Attachment E

Volume II: Report on TXRAM for Streams, Updated June 2017 (see Volume II binder)

Report on the Texas Rapid Assessment Method (TXRAM) for Streams
July 2017
Proposed Lake Palo Pinto Storage Restoration Project at Turkey Peak (Turkey Peak Reservoir)
Prepared for:
Palo Pinto County Municipal Water District No. 1
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1.0 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Fort Worth District, Regulatory Branch has published the Texas Rapid Assessment Method (TXRAM) in final draft form for immediate use in evaluating the ecological condition of streams in order to calculate adverse impacts and mitigation compensation under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. The Palo Pinto County Municipal Water District No. 1 (District or Applicant) submitted a Section 404 individual permit application SWF-2009-00264 for the proposed Palo Pinto Storage Restoration Project at Turkey Peak (Turkey Peak Reservoir or Project) on July 9, 2009, prior to the publication of TXRAM. However, the USACE has indicated that additional evaluation of compensatory mitigation is necessary for the Project, and TXRAM can be utilized to provide an evaluation of the ecological condition of streams in analysis of mitigation requirements.

The purpose of this report it to describe the circumstances and results of the TXRAM evaluation for the Project. TXRAM can be used to assess stream impacts, as well as assess the existing and proposed ecological condition of streams restored or enhanced for compensatory mitigation. This TXRAM report provides an evaluation of reference reaches for the proposed mitigation as well as information on the existing and proposed conditions for streams used for proposed mitigation upstream, on-site, and downstream of the Project. The data from the TXRAM evaluation can be used in the analysis of mitigation for the Project.

2.0 METHODS

TXRAM is a rapid, repeatable, field-based method that generates a single overall score of stream integrity and health. TXRAM contains procedures and guidelines for performing the evaluation, but also allows flexibility for the timing of the assessment in conjunction with other project activities as well as for representative sampling and inferring scores (USACE 2010). Due to the large size and similarity of aquatic resources in the Project and mitigation areas, this evaluation uses representative scoring for similar resources of the same type and condition. HDR based the TXRAM sampling plan on methodology approved by the USACE for other large projects as well as Project discussions with and comments from the USACE.

A delineation and proposed jurisdictional determination (JD) of waters of the U.S. within the Project area was performed previously by HDR (2009), and along with recent aerial photography and an additional field visit of the site in March 2017, provides sufficient information for completing the TXRAM evaluation. Furthermore, the Project area and stream characteristics are similar enough to evaluate conditions using a representative set of stream assessment reaches (SARs). HDR reviewed aerial photographs of the Project area to identify representative SARs using the TXRAM assessment extent guidelines. HDR's review of the Project area allowed for the selection of representative SARs for each type of resource and resource condition. Each representative SAR was evaluated with TXRAM, and remaining SARs were reviewed to confirm similarity. Each inferred SAR (i.e., remaining, non-representative resources) was assigned a representative score based on the similarity of conditions with a representative resource as confirmed with an office review (e.g., aerial photographs) and/or field reconnaissance.

A delineation of waters of the U.S. within the upstream mitigation area was performed concurrently with the TXRAM assessment for the District by HDR during April 22–24, 2014. HDR used available data and aerial photographs to identify preliminary stream assessment reaches (SARs) using the TXRAM assessment extent guidelines. In addition, HDR's review of the mitigation area allowed for the selection of representative SARs for each type of resource and resource condition. Each representative SAR was visited in the field for evaluation with TXRAM,

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and remaining SARs were briefly reviewed to confirm similarity. During the office analysis and data review, including scoring metrics, the selection of representative resources was again confirmed using GIS and recent aerial photography. The metric scores for each representative SAR were entered into a spreadsheet to evaluate the core element and overall scores and determine categories based on the similarity of scores. The categories of representative SARs correspond to each type of resource and resource condition found in the mitigation area. Each inferred SAR (i.e., remaining, non-representative resources) was assigned to a category (with an associated representative score) based on the similarity of conditions with a representative resource as confirmed with an office review (e.g., aerial photographs) and/or field reconnaissance.

In order to provide an evaluation of the potential ecologically attainable condition for proposed mitigation, reference reaches were selected at the Palo Pinto Mountains State Park (park or reference area). The park property has been owned and managed by the state for approximately five years to replicate natural conditions, and is not open to the public. Thus the streams on the park provide an appropriate, approximate reference of the least degraded condition for streams in the watershed. Park management has included some reduction of livestock grazing and selective brush removal; however, while the existing condition of reference reaches is the best available, they do not represent what is the highest achievable. Therefore, the proposed condition of reference reaches after lift to demonstrate what is achievable with the rational for target scores is also included. HDR used available data and aerial photographs to identify reference SARs using the TXRAM assessment extent guidelines for the selection of reference SARs for each type of resource and resource condition. Each reference SAR was visited in the field for evaluation with TXRAM. During the office analysis and data review, scoring of metrics for reference SARs was performed using GIS and recent aerial photography. The metric scores for each reference SAR were entered into a spreadsheet to evaluate the core element and overall scores.

Furthermore, the reference conditions provided additional information for the previous evaluation of existing and proposed conditions of the upstream mitigation area that were conducted under extreme drought. Thus, existing and proposed condition scores for upstream mitigation were determined based on the reference stream data and previous information that provide information for the analysis of ecological lift.

Additionally, based on the reference SAR scores and conceptual restoration plans described in the revised mitigation plan, the SARs in the on-site and downstream mitigation areas were evaluated with TXRAM to provide proposed scores based on the anticipated improvements in metric scores. This evaluation provides an analysis of the ecological lift from the mitigation proposed for the Project.

For the mitigation area downstream of the Project area, recent aerial photography and previous site visits provide sufficient information for completing the TXRAM evaluation. The stream characteristics in the downstream area are similar enough to evaluate conditions using a representative set of SARs. HDR reviewed aerial photographs of the downstream mitigation area to identify representative SARs using the TXRAM assessment extent guidelines. Each representative SAR was evaluated with TXRAM, and remaining SARs were reviewed to confirm similarity. Each inferred SAR (i.e., remaining, non-representative resources) was assigned a representative score based on the similarity of conditions with a representative resource as confirmed with an office review (e.g., aerial photographs).

In July 2017 HDR conducted an evaluation of reference perennial streams in the ecoregion to provide an evaluation of the potential ecologically attainable condition for proposed mitigation.

These reference reaches included field data collection on Rock Creek at Lake Mineral Wells State Park and on the Paluxy River in and near Dinosaur Valley State Park.

In regard to scoring of riparian habitat types in the riparian buffer metric, it is important to note that the presence of particular species is not what determines the TXRAM score, it is the density and community composition/structure/state, as described in the TXRAM scoring evaluation for riparian buffer community types (Version 1.0). Per the TXRAM definitions (Version 1.0), invasive/undesirable vegetation is defined as "being an early or low-successional stage community regenerating from or responding to a disturbance/stress", whereas predominantly native and desirable vegetation is a "mature, mid-, or late-successional stage community expected for the ecoregion based on natural environmental conditions" and therefore a mixture classification includes both native/desirable and non-native/invasive/undesirable vegetation. Furthermore, while certain species may be listed in the TXRAM data sheets, scoring a particular buffer type is performed based on the structure and composition of the community, which was evaluated with available field data and classified / scored based on the TXRAM definitions, which may be difficult to reflect in limited space on data sheets. In instances where the buffer was classified as a "Mix" for the vegetation community, it was determined to be a mixture of native/desirable vegetation, as well as that reflecting a community responding to previous disturbance, such as younger community structure and early to mid-successional species such as hackberry, Ashe juniper, western soapberry, box elder, dewberry, and greenbriar.

3.0 RESULTS

3.1 Stream Impacts

The results of the TXRAM evaluation for impacted streams at the Project area are reported below. The TXRAM data sheets and final scoring sheets for the impacted SARs can be found in Appendix A, and maps are located in Appendix H.

The TXRAM scores for the impacted SARs in the Project area ranged from a high of 75 to a low of 24. Table 1 below depicts the score for each TXRAM core element as well as the overall TXRAM score for the representative impacted SARs in the Project area.

Table 1. TXRAM Scores for Representative Impacted SARs in the Project Area

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
S-1-3	Perennial	16.7	10.0	22.5	21.9	0	71
S-1-6	Perennial	16.7	12.5	22.5	21.9	0	74
S-1-9	Perennial	16.7	7.3	22.5	21.9	0	68
S-1-12	Perennial	16.7	9.5	22.5	21.9	0	71
S-1-14	Perennial	16.7	11.5	22.5	21.9	0	73
S-1-16	Perennial	16.7	12.0	22.5	21.9	0	73
S-1-19	Perennial	16.7	9.0	22.5	21.9	0	70
S-1-20	Perennial	18.3	12.5	22.5	21.9	0	75
S-2-1	Intermittent	13.3	7.0	12.5	12.5	0	45
S-2-2	Intermittent	16.7	4.5	10.0	12.5	0	44

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
S-2-3	Intermittent	20.0	7.0	12.5	12.5	0	52
S-3-1	Ephemeral	15.0	9.5	10.0	6.3	0	41
S-4-1	Ephemeral	15.0	9.5	7.5	0.0	0	32
S-5-1	Ephemeral	11.7	10.0	7.5	0.0	0	29
S-6-1	Ephemeral	18.3	9.5	10.0	6.3	0	44
S-7-1	Ephemeral	11.7	10.0	2.5	0.0	0	24
S-8-1	Ephemeral	15.0	9.5	12.5	6.3	0	43
S-9-1	Ephemeral	16.7	9.8	10.0	6.3	0	43
S-9-2	Ephemeral	18.3	9.3	10.0	6.3	0	44
S-9-3	Ephemeral	20.0	10.0	12.5	6.3	0	49
S-10-1	Ephemeral	15.0	8.8	12.5	6.3	0	43
S-10-2	Ephemeral	18.3	9.0	15.0	6.3	0	49
S-10-3	Ephemeral	11.7	6.3	10.0	6.3	0	34
S-10-4	Ephemeral	18.3	9.5	12.5	6.3	0	47
S-11-1	Ephemeral	16.7	8.5	10.0	0.0	0	35
S-12-1	Ephemeral	15.0	9.0	10.0	6.3	0	40
S-13-1	Intermittent	11.7	4.5	15.0	12.5	0	44
S-14-1	Ephemeral	13.3	5.5	7.5	0.0	0	26
S-15-1	Ephemeral	20.0	6.0	12.5	0.0	0	39
S-16-1	Intermittent	16.7	15.0	5.0	9.4	0	46

Based on the stream type and existing conditions, each inferred SAR was assigned a representative score based on the similarity of its conditions to the representative SAR with that score. Table 2 below shows the inferred SARs, representative SARs, and the representative score.

Table 2. TXRAM Scores for Inferred Impacted SARs in the Project Area

Stream Type	Inferred SAR(s)	Representative SAR(s)	TXRAM Score
Perennial	S-1-1, S-1-2, S-1-4, S-1-7, S-1-8, S-1-17, S-18	S-1-3	71
Perennial	S-1-5	S-1-6	74
Perennial	S-1-10, S-1-11	S-1-12	71
Perennial	S-1-13, S-1-15	S-1-14	73
Intermittent	S-2-4, S-2-5	S-2-3	52
Ephemeral	S-9-4	S-9-3	49
Ephemeral	S-10-5	S-10-4	47

3.2 Stream Reference

The results of the TXRAM evaluation for reference streams in the reference area are reported below. This includes the existing conditions of the reference SARs, as well as the proposed conditions that represent the conditions that are achievable based on the rationale in the descriptions below. The TXRAM data sheets and final scoring sheets for the reference SARs existing conditions can be found in Appendix B, and maps are located in Appendix H.

The TXRAM scores for the reference SARs existing conditions ranged from a high of 72 for Palo Pinto Creek (intermittent stream) to a low of 36 for an ephemeral stream. Table 3 below depicts the score for each TXRAM core element as well as the overall TXRAM score for the existing conditions of reference SARs.

Table 3. TXRAM Scores for Existing Conditions of Reference SARs in Palo Pinto Mountains State Park

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
RS-1-1	Intermittent	21.7	9.5	22.5	15.6	0	69
RS-1-2	Intermittent	20.0	9.3	25.0	15.6	0	70
RS-1-3	Intermittent	20.0	9.8	25.0	15.6	0	70
RS-1-4	Intermittent	20.0	9.8	25.0	15.6	0	70
RS-1-5	Intermittent	21.7	10.0	25.0	15.6	0	72
RS-2-1	Intermittent	21.7	10.0	17.5	12.5	0	62
RS-3-1	Ephemeral	21.7	5.0	12.5	0.0	0	39
RS-4-1	Ephemeral	20.0	5.0	12.5	0.0	0	38
RS-5-1	Ephemeral	21.7	5.0	12.5	0.0	0	39
RS-6-1	Intermittent	21.7	7.5	15.0	12.5	0	57
RS-7-1	Ephemeral	20.0	10.0	10.0	0.0	0	40
RS-8-1	Ephemeral	23.3	5.0	7.5	0.0	0	36
RS-9-1	Ephemeral	23.3	5.0	7.5	0.0	0	36

Although the reference SARs represent some of the higher conditions for streams in the watershed, due to past and present land uses, they do not represent the highest achievable for the ecoregion and watershed. The park property / reference area has been owned and managed by the state for approximately five years, but it has not undergone extensive vegetation management, and some un-authorized livestock access has been observed. Furthermore, past grazing and clearing has degraded the native plant community, which is still in a state of recovery through natural succession, and has not been assisted by substantial vegetation planting and management. It is anticipated that reference SAR scores will improve for riparian buffer with cattle removal and vegetation management to reduce brush and improve the native community, as well as native tree and herbaceous species plantings to increase diversity, which is based on the state and transition models from the NRCS Ecological Site Descriptions for the area (see more details in the Vegetation Management Plan by HDR, 2017). Additionally, it should be noted that TXRAM Version 1.0 includes Example SAR 2 in Appendix D, which is a SAR on an intermittent reach of Rock Creek in the same ecoregion as the reference SARs, and scores a 24.8 for the riparian buffer core element, with only a minor deduction for an abandoned utility line right-of-way. Therefore, it is reasonable to expect the proposed riparian buffer scores shown herein.

Along with past grazing degradation to the channel, Palo Pinto Creek reference reaches have experienced recent, extreme flow events which have led to additional bank erosion. Following periods of normal flows and bankfull events, the banks are anticipated to stabilize naturally

through channel forming processes and vegetation, based on natural geomorphology. It is anticipated that reference SAR scores will improve for bank condition and sediment deposition after flooding affects normalize and cattle removal allows revegetation. Some feral hog damage was observed along reference SARs as a result of recent rain and lack of management. It is anticipated that feral hog damage would be reduced with park development and active management.

Based on the rationale and descriptions above, the proposed conditions of reference SARs that are anticipated are shown in Table 4 below.

Table 4. TXRAM Scores for Proposed/Anticipated Conditions of Reference SARs in Palo Pinto Mountains State Park

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
RS-1-1	Intermittent	23.3	22.5	22.5	15.6	0	84
RS-1-2	Intermittent	21.7	25.0	25.0	15.6	0	87
RS-1-3	Intermittent	21.7	20.8	25.0	15.6	0	83
RS-1-4	Intermittent	21.7	24.8	25.0	15.6	0	87
RS-1-5	Intermittent	23.3	25.0	25.0	15.6	0	89
RS-2-1	Intermittent	21.7	25.0	17.5	12.5	0	77
RS-3-1	Ephemeral	21.7	20.0	12.5	0.0	0	54
RS-4-1	Ephemeral	21.7	20.0	12.5	0.0	0	54
RS-5-1	Ephemeral	23.3	20.0	12.5	0.0	0	56
RS-6-1	Intermittent	23.3	25.0	15.0	12.5	0	76
RS-7-1	Ephemeral	21.7	25.0	10.0	0.0	0	57
RS-8-1	Ephemeral	23.3	20.0	7.5	0.0	0	51
RS-9-1	Ephemeral	23.3	20.0	7.5	0.0	0	51

The TXRAM evaluation of reference reaches for perennial streams included four SARs. With additional points for limited habitats, the scores ranged from 96 to 98. Table 5 below depicts the score for each TXRAM core element as well as the overall TXRAM score for the existing conditions of perennial reference SARs. The TXRAM data sheets and final scoring sheets for the perennial reference SARs existing conditions can be found in Appendix B, and maps are located in Appendix H.

Table 5. TXRAM Scores for Existing Conditions of Perennial Reference SARs

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
RCR-1-1	Perennial	23.3	25.0	20.0	25.0	5	98
PRR-1-1	Perennial	23.3	24.8	22.5	25.0	2	98
PRR-1-2	Perennial	23.3	22.5	20.0	25.0	5	96
PRR-1-3	Perennial	23.3	24.0	25.0	25.0	0	97

3.3 Stream Mitigation

The TXRAM evaluation for existing and proposed conditions of streams in mitigation areas (upstream, on-site, and downstream) are reported below.

3.3.1 Upstream

The results of the TXRAM evaluation for both existing and proposed conditions of streams at the upstream mitigation area are reported below. The TXRAM data sheets and final scoring sheets for the existing conditions of representative SARs in the upstream mitigation area can be found in Appendix C. The TXRAM final scoring sheets for evaluating proposed mitigation activities for the SARs in the upstream mitigation area, as well as the reference streams proposed as mitigation, can be found in Appendix D. Maps of existing and proposed conditions are located in Appendix H.

Note that the original TXRAM scores for the existing conditions of the representative SARs in the upstream mitigation area were from an evaluation during extreme drought conditions. Based on the TXRAM evaluation of reference reaches upstream, during more normal conditions, it was determined that the original evaluation may have underestimated in-stream habitat metric scores. Thus, with this information, the original TXRAM scores for intermittent stream existing condition were updated as reflected in Table 6 below. The existing condition riparian buffer scores were not raised because the scores presented in the tables are accurate and reflective of the existing conditions of the riparian buffer as scored in the field with TXRAM.

The TXRAM scores for the existing conditions of the representative SARs in the upstream mitigation area ranged from a high of 64 to a low of 28. Table 6 below depicts the score for each TXRAM core element as well as the overall TXRAM score for the existing conditions of the representative SARs in the upstream mitigation area.

Table 6. TXRAM Scores for Existing Conditions of Representative SARs in the Upstream Mitigation Area

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
MS-1-1	Intermittent	18.3	7.5	22.5	15.6	0	64
MS-1-2	Intermittent	15.0	4.5	22.5	15.6	0	58
MS-1-3	Intermittent	18.3	9.3	22.5	12.5	0	63
MS-1-4	Intermittent	18.3	8.5	22.5	12.5	0	62
MS-1-5	Intermittent	20.0	5.0	22.5	15.6	0	63
MS-2-1	Ephemeral	18.3	9.5	15.0	6.3	0	49
MS-2-2	Ephemeral	11.7	5.0	10.0	6.3	0	33
MS-2-3	Ephemeral	15.0	5.0	7.5	0.0	0	28
MS-4-1	Ephemeral	15.0	5.0	7.5	0.0	0	28
MS-5-2	Ephemeral	20.0	5.0	7.5	0.0	0	33
MS-6-1	Ephemeral	16.7	7.5	7.5	0.0	0	32
MS-6-2	Ephemeral	21.7	5.0	12.5	0.0	0	39
MS-6-3	Ephemeral	23.3	5.0	5.0	0.0	0	33

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
MS-7-1	Ephemeral	18.3	7.0	7.5	0.0	0	33
MS-9-1	Intermittent	21.7	10.0	17.5	12.5	0	62

Based on the stream type and existing conditions, each inferred SAR is assigned a representative score based on the similarity of its conditions to the representative SAR with that score. Table 7 below shows the inferred SARs, representative SARs, and the representative score.

Table 7. TXRAM Scores for Existing Conditions of Inferred SARs in the Upstream Mitigation Area

Stream Type	Inferred SAR(s)	Representative SAR(s)	TXRAM Score
Ephemeral	MS-3-1, MS-3-2, MS-4-2, MS-8-1	MS-5-2, MS-6-3, MS-7-1	33
Ephemeral	MS-5-1	MS-6-2	39

Also note that the original TXRAM scores for the proposed condition of streams in the upstream mitigation area were evaluated with the data collected during extreme drought and under degraded conditions. Based on the TXRAM evaluation of reference reaches upstream, during more normal conditions, it was determined that the original evaluation may have underestimated some of the proposed TXRAM metric scores, such as in-stream habitat and riparian buffer. Thus, with this new information, the original TXRAM scores for proposed conditions at the upstream mitigation area were updated as reflected in Table 8 below.

The TXRAM scores for the proposed condition of streams restored and enhanced in the upstream mitigation area are based on the anticipated improvement to metric scores from the activities described in the mitigation plan. Table 8 below depicts the score for each TXRAM core element as well as the overall TXRAM score for the proposed condition of SARs in the mitigation area.

Table 8. TXRAM Scores for Proposed Conditions of SARs in the Upstream Mitigation Area

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
PS-1-1	Intermittent	23.3	24.0	25.0	15.6	0	88
PS-1-2	Intermittent	21.7	22.5	25.0	15.6	0	85
PS-1-3	Intermittent	23.3	22.8	25.0	12.5	0	84
PS-1-4	Intermittent	23.3	21.5	25.0	12.5	0	82
PS-1-5	Intermittent	23.3	25.0	25.0	15.6	0	89
PS-1-6*	Intermittent	23.3	23.8	25.0	15.6	0	88
PS-2-1	Intermittent	23.3	22.5	17.5	12.5	0	76
PS-2-2	Intermittent	23.3	22.5	15.0	12.5	0	73
PS-2-3	Intermittent	23.3	20.0	15.0	12.5	0	71
PS-2-4*	Intermittent	23.3	20.0	15.0	12.5	0	71
PS-3-1**	Ephemeral	23.3	20.0	7.5	0.0	0	51
PS-3-2**	Ephemeral	23.3	20.0	7.5	0.0	0	51

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
PS-4-1	Ephemeral	23.3	20.0	7.5	3.1	0	54
PS-4-2**	Ephemeral	23.3	20.0	7.5	0.0	0	51
PS-5-1**	Ephemeral	23.3	20.0	12.5	0.0	0	56
PS-5-2	Ephemeral	23.3	20.0	7.5	0.0	0	51
PS-6-1	Ephemeral	20.0	20.0	7.5	0.0	0	48
PS-6-2	Ephemeral	23.3	20.0	12.5	0.0	0	56
PS-6-3	Ephemeral	25.0	20.0	5.0	0.0	0	50
PS-7-1	Ephemeral	21.7	25.0	7.5	0.0	0	54
PS-8-1**	Ephemeral	23.3	20.0	7.5	0.0	0	51
PS-9-1	Intermittent	21.7	24.8	17.5	12.5	0	77
PS-10-1*	Ephemeral	23.3	20.0	10.0	3.1	0	56

^{*} Proposed condition for SAR currently impounded or not present following stream restoration activities

Proposed improvements to channel condition include removal of impoundments and re-grading of dams to re-establish stream channels on Palo Pinto Creek (SAR PS-1-6) and two unnamed tributaries (SARs PS-2-4 and PS-10-1) which will restore the functions of a stream channel. Additionally, SARs downstream of these re-established stream channels will be rehabilitated through the restoration of natural flows and channel forming processes, thus improving floodplain connectivity scores through the increased frequency of channel interaction with the floodplain or bankfull benches, similar to reference reaches. Furthermore, along with restoration of natural flows, the removal of cattle from the upstream mitigation area, with the subsequent re-growth of vegetation, is anticipated to reduce bank erosion resulting from uncontrolled use, and thus improve the bank condition metric scores of the mitigation SARs, similar to what is anticipated for reference reaches. Furthermore, along with restoration of natural flows and sediment transport, the removal of cattle and riparian enhancement activities will reduce sedimentation in the streams and thus increase the sediment deposition metric scores of the mitigation SARs, similar to what is anticipated for reference reaches.

Proposed improvements to the riparian buffer include removal of cattle using fencing and vegetation management to reduce brush and improve the native community, as well as native tree and herbaceous species plantings to increase diversity, which is based on the state and transition models from the NRCS Ecological Site Descriptions for the area (see more details in the Vegetation Management Plan by HDR, 2017). The proposed riparian mitigation measures are expected to enhance the riparian buffer and result in an overall increase in the riparian buffer scores of the mitigation SARs, similar to what is anticipated for reference reaches.

The in-stream condition is expected to increase in SARs as a result of the removal of the impoundments discussed above to restore flows downstream as well as cattle removal and riparian enhancements. SARs will show improvement in substrate composition due to reduction in fines contributed from upslope and restoration of natural sediment transport processes. SARs will show improvement of in-stream habitat based on the removal of stressors and restoration of natural stream processes that increase available habitat types, similar to reference reaches.

^{**} Inferred score based on similarity to representative stream

The hydrologic condition in SARs will be improved by restoring flows in and downstream of areas that are currently impounded through the removal of dams as discussed above. For SARs PS-2-1, PS-2-2, and PS-2-3, the removal of upslope dams on PS-2-4 and PS-10-1 will restore natural flows that allow the recharge of alluvial water tables, thus providing extended periods of groundwater contribution to flow and pooling in the channel. Additionally, SARs PS-4-1 and PS-10-1, with the removal of the upstream dam, will have an increase in natural flows and pooling. The flow regime and channel flow status metrics will increase accordingly, similar to reference reaches and based on watershed size.

Additional details on mitigation work plans are found in the mitigation plan.

3.3.2 On-Site

The TXRAM score for the existing condition of one stream in the on-site mitigation area was evaluated based on previous delineation data (SAR S-17-1), and is shown in Table 9 below. Additionally, streams currently impounded or degraded by impoundments such that they no longer have an ordinary high water mark have an existing condition of 0.

Table 9. TXRAM Scores for Existing Conditions of SARs in the On-Site Mitigation Area

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
S-17-1	Ephemeral	20.0	8.5	7.5	0.0	0	36

The TXRAM scores for the proposed condition of streams restored or enhanced in the on-site mitigation area are based on the anticipated improvement to metric scores from the activities described in the mitigation plan, as well as the anticipated conditions of reference reaches. Table 10 below depicts the score for each TXRAM core element as well as the overall TXRAM score for the proposed condition of SARs in the on-site mitigation area.

Table 10. TXRAM Scores for Proposed Conditions of SARs in the On-Site Mitigation Area

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
S-17-1	Ephemeral	23.3	20.0	10.0	0.0	0	53
OPSR-2-1*	Ephemeral	23.3	20.0	10.0	0.0	0	53
OPSR-5-1*	Ephemeral	23.3	20.0	10.0	0.0	0	53
OPSR-17-1*	Ephemeral	23.3	20.0	10.0	0.0	0	53
OPSR-18-1*	Ephemeral	23.3	20.0	10.0	0.0	0	53

^{*} Proposed condition for SAR currently impounded following stream restoration activities

The proposed on-site enhancement of stream will include excluding livestock and vegetation management that results in reduced erosion and sedimentation as well as improve the riparian buffer condition, similar to what is anticipated for reference reaches. The proposed on-site restoration of streams will remove impoundments and result in restored functions of the channel, riparian buffer, in-stream and hydrologic condition. The proposed scores for OPRS-2-1, OPSR-5-1, OPSR-17-1, and OPSR-18-1 are based on the stream designs included in the mitigation plan

as well as the anticipated conditions similar to reference reaches. The TXRAM final scoring sheets for evaluating proposed mitigation activities for the SARs in the on-site mitigation areas can be found in Appendix E and maps are located in Appendix H.

3.3.3 Downstream

The TXRAM scores for the existing condition of streams in the downstream mitigation area, that is, downstream of the proposed Project, are similar to those included in the Project area, but were evaluated as described in section 2.0 using representative and inferred SARs. The TXRAM data sheets and final scoring sheets for the existing conditions of SARs in the downstream mitigation area can be found in Appendix F and maps are located in Appendix H. Table 11 below depicts the score for each TXRAM core element as well as the overall TXRAM score for the existing condition of representative SARs in the downstream mitigation area.

Table 11. TXRAM Scores for Existing Conditions of Representative SARs in the Downstream Mitigation Area

SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score
DS-1-1	Perennial	16.7	10.0	22.5	21.9	0	71
DS-1-5	Perennial	16.7	10.5	22.5	21.9	0	72
DS-1-10	Perennial	16.7	8.5	22.5	21.9	0	70
DS-1-13	Perennial	16.7	8.8	22.5	21.9	0	70
DS-1-14	Perennial	16.7	10.5	22.5	21.9	0	72
DS-1-17	Perennial	16.7	13.0	22.5	21.9	0	74
DS-1-20	Perennial	16.7	10.0	22.5	21.9	0	71
DS-1-24	Perennial	16.7	7.5	22.5	21.9	0	69

Based on the stream type and existing conditions, each inferred SAR was assigned a representative score based on the similarity of its conditions to the representative SAR with that score. Table 12 below shows the inferred SARs, representative SARs, and the representative score.

Table 12. TXRAM Scores for Existing Conditions of Inferred SARs in the Downstream

Mitigation Area

Stream Type	Inferred SAR(s)	Representative SAR(s)	TXRAM Score
Perennial	DS-1-2, DS-1-3, DS-1-7	DS-1-1	71
Perennial	DS-1-4, DS-1-6	DS-1-5	72
Perennial	DS-1-8, DS-1-9	DS-1-10	70
Perennial	DS-1-11, DS-1-12	DS-1-13	70
Perennial	DS-1-15, DS-1-16, DS-1-18	DS-1-14	72
Perennial	DS-1-19, DS-1-21, DS-1-22, DS-1-25	DS-1-20	71
Perennial	DS-1-23	DS-1-24	69

The TXRAM scores for the proposed condition of streams enhanced in the downstream mitigation area are based on the anticipated improvement to metric scores from the activities described in the mitigation plan. Table 13 below depicts the score for each TXRAM core element as well as

the overall TXRAM score for the proposed condition of the SARs in the downstream mitigation area.

Table 13. TXRAM Scores for Proposed Conditions of SARs in the Downstream Mitigation Area

SARS III the Downstream Mitigation Area									
SAR ID	Туре	Channel Condition	Riparian Buffer Condition	In-Stream Condition	Hydrologic Condition	Additional Points (Limited Habitat)	TXRAM Score		
DS-1-1	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-2*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-3*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-4*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-5	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-6*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-7*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-8*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-9*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-10	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-11*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-12*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-13	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-14	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-15*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-16*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-17	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-18*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-19*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-20	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-21*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-22*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-23*	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-24	Perennial	23.3	25.0	22.5	21.9	0	93		
DS-1-25*	Perennial	23.3	25.0	22.5	21.9	0	93		

^{*} Inferred score based on similarity to representative SAR

The proposed downstream enhancement of streams will include restricting livestock access and clearing as well as planting native trees, shrubs, grasses, and forbs. The removal of cattle from the downstream mitigation area, with the subsequent planting and re-growth of vegetation, is anticipated to reduce bank erosion resulting from uncontrolled cattle use, and thus improve the bank condition metric scores of the downstream mitigation SARs. Furthermore, the removal of cattle and riparian enhancement activities will reduce sedimentation in the streams and thus increase the sediment deposition metric scores of the downstream mitigation SARs. Additionally, the proposed operations plan for the Project will provide more floodplain connectivity than existing through the proposed high flow events that will provide regular flow access to bankfull benches, and thus increase the floodplain connectivity metric scores of the downstream mitigation SARs.

The proposed 85 cfs pulse flows will allow access to floodplain benches based on visual observations of channel cross sections under various flows and following the TXRAM (Version 1.0) definitions and methodology. The proposed mitigation activities in the riparian buffer include removal of cattle using fencing as well as native tree and herbaceous species plantings to increase diversity of the plant community. The proposed riparian mitigation measures are expected to enhance the riparian buffer and result in an overall increase in the riparian buffer scores of the downstream mitigation SARs. The TXRAM final scoring sheets for evaluating proposed mitigation activities for the SARs in the downstream mitigation area can be found in Appendix G and maps are located in Appendix H.

Note that the TXRAM evaluation of scores for proposed conditions of perennial stream in the downstream mitigation area only utilizes the lift from enhancement to the channel condition and riparian buffer condition. Proposed conditions related to increased hydrology and the lift to instream and hydrologic condition by flow releases, water quality improvements, and increased instream habitat are evaluated in a separate analysis in Attachment K of the Mitigation Plan.

This TXRAM evaluation of existing and proposed conditions in the downstream mitigation area includes the reaches/areas immediately downstream of the Project that are proposed as mitigation. If different or additional downstream areas are included later, supplemental TXRAM evaluation of those reaches would be provided in a future, proposed amendment. Based on preliminary review using aerial photography and available data, it appears that other downstream areas are similar to those included herein and generally consistent with the range of existing conditions found within the Project area and currently proposed downstream mitigation area.

4.0 CONCLUSIONS

The results of the TXRAM evaluation for both the Project area and mitigation areas provide an indication of the ecological condition of streams in these areas. The scores for each of the impacted SARs, combined with the linear feet of impact, as well as the existing and proposed scores and linear feet for representative and inferred SARs in the mitigation areas, can be used to evaluate the replacement of aquatic resources by compensatory mitigation. See the Mitigation Plan for the discussion and calculation of mitigation requirements.

In summary, the results of the TXRAM provide an evaluation of the ecological condition of waters of the U.S. (i.e., streams) at the proposed Project area, as well as the ecological condition of existing and proposed streams in the mitigation areas. The results of the conditional assessment can be used to evaluate the proposed mitigation.

5.0 REFERENCES

HDR Engineering, Inc. (HDR). 2009. Report on the Delineation and Proposed Jurisdictional Determination, Lake Palo Pinto Storage Restoration Project at Turkey Peak, Palo Pinto County, Texas.

HDR Engineering, Inc. (HDR). 2017. Copeland Tract Vegetation Management Plan.

U.S. Army Corps of Engineers. 2010. The Texas Rapid Assessment Method (TXRAM). Wetlands and Streams Modules, Version 1.0. Final Draft.

Appendix A: Stream Data Sheets and Final Scoring Sheets – Impacted S	iARs
RAM Report	July 2017

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type: ☒	Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-1 SAR No.: S-1-3 Size (LF): 1,134 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timber	S Delineation Performed: ⊠ Previously ☐ Currently
8-Digit HUC: 12060201 Watershed Condition (developed	, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
Aerial Photo Date and Source: 2014 NAIP / Bing S	
Stressor(s): Land use Are normal climatic/hydro	ologic conditions present? ☒ Yes ☐ No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation (see HDR report data Notes: Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision and widening the Notes is the Notes of th	ed June 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009). ng from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 35	Avg. Banks: 8
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Element Metric Metric Score Core Element Score Calculation		Core Element Score				
	Floodplain connectivity	3					
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7			
	Sediment deposition	4	X 20				
Diparian buffer condition	Riparian buffer (left bank)	2.2	Sum of bank scores / 10	40.0			
Riparian buffer condition	Riparian buffer (right bank)	1.8	x 25	10.0			
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5			
In-stream condition	In-stream habitat	5	x 25	22.5			
Hydrologic condition	Flow regime	3	Sum of metric scores / 8	21.9			
Hydrologic condition	Channel flow status	4	x 25	21.9			
	Sum of core e	lement scores = c	overall TXRAM stream score	71			
	habitats = overall TXRAM stream	m score x 0.025 f	or each bank (right/left) if:				
L R Dominated by native	0						
	Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score						

Representative Site Photograph:



Facing downstream at the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _T	Turkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation
	SAR No.: 5			
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	▼ Previously ☐ Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 471 sq. mi.
	urce: 2014 NAIP / Bing			
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
5	35	Avg. Bank		
111911111111 = 11911	20	Avg. Wate		
Avg. OHWM:	25	Avg. OHW	/M: 6	
report dated application dated regime score	riew of aerial photogr June 2009) as well a ated January 2009). reduced by 1. Incision habitat estimated.	s aquatic life monito Artificial flow from La	oring surveys (see wa ake Palo Pinto relea	ater rights ses, so flow
CHANNEL CONDITION Floodplain Connectivity	,			
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Pank Candition				Score: 3
Bank Condition	20 0/ Diabat	Donk Active Francisco 20	0/ Δ	0.0
Left Bank Active Erosion			% Average: <u>20</u>	
Bank Protection/Stabiliza	ation: 🗵 Natural 🗌 Artifici	al:		Score: 3
Sediment Deposition				3core. <u>-</u>
	bottom covered by excessi	ive sediment denosition: h	ars with established vegeta	ation (5)
	m covered by excessive sec	· · · · · · · · · · · · · · · · · · ·	=	
	om covered by excessive se osits at in-stream structures			
☐ 60–80% of the botton in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
				Score: 4

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 117.5
-----------	------------------------

Left Bank						Buffer Distan	ce: <u>117.5</u>
Buffer Type		Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtota
1. Woods with cedar elm,	pecan, dogwood, dewberry, greenbriar	80	Mix	Moderate	3	60	1.8
2. Savannah with pecan a	and bermudagrass	60	Mix	High	1	40	0.4
3.							
4.							
5.							
Right Bank						Sco	re: <u>2.2</u>
Buffer Type		Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtota
1. Woods with cedar elm,	pecan, dogwood, dewberry, greenbirar	80	Mix	Moderate	3	40	1.2
2. Savannah with pecan ar	nd maintained grasses	60	Mix	High	1	60	0.6
3.							
4.							
5.							
N-STREAM CONDITION	ON on (estimate percentages)					Sco	re: <u>1.8</u>
Boulder: 10	Gravel: 30		Fines (silt, clay, muck): 10		Artificial:		
Cobble: 25	Sand: 25		Bedrock:	Other:			
							re: _4

In-stream Habitat (check all habitat types that are present)

In-stream Habitat (check all hab	itat typ	es that	are pre	esent)									
Habitat Type	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: 53 Score: 5 HYDROLOGIC CONDITION

Flow Regime	
☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
▼ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: <u>3</u>
Channel Flow Status	
☑ Water covering greater than 75% of the channel bottom w	vidth; less than 25% of channel substrate is exposed (4)

🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Score: 4

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (☐ Linear 区 Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-1 SAR No.: S-1-6 Size (L	F): 1,143 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timber	Delineation Performed: X Previously Currently
8-Digit HUC: 12060201 Watershed Condition (developed	d, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? X Yes No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous field delineation (see HDR report of Notes: Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision and wide	ated June 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009). ning from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 35	Avg. Banks: 8
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score			
	Floodplain connectivity	3					
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7			
	Sediment deposition	4	X 20				
Diparian buffer condition	Riparian buffer (left bank)	2.2	Sum of bank scores / 10	40.5			
Riparian buffer condition	Riparian buffer (right bank)	2.8	x 25	12.5			
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5			
In-stream condition	In-stream habitat	5	x 25	22.5			
Hydrologic condition	Flow regime	3	Sum of metric scores / 8	21.9			
Hydrologic condition	Channel flow status	4	x 25	21.9			
	74						
	Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if:						
L R Dominated by native Dominated by hard m	0						
	Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score						

Representative Site Photograph:



Facing downstream near the upstream end of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.:	Turkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation	
Stream ID/Name: S-1	SAR No.: 5	S-1-6 Size (LF): 1,143	Date: 2017 Eva	luator(s): RW	
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed: [▼ Previously ☐ Currently	
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 471 sq. mi.	
Aerial Photo Date and So	ource: 2014 NAIP / Bing	Site Photos: _\	res Repr	resentative: X Yes No	
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? Yes □ N	No (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)			ght/Depth (Feet)		
Avg. Bank to Bank:	35	Avg. Bank			
Avg. Waters Edge:	20	Avg. Wate			
Avg. OHWM:	25	Avg. OHW	/M: 6		
Based on review of aerial photography and data from previous field delineation (see HDR report dated June 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009). Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision and widening from upstream lake. Cattle and human use. In-stream habitat estimated.					
CHANNEL CONDITION Floodplain Connectivity	,				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
Bank Condition				Score: 3	
Left Bank Active Erosion	n: ²⁰ % Right	Bank Active Erosion: 20	% Average: ²	0.0	
	ation: ☒ Natural ☐ Artifici		/0 /Woldgo		
Barik i Totostion/Otabiliz	Autori. Material Material	ui		Score: 3	
Sediment Deposition					
Less than 20% of the	e bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)	
 ≥ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) 					
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)					
☐ Greater than 80% of	the bottom covered by exce	ssive sediment deposition	resulting in aggrading cha	nnel (1)	
				Score: 4	

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank Buffer Distance: 117	7 h
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Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	80	Mix	Moderate	3	60	1.8
2. Savannah with pecan and bermudagrass	50	Mix	High	1	40	0.4
3.						
4.						
5.						
Score: 22						

Score: <u>2.2</u>

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	90	Mix	Moderate	3	90	2.7
2. Bank and floodplain bench with bermudagrass, rattlepod,cocklebur	20	Undesirable	Moderate	1	10	0.1
3.						
4.						
5.						

Score: 2.8

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial:
Cobble: 25	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	√		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: 5.3 Score: 5

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Seeve 2

Score: 3

Channel Flow Status

Shallier Flow Status
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Score: 4

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (☐ Linear 区 Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-1 SAR No.: S-1-9 Size (L	F): 1,225 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timber	Delineation Performed: X Previously Currently
8-Digit HUC: 12060201 Watershed Condition (develope	d, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? X Yes No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous field delineation (see HDR report of Notes: Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision and wide	ated June 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009). ning from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 35	Avg. Banks: 8
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	3		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.4	Sum of bank scores / 10	7.0
Riparian buffer condition	Riparian buffer (right bank)	1.5	x 25	7.3
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5
In-stream condition	In-stream habitat	5	x 25	22.5
Lludrologia condition	Flow regime	3	Sum of metric scores / 8	21.9
Hydrologic condition	Channel flow status	4	x 25	21.9
	Sum of core e	lement scores = c	overall TXRAM stream score	68
Additional points for limited L R Dominated by native Dominated by hard m	0			
Sum of overall TXR	verall TXRAM stream score	68		

Representative Site Photograph:



Facing downstream near the middle of the SAR, looking at eroded bank.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _T	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation	
Stream ID/Name: <u>S-1</u> SAR No.: <u>S-1-9</u> Size (LF): <u>1,225</u> Date: <u>2017</u> Evaluator(s): <u>RW</u>					
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	▼ Previously ☐ Currently	
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 471 sq. mi.	
	urce: 2014 NAIP / Bing				
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)			ght/Depth (Feet)		
5	35	Avg. Bank			
111911111111 = 11911	20	Avg. Wate			
Avg. OHWM:	25	Avg. OHW	/M: 6		
report dated application dated regime score	riew of aerial photogr June 2009) as well a ated January 2009). reduced by 1. Incision habitat estimated.	s aquatic life monito Artificial flow from La	oring surveys (see wa ake Palo Pinto relea	ater rights ses, so flow	
CHANNEL CONDITION Floodplain Connectivity	,				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
Bank Condition				Score: 3	
Left Bank Active Erosion	20 % Pight I	Pank Astiva Fracian: 20	% Average: 20	0.0	
	ation: ⊠ Natural ☐ Artifici				
Dank Flotection/Stabiliza		aı		Score: 3	
Sediment Deposition					
Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)	
 ≥ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) 					
☐ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)					
Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)	
				Score: 4	

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 117.5
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Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	80	Mix	Moderate	3	20	0.6
2. Savannah with pecan and bermudagrass	50	Mix	High	1	80	0.8
3.						
4.						
5.						

Score: 1.4____

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	80	Mix	Moderate	3	40	1.2
2. Savannah with pecan and bermudagrass	50	Mix	High	1	30	0.3
3. Disturbed / eroded / barren soil	0	Undesirable	Intensive	0	30	0
4.						
5.						

Score: 1.5

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial:
Cobble: 25	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: <u>5.3</u> Score: <u>5</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

Elisated pools and interestial (cubounded) new (2)	
	Score: 3
Channel Flow Status	
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)	
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
$\hfill\square$ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is	exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

Score: 4

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type: X F	Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-1 SAR No.: S-1-12 Size (LF)	: 1,281 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timbers	S Delineation Performed: ☑ Previously ☐ Currently
8-Digit HUC: 12060201 Watershed Condition (developed	, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
Aerial Photo Date and Source: 2014 NAIP / Bing Si	
Stressor(s): Land use Are normal climatic/hydro	logic conditions present? ☒ Yes ☐ No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation (see HDR report date Notes: Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision and widenin	d June 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009). g from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 35	Avg. Banks: 8
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	3			
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	
	Sediment deposition	4	, X20		
Dinarian buffer condition	Riparian buffer (left bank)	1.6	Sum of bank scores / 10	0.5	
Riparian buffer condition	Riparian buffer (right bank)	2.2	x 25	9.5	
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5	
In-stream condition	In-stream habitat	5	x 25	22.3	
Lludralagia aanditian	Flow regime	3	Sum of metric scores / 8	21.9	
Hydrologic condition	Channel flow status	4	x 25	21.9	
	71				
Additional points for limited					
L R Dominated by native	0				
	ast (i.e., acorns and nuts) produ				
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	71	

Representative Site Photograph:



Facing downstream at the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.:	Turkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation	
	SAR No.:				
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently	
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 471 sq. mi.	
Aerial Photo Date and So	ource: 2014 NAIP / Bing	Site Photos: _\	es Repr	esentative: X Yes No	
Stressor(s): Land use Are normal climatic/hydrologic conditions present? X Yes No (If no, explain in Notes)					
Stream Characteristics					
Stream Width (Feet)			ght/Depth (Feet)		
Avg. Bank to Bank:	35	Avg. Bank			
Avg. Waters Edge:	20	Avg. Wate			
Avg. OHWM:	25	Avg. OHW	/M: 6		
report dated application of regime score	view of aerial photogr June 2009) as well a lated January 2009). e reduced by 1. Incision m habitat estimated.	s aquatic life monito Artificial flow from La	ring surveys (see wake Palo Pinto relea	ater rights ses, so flow	
CHANNEL CONDITION Floodplain Connectivity	y				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
Bank Condition				Score: 3	
Left Bank Active Erosio	n: ²⁰ % Right	Bank Active Erosion: 20	% Average: ²⁰	0.0	
	zation: 🗵 Natural 🗌 Artific				
				Score: 3	
Sediment Deposition					
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5)					
☐ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the botto in-stream structures (2)	om covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at	
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)	
				Score: 4	

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 117.5
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Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	80	Mix	Moderate	3	30	0.9
2. Savannah with pecan, bermudagrass, other grasses/forbs	50	Mix	High	1	70	0.7
3.						
4.						
5.						

Score: 1.6____

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	80	Mix	Moderate	3	60	1.8
2. Savannah with pecan, bermudagrass, other grasses/forbs	50	Mix	High	1	40	0.4
3.						
4.						
5.						

Score: 2.2

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial:
Cobble: 25	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: 5.3 Score: 5

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

Score: 3

Channel Flow Status
☑ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Score: 4

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-1 SAR No.: S-1-14 Size (L	F): 1,244 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timbe	Delineation Performed: Previously Currently
8-Digit HUC: 12060201 Watershed Condition (develope	d, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
	Site Photos: Yes ☐ Representative: ☐ Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? X Yes No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation (see HDR report d Notes: Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision and wide	ated June 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009). ning from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 35	Avg. Banks: 8
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	3			
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	
	Sediment deposition	4	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	1.8	Sum of bank scores / 10	44.5	
Riparian buffer condition	Riparian buffer (right bank)	2.8	x 25	11.5	
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5	
In-stream condition	In-stream habitat	5	x 25	22.5	
Lhudralagia aanditian	Flow regime	3	Sum of metric scores / 8	21.9	
Hydrologic condition	Channel flow status	4	x 25	21.9	
	73				
Additional points for limited L R Dominated by native	0				
	ast (i.e., acorns and nuts) produ AM stream score and additional			73	

Representative Site Photograph:



Facing upstream near the upstream end of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.:	Turkey Peak Pro	iject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation	
	SAR No.: _				
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently	
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 471 sq. mi.	
Aerial Photo Date and So	ource: 2014 NAIP / Bing	Site Photos: _\	es Repr	esentative: X Yes No	
Stressor(s): Land use Are normal climatic/hydrologic conditions present? X Yes No (If no, explain in Notes)					
Stream Characteristics					
Stream Width (Feet)			ght/Depth (Feet)		
Avg. Bank to Bank:	35	Avg. Bank			
Avg. Waters Edge:	20	Avg. Wate			
Avg. OHWM:	25	Avg. OHW	/M: 6		
report dated application or regime score	view of aerial photogr June 2009) as well a lated January 2009). e reduced by 1. Incision of habitat estimated.	s aquatic life monito Artificial flow from La	ring surveys (see wake Palo Pinto relea	ater rights ses, so flow	
CHANNEL CONDITION Floodplain Connectivity	у				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
Bank Condition				Score: 3	
Left Bank Active Erosio	n: ²⁰ % Right	Bank Active Erosion: 20	% Average: 20	0.0	
Bank Protection/Stabiliz	zation: 🗵 Natural 🗌 Artific				
				Score: 3	
Sediment Deposition					
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5)					
☐ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the botto in-stream structures (2)	om covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at	
Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)	
				Score: <u>4</u>	

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 117.5
-----------	------------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	80	Mix	Moderate	3	40	1.2
2. Savannah with pecan, bermudagrass, other grasses/forbs	50	Mix	High	1	50	0.5
3. Trail with bermudagrass and other grasses/forbs	10	Undesirable	High	1	10	0.1
4.						
5.						

Score: 1.8____

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	80	Mix	Moderate	3	90	2.7
2. Trail with bermudagrass and other grasses/forbs	10	Undesirable	High	1	10	0.1
3.						
4.						
5.						

Score: 2.8

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial:
Cobble: 25	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: 5.3 Score: 5

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

Channel Flow Status	
☑ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)	
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)	
☐ No water present in the channel; 100% of channel substrate exposed (0)	

Score: 4____

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type: X	Fill/Impact (Linear Non-linear) Mitigation/Conservation
Stream ID/Name: S-1 SAR No.: S-1-16 Size (L	F): 1,116 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timber	Delineation Performed: Previously Currently
8-Digit HUC: 12060201 Watershed Condition (develope	ed, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
Aerial Photo Date and Source: 2014 NAIP / Bing	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? ✓ Yes No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous field delineation (see HDR report of Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision and wide	ated June 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009), ning from upstream lake. Cattle and human use. In-stream habitat estimated. Segment parallel FM 4.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 35	Avg. Banks: 8
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score				
Floodplain connectivity		3						
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	18.3				
	Sediment deposition	5	X 20					
Diparian buffer condition	Riparian buffer (left bank)	1.8	Sum of bank scores / 10	40.0				
Riparian buffer condition	Riparian buffer (right bank)	3.0	x 25	12.0				
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5				
In-stream condition	In-stream habitat	5	x 25	22.5				
Hydrologic condition	Flow regime	3	Sum of metric scores / 8	21.9				
Hydrologic condition	Channel flow status	4	x 25	21.9				
	Sum of core e	lement scores = c	overall TXRAM stream score	75				
Additional points for limited L R	or each bank (right/left) if:	0						
	Dominated by native trees greater than 24-inch diameter at breast height Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata							
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	75				

Representative Site Photograph:



Facing downstream at the SAR.

TXRAM STREAM DATA SHEET

	Turkey Peak Pro					
Stream ID/Name: S-1	SAR No.: _	S-1-16 Size (LF): 1,116	Date: 2017 Eval	uator(s): RW		
Stream Type: Perennial	- Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently		
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 471 sq. mi.		
Aerial Photo Date and S	Source: 2014 NAIP / Bing	Site Photos: _	res Repr	esentative: X Yes No		
Stressor(s): Land use	Are norma	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)		
Stream Characteristics	5					
Stream Width (Feet)		· · · · · · · · · · · · · · · · · · ·	ght/Depth (Feet)			
Avg. Bank to Bank:	35	Avg. Bank				
Avg. Waters Edge: Avg. OHWM:	20	Avg. Wate				
Avg. Onvivi.	25	Avg. Onv	/IVI. b			
application or regime scor	June 2009) as well a dated January 2009). e reduced by 1. Incision habitat estimated.	Artificial flow from La on and widening from	ake Palo Pinto relea m upstream lake. Ca	ses, so flow		
CHANNEL CONDITION Floodplain Connectivity						
Very little incision and acces to the original floodplain or fully developed wide bankful benches.	having regular (i.e., at least	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
Bank Condition				Score: 3		
Left Bank Active Erosic	on: ²⁰ % Right	Bank Active Erosion: 20	% Average: _ ²⁰	0.0		
Bank Protection/Stabili	zation: 🗵 Natural 🗌 Artific					
				Score: 3		
Sediment Deposition						
 ✓ Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) ✓ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited 						
sediments (4)						
☐ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
☐ 60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)						
☐ Greater than 80% of	of the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)		
				Score: <u>5</u>		

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Buffer Type						Vegetation			Score	Percentage		_ _	Subtotal	
Woods with cedar elm, pecan, bumelia, Ashe juniper			70		er Community Mix		Use Moderate	+	3		of Area	!	1.8	
Road, barren, and separated	Juillella,	ASITE Jui	libei	0	+	IVIIX		Intensive	+	0		40		0
3.				0				IIILEIISIVE	+	0	+	40		0
4.									+					
5.									+		+			
<u> </u>				1									Score:	1.8
Right Bank														
Buffer Typ	e			Can Cov		Vegeta Commu		Land Use		Score	P	ercenta of Area		ubtota
1. Woods with cedar elm, pecan, bu	ımelia, As	she junip	er	80)	Mix		Moderat	Э	3		100		3
2.														
3.									1					
4.														
5.														
N-STREAM CONDITION Substrate Composition (estima	ite perc	entages	s)									,	Score:	3.0
Boulder: 10	Gravel		•		Fin	nes (silt, d	clay, n	nuck): ₁₀		Artific	cial:			
Cobble: 25	Sand:	25			Ве	drock:				Other:				
Habitat Type Undercut Banks	T1 ✓	T2 ✓	<i>T</i> 3 ✓	T4 ✓	T5 √	T6 ✓	T7 ✓	T8 ✓	T	9 T	10 /	T11 ✓	T12 ✓	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	V	/ \ \	/	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	v	<u> </u>	/	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓						
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	V		<u>/</u>	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	v	/		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓						
Aquatic Macrophytes														<u> </u>
Riffle/Pool Sequence	✓		✓		✓	✓			V	_				<u> </u>
Artificial Habitat Enhancement														
Other														<u> </u>
Total No. Present	7	5	6	5	7	7	6	6	5		3	4	3	
IYDROLOGIC CONDITION Flow Regime										Averag	je: <u></u> ⁵	.3	Score:	5
☐ Noticeable surface flow pres	ent (4)				☐Is	olated po	ols ar	nd no evid	enc	e of sur	face	or inter	stitial f	low (1)
■ Continual pool of water but la	acking n	oticeable	e flow (3	3)	□ D	ry channe	el and	no obser	vabl	e pools	or i	nterstitia	al flow ((0)
☐ Isolated pools and interstitial	_												`	-
Channel Flow Status	`											(Score:	3
							0/ -							
★ Water covering greater than	75% of 1	he char	nnel bot	tom wid	th; less	s than 25	% of c	channel su	ıbstı	ate is e	expo	sed (4)		
☐ Water covering 50–75% of the														

Page 2 of 2

Score: 4

Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)

☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-1 SAR No.: S-1-19 Size (L	F): 1,271 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timber	Delineation Performed: X Previously Currently
8-Digit HUC: 12060201 Watershed Condition (develope	d, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
Aerial Photo Date and Source: 2014 NAIP / Bing	
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? ✓ Yes ☐ No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation (see HDR report of Notes: Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision and wide	ated June 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009). ning from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 35	Avg. Banks: 8
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
Channel condition	Floodplain connectivity	3	Sum of metric scores / 15 x 25	16.7
	Bank condition	3		
	Sediment deposition	4		
Riparian buffer condition	Riparian buffer (left bank)	1.4	Sum of bank scores / 10 x 25	9.0
	Riparian buffer (right bank)	2.2		
In-stream condition	Substrate composition	4	Sum of metric scores / 10 x 25	22.5
	In-stream habitat	5		
Hydrologic condition	Flow regime	3	Sum of metric scores / 8 x 25	21.9
	Channel flow status	4		
Sum of core element scores = overall TXRAM stream score				70
Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if:				
L R □ □ Dominated by native trees greater than 24-inch diameter at breast height				0
Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata				
Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score				70

Representative Site Photograph:



Facing upstream near the middle of the SAR, looking at eroded bank.

	Turkey Peak Pro					
Stream ID/Name: S-1	SAR No.:	S-1-19 Size (LF): 1,271	Date: 2017 Eval	uator(s): RW		
Stream Type: Perennial	- Artificial Ecoregion: Cr	oss Timbers	Delineation Performed:	Previously Currently		
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 471 sq. mi.		
Aerial Photo Date and S	ource: 2014 NAIP / Bing	Site Photos: _	res Repr	esentative: X Yes No		
Stressor(s): Land use	Are norma	l climatic/hydrologic conditi	ons present? ✓ Yes ✓ N	lo (If no, explain in Notes)		
Stream Characteristics	3					
Stream Width (Feet)			ght/Depth (Feet)			
Avg. Bank to Bank:	35	Avg. Bank				
Avg. Waters Edge: Avg. OHWM:	20 25	Avg. Wate				
Avg. Onvivi.	25	Avg. Onv	VIVI. 6			
application or regime scor	report dated June 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009). Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision and widening from upstream lake. Cattle and human use. In-stream habitat estimated.					
CHANNEL CONDITION Floodplain Connectivity						
Very little incision and access to the original floodplain or fully developed wide bankful benches.	having regular (i.e., at least	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
Bank Condition				Score: 3		
Left Bank Active Erosic	on: ²⁰ % Right	Bank Active Erosion: 20	% Average: ²⁰	0.0		
	zation: 🗵 Natural 🗌 Artific					
				Score: 3		
Sediment Deposition						
 □ Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) □ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) □ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional 						
features (3)	om covered by excessive se					
,	<i>)</i> f the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)		
_	,		5 55 1 5 11.	Score: 4		

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 117.5
-----------	------------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	70	Mix	Moderate	3	30	0.9
2. Pasture with bermudagrass and other grasses/forbs	50	Undesirable	High	1	50	0.5
3. Disturbed / eroded / barren soil	0	Undesirable	Intensive	0	20	0
4.						
5.						·

Score: <u>1.4</u>

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	70	Mix	Moderate	3	60	1.8
2. Floodplain bench with willow, baccharis, mesquite	40	Undesirable	High	1	30	0.3
3. Trail and electric line right-of-way	10	Undesirable	High	1	10	0.1
4.						
5.						

Score: 2.2

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial:
Cobble: 25	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: <u>5.3</u> Score: <u>5</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

	Score: 3
Channel Flow Status	
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
$\ \square$ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is	exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type: ☒	Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-1 SAR No.: S-1-20 Size (LF): <u>737</u> Date: <u>2017</u> Evaluator(s): <u>RW</u>
Stream Type: Perennial - Artificial Ecoregion: Cross Timber	Delineation Performed: 🗵 Previously 🗌 Currently
8-Digit HUC: 12060201 Watershed Condition (developed	l, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
Aerial Photo Date and Source: 2014 NAIP / Bing S	
Stressor(s): Land use Are normal climatic/hydro	ologic conditions present? ⊠ Yes ☐ No (If no, explain in Notes)
	ne 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009). Artificial flow
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 35	Avg. Banks: 8
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score			
	Floodplain connectivity	3					
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3			
	Sediment deposition	4	X 20				
Dinarian buffer condition	Riparian buffer (left bank)	2.6	Sum of bank scores / 10	10.5			
Riparian buffer condition	Riparian buffer (right bank)	2.4	x 25	12.5			
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5			
In-stream condition	In-stream habitat	5	x 25	22.5			
I hudrologio con dition	Flow regime	3	Sum of metric scores / 8	21.9			
Hydrologic condition	Channel flow status	4	x 25	21.9			
	Sum of core e	lement scores = c	overall TXRAM stream score	75			
	Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if:						
L R Dominated by native	0						
Dominated by hard m							
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	75			

Representative Site Photograph:



Facing upstream near the middle of the SAR.

Project/Site Name/No.: _T	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation	
	SAR No.: ^S				
Stream Type: Perennial -	rennial - Artificial Ecoregion: Cross Timbers		_ Delineation Performed: [2	▼ Previously ☐ Currently	
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 471 sq. mi.	
	urce: 2014 NAIP / Bing				
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		
5	35	Avg. Bank			
111911111111 = 11911	20	Avg. Wate			
Avg. OHWM:	25	Avg. OHW	/M: 6		
report dated application dated regime score	riew of aerial photogr June 2009) as well a ated January 2009). reduced by 1. Incision habitat estimated.	s aquatic life monito Artificial flow from La on and widening from	oring surveys (see wake Palo Pinto relea make palo Pinto relea mapstream lake. Ca	ater rights ses, so flow attle and human	
Floodplain Connectivity	,				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
Bank Carrellille				Score: 3	
Bank Condition	10	DI- A-4:	0/	2.0	
Left Bank Active Erosion			% Average: <u>10</u>		
Barik Protection/Stabiliza	ation: 🗵 Natural 🗌 Artifici	al		Score: 4	
Sediment Deposition				00010.	
	bottom covered by excessi	ive sediment denosition: h	ars with established vegeta	ation (5)	
	m covered by excessive sec	•	-	` '	
☐ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the botton in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at	
Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)	
				Score: 4	

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 117.5
-----------	------------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	70	Mix	Moderate	3	80	2.4
2. Pasture with bermudagrass and other grasses/forbs	50	Undesirable	High	1	15	0.2
3. Disturbed / eroded / barren soil	0	Undesirable	Intensive	0	5	0
4.						
5.						

Score: 2.6

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Ashe juniper	70	Mix	Moderate	3	70	2.1
2. Floodplain bench with willow, baccharis, mesquite	40	Undesirable	High	1	30	0.3
3.						
4.						
5.						

Score: 2.4

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial:
Cobble: 25	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: <u>5.3</u> Score: <u>5</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

Channel Flow Status
▼ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-2 SAR No.: S-2-1 Size (L	F): 883 Date: 2017 Evaluator(s): RW
Stream Type: Intermittent Ecoregion: Cross Timber	Delineation Performed: X Previously Currently
8-Digit HUC: 12060201 Watershed Condition (develope	d, pasture, etc.): Pasture Watershed Size: 710 acres
Aerial Photo Date and Source: 2012 NAIP / Bing	Site Photos: Yes ☐ Representative: ☒ Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? Yes □ No (If no, explain in Notes)
Notes: Based on 2017 site visit, review of aerial photography and data from previous field	delineation (see HDR report dated June 2009). Cattle use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 25	Avg. Banks: 4
Avg. Waters Edge: 8	Avg. Water: 1
Avg. OHWM: 15	Avg. OHWM: 2

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	2		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	13.3
	Sediment deposition	3	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.4	Sum of bank scores / 10	7.0
Riparian buffer condition	Riparian buffer (right bank)	1.4	x 25	7.0
In atroom condition	Substrate composition	4	Sum of metric scores / 10	10 F
In-stream condition	In-stream habitat	1	x 25	12.5
I hudua la mia assauditiona	Flow regime	2	Sum of metric scores / 8	12.5
Hydrologic condition	Channel flow status	2	x 25	12.5
		•		
	Sum of core e	lement scores = c	overall TXRAM stream score	45
Additional points for limited L R Dominated by native	0			
	ast (i.e., acorns and nuts) produ AM stream score and additional			45

Representative Site Photograph:



SAR S-2-1 facing downstream.

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation			
Stream ID/Name: S-2	SAR No.: S	S-2-1 Size (LF): <u>883</u>	Date: 2017 Eval	uator(s): RW			
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently			
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture Wate	ershed Size: 710 acres			
Aerial Photo Date and Sou	irce: 2012 NAIP / Bing	Site Photos: _\	res Repr	esentative: X Yes No			
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)			
Stream Characteristics							
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)				
Avg. Bank to Bank: 2	25	Avg. Bank	(S: 4				
Avg. Waters Edge: 8	3	Avg. Wate	er: 1				
Avg. OHWM: 1	5	Avg. OHW	/M: 2				
Based on 2017 site visit, review of aerial photography and data from previous field delineation (see HDR report dated June 2009). Cattle use. In-stream habitat estimated.							
CHANNEL CONDITION Floodplain Connectivity							
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.			
_		floodplain or bankfull benches at isolated areas.	benches.				
5	4	3	(2)	1 Score: 2			
Bank Condition				000.01			
Left Bank Active Erosion:	20 % Right	Bank Active Erosion: 20	% Average: 20	0.0			
	tion: X Natural Artifici						
				Score: 3			
Sediment Deposition							
Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)			
20–40% of the bottom sediments (4)	covered by excessive sec	diment deposition; some es	stablished bars with indica	tors of recently deposited			
■ 40–60% of the bottor	☑ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional						
	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at			
` '	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)			
L				Score: 3			

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 62.5
-----------	-----------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal		
1. Woods with cedar elm, post oak, live oak, Texas ash, Ashe juniper	70	Mix	High	2	50	1.0		
2. Brush with Ashe juniper and mesquite	50	Undesirable	High	1	40	0.4		
3. Trail and separated	0	-	Intense	0	10	0		
4.								
5.								
Score: 14								

Score: <u>1.4</u>

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, live oak, Texas ash, Ashe juniper	70	Mix	High	2	50	1.0
2. Brush with Ashe juniper and mesquite / Trail	50	Undesirable	High	1	40	0.4
3. Trail and separated	0	-	Intense	0	10	0
4.						
5.						

Score: 1.4

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 20	Fines (silt, clay, muck): 40	Artificial:	
Cobble: 30	Sand:	Bedrock:	Other:	

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓												
Overhanging Vegetation		✓											
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles			✓										
Aquatic Macrophytes				✓									
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1	1	1	1									

Average: 1.0 Score: 1

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☒ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 2

Score: 2

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☑ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.:	urkey Peak Project Type	e: 🗵 Fill/Impact (🗌 L	inear 🗵 Non-lir	near)
Stream ID/Name: S-2	SAR No.: S-2-2 Siz	ze (LF): 926 Date	e: 2017	Evaluator(s): RW
Stream Type: Intermitte	ent Ecoregion: Cross Tir	mbers Do	elineation Perfor	med: X Previously Currently
8-Digit HUC: 12060201	Watershed Condition (deve	eloped, pasture, etc.):	Pasture	_ Watershed Size: 710 acres
Aerial Photo Date and Sou	urce: 2012 NAIP / Bing	Site Photos: Yes	3	Representative: ☒ Yes ☐ No
Stressor(s): Land use	Are normal climatic	/hydrologic conditions	present? X Ye	s No (If no, explain in Notes)
Notes:	eview of aerial photography and data from previou	us field delineation (see HDR re	eport dated June 2009)	i. Cattle use. In-stream habitat estimated.
Stream Characteristics				
Stream Width (Feet)		Stream Height/l	Depth (Feet)	
Avg. Bank to Bank: 2	25	Avg. Banks:	4	
Avg. Waters Edge:	3	Avg. Water:	1	
Avg. OHWM:	15	Avg. OHWM:	2	<u> </u>

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score				
	Floodplain connectivity	3						
Channel condition	Bank condition	4		16.7				
	Sediment deposition	3	, X20					
Dinarian buffer condition	Riparian buffer (left bank)	0.7	Sum of bank scores / 10	4.5				
Riparian buffer condition	Riparian buffer (right bank)	1.1	Sum of metric scores / 15	4.5				
la atracas condition	Substrate composition	3	Sum of metric scores / 10	10.0				
In-stream condition	In-stream habitat	1	x 25	10.0				
Lludralagia aanditian	Flow regime	2	Sum of metric scores / 8	12.5				
Hydrologic condition	Channel flow status	2	x 25	12.5				
	Sum of core e	lement scores = c	overall TXRAM stream score	44				
	habitats = overall TXRAM stream	m score x 0.025 fe	or each bank (right/left) if:					
l — —	L R Dominated by native trees greater than 24-inch diameter at breast height							
l — —	last (i.e., acorns and nuts) produ	•						
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	44				

Representative Site Photograph:



SAR S-2-2 facing downstream.

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation
Stream ID/Name: S-2	SAR No.: S	S-2-2 Size (LF): 926	Date: 2017 Eval	uator(s): RW
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture Wate	ershed Size: 710 acres
Aerial Photo Date and Sou	irce: 2012 NAIP / Bing	Site Photos: _\	res Repr	esentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
Avg. Bank to Bank: 2	25	Avg. Bank	(S: 4	
Avg. Waters Edge: 8	3	Avg. Wate	er: 1	
Avg. OHWM: 1	5	Avg. OHW	/M: 2	
			and data from prev use. In-stream habi	
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least presence o		Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
		floodplain or bankfull benches at isolated areas.	benches.	
5	4	3	2	1
Bank Condition				Score: 3
Left Bank Active Erosion:	10 0/ Dight	Bank Active Erosion: 10	% Average: 10	0.0
			% Average^	
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artifici	aı		Score: 4
Sediment Deposition				3core. <u>∗</u>
	hottom covered by excessi	ive sediment denosition: h	ars with established vegeta	ation (5)
	•	·	stablished bars with indica	` '
			rate deposition on old bars he channel bottom and a l	
	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
` '	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
			5 55 5 1	Score: <u>3</u>

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 62.5
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Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal			
1. Woods with cedar elm, post oak, live oak, Texas ash, Ashe juniper	70	Mix	High	2	20	0.4			
2. Brush with Ashe juniper and mesquite	50	Undesirable	High	1	30	0.3			
3. Trail and separated	0	-	Intense	0	50	0			
4.									
5.									
Score: 07									

Score: 0.7

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, live oak, Texas ash, Ashe juniper	70	Mix	High	2	30	0.6
2. Brush with Ashe juniper and mesquite / Trail	50	Undesirable	High	1	50	0.5
3. Trail and separated	0	-	Intense	0	20	0
4.						
5.						

Score: 1.1

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 20	Fines (silt, clay, muck): 50	Artificial:
Cobble: 20	Sand:	Bedrock:	Other:

Score: 3

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓												
Overhanging Vegetation		✓											
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles			✓										
Aquatic Macrophytes				✓									
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1	1	1	1									

Average: 1.0 Score: 1

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☒ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 2

Score: 2

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☑ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-2 SAR No.: S-2-3 Size (L	F): 1270 Date: 2017 Evaluator(s): RW
Stream Type: Intermittent Ecoregion: Cross Timber	Delineation Performed: X Previously Currently
8-Digit HUC: 12060201 Watershed Condition (develope	d, pasture, etc.): Pasture Watershed Size: 710 acres
Aerial Photo Date and Source: 2012 NAIP / Bing	Site Photos: Yes ☐ Representative: ☒ Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? Yes □ No (If no, explain in Notes)
Notes: Based on 2017 site visit, review of aerial photography and data from previous field	delineation (see HDR report dated June 2009). Cattle use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 25	Avg. Banks: 4
Avg. Waters Edge: 8	Avg. Water: 1
Avg. OHWM: 15	Avg. OHWM: 2

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score		
	Floodplain connectivity	4				
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	20.0		
	Sediment deposition	3	X 20			
Diparian buffer condition	Riparian buffer (left bank)	1.6	Sum of bank scores / 10	7.0		
Riparian buffer condition	Riparian buffer (right bank)	1.2	x 25	7.0		
In atroom condition	Substrate composition	4	Sum of metric scores / 10	10.5		
In-stream condition	In-stream habitat	1	x 25	12.5		
Hydrologic condition	Flow regime	2	Sum of metric scores / 8	12.5		
Hydrologic condition	Channel flow status	2	x 25	12.5		
	52					
Additional points for limited						
	L R □ □ Dominated by native trees greater than 24-inch diameter at breast height					
	ast (i.e., acorns and nuts) produ					
Sum of overall TXR	52					

Representative Site Photograph:



SAR S-2-3 facing downstream.

Project/Site Name/No.: Tu				
Stream ID/Name: S-2	SAR No.: 5	S-2-3 Size (LF): 1270	Date: 2017 Eval	uator(s): RW
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently
8-Digit HUC: 12060201				
Aerial Photo Date and Sou	rce: 2012 NAIP / Bing	Site Photos: _\	res Repre	esentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
3	25	Avg. Bank		
Avg. Waters Edge: 8		Avg. Wate		
Avg. OHWM: 1	5	Avg. OHW	/M: 2	
			and data from preveuse. In-stream habi	
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	(4)	3	2	1
				Score: 4
Bank Condition	-			0
Left Bank Active Erosion:			% Average: <u>5.</u>	0
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artifici	ial:		
Sediment Deposition				Score: <u>5</u>
	hottom covered by excess	ive sediment denosition: h	ars with established vegeta	ation (5)
	•	·	stablished bars with indicate	` '
sediments (4)	•			
			rate deposition on old bars he channel bottom and a l	
· ·	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of the	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	` '
			<u> </u>	Score: 3

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank					Buffer Distan	
	C	1/	1	_	Danasatana	

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, live oak, Texas ash, Ashe juniper	70	Mix	High	2	60	1.2
2. Brush with Ashe juniper and mesquite	50	Undesirable	High	1	40	0.4
3.						
4.						
5.						

Score: 1.6____

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, live oak, Texas ash, Ashe juniper	70	Mix	High	2	40	0.8
2. Brush with Ashe juniper and mesquite	30	Undesirable	High	1	40	0.4
3. Trail and separated	0	-	Intense	0	20	0
4.						
5.						

Score: 1.2

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 20	Gravel: 20	Fines (silt, clay, muck): 30	Artificial:
Cobble: 30	Sand:	Bedrock:	Other:

Score: 4___

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓												
Overhanging Vegetation		✓											
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles			✓										
Aquatic Macrophytes				✓									
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1	1	1	1									

Average: 1.0 Score: 1

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☒ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 2

Score: 2____

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
🗵 Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Typ	pe: ▼ Fill/Impact (Linear Non-linear) Mitigation/Conservation
Stream ID/Name: S-3 SAR No.: S-3-1 Si	ze (LF): 1,230 Date: 2017 Evaluator(s): RW
Stream Type: Ephemeral Ecoregion: Cross Ti	mbers
8-Digit HUC: 12060201 Watershed Condition (deve	eloped, pasture, etc.): Pasture, Impoundment Watershed Size: 140 acres
	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic	c/hydrologic conditions present? ☒ Yes ☐ No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous field delined	ation (see HDR report dated June 2009). Cattle use. In-stream habitat estimated. Minor pooling.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 15	Avg. Banks: 5
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 5	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	2		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	15.0
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.9	Sum of bank scores / 10	0.5
Riparian buffer condition	Riparian buffer (right bank)	1.9	x 25	9.5
In atroom condition	Substrate composition	3	Sum of metric scores / 10	10.0
In-stream condition	In-stream habitat	1	x 25	10.0
Lludrologia condition	Flow regime	1	Sum of metric scores / 8	6.3
Hydrologic condition	Channel flow status	1	x 25	0.3
	Sum of core e	lement scores = c	overall TXRAM stream score	41
	habitats = overall TXRAM strear	m score x 0.025 f	or each bank (right/left) if:	
L R Dominated by native	0			
Dominated by hard m				
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	41

Representative Site Photograph:



Facing downstream near the downstream end of the existing SAR.

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ⊠ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation		
Stream ID/Name: S-3	SAR No.: S	S-3-1 Size (LF): 1,230	Date: 2017 Eval	uator(s): _RW		
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently		
8-Digit HUC: 12060201 Watershed Condition (developed, pasture, etc.): Pasture, Impoundment Watershed Size: 140 acres						
Aerial Photo Date and Source: 2014 NAIP / Bing Site Photos: Yes Representative: ☑ Yes □ No						
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)		
Stream Characteristics						
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)			
Avg. Bank to Bank: 1	5	Avg. Bank	is: 5			
Avg. Waters Edge: -		Avg. Wate	er: -			
Avg. OHWM: 5	5	Avg. OHW	/M: 1			
Based on revi	Based on review of aerial photography and data from previous field delineation (see HDR report dated June 2009). Cattle use. In-stream habitat estimated. Minor pooling.					
CHANNEL CONDITION Floodplain Connectivity				<i>(</i>		
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
_	,	at isolated areas.				
5	4	3	(2)	1 Score: 2		
Bank Condition						
Left Bank Active Erosion:	20 % Right	Bank Active Erosion: 20	% Average: 20	0.0		
	tion: X Natural Artifici					
				Score: 3		
Sediment Deposition						
Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)		
 ≥ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) 						
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
☐ 60–80% of the botton in-stream structures (2)	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at		
` '	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)		
				Score: 4		

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank						Buffer Distance	ce: <u>32.5</u>
	Puffor Tuno	Canopy	Vegetation	I and	Score	Percentage	Subtotal

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, Texas ash, Ashe juniper	70	Mix	High	2	90	1.8
2. Trail / Electric distribution line	0	Undesirable	High	1	10	0.1
3.						
4.						
5.						

Score: 1.9

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, Texas ash, Ashe juniper	70	Mix	High	2	90	1.8
2. Trail / Electric distribution line	0	Undesirable	High	1	10	0.1
3.						
4.						
5.						

Score: 1.9

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder:	Gravel: 30	Fines (silt, clay, muck): 50	Artificial:
Cobble: 20	Sand:	Bedrock:	Other:

Score: 3

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓												
Overhanging Vegetation		✓											
Rootmats													
Rootwads													
Woody/Leafy Debris			✓										
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1	1	1										

Average: 1.0 Score: 1

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☒ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 1

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
🗵 Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type	e: ⊠ Fill/Impact (☐ Linear ⊠ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-4 SAR No.: S-4-1 Siz	e (LF): 1,177 Date: 2017 Evaluator(s): RW
Stream Type: Ephemeral Ecoregion: Cross Tir	mbers Delineation Performed: ⊠ Previously ☐ Currently
	loped, pasture, etc.): Pasture, Impoundment Watershed Size: 55 acres
	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic,	/hydrologic conditions present? ⊠ Yes ☐ No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation (see HDR r Notes: down-cutting below.	eport dated June 2009). Cattle use. In-stream habitat estimated. Flows through culvert under FM 4 with heavy
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 10	Avg. Banks: 4
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 3	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score Core Element Score Calculation		Core Element Score
	Floodplain connectivity	2		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	15.0
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.9	Sum of bank scores / 10	0.5
Riparian buffer condition	Riparian buffer (right bank)	1.9	x 25	9.5
In atroom condition	Substrate composition	3	Sum of metric scores / 10	7.5
In-stream condition	In-stream habitat	0	x 25	7.5
Lludrologia condition	Flow regime	0	Sum of metric scores / 8	0.0
Hydrologic condition	Channel flow status	0	x 25	0.0
	Sum of core e	lement scores = c	overall TXRAM stream score	32
Additional points for limited L R Dominated by native Dominated by hard m	0			
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	32

Representative Site Photograph:



Facing downstream near the downstream end of the SAR. Note the incision and bank erosion.

Project/Site Name/No.: _T	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation	
	SAR No.: <u>S-4-1</u> Size (LF): <u>1,177</u> Date: <u>2017</u> Evaluator(s): <u>RW</u>				
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed:	▼ Previously ☐ Currently	
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, etc	c.): Pasture, Impoundment Water	ershed Size: 55 acres	
	urce: 2014 NAIP / Bing				
Stressor(s): Land use	Are normal	climatic/hydrologic condition	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)			ght/Depth (Feet)		
9	10	Avg. Bank			
Avg. Waters Edge: -		Avg. Wate			
Avg. OHWM:	3	Avg. OHW	/M: 1		
under FM 4 w	June 2009). Cattle us rith heavy down-cutti		t estimated. Flows tr	nrough cuivert	
CHANNEL CONDITION Floodplain Connectivity					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
5 1 6 1111				Score: 2	
Bank Condition	20 % 5: 141	D A (' E : 20	0/ A 20	2.0	
Left Bank Active Erosion:			% Average: <u>20</u>		
Bank Protection/Stabiliza	ition: 🗵 Natural 🗌 Artifici	al:			
Sediment Deposition				Score: 3	
	bottom covered by excessi	ive sediment denosition: h	are with petablished vegets	ation (5)	
	n covered by excessive sec	· ·	=		
	m covered by excessive sensits at in-stream structures				
☐ 60–80% of the botton in-stream structures (2)	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at	
☐ Greater than 80% of t	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	` '	
				Score: <u>4</u>	

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Buffer Typ	е			Cano Cov		Vegeta Commi		Land Use	Scor	е	Percentage of Area	Subtota
1. Woods with cedar elm, Texas a	ash, Ashe juniper			70		Mix		High	2		95	1.9
2. Road	,	, r ·		0	-	-	-	Intensive	0		5	0
3.												
4.												
5.												
								l	ı		Sco	re: 1.9
Right Bank <i>Buffer Typ</i>	е			Cano		Vegeta		Land Use	Scor	е	Percentage of Area	Subtota
1. Woods with cedar elm, Texas as	h Acho ii	ıninor		70		Commi Mix		High	2	1	95	1.9
2. Road	ii, Asiie ji	ıı ııheı		0	-	IVIIX			0	-		1
3.				- 0		-		Intensive	U	+	5	0
4.									-	+		
5.				-						+		
<u>. </u>											800	re: 1.9
N-STREAM CONDITION Substrate Composition (estima	ite perc	entages	s)								300	ле. <u>пэ</u>
Boulder:	Gravel		-/		Fir	nes (silt, o	clay, n	nuck): 60	Art	tificia	ıl:	
Cobble: 10	Sand:					edrock:		, 00	Otl	her:		
n-stream Habitat (check all hal	hitat tyn	es that	are nre	sent)							Sco	ore: 3
Habitat Type	T1	T2	T3	T4	<i>T</i> 5	<i>T</i> 6	<i>T</i> 7	T8	T9	T10	T11 T	12 T13
Undercut Banks												
Overhanging Vegetation												
Rootmats												
Rootwads												
Woody/Leafy Debris												
Boulders/Cobbles												
Aquatic Macrophytes												
Riffle/Pool Sequence												
Artificial Habitat Enhancement												
Other												
Total No. Present	0											
Total No. 1 Tesent	0								Aver	ado.	00 800	ore: <u>0</u>
IYDROLOGIC CONDITION Flow Regime									Avei	aye.	<u></u> 300	ле. <u> </u>
☐ Noticeable surface flow pres	ent (4)					solated po	ools ar	nd no evide	nce of s	surfa	ce or interstit	ial flow (1
☐ Continual pool of water but la		oticeahl	e flow (:	3)		-					interstitial fl	•
☐ Isolated pools and interstitial	_		•	- /	د ن	. ,	J. I		poc	01		(=)
I isolated pools and interstitial	เอนมอนเ	iace) ill) VV (<i>∠</i>)								C	ro. C
Channel Flow Status											Sco	ore: <u>0</u>
								_				
☐ Water covering greater than	75% of t	the chai	nnel bot	tom widt	h; les	s than 25	% of c	hannel sub	strate is	s exp	osed (4)	
											` '	
☐ Water covering 50–75% of the			om width			channel s		te is expos		·	,	

Page 2 of 2

Score: 0

☒ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project	Type: ☒ Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: <u>S-5</u> SAR No.: <u>S-5-1</u>	Size (LF): 239 Date: 2017 Evaluator(s): RW
Stream Type: Ephemeral Ecoregion: Cross	S Timbers Delineation Performed: ☑ Previously ☐ Currently
8-Digit HUC: 12060201 Watershed Condition (d	developed, pasture, etc.): Pasture, Pond Watershed Size: 10 acres
	Site Photos: Yes Representative: ⊠ Yes ☐ No
Stressor(s): Land use Are normal clim	natic/hydrologic conditions present? ☒ Yes ☐ No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation (see Notes:	e HDR report dated June 2009). Cattle use. In-stream habitat estimated. Downslope of culvert under FM 4 with heavy erosion.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 15	Avg. Banks: 10
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 3	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	· · · · · · · · · · · · · · · · · · ·			
Channel condition	Bank condition	1	Sum of metric scores / 15 x 25	11.7	
	Sediment deposition	5	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	40.0	
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	10.0	
In atroom condition	Substrate composition	3	Sum of metric scores / 10	7.5	
In-stream condition	In-stream habitat	0	x 25	7.5	
Lludrologia condition	Flow regime	0	Sum of metric scores / 8	0.0	
Hydrologic condition	Channel flow status	0	x 25	0.0	
	Sum of core e	lement scores = c	overall TXRAM stream score	29	
Additional points for limited L R Dominated by native Dominated by hard m	0				
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	29	

Representative Site Photograph:



Facing downstream near the middle of the SAR. Note the steep banks and erosion.

Project/Site Name/No.:	Turkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear)	☐ Mitigation/Conservation
Stream ID/Name: S-5	SAR No.:	S-5-1 Size (LF): 239	Date: 2017 Eva	luator(s): RW
Stream Type: Ephemera	Ecoregion: Cro	oss Timbers	Delineation Performed:	▼ Previously □ Currently
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Pond Wat	ershed Size: 10 acres
Aerial Photo Date and So	ource: 2014 NAIP / Bing	Site Photos: _\	res Rep	resentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ I	No (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
Avg. Bank to Bank:	15	Avg. Bank		
Avg. Waters Edge:	-	Avg. Wate		
Avg. OHWM:	3	Avg. OHW	/M: 1	
report dated	view of aerial photogr June 2009). Cattle us with heavy erosion.			
CHANNEL CONDITION Floodplain Connectivit	у			
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: 1
Left Bank Active Erosio	n: ⁴⁰ % Right	Bank Active Erosion: 40	% Average: ⁴	0.0
	zation: 🗵 Natural 🗌 Artific		/0 / 1101@got _	
Barner Totolatori/Otabiliz				Score: 1
Sediment Deposition				
■ Less than 20% of the less than 20% of th	e bottom covered by excess	ive sediment deposition; ba	ars with established veget	ation (5)
20–40% of the botto sediments (4)	om covered by excessive sec	diment deposition; some e	stablished bars with indica	ators of recently deposited
	om covered by excessive so cosits at in-stream structures			
☐ 60–80% of the botto in-stream structures (2)	om covered by excessive se	ediment deposition; newly o	created bars prevalent; he	eavy sediment deposits at
☐ Greater than 80% of	f the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	annel (1)
				Score: <u>5</u>

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Left Bank Buffer Typ	ne			Cano	y T	Vegeta	tion	Land	Sco		Buffer Dist		Subtota
Бинег тур	Винет Туре			Cov		Commi		Use	300	ле	of Area	,	วนมเบเล
1. Woods with cedar elm, Texas as	h, hackb	erry, Ash	ne juniper	70)	Mix		High	2		100		2
2.													
3.													
4.													
5.													
Right Bank											S	core:	2.0
Buffer Тур	ре			Cano Cov		Vegeta Commi		Land Use	Sco	ore	Percentag of Area	je s	Subtota
1. Woods with cedar elm, Texas as	h, hackbe	rry, Asje	juniper	70)	Mix		High	2		100		2
2.													
3.													
4.													
5.												_	
									-1		S	core:	2.0
N-STREAM CONDITION Substrate Composition (estima	ite perc	entages	s)										
Boulder:	Grave		- /		Fin	nes (silt, d	clay, m	uck): ₆₀	Α	rtificia	ıl:		
Cobble: 10	Sand:					drock:		,	Other:				
	1										S	core:	3
n-stream Habitat (check all ha Habitat Type	bitat typ	es that	t are pres	sent) T4	T5	T6	T7	T8	<i>T</i> 9	T10	T11	T12	T13
	11	12	73	14	10	10	17	10	13	110	111	112	110
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0												
HYDROLOGIC CONDITION Flow Regime									Ave	erage:	<u>0.0</u> S	core:	0
☐ Noticeable surface flow pres	ent (4)				☐ Is	olated po	ools and	d no evide	ence of	surfa	ce or inter	stitial 1	flow (1)
☐ Continual pool of water but la		oticeahl	le flow (3))		-					interstitia		
☐ Isolated pools and interstitial	_			,	. ح	ry orianin	or arra i	0500. 1	abio pe	0.0 0.	morotida		(0)
	((=)								S	core:	0
Channel Flow Status													
☐ Water covering greater than	75% of	the chai	nnel botto	om widt	h; less	s than 25	% of ch	nannel sul	ostrate	is exp	osed (4)		
			om width:	25–50		hannel s	ubstrat	e is expos					
☐ Water covering 50–75% of th☐ Water covering 25–50% of th☐	ne chanr	nel botto			% of c			-	sed (3)	·			

Page 2 of 2

Score: 0

☒ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turke	ey Peak Project Type: ⊠ F	ill/Impact (☐ Linear 🗵 Non-li	near)
Stream ID/Name: S-6	SAR No.: <u>S-6-1</u> Size (LF):	. 1,394 _{Date:} 2017	Evaluator(s): RW
Stream Type: Ephemeral	Ecoregion: Cross Timbers	Delineation Perfo	rmed: X Previously Currently
8-Digit HUC: 12060201	Watershed Condition (developed,	pasture, etc.): Pasture	Watershed Size: 80 acres
Aerial Photo Date and Source:	2014 NAIP / Bing Site	e Photos: Yes	_ Representative: X Yes ☐ No
Stressor(s): Land use	Are normal climatic/hydrol	logic conditions present? X Ye	es No (If no, explain in Notes)
Notes: Based on review of aerial photograp	ohy and data from previous field delineation (see HDR rep	port dated June 2009). Cattle use. In-stream ha	bitat estimated. Minor pooling from recent rain.
Stream Characteristics			
Stream Width (Feet)		Stream Height/Depth (Feet)	
Avg. Bank to Bank: 6		Avg. Banks: 3	
Avg. Waters Edge: -		Avg. Water: -	
Avg. OHWM: 2		Avg. OHWM: 1	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score				
	Floodplain connectivity 3							
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3				
	Sediment deposition	4	X 20					
Dinarian buffer condition	Riparian buffer (left bank)	1.9	Sum of bank scores / 10	0.5				
Riparian buffer condition	Riparian buffer (right bank)	1.9	x 25	9.5				
In atroom condition	Substrate composition	3	Sum of metric scores / 10	10.0				
In-stream condition	In-stream habitat	1	x 25	10.0				
Hydrologic condition	Flow regime	1	Sum of metric scores / 8	6.3				
Hydrologic condition	Channel flow status	1	x 25	0.3				
	Sum of core e	lement scores = c	overall TXRAM stream score	44				
	habitats = overall TXRAM stream	m score x 0.025 f	or each bank (right/left) if:					
L R	0							
	 ☐ Dominated by native trees greater than 24-inch diameter at breast height ☐ Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata 							
	AM stream score and additional			44				

Representative Site Photograph:



Facing upstream near the downstream end of the SAR. Note the murky water pooled in this reach from runoff of recent rain.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation
Stream ID/Name: S-6	SAR No.: S	S-6-1 Size (LF): 1,394	Date: 2017 Eval	uator(s): RW
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed:	▼ Previously ☐ Currently
8-Digit HUC: 12060201				
Aerial Photo Date and Sou	rce: 2014 NAIP / Bing	Site Photos: _\	res Repr	esentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
Avg. Bank to Bank: 6	i	Avg. Bank	(S: 3	
Avg. Waters Edge: -		Avg. Wate		
Avg. OHWM: 2		Avg. OHW	/M: 1	
			previous field deline t estimated. Minor p	
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
		at isolated areas.		4
5	4	(3)	2	1 Score: <u>3</u>
Bank Condition				
Left Bank Active Erosion:	10 % Right	Bank Active Erosion: 10	% Average: 10	0.0
	tion: 🗵 Natural 🗌 Artific			
	_			Score: 4
Sediment Deposition				
Less than 20% of the	bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)
	covered by excessive sec	diment deposition; some e	stablished bars with indica	tors of recently deposited
40–60% of the botton			rate deposition on old bar he channel bottom and a l	
☐ 60–80% of the bottom in-stream structures (2)	n covered by excessive se	diment deposition; newly of	created bars prevalent; he	avy sediment deposits at
` '	ne bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
				Score: 4

Page 1 of 2

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank

Buffer Distance: 28.0

				bullet Distant	Je. <u>20.0</u>
Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
70	Mix	High	2	90	1.8
0	Undesirable	High	1	10	0.1
				Sco	re: _1.9
	Cover	Cover Community 70 Mix	Cover Community Use 70 Mix High	Cover Community Use 70 Mix High 2	Canopy Cover Vegetation Community Land Use Score of Area 70 Mix High 2 90 0 Undesirable High 1 10

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, Texas ash, Ashe juniper	70	Mix	High	2	90	1.8
2. Trail / Electric distribution line	0	Undesirable	High	1	10	0.1
3.						
4.						
5.						

Score: 1.9

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder:	Gravel: 30	Fines (silt, clay, muck): 50	Artificial:
Cobble: 20	Sand:	Bedrock:	Other:

Score: 3

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation	✓												
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1												

Average: 1.0 Score: 1

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☒ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 1

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
🗵 Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey	/ Peak Project Type: 🗵	☑ Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservati
Stream ID/Name: S-7	SAR No.: S-7-1 Size (L	_F): <u>221</u> Date: <u>2017</u> Evaluator(s): <u>RW</u>
Stream Type: Ephemeral	Ecoregion: Cross Timbe	ers Delineation Performed: ✓ Previously ☐ Currer
8-Digit HUC: 12060201	_ Watershed Condition (develope	ed, pasture, etc.): Pasture, Pond Watershed Size: 50 acres
Aerial Photo Date and Source: 2	2014 NAIP / Bing	Site Photos: Yes Representative: ⊠ Yes □ I
Stressor(s): Land use	Are normal climatic/hyd	drologic conditions present? 🗵 Yes 🗌 No (If no, explain in Note
Notes:	d data from previous field delineation (see HDR report d	dated June 2009). Cattle use. In-stream habitat estimated. Downslope of culvert under FM 4 with heavy eros
Stream Characteristics		
Stream Width (Feet)		Stream Height/Depth (Feet)
Avg. Bank to Bank: 10		Avg. Banks: 8
Avg. Waters Edge: -		Avg. Water: -
Avg. OHWM: 1		Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	1		
Channel condition	Bank condition	1	Sum of metric scores / 15 x 25	11.7
	Sediment deposition	5	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	40.0
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	10.0
In-stream condition	Substrate composition	1	Sum of metric scores / 10	2.5
	In-stream habitat	0	x 25	2.5
Lludrologia condition	Flow regime	0	Sum of metric scores / 8	0.0
Hydrologic condition	Channel flow status	0	x 25	0.0
	Sum of core e	lement scores = c	overall TXRAM stream score	24
Additional points for limited L R	habitats = overall TXRAM stream	m score x 0.025 fo	or each bank (right/left) if:	
Dominated by native	trees greater than 24-inch diamonat (i.e., acorns and nuts) produ	•		0
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	24

Representative Site Photograph:



S-7-1 facing downstream (south).

Project/Site Name/No.: _	Turkey Peak Pro	ject Type: ⊠ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation
Stream ID/Name: S-7	SAR No.: 5	S-7-1 Size (LF): 221	Date: 2017 Eva	luator(s): RW
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed:	X Previously Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Pond Wat	ershed Size: 50 acres
Aerial Photo Date and Sc	ource: 2014 NAIP / Bing	Site Photos: _\	res Repr	resentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	No (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
Avg. Bank to Bank:	10	Avg. Bank		
Avg. Waters Edge:	<u>-</u>	Avg. Wate		
Avg. OHWM:	1	Avg. OHW	/M: 1	
report dated	view of aerial photogr June 2009). Cattle us with heavy erosion.			
CHANNEL CONDITION Floodplain Connectivity	/			
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: 1
Left Bank Active Erosion	o: 40 % Pight	Bank Active Erosion: 40	% Average: 4	0.0
	ation: 🗵 Natural 🗌 Artific			
Darik i Totection/Otabiliz	ation. Minatural Million	ai		Score: 1
Sediment Deposition				
☑ Less than 20% of the	e bottom covered by excess	ive sediment deposition; ba	ars with established veget	ation (5)
20–40% of the botto sediments (4)	m covered by excessive sec	diment deposition; some es	stablished bars with indica	itors of recently deposited
	om covered by excessive so posits at in-stream structures			
in-stream structures (2)	om covered by excessive se		·	
Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	• •
				Score: <u>5</u>

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Left Bank Buffer Type				Cano	ру	Vegeta		Land	Sco		Buffer Distander Percentage		Subtotal	
				Cov	-	Commu		Use			of Area			
1. Woods with cedar elm, hackber	ry			70		Mix		High	2	2	100		2	
2.														
3.														
4.														
5.														
Right Bank											٤	core:	2.0	
Buffer Тур	е			Cano		Vegeta: Commu		Land Use	Sco	ore	Percentag of Area	ge S	Subtota	
1. Woods with cedar elm, hackberry	/			70		Mix		High	2	2	100		2	
2.														
3.														
4.														
5.										1				
N-STREAM CONDITION Substrate Composition (estima			s)				_					core:	2.0	
Boulder:	Gravel	:			Fines (silt, clay, muck): 100				rtificia	al:				
Cobble:	Sand:				Ве	drock:	k: Other:					Score: 1		
Habitat Type Undercut Banks	T1	T2	T3	T4	T5	T6	T7	T8	Т9	T10	T11	T12	T1:	
Overhanging Vegetation	1													
Rootmats	+													
Rootwads														
Woody/Leafy Debris	+													
Boulders/Cobbles														
Aquatic Macrophytes														
Riffle/Pool Sequence	1													
Artificial Habitat Enhancement	1					+		+ +			+ -			
Other														
Total No. Present	-													
Total No. Fresent	0								Λ.,,			core:		
IYDROLOGIC CONDITION									7 ()	erage:				
					☐ Is	olated po	ols an	d no evide	nce of	surfa	ce or inter	stitial f	-	
Flow Regime Noticeable surface flow pres		oticeabl	e flow (3	3)		ry channe	el and	no observa	able po	ools o	r interstitia	I flow ((0)	
Flow Regime Noticeable surface flow pres Continual pool of water but la	acking n		-	3)		ry channe	el and	no observa	able po	ools o	r interstitia	l flow ((0)	
Flow Regime ☐ Noticeable surface flow pres ☐ Continual pool of water but la ☐ Isolated pools and interstitial	acking n		-	3)		ry channe	el and	no observa	able po	ools o		l flow (
Flow Regime Noticeable surface flow pres Continual pool of water but later la	acking no	face) flo	ow (2)		X Di						S			
Flow Regime ☐ Noticeable surface flow pres ☐ Continual pool of water but la ☐ Isolated pools and interstitial	acking no (subsur	face) flo	nnel bott	om widt	x Di	s than 259	% of cl	hannel sub	ostrate	is exp	S			

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Score: 0

☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)

☒ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-8 SAR No.: S-8-1 Size (L	F): 1,021 Date: 2017 Evaluator(s): RW
Stream Type: Ephemeral Ecoregion: Cross Timber	Delineation Performed: X Previously Currently
	d, pasture, etc.): Pasture, Pond Watershed Size: 350 acres
Aerial Photo Date and Source: 2014 NAIP / Bing	
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? X Yes No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous field delineation (see HDR	report dated June 2009). Cattle use. In-stream habitat estimated. Minor pooling from recent rain.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 12	Avg. Banks: 8
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 3	Avg. OHWM: 2

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	2		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	15.0
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.9	Sum of bank scores / 10	0.5
Riparian buffer condition	Riparian buffer (right bank)	1.9	x 25	9.5
In-stream condition	Substrate composition	4	Sum of metric scores / 10	10.5
	In-stream habitat	1	x 25	12.5
Lludrologia condition	Flow regime	1	Sum of metric scores / 8	6.3
Hydrologic condition	Channel flow status	1	x 25	0.3
	Sum of core e	lement scores = c	overall TXRAM stream score	43
Additional points for limited L R Dominated by native Dominated by hard m	0			
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	43

Representative Site Photograph:



S-8-1 facing upstream (south).

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _Tu	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear)	☐ Mitigation/Conservation
				valuator(s): RW
				: X Previously Currently
8-Digit HUC: 12060201				
Aerial Photo Date and Sou	ırce: 2014 NAIP / Bing	Site Photos: _	res Re	presentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐	No (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
Avg. Bank to Bank: 1	2	Avg. Bank	(S: 8	
Avg. Waters Edge: -		Avg. Wate	er: -	
Avg. OHWM: 3	3	Avg. OHW		
	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.			Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of
		at isolated areas.		
5	4	3	(2)	1
Bank Condition Left Bank Active Erosion:		Bank Active Erosion: 20	% Average:	20.0 <u>20.0</u>
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artifici	ial:		
				Score: 3
Sediment Deposition				
Less than 20% of the	bottom covered by excess	ive sediment deposition; ba	ars with established veg	etation (5)
	n covered by excessive sec	diment deposition; some es	stablished bars with indi	cators of recently deposited
				ars and creating new bars; a lack of other depositional
☐ 60–80% of the botton in-stream structures (2)	n covered by excessive se	diment deposition; newly o	created bars prevalent;	heavy sediment deposits at
☐ Greater than 80% of the	he bottom covered by exce	essive sediment deposition	resulting in aggrading c	hannel (1)

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review. Identify each buffer type and score according to canopy cover, vegetation community, and land u

Left Bank Buffer Type				Can	ygo	Vegeta	ation	Land	Sco		Buffer Distar	Subtota
					er	Commi	unity	Use		,,,,	of Area	Gustota
1. Woods with cedar elm, post oak, Texas ash, Ashe juniper)	Mix	(High	2		90	1.8
2. Trail / Electric distribution line				0		Undesir	able	High	1		10	0.1
3.												
4.												
5.											Sc	ore: 1.9
Right Bank											300	ле. <u></u>
Buffer Тур	е			Cano Cov		Vegeta Commi		Land Use	Sco	ore	Percentage of Area	Subtota
1. Woods with cedar elm, post oak	, Texas a	ash, Ash	e juniper	70)	Mix	(High	2		90	1.8
2. Trail / Electric distribution line				0		Undesir	able	High	1		10	0.1
3.												
4.												
5.												
N-STREAM CONDITION Substrate Composition (estima	uto noro	ontago	c)								Sco	ore: <u>1.9</u>
Boulder: 10	Grave		3)		Fir	nes (silt (clav m	nick). 40	Α	rtificia	ıl·	
Cobble: 20	Sand:	. 30			Fines (silt, clay, muck): 40 Bedrock:				Other:			
- CODDIO. 20	Janu.				Bedrook.				1101.	Sco	ore: 4	
n-stream Habitat (check all ha	bitat typ	es tha	t are pres	sent)								
Habitat Type	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10) T11 7	T12 T13
Undercut Banks												
Overhanging Vegetation	✓											
Rootmats												
Rootwads												
Woody/Leafy Debris												
Boulders/Cobbles												
Aquatic Macrophytes												
Riffle/Pool Sequence												
Artificial Habitat Enhancement												
Other												
Total No. Present	1											
		<u> </u>					I	1	Ave	erage:	1.0 Sc	ore: 1
HYDROLOGIC CONDITION Flow Regime												
☐ Noticeable surface flow pres	ent (4)				X Is	olated po	ools an	ıd no evide	ence of	surfa	ce or intersti	tial flow (1)
☐ Continual pool of water but la	acking n	oticeab	le flow (3)	□ D	ry chann	el and	no observ	able po	ols o	r interstitial fl	ow (0)
☐ Isolated pools and interstitial	_		•	•		-			'			` '
	,522001		\-/								Sco	ore: _1
Channel Flow Status												····
	750/ of	the obc	nnol hatti	om widt	h. los	o than OF	0/. of c	hannal a	hotroto	io ove	acced (4)	
Water covering greater than										is exp	Josea (4)	
☐ Water covering 50–75% of the	ne chanr	nel botto	om width;	25–50	% of c	nannel s	ubstra	te is expos	sed (3)			
☐ Water covering 25–50% of the	_		_									

Page 2 of 2

Score: 1

☐ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak	Project Type: ☒ Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Co	onservation
Stream ID/Name: S-9 SAR No	.: <u>S-9-1</u> Size (LF): <u>1,040</u> Date: <u>2017</u> Evaluator(s): <u>RW</u>	
Stream Type: Ephemeral Ecoregion:	Cross Timbers Delineation Performed: X Previously	☐ Currently
8-Digit HUC: 12060201 Watershed Cor	ndition (developed, pasture, etc.): $\frac{Pasture, Impoundment}{Pasture}$ Watershed Size: 6	50 acres
	Bing Site Photos: Yes Representative: ⊠	
Stressor(s): Land use Are nor	rmal climatic/hydrologic conditions present? ☒ Yes ☐ No (If no, explai	n in Notes)
Notes:	field delineation (see HDR report dated June 2009). Cattle use. In-stream habitat estimated. Minor pooling from	n recent rain.
Stream Characteristics		
Stream Width (Feet)	Stream Height/Depth (Feet)	
Avg. Bank to Bank: 30	Avg. Banks: 10	
Avg. Waters Edge: -	Avg. Water: -	
Avg. OHWM: 3	Avg. OHWM: 1	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	2			
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	16.7	
	Sediment deposition	4	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	9.8	
Riparian buffer condition	Riparian buffer (right bank)	1.9	x 25		
In atroom condition	Substrate composition	3	Sum of metric scores / 10	10.0	
In-stream condition	In-stream habitat	1	x 25		
Hydrologic condition	Flow regime	1	Sum of metric scores / 8	6.3	
	Channel flow status	1	x 25	0.3	
	43				
Additional points for limited					
L R Dominated by native	0				
Dominated by hard m					
Sum of overall TXR	43				

Representative Site Photograph:



Facing upstream near the middle of the SAR.

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation				
Stream ID/Name: S-9	ream ID/Name: <u>S-9</u> SAR No.: <u>S-9-1</u> Size (LF): <u>1,040</u> Date: <u>2017</u> Evaluator(s): <u>RW</u>							
Stream Type: Ephemeral	al Ecoregion: Cross Timbers Delineation Performed: ☑ Previously ☐ Currently							
8-Digit HUC: 12060201 Watershed Condition (developed, pasture, etc.): Pasture, Impoundment Watershed Size: 650 acres								
Aerial Photo Date and Source: 2014 NAIP / Bing Site Photos: Yes Representative: X Yes No								
Stressor(s): Land use	Stressor(s): Land use Are normal climatic/hydrologic conditions present? X Yes No (If no, explain in Notes)							
Stream Characteristics								
Stream Width (Feet)			ght/Depth (Feet)					
3	30	Avg. Bank						
Avg. Waters Edge: -		Avg. Wate						
Avg. OHWM:	3	Avg. OHW	/M: 1					
Based on revi	Based on review of aerial photography and data from previous field delineation (see HDR report dated June 2009). Cattle use. In-stream habitat estimated. Minor pooling from recent rain.							
CHANNEL CONDITION Floodplain Connectivity								
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.				
5	4	3	(2)	1				
	I			Score: 2				
Bank Condition								
Left Bank Active Erosion:	: <u>10</u>	Bank Active Erosion: 10	% Average: <u>10</u>	0.0				
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artifici	ial:						
				Score: 4				
Sediment Deposition								
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5)								
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)								
☐ 60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)								
Greater than 80% of the bottom covered by excessive sediment deposition resulting in aggrading channel (1)								
				Score: 4				

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Left Bank				Cano	אמו	Vegeto	ation	Land			Buffer Dist Percentag		
Buffer Type			Cano		Vegetation Community		Use	Sco	ore	of Area		Subtota	
1. Woods with cedar elm, cottonwood, pecar	can, western soapberry, Ashe juniper			70)	Mix	(High	2		100		2
2.													
3.													
4.													
5.													
2: 14 5											S	core:	2.0
Right Bank				Cano	nnı/	Vegeta	otion	Land			Percentag		
Buffer Typ	oe .			Cov		Commi		Use	Sco	ore	of Area		Subtota
1. Woods with cedar elm, cottonwood, pecar	n, western so	apberry, A	she juniper	70			High	2		90		1.8	
2. Trail / Electric distribution line				0			High	1		10		0.1	
3.													
4.												\top	
5.					+							\dashv	
					1						S	core:	1.9
N-STREAM CONDITION													
Substrate Composition (estima	ate perc	entages	s)										
Boulder: 10	Gravel	:20			Fir	nes (silt, d	clay, m	uck): ₄₀	Α	Artificial:			
Cobble: 20	Sand:	10			Ве	drock:			0	Other:			
	•										S	core:	3
n-stream Habitat (check all ha													
Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	<i>T7</i>	T8	Т9	T10	T11	T12	T13
Undercut Banks	✓												
Overhanging Vegetation		✓											
Rootmats													
Rootwads													
Woody/Leafy Debris			✓										
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1	1	1										
1 1								Ave	erage:	1.0 S	core:	1	
HYDROLOGIC CONDITION													
Flow Regime													
☐ Noticeable surface flow pres	ent (4)				X Is	olated no	nols an	d no evide	ence of	surfa	ce or inters	titial f	low (1)
☐ Continual pool of water but I	٠,	oticeahl	a flow (3)	١		-					r interstitia		
•	_		•)		ry Criaini	Ci aliu	ilo obseiv	able po	JUIS UI	IIICISIIIa	now ((0)
☐ Isolated pools and interstitial	(Subsur	iace) iic)W (Z)										
Ohannal Flaus Otatura											S	core:	1
Channel Flow Status													
☐ Water covering greater than	75% of	the char	nnel botto	om widt	h; less	s than 25	% of cl	nannel sul	bstrate	is exp	osed (4)		
☐ Water covering 50–75% of the	ne chanr	nel botto	m width;	25–50	% of c	hannel s	ubstrat	e is expos	sed (3)				
	no chanr	nel hotto	m width:	50_75	% of c	hannal c	ubetrot	a ic avno	od (2)				
☐ Water covering 25–50% of the	ie chani	ici botte	mii widui,	30-73	/0 OI C	Hallici S	upstiat	c is exhos	seu (2)				

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Score: 1

☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Pe	ak Project Type: ☒ Fill/Im	oact (Linear Non-lir	near)
Stream ID/Name: S-9	SAR No.: S-9-2 Size (LF): 1,0	40 _{Date:} 2017	Evaluator(s): RW
Stream Type: Ephemeral	Ecoregion: Cross Timbers	Delineation Perfor	med: X Previously Currently
8-Digit HUC: 12060201 Wa	tershed Condition (developed, past	ure, etc.): Pasture, Impoundmen	Matershed Size: 650 acres
Aerial Photo Date and Source: 2014			
Stressor(s): Land use	Are normal climatic/hydrologic	conditions present? 🗵 Ye	s \(\sum \text{No (If no, explain in Notes)} \)
Notes:	ata from previous field delineation (see HDR report date	d June 2009). Cattle use. In-stream hat	pitat estimated. Minor pooling from recent rain.
Stream Characteristics			
Stream Width (Feet)	Strea	m Height/Depth (Feet)	
Avg. Bank to Bank: 30	Avg	. Banks: 10	
Avg. Waters Edge: -	Avg	. Water: -	
Avg. OHWM: 3	Avg	. OHWM: 1	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	3			
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25		
	Sediment deposition	4	, X20		
Dinarian buffer condition	Riparian buffer (left bank)	1.9	Sum of bank scores / 10		
Riparian buffer condition	Riparian buffer (right bank)	1.8	x 25	9.3	
1 (196	Substrate composition	3	Sum of metric scores / 10	10.0	
In-stream condition	In-stream habitat	1	x 25		
11 1 1 2 190	Flow regime	1	Sum of metric scores / 8	6.2	
Hydrologic condition	Channel flow status	1	x 25	6.3	
	44				
Additional points for limited					
L R	0				
☐ ☐ Dominated by native☐ ☐ Dominated by hard m					
Sum of overall TXR	44				

Representative Site Photograph:



Facing upstream near the middle of the SAR.

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ⊠ Fill/Impact ([☐ Linear ☒ Non-linear) ☐	☐ Mitigation/Conservation			
Stream ID/Name: S-9	SAR No.: S	S-9-2 Size (LF): 1,040	Date: 2017 Eval	uator(s): RW			
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently			
8-Digit HUC: 12060201							
Aerial Photo Date and Sou	irce: 2014 NAIP / Bing	Site Photos: _	res Repre	esentative: X Yes No			
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)			
Stream Characteristics							
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)				
Avg. Bank to Bank: 3	30	Avg. Bank	s: 10				
Avg. Waters Edge: -	Avg. Water: -						
Avg. OHWM:	3	Avg. OHW	/M: 1				
Based on review of aerial photography and data from previous field delineation (see HDR report dated June 2009). Cattle use. In-stream habitat estimated. Minor pooling from recent rain.							
CHANNEL CONDITION Floodplain Connectivity							
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.			
		floodplain or bankfull benches at isolated areas.	benches.				
5	4	(3)	2	1 Score: 3			
Bank Condition				0001C. <u></u>			
Left Bank Active Erosion:	10 % Right	Bank Active Erosion: 10	% Average: 10	0.0			
	tion: ☒ Natural ☐ Artifici		/// /tvc/age				
Barik i Totootion/OtabinZa	non. Matarar			Score: 4			
Sediment Deposition				00010.			
Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)			
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)							
□ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)							
☐ 60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)							
Greater than 80% of the bottom covered by excessive sediment deposition resulting in aggrading channel (1)							
				Score: 4			

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank

Buffer Distance: 40.0

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, cottonwood, pecan, western soapberry, Ashe juniper	70	Mix	High	2	90	1.8
2. Trail / Electric distribution line	0	Undesirable	High	1	10	0.1
3.						

 3.

 4.

 5.

Score: 1.9

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, cottonwood, pecan, western soapberry, Ashe juniper	70	Mix	High	2	80	1.6
2. Trail / Electric distribution line	0	Undesirable	High	1	20	0.2
3.						
4.						
5.						

Score: 1.8

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 40	Artificial:
Cobble: 10	Sand: 10	Bedrock:	Other:

Score: 3

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓												
Overhanging Vegetation		✓											
Rootmats													
Rootwads													
Woody/Leafy Debris			✓										
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1	1	1										

Average: 1.0 Score: 1

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	⊠ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 1

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
🗵 Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turke	ey Peak Project Type: [Fill/Impact (☐ Linear ☒ Non-I	inear)
Stream ID/Name: S-9	SAR No.: S-9-3 Size (LF): 1,082 Date: 2017	_ Evaluator(s): RW
Stream Type: Ephemeral	Ecoregion: Cross Timb	pers Delineation Perfo	ormed: X Previously Currently
8-Digit HUC: 12060201	Watershed Condition (develor	ped, pasture, etc.): Pasture, Impoundment	ent Watershed Size: 650 acres
			_ Representative: X Yes ☐ No
Stressor(s): Land use	Are normal climatic/hy	drologic conditions present? X Y	es No (If no, explain in Notes)
Notes:Based on review of aerial photograph	phy and data from previous field delineation (see HI	DR report dated June 2009). Cattle use. In-stream h	abitat estimated. Minor pooling from recent rain.
Stream Characteristics			
Stream Width (Feet)		Stream Height/Depth (Feet)	
Avg. Bank to Bank: 30		Avg. Banks: 10	
Avg. Waters Edge: -		Avg. Water: -	
Avg. OHWM: 3		Avg. OHWM: 1	

Scoring Table

Core Element	ement Metric Metric Score Core Element Score Calculation		Core Element Score	
	Floodplain connectivity	4		
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	20.0
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	40.0
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	10.0
In atroom condition	Substrate composition 5 Sum of metric scores /		Sum of metric scores / 10	10 F
In-stream condition	In-stream habitat	0	x 25	12.5
Lludrologia condition	Flow regime	1	Sum of metric scores / 8	6.3
Hydrologic condition	Channel flow status	1	x 25	0.3
	49			
Additional points for limited L R Dominated by native Dominated by hard m	0			
Sum of overall TXR	49			

Representative Site Photograph:



Facing upstream near the middle of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation			
Stream ID/Name: S-9							
				▼ Previously ☐ Currently			
8-Digit HUC: 12060201							
Aerial Photo Date and Sou	ırce: 2014 NAIP / Bing	Site Photos: _	/es Repr	resentative: X Yes No			
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	No (If no, explain in Notes)			
Stream Characteristics							
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)				
Avg. Bank to Bank: 3	30	Avg. Bank	(S: 10				
Avg. Waters Edge: -		Avg. Wate	er: -				
Avg. OHWM: 3	3	Avg. OHW					
	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull				
		floodplain or bankfull benches at isolated areas.	benches.				
5	(4)	3	2	1			
Score: 4 Bank Condition Left Bank Active Erosion: 10% Right Bank Active Erosion: 10% Average: 10.0							
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artifici	ial:					
				Score: 4			
Sediment Deposition							
Less than 20% of the	bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)			
	n covered by excessive sec	diment deposition; some e	stablished bars with indica	tors of recently deposited			
	40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional						
☐ 60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)							
☐ Greater than 80% of the	☐ Greater than 80% of the bottom covered by excessive sediment deposition resulting in aggrading channel (1)						

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

soapberry, Asl soapberry, Asl soapberry, Asl centages) el: 50 : 10 pes that a	she juniper	Cannot Cov 70 0	opy rer	Vegeta Commo Mix Undesir	rable ation unity c	High High Land Use High High High			Percenta of Area 95 5		1.9 0.1
centages) el: 50 : 10 pes that a) are pre	Can Cov 70 0	ppy rer) Fin Be	Vegeta Commu Mix Undesir es (silt, o	ation unity (Land Use High	Score 2	tificia	Percenta of Area 95 5	score:	2.0 Subtota 1.9 0.1
centages) el: 50 : 10 pes that a) are pre	Cov 70 0	Fin Be	Mix Undesir es (silt, odrock:	unity crable	Use High High	2 1	tificia	Percenta of Area 95 5	score:	1.9 0.1
centages) el: 50 : 10 pes that a) are pre	Cov 70 0	Fin Be	Mix Undesir es (silt, odrock:	unity crable	Use High High	2 1	tificia	Percenta of Area 95 5	score:	1.9 0.1
centages) el: 50 : 10 pes that a) are pre	Cov 70 0	Fin Be	Mix Undesir es (silt, odrock:	unity crable	Use High High	2 1	tificia	Percenta of Area 95 5	score:	1.9 0.1
centages) el: 50 : 10 pes that a) are pre	Cov 70 0	Fin Be	Mix Undesir es (silt, odrock:	unity crable	Use High High	2 1	tificia	Percenta of Area 95 5	score:	1.9 0.1
centages) el: 50 : 10 pes that a) are pre	Cov 70 0	Fin Be	Mix Undesir es (silt, odrock:	unity crable	Use High High	2 1	tificia	of Area 95 5	Score:	1.9 0.1
centages) el: 50 : 10 pes that a) are pre	sent)	Fin Be	Mix Undesir es (silt, odrock:	rable	High	1 Ar		5 al:		0.1
el: 50 : 10 pes that a	are pre	sent)	Fin Be	es (silt, drock:			Ar		al:		2.0
el: 50 : 10 pes that a	are pre		Ве	drock:	clay, m				al:		
el: 50 : 10 pes that a	are pre		Ве	drock:	clay, m	uck): ₁₀			al:		
el: 50 : 10 pes that a	are pre		Ве	drock:	clay, m	uck): ₁₀			al:		
el: 50 : 10 pes that a	are pre		Ве	drock:	clay, m	uck): ₁₀			al:		
pes that a			Ве	drock:	clay, m	uck): ₁₀				Score:	5
pes that a				_			Ot	ther:		Score:	5
			<i>T</i> 5	T6						Score.	5
			T5	T6							
				10	T7	T8	T9	T10	T11	T12	T1.
									+		+
1											+
										 	+
									-		+
									-		+
											+
										 	+
										 	+
											+
									+	+	+
											+
	l			1	1	1 1	Ave	rage:		Score:	0
			X Is	olated po	ools an	d no evide	nce of	surfac	ce or inte	rstitial	flow (1
noticeable	e flow (3	3)									
	•	,		,							(-)
	ν-,									Score	1
										20010.	
the char	nel hatt	om wid	h. lees	than 25	0% of al	nannel cul	netrato i	e ovr	nosed (4)		
								a exp	70360 (4)		
						-					
1	the channel botto	the channel bott inel bottom width	the channel bottom widt nel bottom width; 25–50 nel bottom width; 50–75	reprotice the channel bottom width; less and bottom width; 25–50% of chanlel bottom width; 50–75% of chanlel bottom width; 50–	reprotice the channel bottom width; less than 25 anel bottom width; 50–75% of channel some bottom width; 50–75% of channel	roticeable flow (3)	Interpretation of the channel bottom width; less than 25% of channel subtrate is exposinted bottom width; 50–75% of channel substrate is exposinted by the channel substrate is exposinte	Isolated pools and no evidence of someticeable flow (3)	Isolated pools and no evidence of surface noticeable flow (3)	Isolated pools and no evidence of surface or intendiceable flow (3)	Isolated pools and no evidence of surface or interstitial anoticeable flow (3)

Page 2 of 2

Score: 1

☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak	Project Type: Fill/Impact (☐ Linear Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-10 SAR No	.: S-10-1 Size (LF): 1,092 Date: 2017 Evaluator(s): RW
Stream Type: Ephemeral Ecoregion:	Cross Timbers Delineation Performed: ☒ Previously ☐ Currentl
8-Digit HUC: 12060201 Watershed Co	ndition (developed, pasture, etc.): Pasture, Impoundment Watershed Size: 2 sq. mi.
	Bing Site Photos: Yes Representative: ⊠ Yes □ No
Stressor(s): Land use Are no	rmal climatic/hydrologic conditions present? ⊠ Yes ☐ No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous to the state of	field delineation (see HDR report dated June 2009). Cattle and human use. In-stream habitat estimated. Minor pooling.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 40	Avg. Banks: 7
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 12	Avg. OHWM: 2

Scoring Table

Core Element	re Element Metric Metric Score Core Element Score Calculation						
	Floodplain connectivity 2 Sum of metric scores / 15						
Channel condition	15.0						
	Sediment deposition	4	x 25				
Dinarian buffer condition	0.0						
Riparian buffer condition	8.8						
In atroom condition	10 F						
In-stream condition	12.5						
Lludrologia condition	6.3						
Hydrologic condition	0.3						
	43						
Additional points for limited L R Dominated by native Dominated by hard m	0						
	AM stream score and additional			43			

Representative Site Photograph:



Facing downstream near the upper end of the SAR. Note the incision and bank erosion.

Version 1.0 - Final Draft TXRAM STREAM DATA SHEET

D : (/0) N /N T	iurkov Poak	· · · · · · · · · · · · · · ·		¬	
	urkey Peak Pro				
	SAR No.: _				
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed:	▼ Previously □ Currently	
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Wat	ershed Size: 2 sq. mi.	
Aerial Photo Date and Sou	urce: 2014 NAIP / Bing	Site Photos: _\	Yes Rep	resentative: X Yes No	
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ I	No (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		
Avg. Bank to Bank:	40	Avg. Bank	(S: 7		
Avg. Waters Edge:	-	Avg. Wate	er: -		
Avg. OHWM:	12	Avg. OHW	/M: 2		
	Slight incision and likely having regular (i.e., at least once a year) access to				
benches.	bankfull benches or newly developed floodplains along majority of the reach.	greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
D 10 ""				Score: 2	
Bank Condition Left Bank Active Erosion: 20 % Right Bank Active Erosion: 20 % Average: 20.0					
Bank Protection/Stabilization: Natural Artificial:					
Score: 3					
Sediment Deposition					
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5)					
 ≥ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) 					
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
in-stream structures (2)	m covered by excessive se		·		
☐ Greater than 80% of the bottom covered by excessive sediment deposition resulting in aggrading channel (1)					

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3). Left Bank Buffer Distance: 45.0

Cit Bank					Duller Distant	JC. 40.0
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Texas ash, Ashe juniper	70	Mix	High	2	70	1.4
2. Pasture	20	Undesirable	High	1	30	0.3
3.						
4.						
5.						
	•	•	•	•	Sco	re: <u>1.7</u>

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Texas ash, Ashe juniper	70	Mix	High	2	80	1.6
2. Pasture	20	Undesirable	High	1	20	0.2
3.						
4.						
5.						

Score: 1.8

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 40	Fines (silt, clay, muck): 30	Artificial:
Cobble: 20	Sand:	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓												
Overhanging Vegetation		✓											
Rootmats													
Rootwads													
Woody/Leafy Debris			✓										
Boulders/Cobbles				✓									
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1	1	1	1									

Score: 1 Average: 1.0

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☒ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 1

C

	Score: 1
Channel Flow Status	
☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)	
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
🗵 Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is	exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project/Site Name/No.:	roject Type: ☑ Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-10 SAR No.:	S-10-2 Size (LF): 1,092 Date: 2017 Evaluator(s): RW
Stream Type: Ephemeral Ecoregion: C	Cross Timbers Delineation Performed: ☑ Previously ☐ Currently
	tion (developed, pasture, etc.): Pasture, Impoundment Watershed Size: 2 sq. mi.
	g Site Photos: Yes Representative: ⊠ Yes □ No
Stressor(s): Land use Are norm	al climatic/hydrologic conditions present? X Yes No (If no, explain in Notes)
	ation (see HDR report dated June 2009). Cattle and human use. In-stream habitat estimated. Flows under bridge at Lakeview Dr.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 40	Avg. Banks: 7
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 12	Avg. OHWM: 2

Scoring Table

Core Element	Metric	Core Element Score					
	Floodplain connectivity	3					
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3			
	Sediment deposition	4	, X20				
Dinarian buffer condition	9.0						
Riparian buller condition	Riparian buffer condition Riparian buffer (right bank) 1.9						
la atracas condition	45.0						
In-stream condition	In-stream habitat	1	x 25	15.0			
Lludralagia aanditian	6.3						
Hydrologic condition	Hydrologic condition Channel flow status 1 x 25						
	49						
Additional points for limited							
L R	0						
☐ ☐ Dominated by native☐ ☐ Dominated by hard m							
	AM stream score and additional			49			

Representative Site Photograph:



Facing upstream near the middle of the SAR. Note the rocky substrate.

Version 1.0 - Final Draft TXRAM STREAM DATA SHEET

Project/Site Name/No.:	urkey Peak Pro	ject Type: ⊠ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation		
Stream ID/Name: S-10						
				☑ Previously ☐ Currently		
8-Digit HUC: 12060201 Watershed Condition (developed, pasture, etc.): Pasture, Impoundment Watershed Size: 2 sq. mi.						
Aerial Photo Date and Sou						
Stressor(s): Land use Are normal climatic/hydrologic conditions present? X Yes No (If no, explain in Notes)						
Stream Characteristics						
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)			
Avg. Bank to Bank: 4	10	Avg. Bank	(S: 7			
Avg. Waters Edge: -		Avg. Wate	er: -			
Avg. OHWM:	2	Avg. OHW	/M: 2			
report dated J	iew of aerial photogr lune 2009). Cattle ar eview Dr. Minor pool	nd human use. In-st				
CHANNEL CONDITION Floodplain Connectivity						
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
				Score: 3		
Bank Condition	40			0.0		
Left Bank Active Erosion:		Bank Active Erosion: 10	% Average: <u>1</u>	0.0		
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artifici	al:				
0 11 1 1 11				Score: 4		
Sediment Deposition						
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)						
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
☐ 60–80% of the botton in-stream structures (2)	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	eavy sediment deposits at		
☐ Greater than 80% of t	he bottom covered by exce	ssive sediment deposition	resulting in aggrading cha	annel (1)		
				Score: 4		

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank B	Buffer Distance: 45.0
-------------	-----------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Texas ash, Ashe juniper	70	Mix	High	2	80	1.6
2. Road Right-of-Way / Pasture	20	Undesirable	High	1	10	0.1
3. Road	0	-	Intensive	0	10	0
4.						
5.						
Score: <u>1.7</u>						

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Texas ash, Ashe juniper	70	Mix	High	2	90	1.8
2. Road Right-of-Way / Pasture	20	Undesirable	High	1	5	0.1
3. Road	0	-	Intensive	0	5	0
4.						
5.						

Score: 1.9

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 40	Fines (silt, clay, muck): 10	Artificial:
Cobble: 30	Sand: 10	Bedrock:	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓												
Overhanging Vegetation		✓											
Rootmats													
Rootwads													
Woody/Leafy Debris			✓										
Boulders/Cobbles				✓									
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1	1	1	1									

Average: 1.0 Score: 1

HYDROLOGIC CONDITION

Flow Regime	FI	ow	Red	ıime
-------------	----	----	-----	------

Channel Flow Status	Score
☐ Isolated pools and interstitial (subsurface) flow (2)	Score: 1
Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Noticeable surface flow present (4)	☒ Isolated pools and no evidence of surface or interstitial flow (1)

	Chan	nel	Flow	Status
--	------	-----	------	--------

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
🗵 Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project	ct Type: ☒ Fill/Impact (☐ Linear ☒ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: <u>S-10</u> SAR No.: <u>S-10-</u>	-3 Size (LF): 875 Date: 2017 Evaluator(s): RW
Stream Type: Ephemeral Ecoregion: Cros	ss Timbers Delineation Performed: 🗵 Previously 🗌 Currently
	(developed, pasture, etc.): Pasture, Impoundment Watershed Size: 2 sq. mi.
	Site Photos: Yes Representative: ☒ Yes ☐ No
Stressor(s): Land use Are normal cli	imatic/hydrologic conditions present? ✓ Yes ☐ No (If no, explain in Notes)
	Id delineation (see HDR report dated June 2009). Cattle and human use. In-stream habitat estimated. Portion that parallels FM 4
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 40	Avg. Banks: 7
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 12	Avg. OHWM: 2

Scoring Table

Core Element	Core Element Score						
Channel condition	Channel condition Bank condition 2 Sum of metric scores / 15 x 25						
Dinarian buffer condition	0.0						
Riparian buffer condition	6.3						
In atroom condition	10.0						
In-stream condition	10.0						
Lludrologia condition	6.2						
Hydrologic condition	6.3						
	34						
Additional points for limited L R Dominated by native Dominated by hard m	0						
	AM stream score and additional			34			

Representative Site Photograph:



Facing downstream from the middle of the SAR. Note the previous channelization in the ditch along the road and concrete placed in the channel.

Project/Site Name/No.: _	Furkey Peak Pro	ject Type: 🗵 Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation		
	SAR No.: 5					
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed: [▼ Previously ☐ Currently		
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 2 sq. mi.		
Aerial Photo Date and So	urce: 2014 NAIP / Bing	Site Photos: _\	res Repr	resentative: X Yes No		
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	No (If no, explain in Notes)		
Stream Characteristics						
Stream Width (Feet)			ght/Depth (Feet)			
3	40	Avg. Bank				
Avg. Waters Edge: Avg. OHWM:	12	Avg. Wate Avg. OHW				
	<u></u>	7.1.g. 01.11.				
Based on 2017 site visit, review of aerial photography and data from previous field delineation (see HDR report dated June 2009). Cattle and human use. In-stream habitat estimated. Portion that parallels FM 4 and was channelized along the road in the past.						
CHANNEL CONDITION Floodplain Connectivity	,					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
5 10 10				Score: 1		
Bank Condition Left Bank Active Erosion	30 % Dight	Bank Active Erosion: 30	% Average: <u>3</u>	0.0		
	ation: 🗵 Natural 🗵 Artific		% Average. <u>~</u>			
Barik i Totodion/Otabiliz	auon. Matatai Maritino			Score: 2		
Sediment Deposition						
Less than 20% of the	bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)		
 ∑ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) 						
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
☐ 60–80% of the botto in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	eavy sediment deposits at		
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	annel (1)		
-	·	-	<u> </u>	Score: 4		

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3). Left Bank Buffer Distance: 45.0

Eon Bank					Danoi Diotani	JO
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Texas ash, Ashe juniper	70	Mix	High	2	5	0.1
2. Road Right-of-Way	10	Undesirable	High	1	40	0.4
3. Road	0	-	Intensive	0	55	0

4. 5.

Score: 0.5

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Texas ash, Ashe juniper	70	Mix	High	2	100	2
2.						
3.						
4.						
5.						

Score: 2.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial: 10
Cobble: 20	Sand: 10	Bedrock: 10	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0	0	0	0	0	0	0	0	0				

Average: <u>0.0</u> Score: <u>0</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☒ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 1

Channel Flow Status

Shanner Flow Status
☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
🗵 Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turk	ey Peak Project Type: 2	☑ Fill/Impact (☐ L	inear 🗵 Non-lir	near)
Stream ID/Name: S-10	SAR No.: S-10-4 Size (L	_F): <u>891</u> Dat	e: 2017	Evaluator(s): RW
Stream Type: Ephemeral	Ecoregion: Cross Timbe	ers D	elineation Perfo	rmed: X Previously Currently
8-Digit HUC: 12060201	Watershed Condition (develope	ed, pasture, etc.):	Pasture, Impoundmen	mt Watershed Size: 2 sq. mi.
Aerial Photo Date and Source:	2014 NAIP / Bing			
Stressor(s): Land use	Are normal climatic/hyd	drologic conditions	s present? X Ye	es No (If no, explain in Notes)
Notes: Based on review of aerial photography channelized segment. Minor pooling.	and data from previous field delineation (see HDR report	dated June 2009). Cattle and I	human use. In-stream habit	at estimated. Parallels FM 4 but upstream / away from
Stream Characteristics				
Stream Width (Feet)		Stream Height/	Depth (Feet)	
Avg. Bank to Bank: 40		Avg. Banks:	7	
Avg. Waters Edge: -		Avg. Water:	-	
Avg. OHWM: 12		Avg. OHWM:	2	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	3		
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3
	Sediment deposition	4	, X20	
Dinarian buffer condition	Riparian buffer (left bank)	1.8	Sum of bank scores / 10	0.5
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	9.5
	Substrate composition	4	Sum of metric scores / 10	40.5
In-stream condition	In-stream habitat	1	x 25	12.5
I hudrologio con dition	Flow regime	1	Sum of metric scores / 8	6.3
Hydrologic condition	Channel flow status	1	x 25	6.3
	Sum of core e	lement scores = c	overall TXRAM stream score	47
	habitats = overall TXRAM stream	m score x 0.025 f	or each bank (right/left) if:	
L R	0			
☐ ☐ Dominated by native☐ ☐ Dominated by hard m				
	AM stream score and additional			47

Representative Site Photograph:



Facing upstream near the lower end of the SAR. Note the mix of rock and fine substrates.

Project/Site Name/No.: _Tu	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation				
Stream ID/Name: S-10	SAR No.: S	S-10-4 Size (LF): <u>891</u>	Date: 2017 Eval	uator(s): RW				
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed:	☑ Previously ☐ Currently				
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 2 sq. mi.				
Aerial Photo Date and Source: 2014 NAIP / Bing Site Photos: Yes Representative: X Yes No								
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ✓ Yes ✓ N	lo (If no, explain in Notes)				
Stream Characteristics								
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)					
Avg. Bank to Bank: 4	0	Avg. Bank	(S: 7					
Avg. Waters Edge: -		Avg. Wate	er: -					
Avg. OHWM: 1	2	Avg. OHW	/M: 2					
Notes: Based on review of aerial photography and data from previous field delineation (see HDR report dated June 2009). Cattle and human use. In-stream habitat estimated. Parallels FM 4 but upstream / away from channelized segment. Minor pooling.								
CHANNEL CONDITION Floodplain Connectivity								
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.				
		floodplain or bankfull benches at isolated areas.	benches.					
5	4	3	2	1 Score: 3				
Bank Condition				Score. <u>-</u>				
Left Bank Active Erosion:	10 % Right	Bank Active Erosion: 10	% Average: 10	0.0				
	tion: ☒ Natural ☐ Artific		/// Average					
Dank i Totection/Otabiliza	IIOII. M Natural M Artifici	iai.		Score: 4				
Sediment Deposition				00010.				
Less than 20% of the	bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)				
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)								
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)								
☐ 60–80% of the bottom in-stream structures (2)	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at				
` '	ne bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)				
				Score: 4				

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank

Buffer Distance: 45.0

Left Bank					Duller Distant	JC. 1 J.0
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Texas ash, Ashe juniper	70	Mix	High	2	80	1.6
2. Road Right-of-Way / Pasture	10	Undesirable	High	1	15	0.2
3. Road	0	-	Intensive	0	5	0
4.						
5.						
Score: <u>1.8</u>						

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, Texas ash, Ashe juniper	70	Mix	High	2	100	2
2.						
3.						
4.						
5.						

Score: 2.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 40	Fines (silt, clay, muck): 30	Artificial:
Cobble: 20	Sand:	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓												
Overhanging Vegetation		✓											
Rootmats													
Rootwads													
Woody/Leafy Debris			✓										
Boulders/Cobbles				✓									
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1	1	1	1									

Average: 1.0 Score: 1

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 1

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
🗵 Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turk	ey Peak Project Type: 🗵	Fill/Impact (Linea	Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-11	SAR No.: Size (L	=): <u>553</u> Date: <u>2</u>	D17 Evaluator(s): RW
Stream Type: Ephemeral	Ecoregion: Cross Timbe	rs Deline	ation Performed: X Previously Currently
8-Digit HUC: 12060201	Watershed Condition (develope	d, pasture, etc.): Pastu	re, Impoundment Watershed Size: 100 acres
Aerial Photo Date and Source:			Representative: X Yes \(\square\) No
Stressor(s): Land use	Are normal climatic/hyd	ologic conditions pres	ent? ☒ Yes ☐ No (If no, explain in Notes)
Notes: Based on review of aerial photography	and data from previous field delineation (see HDR report data	ated June 2009). Cattle and human u	se. In-stream habitat estimated. Flows through culvert under FM 4.
Stream Characteristics			
Stream Width (Feet)		Stream Height/Dept	h (Feet)
Avg. Bank to Bank: 10		Avg. Banks: 4	
Avg. Waters Edge: -		Avg. Water: -	
Avg. OHWM: 5		Avg. OHWM: 2	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	3			
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	
	Sediment deposition	4	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	1.7	Sum of bank scores / 10	0.5	
Riparian buffer condition	Riparian buffer (right bank)	1.7	x 25	8.5	
In atroom condition	Substrate composition 4 Sum of metric score		Sum of metric scores / 10	10.0	
In-stream condition	In-stream habitat	0	x 25	10.0	
Lludrologia condition	Flow regime	0	Sum of metric scores / 8	0.0	
Hydrologic condition	Channel flow status	0	x 25	0.0	
	Sum of core e	lement scores = c	overall TXRAM stream score	35	
Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if: L R Dominated by native trees greater than 24-inch diameter at breast height Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata					
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	35	

Representative Site Photograph:



S-11-1 facing downstream (south). Note the dry channel and rocky substrate.

TXRAM STREAM DATA SHEET

Project/Site Name/No.:	urkey Peak Pro	ject Type: ⊠ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation	
	SAR No.: ²				
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [Previously Currently	
	Watershed Condition				
Aerial Photo Date and Sou	urce: 2014 NAIP / Bing	Site Photos: _	⁄es Repr	resentative: X Yes No	
	Are normal				
Stream Characteristics					
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		
Avg. Bank to Bank:	10	Avg. Bank	(S: 4		
Avg. Waters Edge:		Avg. Wate			
	 5	Avg. OHW			
	iew of aerial photogr June 2009). Cattle ar FM 4.				
CHANNEL CONDITION Floodplain Connectivity Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	(3)	2	1	
Bank Condition Left Bank Active Erosion: 20					
Sediment Deposition				Score: 3	
□ Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) □ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) □ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional					
in-stream structures (2)	features (3) Go-80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at				
☐ Greater than 80% of t	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)	

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank					Buffer Distance	ce: 30.0
Buffer Type	Canopy	Vegetation	Land	Score	Percentage	Subtotal

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, Texas ash, Ashe juniper	70	Mix	High	2	80	1.6
2. Road Right-of-Way with bermudagrass	10	Undesirable	High	1	10	0.1
3. Road	0	-	Intensive	0	10	0
4.						
5.						

Score: <u>1.7</u>

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, Texas ash, Ashe juniper	70	Mix	High	2	80	1.6
2. Road Right-of-Way with bermudagrass	10	Undesirable	High	1	10	0.1
3. Road	0	-	Intensive	0	10	0
4.						
5.						

Score: 1.7

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 40	Fines (silt, clay, muck): 30	Artificial:
Cobble: 20	Sand:	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0												

Average: 0.0 Score: 0

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☑ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Secret 0

	Score: <u>0</u>
Channel Flow Status	
☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	exposed (1)
▼ No water present in the channel; 100% of channel substrate exposed (0)	

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project	ject Type: Fill/Impact (☐ Linear Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-12 SAR No.: S-	12-1 Size (LF): 64 Date: 2017 Evaluator(s): RW
Stream Type: Ephemeral Ecoregion: Cr	oss Timbers
	on (developed, pasture, etc.): Pasture, Impoundment Watershed Size: 900 acres
-	Site Photos: Yes Representative: ⊠ Yes □ No
Stressor(s): Land use Are normal	climatic/hydrologic conditions present? ✓ Yes No (If no, explain in Notes)
	on (see HDR report dated June 2009). Cattle and human use. In-stream habitat estimated. Flows through culvert under FM 4. Minor
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 12	Avg. Banks: 5
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 8	Avg. OHWM: 2

Scoring Table

Core Element	Metric	Metric Score Core Element Score Calculation		Core Element Score
	Floodplain connectivity	3		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	15.0
	Sediment deposition	3	X 20	
Diparian buffer condition	Riparian buffer (left bank)	1.8	Sum of bank scores / 10	0.0
Riparian buffer condition	Riparian buffer (right bank)	1.7	x 25	8.8
In atroom condition	Substrate composition	3	Sum of metric scores / 10	10.0
In-stream condition	In-stream habitat	1	x 25	10.0
Hydrologic condition	Flow regime	1	Sum of metric scores / 8	6.3
Hydrologic condition	Channel flow status	1	x 25	0.3
	Sum of core e	lement scores = c	overall TXRAM stream score	40
Additional points for limited				
L R	0			
☐ ☐ Dominated by native ☐ ☐ Dominated by hard m				
	AM stream score and additional			40

Representative Site Photograph:



SAR facing upstream from FM 4 culvert crossing. Note the murky water pooled from recent runoff of rainfall.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation	
Stream ID/Name: S-12	SAR No.: ^S	S-12-1 Size (LF): <u>64</u>	Date: 2017 Eval	uator(s): RW	
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed: 2	Previously Currently	
8-Digit HUC: 12060201					
Aerial Photo Date and Sou	rce: 2014 NAIP / Bing	Site Photos: _\	res Repr	esentative: X Yes No	
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ✓ Yes ✓ N	lo (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		
Avg. Bank to Bank: 1	2	Avg. Bank	(S: 5		
Avg. Waters Edge: -		Avg. Wate	er: -		
Avg. OHWM: 8	}	Avg. OHW	/M: 2		
report dated J	une 2009). Cattle ar	nd human use. In-st	previous field deline ream habitat estima t. SAR for impacted	ted. Flows through	
CHANNEL CONDITION Floodplain Connectivity					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
		at isolated areas.		4	
5	4	(3)	2	Score: <u>3</u>	
Bank Condition					
Left Bank Active Erosion:	20 % Right	Bank Active Erosion: 20	% Average: 20	0.0	
	tion: 🗵 Natural 🗌 Artifici				
				Score: 3	
Sediment Deposition					
Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)	
20–40% of the bottom sediments (4)	covered by excessive sec	diment deposition; some e	stablished bars with indicat	tors of recently deposited	
■ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)					
` '	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)	
				Score: 3	

Page 1 of 2

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 31.0
-----------	-----------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, Texas ash, Ashe juniper	70	Mix	High	2	85	1.7
2. Road Right-of-Way with johnsongrass	10	Undesirable	High	1	10	0.1
3. Road	0	-	Intensive	0	5	0
4.						
5.						

Score: 1.8

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, Texas ash, Ashe juniper	70	Mix	High	2	75	1.5
2. Road Right-of-Way with johnsongrass	10	Undesirable	High	1	20	0.2
3. Road	0	-	Intensive	0	5	0
4.						
5.						

Score: <u>1.7</u>

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder:	Gravel: 20	Fines (silt, clay, muck): 40	Artificial: 10
Cobble: 20	Sand:	Bedrock: 10	Other:

Score: 3

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation	✓												
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1												

Score: 1 Average: 1.0

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☒ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Seeve 4

C

	Score: 1
hannel Flow Status	
☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4	1)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
🗵 Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is	s exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

Page 2 of 2

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak	_ Project Type: ☒ Fill/Impa	act (□ Linear ⊠ Non-li	near)
Stream ID/Name: S-13 SAR N	o.: S-13-1 Size (LF): 1,15	1 Date: 2017	Evaluator(s): RW
Stream Type: Intermittent Ecoregion	n: Cross Timbers	Delineation Perfo	rmed: X Previously Currently
	ondition (developed, pastur	e, etc.): Pasture, Impoundme	Watershed Size: 464 sq. mi.
Aerial Photo Date and Source: 2014 NAIP /			
Stressor(s): Land use Are no	ormal climatic/hydrologic co	onditions present? X Ye	es No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous field channel. Pooling and seepage evident. Crosses Lakeview Dr.	delineation (see HDR report dated June 2009). Eroded channel from Lake Palo Pinto	spillway to confluence with Palo Pinto Creek natural
Stream Characteristics			
Stream Width (Feet)	Stream	Height/Depth (Feet)	
Avg. Bank to Bank: 40	Avg.	Banks: 12	
Avg. Waters Edge: 15	Avg. '	Water: 2	
Avg. OHWM: 25	Avg.	OHWM: 6	<u> </u>

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score				
	Floodplain connectivity	1						
Channel condition	Bank condition	1	Sum of metric scores / 15 x 25	11.7				
	Sediment deposition	5	X 20					
Dinarian buffer condition	Riparian buffer (left bank)	1.3	Sum of bank scores / 10					
Riparian buffer condition	Riparian buffer (right bank)	0.5	x 25	4.5				
In atroom condition	Substrate composition	5	Sum of metric scores / 10	15.0				
In-stream condition	In-stream habitat	1	x 25	15.0				
Hydrologic condition	Flow regime	2	Sum of metric scores / 8	12.5				
Hydrologic condition	Channel flow status	2	x 25	12.5				
	Sum of core e	lement scores = c	overall TXRAM stream score	44				
	habitats = overall TXRAM stream	m score x 0.025 fe	or each bank (right/left) if:					
L R	0							
☐☐☐☐ Dominated by native☐☐☐☐☐ Dominated by hard m								
	Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score							

Representative Site Photograph:



Facing upstream near middle of SAR. Note the high erosion and incision of the spillway channel below Lake Palo Pinto.

	Turkey Peak Pro					
Stream ID/Name: S-13	SAR No.: _	S-13-1 Size (LF): 1,151	Date: 2017 Eval	uator(s): RW		
Stream Type: Intermitten	t Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently		
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 464 sq. mi.		
Aerial Photo Date and S	ource: 2014 NAIP / Bing	Site Photos: _\	res Repr	esentative: X Yes No		
Stressor(s): Land use	Are norma	l climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)		
Stream Characteristics						
Stream Width (Feet)			ght/Depth (Feet)			
Avg. Bank to Bank:	40	Avg. Bank				
Avg. Waters Edge: Avg. OHWM:	15 25	Avg. Wate				
7.vg. 011v1vi.	20					
report dated	view of aerial photogi June 2009). Eroded reek natural channel	channel from Lake F	Palo Pinto spillway to	confluence with		
CHANNEL CONDITION Floodplain Connectivit	у					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
Bank Condition				Score: 1		
	n: <u>50</u> % Right	Bank Active Frosion: 50	% Average: 50	0.0		
	zation: ☒ Natural ☐ Artific					
				Score: 1		
Sediment Deposition						
■ Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5)						
20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)						
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)						
1	f the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)		
				Score: <u>5</u>		

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

-	= =	_	 -	_	•	-
Left Bank					Buffer Distance	ce: <u>70.0</u>

on Bank					Ballol Blotain	30. <u>10.0</u>
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, Ashe juniper, mesquite, balck willow	60	Mix	Moderate	2	50	1.0
2. Right-of-Way and disturbed area with johnsongrass, baccharis	10	Undesirable	High	1	30	0.3
3. Road and Barren	0	-	Intensive	0	20	0
4.						
5.						
Score: 1.3						

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, Ashe juniper, mesquite, balck willow	60	Mix	Moderate	2	10	0.2
2. Right-of-Way and disturbed area with johnsongrass, baccharis	10	Undesirable	High	1	30	0.3
3. Road and Barren	0	-	Intensive	0	60	0
4.						
5.				·		

Score: 0.5

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 30	Gravel: 20	Fines (silt, clay, muck): 10	Artificial:
Cobble: 30	Sand:	Bedrock: 10	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles	✓												
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	1												

Average: 1.0 Score: 1

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☒ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 2

	Score: 2
Channel Flow Status	
☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4	· ·)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☑ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is	exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	: ☑ Fill/Impact (☐ Linear ☑ Non-linear) ☐ Mitigation/Conservation
Stream ID/Name: S-14 SAR No.: S-14-1 Size	e (LF): 345 Date: 2017 Evaluator(s): RW
Stream Type: Ephemeral Ecoregion: Cross Tim	nbers Delineation Performed: ⊠ Previously ☐ Currently
	oped, pasture, etc.): Pasture, Impoundment Watershed Size: 160 acres
	_ Site Photos: Yes Representative: ⊠ Yes ☐ No
Stressor(s): Land use Are normal climatic/h	nydrologic conditions present? X Yes No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation (see HDR rep. Notes: and into spillway channel.	port dated June 2009). Cattle and human use. In-stream habitat estimated. Flows through culvert under Lakeview Dr
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 8	Avg. Banks: 4
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 2	Avg. OHWM: 0.5

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	1		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	13.3
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.1	Sum of bank scores / 10	
Riparian buffer condition	Riparian buffer (right bank)	1.1	x 25	5.5
In atroom condition	Substrate composition	3	Sum of metric scores / 10	7.5
In-stream condition	In-stream habitat	0	x 25	7.5
Lludrologia condition	Flow regime	0	Sum of metric scores / 8	0.0
Hydrologic condition	Channel flow status	0	x 25	0.0
	Sum of core e	lement scores = c	overall TXRAM stream score	26
	habitats = overall TXRAM stream	m score x 0.025 f	or each bank (right/left) if:	
L R Dominated by native	0			
Dominated by hard m				
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	26

Representative Site Photograph:



S-14-1 facing upstream (southwest).

Project/Site Name/No.:	Turkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation		
	SAR No.: 5					
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed: 2	▼ Previously ☐ Currently		
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 160 acres		
	ource: 2014 NAIP / Bing					
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? X Yes \(\Bar{\text{N}} \)	lo (If no, explain in Notes)		
Stream Characteristics						
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)			
Avg. Bank to Bank:	8	Avg. Bank				
Avg. Waters Edge:	-	Avg. Wate				
Avg. OHWM:	2	Avg. OHW	/M: 0.5			
report dated	view of aerial photogr June 2009). Cattle a r Lakeview Dr and int	nd human use. In-st	•	`		
CHANNEL CONDITION Floodplain Connectivity	/					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
5 1 6 W				Score: 1		
Bank Condition	20		20	2.0		
Left Bank Active Erosion			% Average: 20			
Bank Protection/Stabiliz	ation: 🗵 Natural 🗌 Artifici	ial:				
Cadimant Danagitian				Score: 3		
Sediment Deposition	a battam aguarad bu ayagaa	ive andiment deposition, b	are with established vegets	ation (E)		
	e bottom covered by excess m covered by excessive sec	•	_	• •		
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
☐ 60–80% of the botto in-stream structures (2)	om covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at		
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	• •		
				Score: 4		

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank			Buffer Distan	

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, Texas ash, Ashe juniper	70	Mix	High	2	30	0.6
2. Disturbed area with baccharis, black willow, KR bluestem, johnsongrass	50	Undesirable	High	1	50	0.5
3. Road and Barren	0	-	Intensive	0	20	0
4.						
5.						

Score: 1.1

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, Texas ash, Ashe juniper	70	Mix	High	2	30	0.6
2. Disturbed area with baccharis, black willow, KR bluestem, johnsongrass	50	Undesirable	High	1	50	0.5
3. Road and Barren	0	-	Intensive	0	20	0
4.						
5.						

Score: 1.1

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 5	Gravel: 20	Fines (silt, clay, muck): 55	Artificial:
Cobble: 20	Sand:	Bedrock:	Other:

Score: 3

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0												

Average:	0.0	Score: 0	Ī

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☑ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 0

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☒ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak	Project Type: X Fill/Im	oact (□ Linear 🏻 Non-li	near)
Stream ID/Name: S-15 SAR N	lo.: S-15-1 Size (LF): 1,0	70 _{Date:} 2014	_ Evaluator(s): _RW
Stream Type: Ephemeral Ecoregio	n: Cross Timbers	Delineation Perfo	ormed: X Previously Currently
8-Digit HUC: 12060201 Watershed C	ondition (developed, past	ure, etc.): Pasture	Watershed Size: _40 acres
Aerial Photo Date and Source: 2012 NAIP /	Bing Site Pho	otos: Yes	_ Representative: X Yes ☐ No
Stressor(s): Land use Are n	ormal climatic/hydrologic	conditions present? X Ye	es No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous	us field delineation (see HDR report date	d June 2009). Cattle use. In-stream ha	abitat estimated. Flows across gravel ranch road.
Stream Characteristics			
Stream Width (Feet)	Strea	m Height/Depth (Feet)	
Avg. Bank to Bank: 6	Avg	. Banks: 3	
Avg. Waters Edge: -	Avg	. Water: -	
Avg. OHWM: 3	Avg	. OHWM: 1	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score			
	Floodplain connectivity	4					
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	20.0			
	Sediment deposition	4	X 20				
Dinarian buffer condition	Riparian buffer (left bank)	1.2	Sum of bank scores / 10	0.0			
Riparian buffer condition	Riparian buffer (right bank)	1.2	x 25	6.0			
In atroom condition	Substrate composition	5	Sum of metric scores / 10	10 F			
In-stream condition	In-stream habitat	0	x 25	12.5			
Lludrologia condition	Flow regime	0	Sum of metric scores / 8	0.0			
Hydrologic condition	Channel flow status	0	x 25	0.0			
	Sum of core element scores = overall TXRAM stream score						
Additional points for limited L R Dominated by native Dominated by hard m	0						
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	39			

Representative Site Photograph:



Facing downstream near the middle of the SAR. Note the rocky substrate.

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ☒ Fill/Impact ([☐ Linear ☒ Non-linear) [☐ Mitigation/Conservation
Stream ID/Name: S-15	SAR No.: S	S-15-1 Size (LF): 1,070	Date: 2014 Eval	uator(s): RW
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed:	▼ Previously ☐ Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture Wate	ershed Size: 40 acres
Aerial Photo Date and Sou	rce: 2012 NAIP / Bing	Site Photos: _\	Yes Repr	esentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? X Yes \(\Bar{\text{N}} \)	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
Avg. Bank to Bank: 6	;	Avg. Bank	(S: 3	
Avg. Waters Edge: -		Avg. Wate	er: -	
Avg. OHWM: 3	}	Avg. OHW	/M: 1	
			previous field deline t estimated. Flows a	
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5		at isolated areas.	2	4
5	(4)	ა	2	Score: 4
Bank Condition				
Left Bank Active Erosion:	10 % Right	Bank Active Erosion: 10	% Average: 10	0.0
	tion: 🗵 Natural 🗌 Artifici			
Dank i Totection/Otabiliza	Trattara			Score: 4
Sediment Deposition				3001e. <u></u>
☐ Less than 20% of the	bottom covered by excessi	ive sediment deposition: ba	ars with established vegeta	ation (5)
	•	•	stablished bars with indica	` '
sediments (4)				
			rate de position on old bars he channel bottom and a l	
☐ 60–80% of the bottom in-stream structures (2)	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
Greater than 80% of the	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
				Score: 4

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank

Buffer Distance: 28.0

Left Bank					Duller Distant	56. <u>20.0</u>
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, live oak, Texas ash, Ashe juniper	70	Mix	High	2	20	0.4
2. Brush with Ashe juniper and mesquite / Trail	20	Undesirable	High	1	80	0.8
3.						
4.						
5.						
	•				Sco	re: <u>1.2</u>
2.145						

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, post oak, live oak, Texas ash, Ashe juniper	70	Mix	High	2	20	0.4
2. Brush with Ashe juniper and mesquite / Trail	20	Undesirable	High	1	80	0.8
3.						
4.						
5.						

Score: 1.2

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 40	Fines (silt, clay, muck): 20	Artificial:
Cobble: 30	Sand:	Bedrock:	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0												

Average: 0.0 Score: 0

HYDROLOGIC CONDITION

Flow R	Reaime
--------	--------

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☑ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 0

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☒ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.:	Turkey Peak Proje	ect Type: 🗵 Fill/Impa	ct (☐ Linear ☒ No	n-linear)
Stream ID/Name: S-16	SAR No.:	6-1 Size (LF): 101	_{Date:} 2017	Evaluator(s): RW
Stream Type: Intermitt	ent Ecoregion: Cro	ss Timbers	Delineation Pe	rformed: X Previously Currently
8-Digit HUC: 1206020	1 Watershed Conditio	n (developed, pasture	e, etc.): Pasture, Impound	Watershed Size: 400 acres
Aerial Photo Date and So				Representative: X Yes \(\square\) No
Stressor(s): Land use	Are normal of	climatic/hydrologic cor	nditions present? 🗵	Yes No (If no, explain in Notes)
Notes:Based on review of aerial ph	otography and data from previous field delineation	(see HDR report dated June 2009).	Cattle use. In-stream habitat estir	mated. Downstream of impoundment. Some pooling.
Stream Characteristics				
Stream Width (Feet)		Stream	Height/Depth (Feet)	
Avg. Bank to Bank:	25	Avg. E	anks: 8	
Avg. Waters Edge:	-	Avg. V	Vater: -	
Avg. OHWM:	15	Avg. C	HWM: 4	
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score				
	Floodplain connectivity	2						
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	16.7				
	Sediment deposition	4	X 20					
Dinarian buffer condition	Riparian buffer (left bank)	3.0	Sum of bank scores / 10	45.0				
Riparian buffer condition	Riparian buffer (right bank)	3.0	x 25	15.0				
In atroom condition	Substrate composition 1 Sum of metric scores / 10		F.O.					
In-stream condition	In-stream habitat	1	x 25	5.0				
Lludralagia aanditian	Flow regime	2	Sum of metric scores / 8	9.4				
Hydrologic condition	Channel flow status	1	x 25	9.4				
		•						
	46							
Additional points for limited								
L R □ □ Dominated by native	0							
☐ ☐ Dominated by native trees greater than 24-inch diameter at breast height ☐ ☐ Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata								
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	46				

Representative Site Photograph:



Facing downstream near the middle of the SAR.

Project/Site Name/No.: To								
Stream ID/Name: S-16	SAR No.: ⁵	S-16-1 Size (LF): 101	Date: 2017 Eval	uator(s): RW				
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently				
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 400 acres				
Aerial Photo Date and Sou	irce: 2014 NAIP / Bing	Site Photos: _\	res Repre	esentative: X Yes No				
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)				
Stream Characteristics								
Stream Width (Feet)			ght/Depth (Feet)					
3	25	Avg. Bank						
Avg. Waters Edge: -		Avg. Wate						
Avg. OHWM: 1	5	Avg. OHW	/M: 4					
Based on review of aerial photography and data from previous field delineation (see HDR report dated June 2009). Cattle use. In-stream habitat estimated. Downstream of impoundment. Some pooling.								
CHANNEL CONDITION Floodplain Connectivity								
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.				
5	4	3	2	1				
				Score: 2				
Bank Condition								
Left Bank Active Erosion:		Bank Active Erosion: 10	% Average: <u>10</u>	0.0				
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artifici	ial:						
Ocalian and Domocitica				Score: 4				
Sediment Deposition			20 (12.1)	(; (5)				
	·	•	ars with established vegeta	` '				
sediments (4)	covered by excessive sec	diment deposition; some es	stablished bars with indicat	tors of recently deposited				
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)								
☐ 60–80% of the botton in-stream structures (2)	n covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at				
☐ Greater than 80% of the	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)				
				Score: 4				

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Buffer Тур	е			Cano	1	Vegeta		Land	Score	Buffer Distar	Subtota	
1 Weeds with seden also pest sel	. A a b a i			Cov		Commu		Use		of Area	0	
 Woods with cedar elm, post oal . 	k, Asne Ji	ınıper		70)	Mix		Moderate	3	100	3	
3.												
4.												
5.				+								
J.										Sco	ore: <u>3.0</u>	
Right Bank												
Buffer Type			Cano Cov		Vegeta Commu		Land Use	Score	Percentage of Area	Subtota		
1. Woods with cedar elm, post oak,	Ashe jun	iper		70)	Mix		Moderate	3	100	3	
2.												
3.												
4.												
5.												
N-STREAM CONDITION Substrate Composition (estima			s)] F:-	(-:lk			\ \4:£:		ore: 3.0	
Boulder:	Gravel	:			Fines (silt, clay, muck): 100				Artificial:			
Cobble:	Sand:				Be	drock:			Other:			
n-stream Habitat (check all ha	hitat tun	os that	aro nro	seant)						500	ore: <u>1</u>	
Habitat Type	T1	T2	T3	T4	T5	T6	T7	T8	T9 T	10 T11 7	12 T13	
Undercut Banks	+					+		-				
Overhanging Vegetation	✓											
Rootmats	•											
Rootwads												
Woody/Leafy Debris												
Boulders/Cobbles												
Aquatic Macrophytes												
Riffle/Pool Sequence												
Artificial Habitat Enhancement												
Other												
	1											
Total No. Present	1								Averag		ore: 1	
HYDROLOGIC CONDITION Flow Regime Noticeable surface flow pres Continual pool of water but la		oticeabl	e flow (3)		-			nce of sur	face or intersti	tial flow (1	
▼ Isolated pools and interstitial	(subsur	face) flo	ow (2)									
										Sco	ore: 2	
Channel Flow Status												
☐ Water covering greater than	75% of	the chai	nnel bot	tom widt	h; les	s than 25	% of c	hannel sub	strate is e	exposed (4)		
					-							
☐ Water covering 50–75% of the	ne chanr	nel botto	m width	າ: 25–50	% of c	hannel s	ubstra	te is expose	ed (3)			

Page 2 of 2

Score: 1

☐ No water present in the channel; 100% of channel substrate exposed (0)

Appendix B: Stream Data Sheets and Final Scoring Sheets – Reference SARs Existing Condition

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP -	PPMSP Project	Type: Fill/Impact	(☐ Linear ☐ Non-li	near) 🗵 Mitigation/Conservation
Stream ID/Name: RS-1	SAR No.: RS-1-1	Size (LF): 1,301	Date: 12/16/15	Evaluator(s): RW, DT
Stream Type: Intermittent	Ecoregion: Cross	Timbers	Delineation Perfo	rmed: Previously X Currently
8-Digit HUC: 12060201	Watershed Condition (d	developed, pasture,	etc.): woods, pastur	Te Watershed Size: 22 sq. mi.
Aerial Photo Date and Source:	2014 NAIP	Site Photos:	24-30	_ Representative: X Yes ☐ No
NI / A		atic/hydrologic cond	litions present? 🗌 Ye	es X No (If no, explain in Notes)
Notes: Reference reach within the PPMSP (modes) of on-going (but not intense) uncontrolled				tent under normal conditions for year. Some evidence erosion, expected to normalize.
Stream Characteristics				
Stream Width (Feet)		Stream H	eight/Depth (Feet)	
Avg. Bank to Bank: 50		Avg. Ba	nks: 8	
Avg. Waters Edge: 15		Avg. Wa	ater: 1	
Avg. OHWM: 20		Avg. OF	IWM: 3	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score			
	Floodplain connectivity	4					
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	21.7			
	Sediment deposition	5	X 20				
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	0.5			
Riparian buffer condition	Riparian buffer (right bank)	1.8	x 25	9.5			
In atroom condition	Substrate composition	composition 5 Sum of metric scores /		22.5			
In-stream condition	In-stream habitat	4	x 25	22.5			
Lludrologia condition	Flow regime	2	Sum of metric scores / 8	15.6			
Hydrologic condition	Channel flow status	3	x 25	15.0			
	Sum of core e	lement scores = c	overall TXRAM stream score	69			
L R	Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if:						
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	69			

Representative Site Photograph:



Facing northeast (downstream) from near the downstream end of the SAR. View of a small riffle area entering a long shallow pool.

Project/Site Name/No.: _T	P - PPMSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [☑ Mitigation/Conservation
	SAR No.: ^E			
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): woods, pasture Wate	ershed Size: 22 sq. mi.
Aerial Photo Date and Sou	urce: 2014 NAIP	Site Photos: 2	24-30 Repr	esentative: X Yes ☐ No
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? Yes N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
3	50	Avg. Bank		
3	15 20	Avg. Wate		
Avg. Of Ivvivi.	20	Avg. Onv	7 IVI. 3	
wet fall and fr for year. Som March 2017 f	ach within the PPMS com recent rain (3 danged and evidence of on-going or existing. Flood evected to normalize.	ys previous). Likely ing (but not intense)	intermittent under n uncontrolled cattle	ormal conditions use. Updated
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: <u>4</u>
Left Bank Active Erosion	· 15 % Pight	Bank Active Erosion: 15	% Average: 1	5.0
	ation: ⊠ Natural ☐ Artifici			
Barik i Totodion/Otabinzo	Autori. Material Material	idi.		Score: 4
Sediment Deposition				
■ Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)
	n covered by excessive sec	•	•	` '
40–60% of the botto	m covered by excessive security at in-stream structures			
1	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
				Score: 5

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

eft Bank <i>Buffer Typ</i>	e			Cano		Vegeta		Land	Sc		Buffer Dis Percenta	ge S	Subtota
1 14 1 14 1 0	/A I ·			Cov		Commi		Use		_	of Area		
1. Woods with elm, oak, & pecan	(Ashe jur	liper und	derstory)	70)	Mix		High	-	2	100	$-\!\!\!\!+\!\!\!\!\!-$	2
2. 3.												+	
3. 4.												+	
+ . 5.												+	
U												Score:	2.0
ight Bank											`	JCOIG.	2.0
Buffer Typ	е			Cano Cov		Vegeta Commu		Land Use	Sc	ore	Percentage of Area		Subtota
1. Woods with elm, oak, & pecan (A	she junip	er under	story)	70)	Mix		High		2	80		1.6
2. Re-growth (old pasture) with elm & n	nesquite			10)	Undesir	able	High		1	20		0.2
3.													
4.								-					
5.													
I-STREAM CONDITION ubstrate Composition (estima	ite perce	entages	s)									Score:	1.8
Boulder: 5	Gravel	:10			Fines (silt, clay, mu		uck):	Artificial:					
Cobble: 75	Sand:	5			Bedrock: 5			(Other:				
Habitat Type Undercut Banks	T1 ✓	T2 ✓	<i>T</i> 3 ✓	T4 ✓	T5 √	T6 ✓	T7 ✓	T8 ✓	T9 √	T10	T11 ✓	T12 ✓	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Overhanging Vegetation													✓
Rootmats	✓			✓		✓			✓			✓	✓
Rootwads			✓		✓			/		√	✓		_
Woody/Leafy Debris							✓	/	√	√			<u> </u>
Boulders/Cobbles	√	√	✓	✓	✓	√		✓	√	√	✓	√	✓
Aquatic Macrophytes		√				✓	✓		✓	√		✓	<u> </u>
Riffle/Pool Sequence Artificial Habitat Enhancement		✓				-				✓			<u> </u>
													<u> </u>
Other	_		_	_			_			<u> </u>	_		
Total No. Present	3	4	3	3	3	4	3	4	5	5	3	4	4
YDROLOGIC CONDITION low Regime									Av	erage: _.	3.1	Score:	4
☐ Noticeable surface flow pres	ent (4)				☐ Is	olated po	ols and	d no evid	ence o	f surfac	e or inter	stitial fl	low (1
☐ Continual pool of water but la	acking n	oticeabl	e flow (3))	☐ Di	ry channe	el and ı	no observ	vable p	ools or	interstitia	ıl flow (0)
▼ Isolated pools and interstitial	(subsur	face) flo	w (2)										
hannel Flow Status	<u>`</u>										(Score:	2
**													
☐ Water covering greater than	75% of t	he char	nal hatta	m widt	h. loca	than 25	% of ah	annel cu	hetrate	ie avn	(A) has		

2 of 2

Score: 3

Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)

☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP - PPMSP Project Type:	☐ Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: RS-1 SAR No.: RS-1-2 Size (I	_F): 1,226 Date: 12/16/15 Evaluator(s): RW, DT
Stream Type: Intermittent Ecoregion: Cross Timb	ers Delineation Performed: ☐ Previously ☒ Currently
8-Digit HUC: 12060201 Watershed Condition (develop	ed, pasture, etc.): woods, pasture Watershed Size: 22 sq. mi.
	Site Photos: 31-37 Representative: ⊠ Yes □ No
Stressor(s): N / A Are normal climatic/hyd	drologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
Reference reach within the PPMSP (managed by TPWD). Stream currently flowing due to a wet fall and fro Notes: present. Some evidence of on-going (but not intense) uncontrolled cattle use. Updated March 2017 for exis	m recent rain (3 days previous). Likely intermittent under normal conditions for year. Overflow bench and secondary channel ting. Flood event within past year has caused higher than normal bank erosion, expected to normalize.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 8
Avg. Waters Edge: 15	Avg. Water: 1
Avg. OHWM: 20	Avg. OHWM: 3

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score			
	Floodplain connectivity	4					
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	20.0			
	Sediment deposition	5	X 20				
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	0.0			
Riparian buffer condition	Riparian buffer (right bank)	1.7	x 25	9.3			
In atroom condition	Substrate composition	5 Sum of metric scores / 1		25.0			
In-stream condition	In-stream habitat	5	x 25	23.0			
Lludralagia aanditian	Flow regime	2	Sum of metric scores / 8	15.6			
Hydrologic condition	Channel flow status	3	x 25	15.6			
	Sum of core e	lement scores = c	overall TXRAM stream score	70			
L R Dominated by native	Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if: L R Dominated by native trees greater than 24-inch diameter at breast height						
	ast (i.e., acorns and nuts) produ AM stream score and additional			70			

Representative Site Photograph:



Facing northeast (downstream) near the downstream end of the SAR. Note the steep vertical banks along the left bank that average 8 feet in height, however, this is an isolated occurrence along the reach, which has slight channel incision.

Project/Site Name/No.: _T	P - PPMSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear)	Mitigation/Conservation
	SAR No.: ^E			
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	Delineation Performed:	☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): woods, pasture Wat	tershed Size: 22 sq. mi.
Aerial Photo Date and So	urce: 2014 NAIP	Site Photos: 3	31-37 Rep	resentative: X Yes No
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? Yes	No (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
5	50	Avg. Bank		
3	20	Avg. Wate Avg. OHW		
Avg. Of Ivvivi.	20	Avg. Of tw	7 IVI. 3	
wet fall and fr for year. Ove not intense) ເ	ach within the PPMS rom recent rain (3 da rflow bench and secuncontrolled cattle us caused higher than	ys previous). Likely ondary channel pres e. Updated March 2	intermittent under r sent. Some evidenc 2017 for existing. Fl	normal conditions e of on-going (but ood event within
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/tarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: 4
Left Bank Active Erosion	. 20 % Pight	Bank Active Erosion: 20	% Average: 2	20.0
	ation: ⊠ Natural ☐ Artifici			
Dank i Totection/Otabiliza	ation. M Natural Matino	aı		Score: 3
Sediment Deposition				
★ Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established veget	ation (5)
20–40% of the bottor sediments (4)	m covered by excessive sec	diment deposition; some es	stablished bars with indica	ators of recently deposited
	m covered by excessive se osits at in-stream structures			
☐ 60–80% of the botton in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	eavy sediment deposits at
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	annel (1)
<u> </u>				Score: 5

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank			Buffer Distan	ce: 75.0

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with elm, oak, & juniper (Ashe juniper understory)	80	Mix	High	2	100	2
2.						
3.						
4.						
5.						
•			•		Sco	re: 2.0

Score: <u>2.0</u>

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with elm, oak, & juniper (Ashe juniper understory)	70	Mix	High	2	70	1.4
2. Re-growth (old pasture) with elm & mesquite	20	Undesirable	High	1	30	0.3
3.						
4.						
5.						

Score: 1.7

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 5	Gravel: 10	Fines (silt, clay, muck): 5	Artificial:
Cobble: 75	Sand: 5	Bedrock: 5	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓		✓	✓		✓	✓	✓	✓	✓		
Overhanging Vegetation						✓	✓		✓			✓	
Rootmats			✓	✓	✓								
Rootwads	✓	✓				✓	✓	✓	✓				
Woody/Leafy Debris		✓		✓	✓	✓		✓	✓		✓	✓	
Boulders/Cobbles	✓	√	✓	✓	✓	✓	√	√	√	√	√	√	
Aquatic Macrophytes			✓		✓	✓			✓			✓	
Riffle/Pool Sequence	✓	✓				✓		✓		✓	✓		
Artificial Habitat Enhancement													
Other													
Total No. Present	4	5	3	4	5	6	4	5	6	3	4	4	

Average: 4.4 Score: 5

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☒ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 2

⊠ isolated pools and interstitial (subsurface) now (2)	
Score: 2	
Channel Flow Status	
☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)	
☑ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed	(1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	
0	

Score: 3

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP - PPMSP Project Type:	☐ Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: RS-1 SAR No.: RS-1-3 Size	(LF): 914 Date: 12/16/15 Evaluator(s): RW, DT
Stream Type: Intermittent Ecoregion: Cross Time	bers Delineation Performed: ☐ Previously ☒ Currently
8-Digit HUC: 12060201 Watershed Condition (develo	oped, pasture, etc.): woods, pasture Watershed Size: 21 sq. mi.
Aerial Photo Date and Source: 2014 NAIP	_ Site Photos: 43-47 Representative: ⊠ Yes ☐ No
NI / A	nydrologic conditions present? Yes No (If no, explain in Notes)
Reference reach within the PPMSP (managed by TPWD). Stream currently flowing due to a v Notes: of on-going (but not intense) uncontrolled cattle use. Updated March 2017 for existing. Flood	wet fall and from recent rain (3 days previous). Likely intermittent under normal conditions for year. Some evidence event within past year has caused higher than normal bank erosion, expected to normalize.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 8
Avg. Waters Edge: 15	Avg. Water: 1
Avg. OHWM: 20	Avg. OHWM: 3

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score			
	Floodplain connectivity	3					
Channel condition	Bank condition 4		Sum of metric scores / 15 x 25	20.0			
	Sediment deposition	5	X 20				
Diparian buffer condition	Riparian buffer (left bank)	1.9	Sum of bank scores / 10	0.0			
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	9.8			
In-stream condition	Substrate composition	5	Sum of metric scores / 10	25.0			
in-stream condition	In-stream habitat	5	x 25	25.0			
Lludrologia condition	Flow regime	2	Sum of metric scores / 8	15.6			
Hydrologic condition	Channel flow status	3	x 25	15.0			
	70						
Additional points for limited							
Dominated by native	L R □ □ Dominated by native trees greater than 24-inch diameter at breast height						
Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata							
Sum of overall TXR	70						

Representative Site Photograph:



Facing southwest (upstream) at channel braid and small island covered with terrestrial vegetation found in the middle section of SAR.

Project/Site Name/No.:	TP - PPMSP Pro	iject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear)	
	SAR No.:			
Stream Type: Intermitten	t Ecoregion: Cro	oss Timbers	Delineation Performed:	☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): woods, pasture Wa	tershed Size: 21 sq. mi.
Aerial Photo Date and So	ource: 2014 NAIP	Site Photos: _4	13-47 Rep	resentative: X Yes No
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? Yes	No (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
Avg. Bank to Bank:	50	Avg. Bank		
Avg. Waters Edge:	15	Avg. Wate		
Avg. OHWM:	20	Avg. OHW	/M: 3	
wet fall and f for year. Sor March 2017	each within the PPMS from recent rain (3 dame evidence of on-go for existing. Flood evected to normalize.	lys previous). Likely ing (but not intense)	intermittent under runcontrolled cattle	normal conditions use. Updated
CHANNEL CONDITION Floodplain Connectivity	y			
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: 3
Left Bank Active Erosio	n: 15 % Right	Bank Active Erosion: 15	% Average:	15.0
	zation: 🗵 Natural 🗌 Artific			
				Score: 4
Sediment Deposition				
■ Less than 20% of the	e bottom covered by excess	ive sediment deposition; ba	ars with established vege	tation (5)
20–40% of the botto sediments (4)	om covered by excessive sec	diment deposition; some e	stablished bars with indica	ators of recently deposited
	om covered by excessive so posits at in-stream structures			
☐ 60–80% of the botto in-stream structures (2)	om covered by excessive se	ediment deposition; newly o	created bars prevalent; h	eavy sediment deposits at
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading ch	annel (1)
L				Score: 5

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank			Buffer Distance	ce: <u>75.0</u>

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with elm, oak, & pecan (Ashe juniper understory)	70	Mix	High	2	90	1.8
2. Re-growth (old pasture) with elm & mesquite	10	Undesirable	High	1	10	0.1
3.						
4.						
5.						

Score: 1.9

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with elm, oak, & pecan (Ashe juniper understory)	80	Mix	High	2	95	1.9
2. Re-growth (old pasture) with elm & mesquite	10	Undesirable	High	1	5	0.1
3.						
4.						
5.						

Score: 2.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 5	Gravel: 20	Fines (silt, clay, muck): 5	Artificial:
Cobble: 65	Sand: ₅	Bedrock:	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓			✓				
Overhanging Vegetation		✓	✓			✓	✓	✓					
Rootmats		✓	✓			✓		✓					
Rootwads				✓	✓				✓				
Woody/Leafy Debris	✓	✓	✓		✓	✓			✓				
Boulders/Cobbles			✓	√	✓	✓	√	✓	✓				
Aquatic Macrophytes	✓	✓	✓										
Riffle/Pool Sequence							✓		✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	3	5	6	3	4	5	3	3	5				

Average: 4.1 Score: 5

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☒ Isolated pools and interstitial (subsurface) flow (2)	
	Score: <u>2</u>

Channel Flow Status
☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☑ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Score: 3

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP -	PPMSP Proj	ect Type: 🗌 Fill/Impa	ıct (□ Linear □ Non-	linear) 🗵 Mitigation/Conservation
Stream ID/Name: RS-1	SAR No.:	-1-4 Size (LF): <u>928</u>	Date: 12/16/15	Evaluator(s): RW, DT
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	Delineation Per	formed: Previously X Currently
8-Digit HUC: 12060201	Watershed Condition	n (developed, pastur	e, etc.): woods, past	ure Watershed Size: 21 sq. mi.
Aerial Photo Date and Source:	2014 NAIP	Site Phote	os: 48, 49, 50	Representative: X Yes
Stressor(s): N / A		climatic/hydrologic co	nditions present? 🗌 `	Yes X No (If no, explain in Notes)
Notes: Reference reach within the PPMSP (m of on-going (but not intense) uncontrol				mittent under normal conditions for year. Some evidence lik erosion, expected to normalize.
Stream Characteristics				
Stream Width (Feet)		Stream	Height/Depth (Feet)	
Avg. Bank to Bank: 50		Avg.	Banks: 8	
Avg. Waters Edge: 15		Avg. \	Nater: 1	
Avg. OHWM: 20		Avg.	DHWM: з	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	4		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	20.0
	Sediment deposition	5	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.9	Sum of bank scores / 10	0.0
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	9.8
In atroom condition	Substrate composition	5	Sum of metric scores / 10	25.0
In-stream condition	In-stream habitat	5	x 25	25.0
Lludrologie condition	Flow regime	2	Sum of metric scores / 8	15.6
Hydrologic condition	Channel flow status	3	x 25	15.6
	Sum of core e	lement scores = c	overall TXRAM stream score	70
Additional points for limited L R Dominated by native Dominated by hard m	0			
	AM stream score and additional			70

Representative Site Photograph:



Facing north (downstream) near the downstream end of SAR. Note the gravel bar along the left bank at this location.

Project/Site Name/No.: _	TP - PPMSP Pro	ject Type: 🗌 Fill/Impact ([☐ Linear ☐ Non-linear) [Mitigation/Conservation		
Stream ID/Name: RS-1	SAR No.: _	RS-1-4 Size (LF): 928	Date: 12/16/15 Eva	luator(s): RW, DT		
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently		
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): woods, pasture Wat	ershed Size: 21 sq. mi.		
Aerial Photo Date and So	ource: 2014 NAIP	Site Photos: 4	18, 49, 50 Repr	resentative: X Yes No		
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 N	No (If no, explain in Notes)		
Stream Characteristics						
Stream Width (Feet)			ght/Depth (Feet)			
	Avg. Bank to Bank: 50 Avg. Banks: 8					
Avg. Waters Edge: Avg. OHWM:	15 20	Avg. Wate Avg. OHW				
7.11g. 0.1111111						
wet fall and f for year. Son March 2017	each within the PPMS rom recent rain (3 dane evidence of on-gofor existing. Flood evected to normalize.	lys previous). Likely ing (but not intense)	intermittent under n uncontrolled cattle	ormal conditions use. Updated		
CHANNEL CONDITION Floodplain Connectivity	,					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
Bank Condition				Score: <u>4</u>		
Left Bank Active Erosion	n: <u>20</u> % Right	Bank Active Erosion: 20	% Average: <u>2</u>	0.0		
Bank Protection/Stabiliz	ation: 🗵 Natural 🗌 Artific					
				Score: 3		
Sediment Deposition						
 ✓ Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) ☐ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) 						
☐ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
in-stream structures (2)	m covered by excessive se		•			
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	• •		
				Score: <u>5</u>		

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 75.0
-----------	-----------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with elm, oak, & pecan (Ashe juniper understory)	70	Mix	High	2	90	1.8
2. Re-growth (old pasture) with elm & mesquite	5	Undesirable	High	1	10	0.1
3.						
4.						
5.						10

Score: 1.9

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with elm, oak, & pecan (Ashe juniper understory)	70	Mix	High	2	95	1.9
2. Re-growth (old pasture) with elm & mesquite	10	Undesirable	High	1	5	0.1
3.						
4.						
5.						

Score: 2.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 5	Gravel: 10	Fines (silt, clay, muck): 10	Artificial:
Cobble: 70	Sand: ₅	Bedrock:	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks		✓		✓				✓	✓				
Overhanging Vegetation		✓		✓	✓	✓							
Rootmats	✓		✓	✓									
Rootwads		✓											
Woody/Leafy Debris	✓	✓		✓	✓	✓	✓	✓					
Boulders/Cobbles	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Aquatic Macrophytes			✓		✓	✓		✓	✓				
Riffle/Pool Sequence	✓			✓	✓		✓		✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	4	5	3	6	5	4	3	4	4				

Average: 4.2 Score: 5

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☒ Isolated pools and interstitial (subsurface) flow (2)	
	0

Score: 2

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☑ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Score: 3

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP - PPMSP Project Type: [☐ Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: RS-1 SAR No.: RS-1-5 Size (LF): 1,278 Date: 12/16/15 Evaluator(s): RW, DT
Stream Type: Intermittent Ecoregion: Cross Timb	ers Delineation Performed: ☐ Previously ☒ Currently
8-Digit HUC: 12060201 Watershed Condition (develop	ned, pasture, etc.): woods, pasture Watershed Size: 21 sq. mi.
	Site Photos: 51-57 Representative: ⊠ Yes □ No
NI / A	drologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
Reference reach within the PPMSP (managed by TPWD). Stream currently flowing due to a well Notes: of on-going (but not intense) uncontrolled cattle use. Updated March 2017 for existing. Flood ev	fall and from recent rain (3 days previous). Likely intermittent under normal conditions for year. Some evidence ent within past year has caused higher than normal bank erosion, expected to normalize.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 8
Avg. Waters Edge: 15	Avg. Water: 1
Avg. OHWM: 20	Avg. OHWM: 3

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	ctivity 4		
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	21.7
	Sediment deposition	5	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	40.0
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	10.0
In atroom condition	Substrate composition	5	Sum of metric scores / 10	25.0
In-stream condition	In-stream habitat	5	x 25	25.0
Lludrologia condition	Flow regime	2	Sum of metric scores / 8	15.6
Hydrologic condition	Channel flow status	3	x 25	15.0
	Sum of core e	lement scores = c	overall TXRAM stream score	72
Additional points for limited L R Dominated by native Dominated by hard m	0			
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	72

Representative Site Photograph:



Facing southwest (upstream) from the downstream end of SAR. Palo Pinto Creek at this location is characterized by a wide, shallow pool over a dominantly cobble substrate with a wooded riparian buffer.

Project/Site Name/No.: _T	P - PPMSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [☑ Mitigation/Conservation				
	SAR No.: ^E							
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently				
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): woods, pasture Wate	ershed Size: 21 sq. mi.				
Aerial Photo Date and Sou	ırce: 2014 NAIP	Site Photos: _5	51-57 Repr	esentative: X Yes ☐ No				
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? Yes N	lo (If no, explain in Notes)				
Stream Characteristics								
Stream Width (Feet)			ght/Depth (Feet)					
3	50	Avg. Bank						
	Avg. Waters Edge: 15 Avg. Water: 1 Avg. OHWM: 20 Avg. OHWM: 3							
Avg. Of Ivvivi.	20	Avg. Of tw	7 IVI. 3					
Reference reach within the PPMSP (managed by TPWD). Stream currently flowing due to a wet fall and from recent rain (3 days previous). Likely intermittent under normal conditions for year. Some evidence of on-going (but not intense) uncontrolled cattle use. Updated March 2017 for existing. Flood event within past year has caused higher than normal bank erosion, expected to normalize.								
CHANNEL CONDITION Floodplain Connectivity								
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Very little incision and access to the original floodplain or fully developed wide bankfull Slight incision and likely having regular (i.e., at least once a year) access to widence of near vertical/ undercut banks; irregular (i.e., the original floodplain or fully developed wide bankfull once a year) access to widen further; majority of both banks incision with flow contained to the original floodplain or fully developed wide bankfull once a year) access to widen further; majority of both banks incision with flow contained to the original floodplain or fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year) access to widen fully developed wide bankfull once a year access to widen fully developed wide bankfull once a year access to widen fully developed widen fu							
5	4	3	2	1				
Bank Candition				Score: <u>4</u>				
Bank Condition Left Bank Active Erosion	. 15 0/ Dight	Donk Active Freeign, 15	0/ Average, 1	5.0				
			% Average: <u>1</u>					
Darik i Totection/Stabiliza	Ition. Minatural Minitude	iai		Score: 4				
Sediment Deposition								
	bottom covered by excessi	ive sediment deposition: ba	ars with established vegeta	ation (5)				
	n covered by excessive sec	•	•	` '				
40–60% of the botton	m covered by excessive sensits at in-stream structures							
1	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at				
	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)				
				Score: <u>5</u>				

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review. Identify each buffer type and score according to canopy cover, vegetation community, and land u

are pro	Cancon 80 Cancon 80 Sesent) T4 ✓	opy ver	Vegeta Commu Nix Vegeta Commu Mix es (silt, colrock:	tion unity	T8	<i>T</i> 9	ore /	Percentag of Area 100 S :	core:	ubtotal 2
are pre	Can Cov 80	opy ver o	Vegeta Commu Mix es (silt, colorock:	tion unity	Land Use High	Scc 2	ore F	S Percentag of Area 100 S :	core:	2.0 ubtotal 2 2.0
are pre	Cov 8(Find Bed	es (silt, colorect:	clay, mu	Use High	2 A C C	artificial Other:	Percentag of Area 100 S :	core:	2 2.0 <u>5</u>
are pre	Cov 8(Find Bed	es (silt, colorect:	clay, mu	Use High	2 A C C	artificial Other:	Percentag of Area 100 S :	core:	2 2.0 5
are pre	Cov 8(Find Bed	es (silt, colorect:	clay, mu	Use High	2 A C C	artificial Other:	Percentag of Area 100 S :	core:	2 2.0 5
are pre	Cov 8(Find Bed	es (silt, colorect:	clay, mu	Use High	2 A C C	artificial Other:	Percentag of Area 100 S :	core:	2 2.0 5
are pre	Cov 8(Find Bed	es (silt, colorect:	clay, mu	Use High	2 A C C	artificial Other:	Percentag of Area 100 S :	core:	2 2.0 5
are pre	Cov 8(Find Bed	es (silt, colorect:	clay, mu	Use High	2 A C C	artificial Other:	of Area 100 S	core: _	2.0
are pre	esent)	Find Bed	es (silt, dirock:	clay, mu	uck): ₁₀	79	artificial Other:	S	core: _	2.0
are pre	T4 ✓	Bed	T6 ✓	T7	T8	<i>T</i> 9	710 ✓	: S	core: _	5
are pre	T4 ✓	Bed	T6 ✓	T7	T8	<i>T</i> 9	710 ✓	: S	core: _	5
are pre	T4 ✓	Bed	T6 ✓	T7	T8	<i>T</i> 9	710 ✓	: S	core: _	5
are pre	T4 ✓	Bed	T6 ✓	T7	T8	<i>T</i> 9	710 ✓	: S	core: _	5
are pre	T4 ✓	Bed	T6 ✓	T7	T8	<i>T</i> 9	710 ✓	: S	core: _	5
T3 ✓ ✓	T4 ✓	Bed	T6 ✓	T7	T8	<i>T</i> 9	710 ✓	S 711 ✓	T12	
T3 ✓ ✓	T4 ✓	T5	T6 ✓			<i>T</i> 9	T10 ✓	T11 ✓	T12	
T3 ✓ ✓	T4 ✓		√				√	T11 ✓	T12	
√		√		✓		,				
	√				/		,			
√	✓		1		✓	✓	✓	✓	✓	✓
							√		√	√
		√	√	√	1			1		
✓		√		,	1	√	√			
· ✓	1	√	√	√	1	<u>√</u>	√	1	√	1
•	'	√	'	•	1		√	'	<u>√</u>	1
		•			1	<u> </u>	1		<u> </u>	1
					+ •		•			_
5	3	5	4	3	6	5	7	4	5	5
		ı		ı		Ave	erage: ₋	4.5 S	core:	5
		☐ Iso	lated po	ols and	d no evide	ence of	surfac	e or inters	titial fl	ow (1)
e flow (3)									. ,
	- /	5.	,		.5 0.5001 V	p	2.5 01			- /
/vv (<i>∠)</i>								S	core:	2
nnel bot	tom wid	th; less	than 25	% of ch	nannel su	bstrate	is expo	osed (4)		
	le flow (ow (2)	le flow (3) ow (2)	le flow (3)	le flow (3)	le flow (3)	le flow (3)	☐ Isolated pools and no evidence of ☐ Dry channel and no observable po	☐ Isolated pools and no evidence of surfactile flow (3) ☐ Dry channel and no observable pools or	☐ Isolated pools and no evidence of surface or inters le flow (3) ☐ Dry channel and no observable pools or interstitial ow (2)	☐ Isolated pools and no evidence of surface or interstitial fluction ☐ Dry channel and no observable pools or interstitial flow (6)

Page 2 of 2

Score: 3

☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)

☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP - PPMSP Project Type:	Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: RS-2 SAR No.: RS-2-1 Size (L	F): 1,497 Date: 12/16/15 Evaluator(s): RW, DT
Stream Type: Intermittent Ecoregion: Cross Timber	Delineation Performed: Previously 🗵 Currently
8-Digit HUC: 12060201 Watershed Condition (develope	d, pasture, etc.): woods, pasture Watershed Size: 620 acres
Aerial Photo Date and Source: 2014 NAIP	Site Photos: 58, 59 Representative: ⊠ Yes □ No
NI / A	rologic conditions present? Yes No (If no, explain in Notes)
Notes: Reference reach within the PPMSP (managed by TPWD). Tributary to Palo Pinto Creek. Flowing as a ronditions for year. Some spike rush along margin of channel but vegetation mostly upland species near	esult of an unusually wet fall and recent rainfall that fell 3 days prior to visit. Likely intermittent under normal r channel. Some evidence of on-going (but not intense) uncontrolled cattle use. Updated March 2017 for existing.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 30	Avg. Banks: 6
Avg. Waters Edge: 5	Avg. Water: 0.5
Avg. OHWM: 10	Avg. OHWM: 2

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score		
	Floodplain connectivity	3				
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	21.7		
	Sediment deposition	5	X 20			
Dinarian buffer condition	Riparian buffer (left bank) 2.0 Sum of bank scores / 10					
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	10.0		
In atroom condition	Substrate composition	Sum of metric scores / 10	17.5			
In-stream condition	In-stream habitat 3 x 25					
I hudua la mia assauditiona	12.5					
Hydrologic condition	ydrologic condition					
	Sum of core e	lement scores = c	overall TXRAM stream score	62		
	habitats = overall TXRAM strear	m score x 0.025 f	or each bank (right/left) if:			
L R	trees greater than 24-inch diam	otor at breast bei	aht	0		
	ast (i.e., acorns and nuts) produ					
	AM stream score and additional			62		

Representative Site Photograph:



Small Tributary of Palo Pinto Creek facing west-northwest (downstream) from the downstream portion of SAR. Note the wooded riparian buffer.

Project/Site Name/No.:	TP - PPMSP Pro	ject Type: 🗌 Fill/Impact ([☐ Linear ☐ Non-linear)	☑ Mitigation/Conservation				
Stream ID/Name: RS-2	SAR No.:	RS-2-1 Size (LF): 1,497	Date: 12/16/15 Eva	aluator(s): RW, DT				
Stream Type: Intermitten	t Ecoregion: Cro	oss Timbers	Delineation Performed:	☐ Previously ☒ Currently				
8-Digit HUC: 12060201	8-Digit HUC: 12060201 Watershed Condition (developed, pasture, etc.): woods, pasture Watershed Size: 620 acres							
Aerial Photo Date and S	Aerial Photo Date and Source: 2014 NAIP Site Photos: 58, 59 Representative: X Yes No							
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 区	No (If no, explain in Notes)				
Stream Characteristics								
Stream Width (Feet)			ght/Depth (Feet)					
Avg. Bank to Bank:	30	Avg. Bank						
Avg. Waters Edge: 5 Avg. Water: 0.5 Avg. OHWM: 10 Avg. OHWM: 2								
Avg. OHWM:	10	Avg. Onv	/M: 2					
Flowing as a result of an unusually wet fall and recent rainfall that fell 3 days prior to visit. Likely intermittent under normal conditions for year. Some spike rush along margin of channel but vegetation mostly upland species near channel. Some evidence of on-going (but not intense) uncontrolled cattle use. Updated March 2017 for existing.								
CHANNEL CONDITION Floodplain Connectivit	у							
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	having regular (i.e., at least	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.				
5	4	3	2	1				
Bank Condition				Score: 3				
Left Bank Active Erosic	n: ⁵ % Right	Bank Active Erosion: 5	% Average: 5	5.0				
	zation: 🗵 Natural 🗌 Artific							
				Score: 5				
Sediment Deposition								
★ Less than 20% of the less than 20% of th	e bottom covered by excess	ive sediment deposition; ba	ars with established veget	tation (5)				
20–40% of the botto sediments (4)	om covered by excessive sec	diment deposition; some e	stablished bars with indica	ators of recently deposited				
	om covered by excessive so posits at in-stream structures							
☐ 60–80% of the bottom in-stream structures (2)	om covered by excessive se	diment deposition; newly of	created bars prevalent; he	eavy sediment deposits at				
☐ Greater than 80% o	f the bottom covered by exce	essive sediment deposition	resulting in aggrading ch	• •				
				Score: 5				

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Buffer Typ	е			Can		Vegeta Commu		Land Use	Sc	ore	Percenta of Area		ubtota
1. Woods with post/red/shin oak, e	elm, junip	er, Texa	s ash	70)	Mix	-	High	1	2	97		1.94
2. Trail				30)	Mix		High	+	1	3		0.03
3.													
4.													
5.													
tight Bank				1							,	Score:	2.0
Buffer Typ	е			Can		Vegeta Commu		Land Use	Sc	ore	Percenta of Area	- 0	ubtota
Woods with post/red/shin oak, elm, juniper, Texas ash			ash	70)	Mix		High	2	2	100		2
2.	· · ·												
3.													
4.													
5.													
N-STREAM CONDITION Substrate Composition (estima			:)									Score:	2.0
Boulder: 2	Gravel: 2 Fines (silt, clay, muck): 25 Artificial:						:						
Cobble: 65	Sand: 5 Bedrock: 1 Other:												
Habitat Type Undercut Banks	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Overhanging Vegetation Rootmats	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rootwads	1												
Woody/Leafy Debris			-		-		,			,		,	
Boulders/Cobbles	√	√	√	√	√	√	√	V	√	✓	√	√	√
Aquatic Macrophytes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present					_		_					0	
Total No. 1 Tesent	3	3	3	3	3	3	3	3	3	3	3 0	Score:	3
IYDROLOGIC CONDITION Flow Regime										erage:		Score:	
☐ Noticeable surface flow pres☐ Continual pool of water but law is interstitial☑ Isolated pools and interstitial	acking no			3)		-		d no evide no observ					-
N ISOlated pools and interstitial	,	-,	. /									Score:	2
Channel Flow Status													
<u> </u>	75% of t	he char	nel hot	om wid	th: less	than 25	% of ch	nannel su	hstrate	is exn	nsed (4)		

Page 2 of 2

Score: 2

☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)

☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP -	PPMSP Project	Type: Fill/Impact ([☐ Linear ☐ Non-li	near) 🗵 Mitigation/Conservation
Stream ID/Name: RS-3	SAR No.: RS-3-1	Size (LF): 1,029	Date: 12/16/15	Evaluator(s): DT, RW
Stream Type: Ephemeral	Ecoregion: Cross	Timbers	Delineation Perfo	rmed: Previously X Currently
8-Digit HUC: 12060201	Watershed Condition (developed, pasture, et	c.): Woods	Watershed Size: 49 acres
Aerial Photo Date and Source:	2014 NAIP	Site Photos: _6	60, 61, 62, 63, 64	Presentative: ☐ Yes ☐ No
NI / A		natic/hydrologic conditi	ons present? 🗌 Ye	es X No (If no, explain in Notes)
Notes: Reference reach within the PPMSP (m. conditions for year. Rocky soil in buffer				ain 3 days prior to visit. Likely dry under normal
Stream Characteristics				
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
Avg. Bank to Bank: 20		Avg. Bank	S: 5	
Avg. Waters Edge:		Avg. Wate	er:	
Avg. OHWM: 5		Avg. OHW	/M: 1	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score		
	Floodplain connectivity	3				
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	21.7		
	Sediment deposition	5	X 20			
Dinarian buffer condition	Riparian buffer (left bank) 1.0 Sum of bank scores / 10					
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	5.0		
In atroom condition	-stream condition Substrate composition 5 Sum of metric scores / 10					
in-stream condition	In-stream habitat	12.5				
I hudua la mia ao malitia n	0.0					
Hydrologic condition	rologic condition Channel flow status 0 Sum of metric scores / 8 x 25					
	Sum of core e	lement scores = c	overall TXRAM stream score	39		
	habitats = overall TXRAM strear	m score x 0.025 f	or each bank (right/left) if:			
L R	troos greater than 24 inch diam	otor at broast boi	aht	0		
	trees greater than 24-inch diamonast (i.e., acorns and nuts) produ					
	AM stream score and additional			39		

Representative Site Photograph:



Facing northwest (downstream) in the middle section of SAR. Ephemeral stream that is dry under normal conditions. Large boulder and cobble were the dominant substrate materials.

Project/Site Name/No.: T	P - PPMSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) │					
	SAR No.: ^E							
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed:	☐ Previously ☒ Currently				
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Woods Wat	ershed Size: 49 acres				
Aerial Photo Date and Sou	urce: 2014 NAIP	Site Photos: _6	60, 61, 62, 63, 64 Rep	resentative: X Yes No				
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 I	No (If no, explain in Notes)				
Stream Characteristics								
Stream Width (Feet)			ght/Depth (Feet)					
J	20	Avg. Bank						
Avg. Waters Edge:								
Avg. OHWM:	5	Avg. OHW	/M: 1					
Reference reach within the PPMSP (managed by TPWD). Tributary to Palo Pinto Creek. Minor pools in channel due to an unusually wet fall and recent rain 3 days prior to visit. Likely dry under normal conditions for year. Rocky soil in buffer area. Some evidence of on-going (but not intense) uncontrolled cattle use. Updated March 2017 for existing.								
CHANNEL CONDITION Floodplain Connectivity								
Very little incision and access to the original floodplain or fully developed wide bankfull benches. Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach. Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach. Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas. Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.								
5	4	3	2	1				
Bank Condition				Score: 3				
Left Bank Active Erosion	. 5 % Pight	Bank Active Erosion: 5	9/ Average: 5	5.0				
	tion: ☒ Natural ☐ Artifici							
Darik i Totection/Stabiliza	Natural Artifici	iai		Score: 5				
Sediment Deposition								
X Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established veget	ation (5)				
	n covered by excessive sec	· · · · · · · · · · · · · · · · · · ·	-					
40–60% of the botton	m covered by excessive sensits at in-stream structures							
1 ' '	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	eavy sediment deposits at				
1	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	annel (1)				
L				Score: 5				

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Buffer Typ	e			Cano Cov		Vegeta Commu		Land Use	Sc	ore	Percenta of Area		Subtota
1. Woods with shin oak, red oak, 7	Texas as	er	50)	Mix		High		1	100		1	
2.													
3.													
4.													
5.													
Right Bank							Į.					Score	1.0
Buffer Typ	е			Can		Vegeta: Commu		Land Use	Sc	ore	Percenta of Area		Subtota
1. Woods with shin oak, red oak, Te	vae ach	iuninar		50		Mix		High	<u> </u>	1	100	2	1
2.	, , , , , , , , , , , , , , , , , , ,	Juniper		30	,	IVIIX		riigii		1	100		<u>'</u>
3.													
4.					+					+		+	
5.					+					+			
<u>. </u>												Score	• 10
N-STREAM CONDITION Substrate Composition (estima	ite perc	entages	s)									30016	- 1.0
Boulder: 40	Grave		- /		Fin	es (silt, c	lay, m	uck): 5		Artificia	al:		
Cobble: 30	Sand:				drock:		, -		Other:				
n-stream Habitat (check all hal	bitat tvr	es that	are pre	sent)					ı			Score	5
Habitat Type	T1	T2	T3	T4	<i>T</i> 5	<i>T</i> 6	<i>T</i> 7	T8	<i>T</i> 9	T10	T11	T12	T13
Undercut Banks	1							+ +					
Overhanging Vegetation	1							+ +					
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence	1												+
Artificial Habitat Enhancement	+							+ +					
Other								+ +		1			
Total No. Present	_	_		0	_		^		0	_			+
Total No. 1 Tesent	0	0	0	0	0	0	0	0	0	0	0	Saara	
HYDROLOGIC CONDITION Flow Regime									Av	erage:		Score	
☐ Noticeable surface flow pres	ent (4)				☐ Iso	olated po	ols an	d no evide	ence o	f surfa	ce or inte	rstitial	flow (1)
☐ Continual pool of water but la		oticeah	e flow (3	3)		-		no observ					
☐ Isolated pools and interstitial	_		•	,		,			p	30.00			(-)
	Guboul	iace) iii	/vv (<i>~)</i>									800	• 0
Channel Flow Status												Score	0
☐ Water covering greater than	75% of	the cha	nnel bott	om widt	h; less	than 25°	% of cl	nannel sul	bstrate	e is exp	osed (4)		
☐ Water covering 50–75% of the	ne chani	nel botto	m width	; 25–50	% of cl	hannel sı	ubstrat	e is expos	sed (3))			
☐ Water covering 25–50% of the								-					
Water Covernia 23-30% or in									ocu 12				
☐ Water present but covering le								-			strate is	exnose	ed (1)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP - PPMSP Project Type:	Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: RS-4 SAR No.: RS-4-1 Size (L	_F): 805 Date: 12/16/15 Evaluator(s): DT, RW
Stream Type: Ephemeral Ecoregion: Cross Timber	Previously ☑ Currently
8-Digit HUC: 12060201 Watershed Condition (developed	ed, pasture, etc.): Woods & Pasture Watershed Size: 110 acres
	Site Photos: <u>73, 74, and 75</u> Representative: ⊠ Yes ☐ No
NI / A	frologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
Reference reach within the PPMSP (managed by TPWD). Tributary to Palo Pinto Creek. Minor pronotes: conditions for year. Scattered piles of cut juniper in buffer area. Some evidence of on-going (but reconstructions).	ools in channel due to an unusually wet fall and recent rain 3 days prior to visit. Likely dry under normal not intense) uncontrolled cattle use. Updated March 2017 for existing.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 20	Avg. Banks: 3
Avg. Waters Edge:	Avg. Water:
Avg. OHWM: 5	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score			
	Floodplain connectivity	3					
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	20.0			
	Sediment deposition	5	X 20				
Dinarian buffer condition	Riparian buffer (left bank) 1.0 Sum of bank scores / 10						
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	5.0			
In atroom condition	Substrate composition 5 Sum of metric scores / 10						
In-stream condition	In-stream habitat	am habitat 0 x 25					
Lludrologia condition	Flow regime 0 Sum of metric scores / 8						
Hydrologic condition	Channel flow status 0 x 25						
	Sum of core e	lement scores = c	overall TXRAM stream score	38			
L R	Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if:						
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	38			

Representative Site Photograph:



Facing west-southwest (upstream) near the upstream end of SAR. Ephemeral stream that had water after a recent storm event but is dry under normal conditions. The buffer area along both banks has been partially cleared of juniper.

Project/Site Name/No.: _	rp - PPMSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation
	SAR No.: [[]			
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed: [☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Woods & Pasture Wate	ershed Size: 110 acres
Aerial Photo Date and So	urce: 2014 NAIP	Site Photos: _7	73, 74, and 75 Repr	esentative: X Yes No
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
5	20	Avg. Bank		
Avg. Waters Edge: Avg. OHWM:	5	Avg. Wate Avg. OHW		
Avg. Of Ivvivi.	5	Avg. Of tw	/ IVI. 1	
Minor pools i Likely dry un	each within the PPMS n channel due to an der normal conditions ace of on-going (but n	unusually wet fall an s for year. Scattered	nd recent rain 3 days I piles of cut juniper	s prior to visit. in buffer area.
CHANNEL CONDITION Floodplain Connectivity	,			
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: <u>3</u>
Left Bank Active Erosion	. 10 % Pight	Bank Activo Erosion: 10	% Average: 10	0.0
	ation: ☒ Natural ☐ Artifici			
Dank i Totection/Otabiliz	ation. A Natural Artifici	ai		Score: 4
Sediment Deposition				
■ Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)
	m covered by excessive sec	•	•	` '
	om covered by excessive se osits at in-stream structures			
☐ 60–80% of the botto in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
				Score: 5

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3). Left Bank

Left Bank Buffer Distance							
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal	
1. Woods with post oak, live oak, cedar elm, juniper	50	Mix	High	1	70	0.7	
2. Savannah with oak and native grasses	20	Mix	High	1	30	0.3	
3							

4. 5.

Score: 1.0

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with post oak, live oak, cedar elm, juniper	50	Mix	High	1	60	0.6
2. Savannah with oak and native grasses	20	Mix	High	1	40	0.4
3.						
4.						
5.						

Score: 1.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 35	Gravel: 10	Fines (silt, clay, muck): 5	Artificial:
Cobble: 45	Sand: 5	Bedrock:	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0	0	0	0	0	0	0	0	0				

Average: 0.0 Score: 0

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☑ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Socrat 0

	Score: <u>0</u>
Channel Flow Status	
☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	exposed (1)
▼ No water present in the channel; 100% of channel substrate exposed (0)	

Score: 0

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP - PPMSP Project Type:	Fill/Impact (Linear Non-linear) Mitigation/Conservation
Stream ID/Name: $RS-5$ SAR No.: $RS-5-1$ Size (L	F): 1,167 Date: 12/17/15 Evaluator(s): RW, DT
Stream Type: Ephemeral Ecoregion: Cross Timber	Previously ☐ Currently Previously ☐ Currently
8-Digit HUC: 12060201 Watershed Condition (developed	ed, pasture, etc.): Woods, Pond Watershed Size: 110 acres
Aerial Photo Date and Source: 2014 NAIP	Site Photos: 6, 7, 8, 9 Representative: ⊠ Yes □ No
NI / A	Irologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
Reference reach within the PPMSP (managed by TPWD). Tributary to Palo Pinto Creek. Minor pr Notes: conditions for year. Scattered piles of cut juniper in buffer area. Some evidence of on-going (but r	ools in channel due to an unusually wet fall and recent rain 3 days prior to visit. Likely dry under normal not intense) uncontrolled cattle use. Updated March 2017 for existing.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 12	Avg. Banks: 4
Avg. Waters Edge:	Avg. Water:
Avg. OHWM: 5	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score				
	Floodplain connectivity	4						
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	21.7				
	Sediment deposition	4	X 20					
Diparian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10	5.0				
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	5.0				
In-stream condition	Substrate composition	5	Sum of metric scores / 10	12.5				
in-stream condition	In-stream habitat	0	x 25	12.5				
Hydrologic condition	Flow regime	0	Sum of metric scores / 8	0.0				
Hydrologic condition	Channel flow status	0	x 25	0.0				
	Sum of core e	lement scores = c	overall TXRAM stream score	39				
Additional points for limited L R Dominated by native Dominated by hard m	0							
Sum of overall TXR	Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score							

Representative Site Photograph:



Facing northwest (downstream) from the upper portion of SAR. Note partial removal of juniper in the buffer area.

Project/Site Name/No.:	ΓP - PPMSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [☑ Mitigation/Conservation
Stream ID/Name: RS-5	SAR No.: [[]	RS-5-1 Size (LF): 1,167	Date: <u>12/17/15</u> Eval	uator(s): RW, DT
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed: [☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Woods, Pond Wate	ershed Size: 110 acres
Aerial Photo Date and So	urce: 2014 NAIP	Site Photos: _6	8, 7, 8, 9 Repr	esentative: X Yes No
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? Yes N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
5	12	Avg. Bank		
Avg. Waters Edge:		Avg. Wate		
Avg. OHWM:	5	Avg. OHW	/M: 1	
Minor pools i Likely dry un	each within the PPMS n channel due to an der normal conditions der of on-going (but r	unusually wet fall an s for year. Scattered	nd recent rain 3 days I piles of cut juniper	s prior to visit. in buffer area.
CHANNEL CONDITION Floodplain Connectivity	,			
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: 4
	0/ Dight	Dank Astiva Fracian	% Average: 2	5
Left Bank Active Erosion				
Bank Protection/Stabiliz	ation: ☒ Natural ☐ Artific	al		Score: 5
Sediment Deposition				ocore. <u>-</u>
	e bottom covered by excess	ive sediment denosition: h	ars with established vegeta	ation (5)
	m covered by excessive sec	•	-	` '
	om covered by excessive so osits at in-stream structures			
	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
				Score: 4

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank			Buffer Distance	ce: <u>31.0</u>

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with elm, oak, juniper, mesquite, and Texas ash	40	Mix	High	1	60	0.6
2. Savannah with oak and native grasses	10	Mix	High	1	40	0.4
3.						
4.						
5.						

Score: 1.0

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with elm, oak, juniper, mesquite, and Texas ash	40	Mix	High	1	80	0.8
2. Savannah with oak and native grasses	10	Mix	High	1	20	0.2
3.						
4.						
5.						

Score: 1.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 20	Gravel: 20	Fines (silt, clay, muck): ₁₅	Artificial:
Cobble: 40	Sand: ₅	Bedrock:	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0	0	0	0	0	0	0	0	0	0	0	0	0

Average: <u>0.0</u> Score: <u>0</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☑ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Socrat 0

C

☐ isolated pools and interstitial (subsurface) flow (2)	
	Score: 0
hannel Flow Status	
☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)	
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is	exposed (1)
▼ No water present in the channel; 100% of channel substrate exposed (0)	

Score: 0

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP - PPMSP Project Type:	Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: RS-6 SAR No.: RS-6-1 Size (L	_F): <u>772</u> Date: <u>12/17/15</u> Evaluator(s): <u>RW, DT</u>
Stream Type: Intermittent Ecoregion: Cross Timber	ers Delineation Performed: ☐ Previously ☒ Currently
8-Digit HUC: 12060201 Watershed Condition (developed	ed, pasture, etc.): Woods & Pasture Watershed Size: 500 acres
	Site Photos: $11, 12, 13, 14$ Representative: \boxtimes Yes \square No
NI / A	drologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
Reference reach within the PPMSP (managed by TPWD). Tributary to Palo Pinto Creek. Flowing Notes: channel but vegetation mostly upland species near channel. Some evidence of on-going (but not	due to recent rain. Likely intermittent under normal conditions for year. Some spike rush along margin of intense) uncontrolled cattle use. Updated March 2017 for existing.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 30	Avg. Banks: 5
Avg. Waters Edge: 4	Avg. Water: 0.5
Avg. OHWM: 10	Avg. OHWM: 2

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	4		
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	21.7
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	7.5
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	7.5
In atroom condition	Substrate composition	4	Sum of metric scores / 10	1F.O.
In-stream condition	In-stream habitat	2	x 25	15.0
Lludrologia condition	Flow regime	2	Sum of metric scores / 8	12.5
Hydrologic condition	Channel flow status	2	x 25	12.5
	Sum of core e	lement scores = c	overall TXRAM stream score	57
•	habitats = overall TXRAM stream	m score x 0.025 f	or each bank (right/left) if:	
L R	0			
☐ ☐ Dominated by native☐ ☐ Dominated by hard m				
	AM stream score and additional			57

Representative Site Photograph:



Facing southeast (upstream) from the downstream end of SAR. Flow was observed after recent rainfall but likely intermittent with isolated pools under normal conditions. Substrates were fairly diverse at this site.

Project/Site Name/No.: _	rp - PPMSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	Mitigation/Conservation			
Stream ID/Name: RS-6 SAR No.: RS-6-1 Size (LF): 772 Date: 12/17/15 Evaluator(s): RW, DT							
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently			
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Woods & Pasture Wate	ershed Size: 500 acres			
Aerial Photo Date and So	urce: 2014 NAIP	Site Photos: 1	11, 12, 13, 14 Repr	esentative: X Yes No			
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 N	lo (If no, explain in Notes)			
Stream Characteristics							
Stream Width (Feet)			ght/Depth (Feet)				
Avg. Bank to Bank:	30	Avg. Bank					
111911111111111111111111111111111111111	4	Avg. Wate					
Avg. OHWM:	10	Avg. OHW	/M: 2				
Flowing due rush along m	Reference reach within the PPMSP (managed by TPWD). Tributary to Palo Pinto Creek. Flowing due to recent rain. Likely intermittent under normal conditions for year. Some spike rush along margin of channel but vegetation mostly upland species near channel. Some evidence of on-going (but not intense) uncontrolled cattle use. Updated March 2017 for existing.						
CHANNEL CONDITION Floodplain Connectivity	,						
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.			
5	4	3	2	1			
D 10 ""				Score: 4			
Bank Condition	5 0/ 5: 11	D A () E 5	0/ 1 5	0			
Left Bank Active Erosion			% Average: <u>5.</u>				
Bank Protection/Stabiliza	ation: 🗵 Natural 🗌 Artifici	al:					
Sediment Deposition				Score: <u>5</u>			
	hattam agrared by avagas	ive andiment deposition, by	are with established vegets	stion (E)			
 ☐ Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) ☑ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) 							
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)							
60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)							
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)			
				Score: 4			

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Buffer Type				Can		Vegeta Commi		Land Use	Scor	е	Percentage of Area	Subtota
1. Woods with elm, oak, juniper, &	k mesquit	6		Mix		High	2		100	2		
2.					-		-					_
3.												
4.												
5.												
									1		Sco	re: 2.0
Right Bank												
Buffer Typ	ре			Can		Vegeta		Land	Scor	е	Percentage	Subtota
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•			Col		Commi		Use		+	of Area	
1. Woods with elm, oak, juniper, &				60	-	Mix	+	High	1		60	0.6
2. Re-growth (old pasture) with elm & r	nesquite			20)	Mix		High	1		40	0.4
3.				1						_		
4.				-						_		
5.												
N-STREAM CONDITION Substrate Composition (estima	oto noro	ontogo	-1								Sco	ore: <u>1.0</u>
Boulder: 5	Gravel		9)		Fir	nes (silt, o	rlav m	nck). 40	Δrt	ificia	ıl·	
Cobble: 15	Sand:					edrock:	Jiay, III	uck). 10				
Copple: 12	Sariu.	30			В	Juliock.			Other: Score: 4			re: 4
n-stream Habitat (check all ha	bitat tvo	es that	are pre	esent)							300	ne. <u>-</u>
Habitat Type	T1	T2	T3	T4	<i>T</i> 5	<i>T</i> 6	<i>T7</i>	T8	<i>T</i> 9	T10	T11 T	12 T13
Undercut Banks												
Overhanging Vegetation	1	√	1	√		√		✓				
Rootmats	•	•	•	-				*				
Rootwads												
Woody/Leafy Debris				√								
Boulders/Cobbles		/	/	✓				1				
Aquatic Macrophytes		√	✓	V				/ /				
Riffle/Pool Sequence												
Artificial Habitat Enhancement												
Other				-								
		_		_	_	+ .	_	_				
Total No. Present	1	2	2	3	0	1	0	2				
IVDDOLOGIC CONDITION									Aver	age:	1.4 SCC	re: 2
HYDROLOGIC CONDITION Flow Regime												
Noticeable surface flow pres						-					ce or interstit	•
☐ Continual pool of water but I	acking n	oticeabl	e flow (3	3)		ry chann	el and	no observ	able poc	ols or	r interstitial flo	ow (0)
☒ Isolated pools and interstitia	l (subsur	face) flo	w (2)									
											Sco	re: _2
Channel Flow Status												
☐ Water covering greater than	75% of	he char	nnel bot	tom wid	th; les	s than 25	% of cl	nannel sub	ostrate is	s exp	osed (4)	
					-							
	he chanr	nel botto	m width	n: 25–50	% of c	channel s	ubstrat	e is exnos	sed (3)			
☐ Water covering 50–75% of to ✓ Water covering 25–50% of to								-				

Page 2 of 2

Score: 2

☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP - PPMSP Project Type:	Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: RS-7 SAR No.: RS-7-1 Size (LI	F): 1,286 Date: 12/17/15 Evaluator(s): RW, DT
Stream Type: Ephemeral Ecoregion: Cross Timber	Delineation Performed: Previously 🗵 Currently
8-Digit HUC: 12060201 Watershed Condition (develope	d, pasture, etc.): Woods Watershed Size: 60 acres
Aerial Photo Date and Source: 2014 NAIP	Site Photos: 15, 16, 17, 18 Representative: ⊠ Yes □ No
NI / A	rologic conditions present? Yes No (If no, explain in Notes)
Reference reach within the PPMSP (managed by TPWD). Tributary to Palo Pinto Creek. Minor por Conditions for year. Some evidence of on-going (but not intense) uncontrolled cattle use. Updated	ols in channel due to an unusually wet fall and recent rain 3 days prior to visit. Likely dry under normal March 2017 for existing.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 25	Avg. Banks: 5
Avg. Waters Edge:	Avg. Water:
Avg. OHWM: 5	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	3		
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	20.0
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	40.0
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	10.0
In-stream condition	Substrate composition	4	Sum of metric scores / 10	10.0
in-stream condition	In-stream habitat	0	x 25	10.0
Lludralagia aanditian	Flow regime	0	Sum of metric scores / 8	0.0
Hydrologic condition	Channel flow status	0	x 25	0.0
	Sum of core e	lement scores = c	overall TXRAM stream score	40
	habitats = overall TXRAM strear	m score x 0.025 fo	or each bank (right/left) if:	
L R Dominated by native	0			
Dominated by hard m				
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	40

Representative Site Photograph:



Facing southeast (upstream) in the upstream portion of SAR. This ephemeral tributary was characterized by mostly gravel substrates with noticeable cobble and sand materials. The channel is dry under normal conditions.

Project/Site Name/No.: _T	P - PPMSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation			
Stream ID/Name: RS-7	me: RS-7 SAR No.: RS-7-1 Size (LF): 1,286 Date: 12/17/15 Evaluator(s): RW, DT						
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed: ☐ Previously ☒ C				
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Woods Wate	ershed Size: 60 acres			
Aerial Photo Date and Sou	urce: 2014 NAIP	Site Photos: _1	15, 16, 17, 18 Repr	esentative: X Yes No			
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? Yes X	lo (If no, explain in Notes)			
Stream Characteristics							
Stream Width (Feet)			ght/Depth (Feet)				
<u> </u>	25	Avg. Bank					
Avg. Waters Edge: -	-	Avg. Wate					
Avg. OHWM:	5	Avg. OHW	/M: 1				
Notes: Reference reach within the PPMSP (managed by TPWD). Tributary to Palo Pinto Creek. Minor pools in channel due to an unusually wet fall and recent rain 3 days prior to visit. Likely dry under normal conditions for year. Some evidence of on-going (but not intense) uncontrolled cattle use. Updated March 2017 for existing.							
CHANNEL CONDITION Floodplain Connectivity							
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.			
5	4	3	2	1			
Bank Condition				Score: 3			
Left Bank Active Erosion	: ⁵ % Right	Bank Active Erosion: 10	% Average: ⁷	5			
	ition: ☒ Natural ☐ Artific						
				Score: 5			
Sediment Deposition							
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)							
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)							
60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)							
☐ Greater than 80% of t	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)			
-				Score: 4			

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

	ercentage of Area		Score	3	Land Use		Vegetat Commu		Can			е	Buffer Typ
2	100		2		High		Mix)	70	per	elm, juni	k, cedar e	oods with Texas ash, shin oal
	_												
e: <u>2.0</u>	Scor												Bank
Subtota	ercentage of Area		Score	S	Land Use		Vegetat Commu		Can			е	Buffer Typ
2	100		2		High		Mix)	70	r	n, junipe	cedar eln	ods with Texas ash, shin oak,
			Artific Other		ck): ₁₅	ay, mu	nes (silt, c			:)	50	Gravel:	REAM CONDITION rate Composition (estima der: le: 20
e: _4	Scor								sent)	are pre			eam Habitat (check all hat
2 T13	T11 T1	10) T	<i>T</i> 9	T8	<i>T7</i>	T6	<i>T</i> 5	T4	T3	T2	T1	at Type
													rcut Banks
													nanging Vegetation
_													mats
													wads
_													dy/Leafy Debris
													lers/Cobbles
													tic Macrophytes
													/Pool Sequence
							1						cial Habitat Enhancement
							+						•
0	0 0	0	(0	0	0	0	0	0	0	0	0	No. Present
			Averag										OLOGIC CONDITION
E	Scor	rface o	Averag e of sur	A ence	no evide		•		0	0	0 oticeable		nial Habitat Enhancement No. Present

☐ Isolated pools and interstitial (subsurface) flow (2) Score: 0 **Channel Flow Status** Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4) ☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3) Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2) Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1) ☒ No water present in the channel; 100% of channel substrate exposed (0) Score: 0

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP - PPMSP Project Type:	☐ Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: RS-8 SAR No.: RS-8-1 Size	(LF): 861 Date: 12/17/15 Evaluator(s): RW, DT
Stream Type: Ephemeral Ecoregion: Cross Tim	bers
8-Digit HUC: 12060201 Watershed Condition (develo	pped, pasture, etc.): Woods, pasture Watershed Size: 36 acres
Aerial Photo Date and Source: 2014 NAIP	_ Site Photos: 19 & 20 Representative: ⊠ Yes □ No
NI / A	ydrologic conditions present? Yes No (If no, explain in Notes)
Reference reach within the PPMSP (managed by TPWD). Tributary to Palo Pinto Creek. Mino Conditions for year. Some evidence of on-going (but not intense) uncontrolled cattle use. Upda	or pools in channel due to an unusually wet fall and recent rain 3 days prior to visit. Likely dry under normal ated March 2017 for existing.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 8	Avg. Banks: 3
Avg. Waters Edge:	Avg. Water:
Avg. OHWM: 2	Avg. OHWM: 0.5

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score			
	Floodplain connectivity	4					
Channel condition	Bank condition	5		23.3			
	Sediment deposition	5	Calculation 4 5 Sum of metric scores / 15 x 25				
Dinarian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10	5 0			
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	5.0			
In atroom condition	Substrate composition	3	Sum of metric scores / 10	7.5			
In-stream condition	In-stream habitat	0	x 25	7.5			
Lludrologie condition			Sum of metric scores / 8	0.0			
Hydrologic condition	Channel flow status	0	x 25	0.0			
	Sum of core e	lement scores = c	overall TXRAM stream score	36			
L R	trees greater than 24-inch diam	eter at breast heig	ght	0			
Sum of overall TXR	Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score						

Representative Site Photograph:



Facing north (upstream) in the central portion of SAR.

Project/Site Name/No.: TF	P - PPMSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) │	▼ Mitigation/Conservation
Stream ID/Name: RS-8				
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed:	☐ Previously ☒ Currently
8-Digit HUC: 12060201				
Aerial Photo Date and Sou	rce: 2014 NAIP	Site Photos: _1	19 & 20 Rep	resentative: X Yes No
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 l	No (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
Avg. Bank to Bank: 8		Avg. Bank		
Avg. Waters Edge:	•	Avg. Wate		
Avg. OHWM: 2		Avg. OHW	/M: 0.5	
Minor pools in Likely dry und	channel due to an eer normal conditions	SP (managed by TP\ unusually wet fall an s for year. Some evi March 2017 for exist	nd recent rain 3 days dence of on-going (s prior to visit.
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: <u>4</u>
Left Bank Active Erosion:	1 % Right	Bank Active Erosion: 1	% Average: 1	.0
	tion: ☒ Natural ☐ Artifici			
				Score: 5
Sediment Deposition				
	•	ive sediment deposition; badiment deposition; some es	_	` '
40–60% of the botton		ediment deposition; moders; OR obstructed view of t		
· ·	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	eavy sediment deposits at
☐ Greater than 80% of the	ne bottom covered by exce	essive sediment deposition	resulting in aggrading cha	annel (1)
				Score: <u>5</u>

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

1. Woods with shin oak, red oak, Texas ash, elm, juniper 60 Mix High 1 100 2.	0 000	Percentage		Score	5	Land			Vegeta	- 1	Cano			Э	Buffer Typ
2. 3. 4. 5. Right Bank Buffer Type Cover Community Use Score Percer of Ar 1. Woods with shin oak, red oak, Texas ash, elm, juniper 60 Mix High 1 100 2. 3. 4. 5. N-STREAM CONDITION Substrate Composition (estimate percentages) Boulder: Gravel: 10 Sand: 20 Bedrock: Other: In-stream Habitat (check all habitat types that are present) Habitat Type T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T1: Undercut Banks Overhanging Vegetation Rootmats Rootwads Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present Other Root Regime Noticeable surface flow present (4) Solve Regime Rootwads Solve Rootwads Rootwads Rootwads Rootwads Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present Other Solve Regime Rootwads Rootwads Rootwads Riffle/Pool Sequence Riffle/		of Area				Use				er			-1 1		ale contra elete e el ese el ese el
3. 4. 5.) 1	100	100	1		High			MIX		60	niper	, eim, ju	exas asr	ods with shin oak, red oak,
4. 5. Suffer Type Canopy Vegetation Land Use Vegetation															
Right Bank Buffer Type Canopy Vegetation Land Use Score Percent of Art Land Use Cover Community Cover Community Use Cover Community Cover Cover Community Cover Co							-								
Buffer Type Canopy Vegetation Land Score Percer of Art							-								
Buffer Type	Score: 1.0	Score					1								
1. Woods with shin oak, red oak, Texas ash, elm, juniper 60 Mix High 1 100 2. 3. 4. 5.															ank
2.	Oubl	Percentage of Area		Score	S									Э	Buffer Тур
3.) 1	100	100	1		High			Mix		60	er	elm, junip	xas ash,	ods with shin oak, red oak, Te
4.															
Substrate Composition (estimate percentages) Boulder: Gravel: 10 Fines (silt, clay, muck): 50 Artificial: Cobble: 20 Sand: 20 Bedrock: Other: In-stream Habitat (check all habitat types that are present) Habitat Type T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T1: Undercut Banks Overhanging Vegetation Rootmats Noody/Leafy Debris Soulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0															
N-STREAM CONDITION Bubstrate Composition (estimate percentages) Boulder: Gravel: 10 Fines (silt, clay, muck): 50 Artificial: Cobble: 20 Sand: 20 Bedrock: Other: In-stream Habitat (check all habitat types that are present) Habitat Type T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 Undercut Banks Overhanging Vegetation Rootmats Rootmats Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Average: 0.0 INDROLOGIC CONDITION Flow Regime Noticeable surface flow present (4) Isolated pools and no evidence of surface or in Esolated pools and interstitial (subsurface) flow (2)															
Boulder: Gravel: 10 Fines (silt, clay, muck): 50 Artificial: Cobble: 20 Sand: 20 Bedrock: Other: Instream Habitat (check all habitat types that are present) Habitat Type T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0															
Boulder: Gravel: 10 Fines (silt, clay, muck): 50 Artificial: Cobble: 20 Sand: 20 Bedrock: Other: Instream Habitat (check all habitat types that are present) Habitat Type T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Score: 1.0	Score													EAM CONDITION
Boulder: Gravel: 10 Fines (silt, clay, muck): 50 Artificial:													ntages	te perce	
Sand: 20 Bedrock: Other:		al:	icial:	Artific		ıck): 50	nuc	clay, n	es (silt, c	Fin					
### Abitat (check all habitat types that are present) ###################################			er:	Other		, 55			· · · · · · · · · · · · · · · · · · ·						9: 20
Habitat Type	Score: 3			1						1					
Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present Other Tota											sent)	are pres	es that	itat typ	nm Habitat (check all ha
Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	T12	0 T11 T12	T10 T1:	9 T1	<i>T</i> 9	T8		T7	T6	T5	T4	<i>T</i> 3	T2	T1	t Type
Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present															cut Banks
Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present															anging Vegetation
Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present Other Total N															ats
Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present O O O O O O O O O O O O O O O O O O O															ads
Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present Other Total No. Present Other IVDROLOGIC CONDITION Flow Regime Noticeable surface flow present (4) Continual pool of water but lacking noticeable flow (3) Isolated pools and no evidence of surface or in Isolated pools and no observable pools or interst Isolated pools and interstitial (subsurface) flow (2)															//Leafy Debris
Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present Other Other Other Total No. Present Other Ot															ers/Cobbles
Artificial Habitat Enhancement Other Total No. Present O O O O O O O O O O O O O O O O O O O															c Macrophytes
Other Total No. Present O O O O O O O O O O O O O O O O O O O															Pool Sequence
Total No. Present 0 0 0 0 0 0 0 0 0 0 0 0 Average: Average: 0.0 O O O O O O O O O O O O O O O O O O															al Habitat Enhancement
Average: 0.0 Avera							Ť								
If YDROLOGIC CONDITION Flow Regime ☐ Noticeable surface flow present (4) ☐ Continual pool of water but lacking noticeable flow (3) ☐ Isolated pools and no evidence of surface or in ☑ Dry channel and no observable pools or interst ☐ Isolated pools and interstitial (subsurface) flow (2)			0	0	0	0		0	0	0	0	0	0	0	No. Present
Noticeable surface flow present (4)	Score: 0	: 0.0 Score	ge: <u>0.0</u>	Average	P	I.								l .	
 □ Noticeable surface flow present (4) □ Continual pool of water but lacking noticeable flow (3) □ Isolated pools and no evidence of surface or in Dry channel and no observable pools or interst □ Isolated pools and interstitial (subsurface) flow (2) 															LOGIC CONDITION
☐ Continual pool of water but lacking noticeable flow (3) ☐ Dry channel and no observable pools or interst ☐ Isolated pools and interstitial (subsurface) flow (2)															egime
☐ Isolated pools and interstitial (subsurface) flow (2)	terstitial flow	ace or interstitia	ırface or in	e of surf	ence	l no evide	nd ı	ools a	olated po	☐ Iso				ent (4)	ticeable surface flow pres
	itial flow (0)	or interstitial flov	s or interst	e pools	/able	o observa	l no	el and	y channe	⊠ Dr)	flow (3	ticeable	cking no	ntinual pool of water but la
	. ,											v (2)	ace) flo	subsur	lated pools and interstitial
Channel Flow Status	Score: 0	Score											•	-	<u> </u>
TOTAL CONTRACT OF THE PROPERTY															el Flow Status
☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4	 1)	(posed (4)	exposed (4	ate is ex	bstra	annel sub	cha	% of a	than 25°	: less	om widt	nel botto	ne chan	75% of t	ter covering greater than
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	,	1 (-)	1 (

Score: 0

Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)

☒ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: TP - PPMSP Project Type	e: Fill/Impact (Linear Non-linear) Mitigation/Conservation
Stream ID/Name: RS-9 SAR No.: RS-9-1 Siz	e (LF): 899 Date: 12/17/15 Evaluator(s): DT, RW
Stream Type: Ephemeral Ecoregion: Cross Tir	mbers Delineation Performed: ☐ Previously ☒ Currently
8-Digit HUC: 12060201 Watershed Condition (deve	loped, pasture, etc.): woods, pasture Watershed Size: 240 acres
Aerial Photo Date and Source: 2014 NAIP	Site Photos: 21, 22, 23, 24 Representative: ⊠ Yes □ No
NI / A	/hydrologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
Reference reach within the PPMSP (managed by TPWD). Tributary to Palo Pinto Creek. M Notes: conditions for year. Some evidence of on-going (but not intense) uncontrolled cattle use. Up	inor pools in channel due to an unusually wet fall and recent rain 3 days prior to visit. Likely dry under normal odated March 2017 for existing.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 25	Avg. Banks: 6
Avg. Waters Edge:	Avg. Water:
Avg. OHWM: 6	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	4			
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	23.3	
	Sediment deposition	5	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10	5.0	
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	5.0	
In atroom condition	Substrate composition	3	Sum of metric scores / 10	7.5	
In-stream condition	In-stream habitat	0	x 25	7.5	
Lludralagia aanditian	Flow regime	0	Sum of metric scores / 8	0.0	
Hydrologic condition	Channel flow status	0	x 25	0.0	
	Sum of core e	lement scores = c	overall TXRAM stream score	36	
Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if: L R Dominated by native trees greater than 24-inch diameter at breast height Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata					
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	36	

Representative Site Photograph:



Facing south (downstream) near the upstream portion of SAR. The stream is dry under normal conditions.

TXRAM STREAM DATA SHEET

Project/Site Name/No.:	P - PPMSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [☑ Mitigation/Conservation
Stream ID/Name: RS-9	SAR No.: [[]	RS-9-1 Size (LF): 899	Date: 12/17/15 Eva	luator(s): DT, RW
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): woods, pasture Wate	ershed Size: 240 acres
Aerial Photo Date and So	urce: 2014 NAIP	Site Photos: 2	21, 22, 23, 24 Repr	resentative: X Yes No
Stressor(s): N / A	Are normal	climatic/hydrologic conditi	ons present? Yes N	No (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
5	25	Avg. Bank		
Avg. Waters Edge: Avg. OHWM:	6	Avg. Wate Avg. OHW		
Avg. Of Ivvivi.	0	Avg. Onv	VIVI. I	
Minor pools in Likely dry und	ach within the PPMS n channel due to an der normal conditions cattle use. Updated I	unusually wet fall ar s for year. Some evi	nd recent rain 3 days dence of on-going (s prior to visit.
CHANNEL CONDITION Floodplain Connectivity	,			
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: 4
Left Bank Active Erosion	5 % Pight I	Bank Active Erosion: 5	9/ Average: 5	.0
	i. <u> </u>			
Darik i Totection/Stabiliza	ation. A Natural Artifici	iai		Score: 5
Sediment Deposition				
	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)
	m covered by excessive sec	•	=	
40–60% of the botto	om covered by excessive secosits at in-stream structures			
	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	annel (1)
				Score: <u>5</u>

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Buffer Typ	oe -			Can		Vegeta Commu		Land Use	Sco	ore	Percenta of Area	_	Subtota
1. Woods with elm, oak, ash, junip)Ar			Cover 50		Mix		High	1		100	<i>a</i>	1
2.)CI			30	,	IVIIA	•	riigii	+ '		100		'
3.													
<u>4</u> .				1									
1. 5.													
J.												Score	1.0
ight Bank				1 -					_				
Buffer Typ	e			Can		Vegeta Commu		Land Use	Sco	ore	Percenta of Area		Subtota
1. Woods with elm, oak, ash, junipe	r			50)	Mix		High	1		100		1
2.													
3.													
4.									1				
5.									1				
				-1	i_		I		-	I		Score	1.0
I-STREAM CONDITION													
ubstrate Composition (estima Boulder: 5	Gravel		5)		Lin	nes (silt, d	olov m	uok): -	Ι.	rtificia	ı.		
Cobble: 10	Sand:					drock: 50		uck). 5		Other:	1.		
Cobble. 10	Sand.	10			ье	urock. 50				mer.		Saara	
n-stream Habitat (check all ha	hitat tvn	es that	are nre	sent)								Score	3
Habitat Type	T1	T2	T3	T4	<i>T</i> 5	T6	<i>T7</i>	T8	<i>T</i> 9	T10	T11	T12	? T13
Undercut Banks								+ +					
Overhanging Vegetation													
Rootmats								+ +					
Rootwads								+ +					_
Woody/Leafy Debris								+					-
Boulders/Cobbles								+ +					
Aquatic Macrophytes												1	
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0	0	0	0	0	0	0	0	0	0			
YDROLOGIC CONDITION low Regime									Ave	erage:	0.0	Score	0
☐ Noticeable surface flow pres	ent (4)					olated no	ools an	d no evide	ence of	surfac	ce or inte	rstitial	flow (1)
Continual pool of water but la		nticeahl	e flow ('	3)				no observ					
☐ Isolated pools and interstitial	•		•	3)		ry Charlin	or arra	110 00301 V	abic p	5015 01	intorouti	ai iiovv	(0)
												Score	0
hannel Flow Status													
☐ Water covering greater than	75% of t	he char	nnel bot	tom widt	th; less	than 25	% of ch	nannel sul	ostrate	is exp	osed (4)		
☐ water covering greater than											` '		
☐ Water covering greater than ☐ Water covering 50–75% of the											()		

Score: 0

☒ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turke	y Peak / LMWSP Project Typ	e: ☐ Fill/Impact (☐ L	inear ☐ Non-li	near) 🗵 Mitigation/Conservation
Stream ID/Name: RCR-1-1	SAR No.: Si	ze (LF): 800 Dat	e: <u>7/13/17</u>	_ Evaluator(s): _RW
Stream Type: Perennial	Ecoregion: Cross Ti	mbers	elineation Perfo	ormed: Previously X Currently
8-Digit HUC: 12060201	Watershed Condition (deve	eloped, pasture, etc.):	Lake	Watershed Size: ~63 sq. mi.
Aerial Photo Date and Source:	2016 NAIP / Bing	Site Photos: Ye	S	_ Representative: X Yes ☐ No
Stressor(s): None	Are normal climation	c/hydrologic conditions	s present? X Ye	es No (If no, explain in Notes)
Notes: Rock Creek below Lake Mineral Wel	ls in state park. Mature forest in riparian buffer wi	ith some ~24" DBH. Nearby grassla	and restored. Old distribut	ion line noted but does not appear to be maintained.
Stream Characteristics				
Stream Width (Feet)		Stream Height	Depth (Feet)	
Avg. Bank to Bank: 40		Avg. Banks:	8	
Avg. Waters Edge: 25		Avg. Water:	2	
Avg. OHWM: 30		Avg. OHWM:	5	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score		
	Floodplain connectivity	4				
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	23.3		
	Sediment deposition	5	X 20			
Dinarian buffer condition	Riparian buffer (left bank)	5.0	Sum of bank scores / 10	05.0		
Riparian buffer condition	Riparian buffer (right bank)	5.0	x 25	25.0		
In atroom condition	Substrate composition	4	Sum of metric scores / 10	20.0		
In-stream condition	In-stream habitat	4	x 25	20.0		
Lludrologia condition	Flow regime	4	Sum of metric scores / 8	25.0		
Hydrologic condition	Channel flow status	4	x 25	25.0		
	Sum of core e	lement scores = c	overall TXRAM stream score	93		
Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if: L R Dominated by native trees greater than 24-inch diameter at breast height S Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata						
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	98		

Representative Site Photograph:



Facing upstream near the middle of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _T	urkey Peak / LMWSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation
Stream ID/Name: RCR-1-	1 SAR No.: _	Size (LF): <u>800</u>	Date: Eval	uator(s): RW
Stream Type: Perennial	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Lake Wate	ershed Size: ~63 sq. mi.
Aerial Photo Date and Sou	urce: 2016 NAIP / Bing	Site Photos: _\	Yes Repr	esentative: X Yes No
Stressor(s): None	Are normal	climatic/hydrologic conditi	ons present? X Yes \(\Bar{\text{N}} \)	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
Avg. Bank to Bank:	40	Avg. Bank	(S: 8	
Avg. Waters Edge:	25	Avg. Wate	er: 2	
Avg. OHWM:	30	Avg. OHW	/M: 5	
	pelow Lake Mineral V BH. Nearby grasslar ned.			
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
		at isolated areas.		
5	(4)	3	2	1 Score: 4
Bank Condition				0001C. <u></u>
Left Bank Active Erosion	. 5 % Right	Bank Active Frosion: 5	% Average: ^{5.}	0
	ation: ☒ Natural ☐ Artific			
Darik i Totection/Otabiliza	Natural Artific	iai.		Score: 5
Sediment Deposition				<u> </u>
X Less than 20% of the	bottom covered by excess	ive sediment deposition: ba	ars with established vegeta	ation (5)
	n covered by excessive sec		•	` '
sediments (4)	in covered by executive cov	amone appointen, como o	otabilorioa baro with indica	toro or robornay dopositod
	m covered by excessive so sits at in-stream structures			
☐ 60–80% of the bottor in-stream structures (2)	m covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of t	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
				Score: 5

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3). Left Bank Buffer Distance: 120.0

2011 201111						
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Forest with pecan, hickory, bur oak, Texas red oak, American elm, cedar elm, ash, hackberry, dogwood, possumhaw, co	80	Native	Low	5	98	4.9
2. Grassland restored with natives such as eastern gamagrass	10	Native	Low	3	2	0.1
3.						
4.						
5.						
<u> </u>		•			Sco	re: 5.0

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Forest with pecan, hickory, bur oak, Texas red oak, American elm, cedar elm, ash, hackberry, dogwood, possumha	80	Native	Low	5	100	5
2.						
3.						
4.						
5.						

Score: 5.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 5	Gravel: 40	Fines (silt, clay, muck): 30	Artificial:
Cobble: 25	Sand:	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	<i>T7</i>	T8	Т9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓		✓						
Overhanging Vegetation		✓	✓		✓		✓						
Rootmats			✓			✓	✓	✓					
Rootwads	✓	✓		✓	✓			✓					
Woody/Leafy Debris			✓		✓								
Boulders/Cobbles		✓		✓	✓	✓	✓	✓					
Aquatic Macrophytes					✓	✓		✓					
Riffle/Pool Sequence						✓		✓					
Artificial Habitat Enhancement													
Other													
Total No. Present	2	4	4	3	6	4	4	5					

Average: 4.0 Score: 4

HYDROLOGIC CONDITION

Flow Regime

✓ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Seeve 4

Score: 4_

Channel Flow Status
☑ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turke	ey Peak / DVSP Project	Type: Fill/Impa	ct (Linear 1	Non-linear) X Mitigation/Conservation
Stream ID/Name: PRR-1-1	SAR No.: PRR-1-1	Size (LF): 800	Date: 7/13/1	7 Evaluator(s): RW
Stream Type: Perennial	Ecoregion: Cross	Timbers	Delineation	Performed: Previously Z Currently
8-Digit HUC: 12060202	Watershed Condition (d	leveloped, pasture	e, etc.): Undeve	loped Watershed Size: ~400 sq. mi.
Aerial Photo Date and Source:	2016 NAIP / Bing	Site Photo	s: Yes	Representative: X Yes No
Stressor(s): None	Are normal clim	atic/hydrologic co	nditions present?	X Yes ☐ No (If no, explain in Notes)
Notes: Paluxy River in the downstream portion TPWD ecologically significant streams		ivate but woods appear to be I	ow use. Some large hickory a	nd bur oak on right bank ~24" DBH. Some rain previous week.
Stream Characteristics				
Stream Width (Feet)		Stream	Height/Depth (Fee	et)
Avg. Bank to Bank: 70		Avg. E	Banks: 4	
Avg. Waters Edge: 55		Avg. V	Vater: 1	
Avg. OHWM: 60		Avg. C	DHWM: 2	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	4		
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	23.3
	Sediment deposition	5	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	5.0	Sum of bank scores / 10	04.0
Riparian buffer condition	Riparian buffer (right bank)	4.9	x 25	24.8
In atroom condition	Substrate composition	5	Sum of metric scores / 10	22.5
In-stream condition	In-stream habitat	4	x 25	22.5
Lludrologia condition	Flow regime	4	Sum of metric scores / 8	25.0
Hydrologic condition	x 25	25.0		
	96			
Additional points for limited L R Dominated by native	2			
	ast (i.e., acorns and nuts) produ AM stream score and additional			98

Representative Site Photograph:



Facing downstream near the upper end of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _Tu	urkey Peak / DVSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [☑ Mitigation/Conservation		
Stream ID/Name: PRR-1-1	SAR No.: [[]	PRR-1-1 Size (LF): 800	Date: <u>7/13/17</u> Eval	uator(s): RW		
Stream Type: Perennial						
8-Digit HUC: 12060202						
Aerial Photo Date and Sou	rrce: 2016 NAIP / Bing	Site Photos: _	Yes Repr	esentative: X Yes No		
Stressor(s): None	Are normal	climatic/hydrologic conditi	ons present? ✓ Yes ✓ N	lo (If no, explain in Notes)		
Stream Characteristics						
Stream Width (Feet)			ght/Depth (Feet)			
11191 = 11111111	70	Avg. Bank				
5	55	Avg. Wate				
Avg. OHWM: 6	60	Avg. OHW	/M: 2			
but woods app	pear to be low use.	Some large hickory	alley State Park. Rigand bur oak on right ant stream segment	bank ~24" DBH.		
CHANNEL CONDITION Floodplain Connectivity						
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
Bank Condition				Score: 4		
Left Bank Active Erosion:	5 % Right	Bank Active Erosion: 5	% Average: ^{5.}	.0		
	tion: X Natural Artific					
				Score: 5		
Sediment Deposition						
20–40% of the bottom	·	•	ars with established vegeta stablished bars with indica	` '		
sediments (4) 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
	n covered by excessive se	diment deposition; newly of	created bars prevalent; he	avy sediment deposits at		
☐ Greater than 80% of the	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)		
				Score: 5		

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3). Left Bank Buffer Distance: 135.0

Left Balik					bullet Distant	Je. <u>133.0</u>
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, live oak, Texas Oak, mature Ashe juniper	65	Native	Low	5	100	5
2.						
3.						
4.						
5.						
Score: 5.0						

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with hickory, oak, elm, ash, sycamore	70	Native	Low	5	95	4.8
2. Gavel bar with sycamore and forbs	5	Mix	Low	2	5	0.1
3.						
4.						
5.						

Score: 4.9

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck):	Artificial:
Cobble: 20	Sand:	Bedrock: 40	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks				✓	✓		✓						
Overhanging Vegetation				✓	✓		✓	✓					
Rootmats				✓	✓		✓	✓	✓				
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles	✓	✓	✓	√		✓	√	✓	✓				
Aquatic Macrophytes	✓	✓	✓	✓	✓		✓	✓	✓				
Riffle/Pool Sequence	✓	✓	✓			✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	3	3	3	5	4	2	5	4	4				

Average: 3.7 Score: 4

HYDROLOGIC CONDITION

Flow Regime	aime
-------------	------

✓ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: <u>4</u>

	Score: 4
Channel Flow Status	
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4	.)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turke	ey Peak / DVSP Project	Type: 🗌 Fill/Impa	ct (Linea	ır 🗌 Non-lir	near) 🗵 Mitigation/Conservation
Stream ID/Name: PRR-1-2	SAR No.: PRR-1-2	Size (LF): 1050)_ _{Date:} 7	/13/17	Evaluator(s): RW
Stream Type: Perennial	Ecoregion: Cross	Timbers	Deline	eation Perfo	rmed: Previously Currently
8-Digit HUC: 12060202	Watershed Condition (d	developed, pasture	e, etc.): Un	develope	Matershed Size: ~400 sq. mi.
Aerial Photo Date and Source:	2016 NAIP / Bing	Site Photo	os: Yes		_ Representative: X Yes ☐ No
Stressor(s): None	Are normal clim	natic/hydrologic co	nditions pre	sent? 🗵 Ye	s No (If no, explain in Notes)
Notes: Paluxy River in the downstream portio	n of Dinosaur Valley State Park. Some large h	nickory and oak on both banks	~24" DBH. Some ra	ain previous week. T	PWD ecologically significant stream segment.
Stream Characteristics					
Stream Width (Feet)		Stream	Height/Dep	th (Feet)	
Avg. Bank to Bank: 70		Avg. E	Banks: 5		
Avg. Waters Edge: 55		Avg. \	Vater: 2		
Avg. OHWM: 60		Avg. (DHWM: з	•	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	4			
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	23.3	
	Sediment deposition	5	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	5.0	Sum of bank scores / 10	00.5	
Riparian buffer condition	Riparian buffer (right bank)	4.0	x 25	22.5	
In-stream condition	Substrate composition	4	Sum of metric scores / 10	20.0	
in-stream condition	In-stream habitat	4	x 25	20.0	
Lludralagia aanditian	Flow regime	4	Sum of metric scores / 8	25.0	
Hydrologic condition	Channel flow status	4	x 25	25.0	
	Sum of core e	lement scores = c	overall TXRAM stream score	91	
Additional points for limited					
L R □ □ Dominated by native □ □ Dominated by hard m	5				
	ast (i.e., acorns and nuts) produ AM stream score and additional			96	

Representative Site Photograph:



Facing downstream near the middle of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: T	urkey Peak / DVSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	Mitigation/Conservation	
Stream ID/Name: PRR-1-2	2 SAR No.: _	PRR-1-2 Size (LF): 1050	Date: Eval	uator(s): RW	
Stream Type: Perennial	Ecoregion: Cro	oss Timbers	Delineation Performed:	☐ Previously ☒ Currently	
8-Digit HUC: 12060202	Watershed Condition	on (developed, pasture, et	c.): <u>Undeveloped</u> Wate	ershed Size: ~400 sq. mi.	
Aerial Photo Date and Sou	urce: 2016 NAIP / Bing	Site Photos: _\	res Repre	esentative: X Yes No	
Stressor(s): None	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)			ght/Depth (Feet)		
3	70	Avg. Bank			
3	55	Avg. Wate			
Avg. OHWM:	60	Avg. OHW	/M: 3		
and oak on b	in the downstream poth banks ~24" DBHent.	H. Some rain previou	us week. TPWD eco	logically significant	
CHANNEL CONDITION Floodplain Connectivity					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
				Score: <u>4</u>	
Bank Condition				0	
Left Bank Active Erosion			% Average: <u>5.</u>	0	
Bank Protection/Stabiliza	ition: 🗵 Natural 🗌 Artifici	ial:			
0.111511				Score: <u>⁵</u>	
Sediment Deposition	hattana aassanad lassassa	ive endineendeden eidien. b		Aion (F)	
	bottom covered by excess	•	•	` '	
20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)					
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the bottor in-stream structures (2)	n covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at	
☐ Greater than 80% of t	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)	
-				Score: 5	

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank Buffer Distan	ce: <u>135.0</u>
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Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with hickory, cedar elm, Texas Oak, bur oak, sycamore, ash, mature Ashe juniper	65	Native	Low	5	100	5
2.						
3.						
4.						
5.						
					Sco	re: 5.0

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with hickory, Texas oak, live oak, elm, ash, mature Ashe juniper	70	Native	Low	5	65	3.3
2. Gavel bar with sycamore and forbs	5	Mix	Low	2	30	0.6
3. Grassland and dirt trail with bluestems and forbs	5	Mix	Moderate	1	5	0.1
4.						
5.						

Score: 4.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 20	Fines (silt, clay, muck):	Artificial:
Cobble: 20	Sand:	Bedrock: 50	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓		✓	✓	✓			✓				
Overhanging Vegetation	✓	✓	✓	✓	✓	✓							
Rootmats		✓			✓	✓	✓						
Rootwads				✓									
Woody/Leafy Debris				✓					✓				
Boulders/Cobbles	✓	√			✓		√	✓	✓	✓			
Aquatic Macrophytes	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Riffle/Pool Sequence							✓	✓	✓	✓			
Artificial Habitat Enhancement													
Other													
Total No. Present	4	5	2	5	5	4	4	3	5	2			

Average: 3.9 Score: 4

HYDROLOGIC CONDITION

Flow Regime

☒ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 4

isolated pools and interstitial (subsurface) now (2)	
	Score: <u>4</u>
Channel Flow Status	
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)	
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is €	exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

TXRAM STREAM FINAL SCORING SHEET

Fill/Impact (☐ Linear ☐ Non-linear) 区 Mitigation/Conservation
F): 990 Date: 7/13/17 Evaluator(s): RW
Delineation Performed: Previously 🗵 Currently
d, pasture, etc.): Undeveloped Watershed Size: ~400 sq. mi.
Site Photos: Yes ☐ No
rologic conditions present? X Yes No (If no, explain in Notes)
te property on both banks. Some rain previous week. TPWD ecologically significant stream segment.
Stream Height/Depth (Feet)
Avg. Banks: 4
Avg. Water: 1
Avg. OHWM: 2

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score			
	Floodplain connectivity	4					
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	23.3			
	Sediment deposition	5	X 20				
Dinarian buffer condition	Riparian buffer (left bank)	5.0	Sum of bank scores / 10	04.0			
Riparian buffer condition	Riparian buffer (right bank)	4.6	x 25	24.0			
In atroom condition	Substrate composition	5	Sum of metric scores / 10	25.0			
In-stream condition	In-stream habitat	5	x 25	25.0			
Lludrologia condition	Flow regime	4	Sum of metric scores / 8	25.0			
Hydrologic condition	Channel flow status	4	x 25	25.0			
	Sum of core e	lement scores = c	overall TXRAM stream score	97			
•	Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if:						
L R Dominated by native	0						
Dominated by hard m							
	AM stream score and additional			97			

Representative Site Photograph:



Facing downstream near the lower end of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _T	urkey Peak / DVSP Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation	
Stream ID/Name: PRR-1-3	3 SAR No.: F	PRR-1-3 Size (LF): 990	Date: <u>7/13/17</u> Eval	uator(s): RW	
	Ecoregion: Cro				
8-Digit HUC: 12060202	Watershed Condition	on (developed, pasture, et	c.): Undeveloped Wate	ershed Size: ~400 sq. mi.	
Aerial Photo Date and Sou	urce: 2016 NAIP / Bing	Site Photos: _\	res Repr	esentative: X Yes No	
Stressor(s): None Are normal climatic/hydrologic conditions present? X Yes No (If no, explain in Notes)					
Stream Characteristics					
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		
Avg. Bank to Bank:	70	Avg. Bank	(S: 4		
3	55	Avg. Wate			
Avg. OHWM:	60	Avg. OHW	/M: 2		
	upstream of Dinosau oth banks. Some rai				
CHANNEL CONDITION Floodplain Connectivity					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4)	3	2	1	
		<u> </u>		Score: 4	
Bank Condition					
Left Bank Active Erosion	: <u>0</u>	Bank Active Erosion: 5	% Average: 2.	5	
Bank Protection/Stabiliza	ation: 🗵 Natural 🗌 Artifici	ial:			
				Score: 5	
Sediment Deposition					
■ Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)	
20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)					
☐ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the bottor in-stream structures (2)	☐ 60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at				
` '	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)	
				Score: 5	

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

	Left Bank			Buffer D	Distanc	
- 1		_		_		

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with hickory, elm, Texas Oak, ash, sycamore, cottonwood, mature Ashe juniper	70	Native	Low	5	100	5
2.						
3.						
4.						
5.						

Score: <u>5.0</u>

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with hickory, Texas oak, cedar elm, ash, hackberry, sycamore, mature Ashe juniper	70	Native	Low	5	85	4.3
2. Gavel bar with sycamore and forbs	2	Mix	Low	2	15	0.3
3.						
4.						
5.						

Score: 4.6

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 5	Artificial:
Cobble: 30	Sand:	Bedrock: 25	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	<i>T7</i>	T8	Т9	T10	T11	T12	T13
Undercut Banks		✓	✓	✓	✓	✓		✓	✓				
Overhanging Vegetation	✓			✓		✓		✓	✓	✓			
Rootmats		✓		✓				✓	✓	✓			
Rootwads	✓					✓							
Woody/Leafy Debris		√					✓		✓	✓			
Boulders/Cobbles	√	✓	✓	√	✓	✓	√	✓	√				
Aquatic Macrophytes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Riffle/Pool Sequence		✓	✓	✓	✓	✓	✓			✓			
Artificial Habitat Enhancement													
Other													
Total No. Present	4	6	4	6	4	6	4	5	6	5			

Average: 5.0 Score: 5

HYDROLOGIC CONDITION

Flow Regime

✓ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Socral 4

ocoie.	
Channel Flow Status	
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)	
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed	d (1)
No water present in the channel; 100% of channel substrate exposed (0)	

Appendix C: Stream Data S	Sheets and Final Scori SARs Existing Cond	ing Sheets – Upstream dition	Mitigation
XRAM Report			July 2017

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak	Project Type: ☐ Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: MS-1 SAR No	D.: MS-1-1 Size (LF): 1,753 Date: 4/22/14 Evaluator(s): RW, DT
Stream Type: Intermittent Ecoregion:	Cross Timbers Delineation Performed: ☐ Previously ☒ Currently
8-Digit HUC: 12060201 Watershed Co	ondition (developed, pasture, etc.): Pasture, Impoundment Watershed Size: 44 sq. mi.
	NG Site Photos: Yes Representative: ☒ Yes ☐ No
Stressor(s): Land use Are no	rmal climatic/hydrologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
Notes: Extreme drought. Signs of cattle use.	Portion of channel split. In-stream habitat estimated using reference reach.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 12
Avg. Waters Edge: 15	Avg. Water: 1
Avg. OHWM: 30	Avg. OHWM: 3

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	3		
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3
	Sediment deposition 4		X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10	7.5
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	7.5
In atroom condition	Substrate composition	5	Sum of metric scores / 10	22.5
In-stream condition	In-stream habitat	4	x 25	22.5
Lludralagia aanditian	Flow regime	2	Sum of metric scores / 8	15.6
Hydrologic condition	Channel flow status	3	x 25	15.0
		•		
	Sum of core e	lement scores = c	overall TXRAM stream score	64
L R	habitats = overall TXRAM streat trees greater than 24-inch diam last (i.e., acorns and nuts) produ	eter at breast hei	ght	0
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	64

Representative Site Photograph:



MS-1-1 facing upstream (west).

Version 1.0 - Final Draft TXRAM STREAM DATA SHEET

D : ((0); N (N T	Turkov Poak		 	
	Turkey Peak Pro			
	SAR No.:			
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously 🗵 Currently
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 44 sq. mi.
Aerial Photo Date and So	urce: 2012 NAIP / BING	Site Photos:	res Repr	esentative: X Yes No
	Are normal			
Stream Characteristics		,g		(,
Stream Width (Feet)		Stream Heid	ght/Depth (Feet)	
	50	Avg. Bank	· · · · ·	
	15	Avg. Wate		
	30	Avg. OHW		
Notes: Extreme drou	ıght. Signs of cattle ι ce reach.	use. Portion of chan	nel split. In-stream h	abitat estimated
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Pank Condition				Score: 3
Bank Condition Left Bank Active Erosion	. 20 % Pight	Bank Active Erector: 10	% Average: 1	5.0
	ation: ⊠ Natural ☐ Artific			
Dank i Totection/Otabiliza	Auton. M Natural M Artino	iai.		Score: 4
Sediment Deposition				ocore
_	hottom covered by eveces	ive andiment deposition, b	are with established vegets	ation (E)
	bottom covered by excess m covered by excessive sec		· ·	` '
	m covered by excessive sosits at in-stream structures			
in-stream structures (2)	m covered by excessive se		•	
Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Buffer Type 1. Woods with mesquite, Ashe junip 2. Gravel bar with mesquite, Ashe junip 3. 4. 5. tight Bank Buffer Type	er, live	oak		Cand Cov		Vegeta Commu		Land Use	Sco	ore	Percentag of Area	ge s	Subtotal
Gravel bar with mesquite, Ashe junip State of the state of th		oak		E0			armey .				OI MICU		
3. 4. 5. tight Bank	per		1. Woods with mesquite, Ashe juniper, live oak			Mix		High	1	1	90		0.9
4. 5. tight Bank				10		Undesir	able	High	1	ı	10		0.1
5. tight Bank													
tight Bank													
					•				•		5	core	1.0
)			Cano		Vegeta		Land	Sco	ore	Percentag		Subtotal
1 Woods with sader alm pages live	aal. Aa	ha iunin	~ <u>"</u>	Cov	-	Commu		Use	 	,	of Area	+	
1. Woods with cedar elm, pecan, live 2.	oak, AS	ne junip	ti .	70	'	Mix		High	2	<u> </u>	100		2
3.												+	
									1			\perp	
4.				1								\perp	
5.													
N-STREAM CONDITION Substrate Composition (estimate	e perce	entages	s)								•	core	2.0
	Gravel				Fir	nes (silt, d	clay, m	uck): 20	<i>A</i>	Artificia	ıl:		
Cobble: 20	Sand:				Bedrock:		(Other:					
n-stream Habitat (check all habi	itat typ T1	es that	are pre	esent)	T5	T6	T7	T8	T9	T40		T12	
Habitat Type		12	13	14	15	10	T7	10	19	T10	T11	112	T13
Undercut Banks	✓												_
Overhanging Vegetation													
Rootmats													
Rootwads	✓												
Woody/Leafy Debris	✓												
Boulders/Cobbles	✓												
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	4												
		<u>I</u>	1						Av	erage:	4.0	core	4
IYDROLOGIC CONDITION Tow Regime										Ü			
☐ Noticeable surface flow preser	nt (4)				☐ Is	olated po	ools an	d no evide	nce of	f surfac	ce or inter	stitial	flow (1)
☐ Continual pool of water but lac	` '	oticeahl	e flow (:	3)				no observ					
				-,		. , 0.101111	or arra	00001 V	p	20.5 01			(-)
	Subsui	iace) iic)W (Z)								9	core	• 2
Channel Flow Status											`		·
☐ Water covering greater than 7	5% of t	he char	nnel bot	tom widt	h; less	s than 25	% of cl	nannel sub	strate	is exp	osed (4)		
■ Water covering 50–75% of the											. ,		
☐ Water covering 25–50% of the								-					
☐ Water present but covering les								-			atrata ia -	vnco-	A (1)

Score: 3

☐ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turke	ey Peak Project Type: [☐ Fill/Impact (☐ Linear ☐ Non-linear)	
Stream ID/Name: MS-1	SAR No.: MS-1-2 Size (LF): 716 Date: 4/22/14 Evalu	uator(s): RW, DT
Stream Type: Intermittent	Ecoregion: Cross Timb	Delineation Performed:	☐ Previously X Currently
8-Digit HUC: 12060201	Watershed Condition (develor	ped, pasture, etc.): Pasture, Impoundment Wat	ershed Size: 44 sq. mi.
Aerial Photo Date and Source:		Site Photos: Yes Rep	
Stressor(s): Land use	Are normal climatic/hy	drologic conditions present? Yes I	No (If no, explain in Notes)
Notes: Extreme drought. Signs of ca	attle use and juniper cutting. Erosion at I	oend. Parallels railroad tracks. In-stream habitat e	stimated from reference reach.
Stream Characteristics			
Stream Width (Feet)		Stream Height/Depth (Feet)	
Avg. Bank to Bank: 50		Avg. Banks: 10	
Avg. Waters Edge: 25		Avg. Water: 2	
Avg. OHWM: 30		Avg. OHWM: 4	

Scoring Table

Core Element	Metric Score Calculation		Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	2			
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	15.0	
	Sediment deposition	4	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10		
Riparian buffer condition	Riparian buffer (right bank)	0.8	x 25	4.5	
In atroom condition	Substrate composition	5 Sum of metric scores		22.5	
In-stream condition	In-stream habitat	4	x 25	22.0	
Lludrologia condition	Flow regime	2	Sum of metric scores / 8	15.6	
Hydrologic condition	Channel flow status	3	x 25	15.6	
	Sum of core e	lement scores = c	overall TXRAM stream score	58	
L R	habitats = overall TXRAM streat trees greater than 24-inch diam last (i.e., acorns and nuts) produ	eter at breast hei	ght	0	
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	58	

Representative Site Photograph:



MS-1-2 facing upstream (west).

TXRAM STREAM DATA SHEET

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [☑ Mitigation/Conservation
Stream ID/Name: MS-1				
Stream Type: Intermittent				
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 44 sq. mi.
Aerial Photo Date and Sou				
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		Stream Heid	ght/Depth (Feet)	
<u> </u>	50	Avg. Bank		
	25	Avg. Wate		
Avg. OHWM: 3	60	Avg. OHW	/M: 4	
CHANNEL CONDITION Floodplain Connectivity Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
	,,	floodplain or bankfull benches at isolated areas.	benches.	
5	4	3	2	1
				Score: 2
Bank Condition				
Left Bank Active Erosion:		Bank Active Erosion: 30	% Average: 2	5.0
Bank Protection/Stabilization	tion: 🗵 Natural 🗌 Artific	ial:		
				Score: 3
Sediment Deposition				
Less than 20% of the	bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)
	covered by excessive sec	diment deposition; some es	stablished bars with indica	tors of recently deposited
40–60% of the botton		ediment deposition; model s; OR obstructed view of t		
☐ 60–80% of the bottom in-stream structures (2)	n covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of the	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	innel (1)

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review. Identify each buffer type and score according to canopy cover, vegetation community, and land u

Left Bank				T 0	- T	Magical	tio :-	1		T	Buffer Dista		
Buffer Typ	e			Cano Cov		Vegeta Commi		Land Use	Sc	core	Percentage of Area	Subto	
1. Woods with Ashe juniper, live of	ak, ceda	r elm		60)	Mix		High		1	100	1	
2.													
3.													
4.													
5.													
Right Bank											So	ore: <u>1.0</u>	
Buffer Type			Cand		Vegeta Commi		Land Use	Sc	core	Percentage of Area	Subto		
1. Woods with cedar elm, live oak, A	Ashe junip	oer		60)	Mix	ζ.	High		1	80	0.8	
2. Railroad ROW			0		N/A	ı	Intense		0	20	0		
3.													
4.				1									
5.				1									
N-STREAM CONDITION Substrate Composition (estima	te perce	entages	s)								Sc	ore: <u>0.8</u>	
Boulder: 5	Gravel	: 75			Fir	Fines (silt, clay, muck): 10				Artificial:			
Cobble: 10	Sand:				Ве	Bedrock:				Other:			
n-stream Habitat (check all hal	bitat typ	es that	t are pre	esent)							So	ore: <u>5</u>	
Habitat Type	T1	T2	T3	T4	T5	T6	<i>T7</i>	T8	<i>T</i> 9	T10	T11	T12 T	
Undercut Banks	√												
Overhanging Vegetation	1												
Rootmats	✓												
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles	√												
Aquatic Macrophytes	-												
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other										+			
Total No. Present	1									+			
Total No. 1 Toolik	!		1						Αν	/erage:	4.0 Sc	ore: 4	
HYDROLOGIC CONDITION Flow Regime													
☐ Noticeable surface flow presc ☐ Continual pool of water but la	acking n		,	3)		-					ce or inters r interstitial		
☒ Isolated pools and interstitial	(subsur	face) flo	ow (2)								Sc	ore: 2	
Channel Flow Status													
$\hfill\square$ Water covering greater than	75% of t	he cha	nnel bot	tom widt	h; les	s than 25	% of c	hannel su	bstrate	e is exp	posed (4)		
➤ Water covering 50–75% of the	ne chann	nel botto	om width	n; 25–50	% of c	hannel s	ubstra	te is expo	sed (3)			
				,									
☐ Water covering 25–50% of the	ne chann	nel hotto	om width	n: 50 <u>–</u> 75	% of c			-		-			

Score: 3

☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (☐ Linear ☐ Non-linear) 区 Mitigation/Conservation
Stream ID/Name: MS-1 SAR No.: MS-1-3 Size (L	F): 1,022 Date: 4/22/14 Evaluator(s): RW, DT
Stream Type: Intermittent Ecoregion: Cross Timber	Delineation Performed: Previously 🗵 Currently
8-Digit HUC: 12060201 Watershed Condition (develope	d, pasture, etc.): Pasture, Impoundment Watershed Size: 44 sq. mi.
Aerial Photo Date and Source: 2012 NAIP / BING	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? Yes No (If no, explain in Notes)
Notes: Extreme drought. Signs of cattle use. Erosion. Pool present	over bedrock. In-stream habitat estimated from reference reach.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 8
Avg. Waters Edge: 10	Avg. Water: 1
Avg. OHWM: 30	Avg. OHWM: 3

Scoring Table

Core Element	Metric Score Calculat		Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	3			
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3	
	Sediment deposition	4	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	0.0	
Riparian buffer condition	Riparian buffer (right bank)	1.7	x 25	9.3	
In atroom condition	Substrate composition	5 Sum of metric scores /		22.5	
In-stream condition	In-stream habitat	4	x 25	22.0	
Lludrologia condition	Flow regime	2	Sum of metric scores / 8	12.5	
Hydrologic condition	Channel flow status	2	x 25	12.5	
	Sum of core e	lement scores = c	overall TXRAM stream score	63	
L R ☐ Dominated by native	habitats = overall TXRAM streat trees greater than 24-inch diam last (i.e., acorns and nuts) produ	eter at breast hei	ght	0	
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	63	

Representative Site Photograph:



MS-1-3 facing upstream (northwest).

Version 1.0 - Final Draft TXRAM STREAM DATA SHEET

_				
Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: 🗌 Fill/Impact ([☐ Linear ☐ Non-linear) 🖸	☑ Mitigation/Conservation
Stream ID/Name: MS-1	SAR No.: _	MS-1-3 Size (LF): 1,022	Date: 4/22/14 Eval	uator(s): RW, DT
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 44 sq. mi.
Aerial Photo Date and Sou				
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 N	lo (If no, explain in Notes)
Stream Characteristics		, ,	. – –	, , , , , , , , , , , , , , , , , , , ,
Stream Width (Feet)		Stream Heid	ght/Depth (Feet)	
	50	Avg. Bank		
	10	Avg. Wate		
	30	Avg. OHW		
Notes:				
Extreme drough	ght. Signs of cattle ι	use. Erosion. Pool p	resent over bedrock	. In-stream habitat
estimated fror	m reference reach.			
CHANNEL CONDITION				
CHANNEL CONDITION Floodplain Connectivity				
	21		301	821 11
7/	Annual -	Lis.		/A
Marine Marine Marine			A	- manufacture of the second se
the same of				
Sandale Marie	The state of the s			THE REAL PROPERTY.
Variable in sision and access	Olimbation sining and librate	Madanta indicion and	Overvidens desirated	Description of the second on
Very little incision and access to the original floodplain or	Slight incision and likely having regular (i.e., at least	Moderate incision and presence of near vertical/	Overwidened or incised channel and likely to widen	Deeply incised channel or channelized flow; severe
fully developed wide bankfull	once a year) access to	undercut banks; irregular (i.e.,	further; majority of both banks	incision with flow contained
benches.	bankfull benches or newly developed floodplains along	greater than 2 year return interval) access to floodplain	near vertical/undercut; unlikely/rarely having access	within the banks; majority of banks vertical/undercut.
	majority of the reach.	or possible access to floodplain or bankfull benches	to floodplain or bankfull benches.	
		at isolated areas.	belicites.	
5	4	3	2	1
				Score: <u>3</u>
Bank Condition	20 0/ 5: 14		2/ 2 11	2.5
Left Bank Active Erosion:			% Average: <u>1</u> 2	2.5
Bank Protection/Stabiliza	ition: ☒ Natural ☐ Artifici	ial:		
				Score: <u>4</u>
Sediment Deposition				
Less than 20% of the	bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)
■ 20–40% of the bottom	n covered by excessive sec	diment deposition; some es	stablished bars with indica	tors of recently deposited
sediments (4)				
	n covered by excessive se			
	sits at in-stream structures	s; OR obstructed view of t	he channel bottom and a	ack of other depositional
features (3)				p
in-stream structures (2)	n covered by excessive se	ealment deposition; newly o	created bars prevalent; he	avy sediment deposits at
` '	he bottom covered by exce	essive sediment denosition	resulting in aggrading cha	nnel (1)
	Doublin obvoide by CACC	coaminoni dopodition		

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Buffer Typ	е			Can	ору	Vegeta		Land	Sco	ore	Percentag	ge s	Subtota
				Cov	er er	Commi	ınity	Use			of Area		
1. Woods with Ashe juniper, live of	ak, ceda	r elm		70)	Mix		High	2	2	100		2
2.													
3.													
4.													
5.													
Right Bank											:	core:	2.0
Buffer Typ	е			Cano Cov		Vegeta Commu		Land Use	Sco	ore	Percentag of Area	ge s	Subtota
1. Woods with cedar elm, live oak, A	Ashe juni	per		70)	Mix		High	2	2	70		1.4
2. Gravel bar with mesquite, Ashe juniper			10)	Undesir	able	High	1	ı	30		0.3	
3.													
4.													
5.				+									
												core:	1.7
N-STREAM CONDITION Substrate Composition (estima	ite perc	entages	s)										
Boulder: 5	Gravel: 60				Fines (silt, clay, muck): 10				Δ	Artificial:			
Cobble: 20	Sand:					drock: 5		, 10		Other:			
												core:	5
n-stream Habitat (check all hal													
Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	<i>T7</i>	T8	<i>T</i> 9	T10) T11	T12	T13
Undercut Banks	✓												
Overhanging Vegetation	✓												
Rootmats	✓												
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles	1												
Aquatic Macrophytes	<u> </u>												
Riffle/Pool Sequence													
Artificial Habitat Enhancement	 												
Other													
Total No. Present	4												
1010111011100111	4								Δν	l erage:	4.0	core:	4
HYDROLOGIC CONDITION									/ ()	crage.	·		
Flow Regime													
☐ Noticeable surface flow pres	ent (4)				□ls	olated po	ools an	d no evide	ence of	f surfa	ce or inter	stitial 1	flow (1)
☐ Continual pool of water but la		oticeabl	e flow (3	3)		-					r interstitia		
	_		•	<i>-</i>)		ry orianin	or arra	110 00001 1	аыс р	0010 0	i intorotitio	1 110	(0)
Isolated pools and interstitial	(Subsui	iace) iic	JW (Z)									,	2
Channel Flow Status												core:	
	750/ of	the chai	nnel hot	om widt	h· les	s than 25	% of cl	hannel su	hetrata	ic av	nosed (4)		
☐ Water covering greater than	75% 01	ti ic ci iai	IIICI DOL	COIII WIGI	.11, 1000	5 tilali 20	/0 OI OI	namici su	บรแลเษ	IS CAL	JUSEU (4)		
										-	JUSEU (4)		
 Water covering greater than Water covering 50–75% of th ■ Water covering 25–50% of th	ne chanr	nel botto	m width	; 25–50	% of c	hannel s	ubstrat	te is expos	sed (3)		JUSEU (4)		

Score: 2

☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turk	ey Peak Project Type: [☐ Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: MS-1	SAR No.: MS-1-4 Size (LF): 984 Date: 4/22/14 Evaluator(s): RW, DT
Stream Type: Intermittent	Ecoregion: Cross Timb	ers Delineation Performed: ☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Condition (develop	ed, pasture, etc.): Pasture, Impoundment Watershed Size: 44 sq. mi.
Aerial Photo Date and Source:	2012 NAIP / BING	Site Photos: Yes Representative: ⊠ Yes □ No
Stressor(s): Land use	Are normal climatic/hy	drologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
Notes: Extreme drought. Cattle p	present. Some pooling present. Chan	nel braided in portion. In-stream habitat estimated from reference reach.
Stream Characteristics		
Stream Width (Feet)		Stream Height/Depth (Feet)
Avg. Bank to Bank: 50		Avg. Banks: 8
Avg. Waters Edge: 10		Avg. Water: 1
Avg. OHWM: 30		Avg. OHWM: 3

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score			
	Floodplain connectivity	3					
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3			
	Sediment deposition	4	, X20				
Dinarian buffer condition	Riparian buffer (left bank)	1.6	Sum of bank scores / 10	0.5			
Riparian buffer condition	Riparian buffer (right bank)	1.8	x 25	8.5			
In atroom condition	Substrate composition	5	Sum of metric scores / 10	22.5			
In-stream condition	In-stream habitat	4	x 25	22.5			
Lludrologia condition	Flow regime	2	Sum of metric scores / 8	12.5			
Hydrologic condition	Channel flow status	2	x 25	12.5			
	Sum of core e	lement scores = c	overall TXRAM stream score	62			
L R Dominated by native	Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if: L R Dominated by native trees greater than 24-inch diameter at breast height Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata						
	AM stream score and additional			62			

Representative Site Photograph:



MS-1-4 facing upstream (northwest).

TXRAM STREAM DATA SHEET

Project/Site Name/No.: Tu	urkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	✓ Mitigation/Conservation
Stream ID/Name: MS-1				
Stream Type: Intermittent				
8-Digit HUC: 12060201				
Aerial Photo Date and Sou				
Stressor(s): Land use	Are normal	climatic/nydrologic conditi	ons present? Yes X N	io (it no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
5	50	Avg. Bank		
3	0	Avg. Wate		
Avg. OHWM:	60	Avg. OHW	/M: 3	
	ght. Cattle present. sitat estimated from i		ent. Channel braided	in portion.
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
				Score: <u>3</u>
Bank Condition				
Left Bank Active Erosion:	10 Right	Bank Active Erosion: 10	% Average: <u>1</u>	0.0
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artifici	ial:		
				Score: 4
Sediment Deposition				
☐ Less than 20% of the	bottom covered by excess	ive sediment deposition: ha	ars with established vegeta	ation (5)
	•	•	stablished bars with indica	` '
			rate deposition on old bar he channel bottom and a	
in-stream structures (2)	•		created bars prevalent; he	
☐ Greater than 80% of the	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

.eft Bank <i>Buffer Tyբ</i>	pe			Cano		Vegeta		Land	Sco		Buffer Distar	Subtota
1. Woods with Ashe juniper, live o	ak coda	r olm		Cov		Commi Mix		Use	2		of Area 60	1.2
Gravel bar with mesquite, Ashe jur		I CIIII		10	-	Undesir		High	1	-	40	0.4
3.	libei			10	,	Undesir	able	High	1		40	0.4
4.				+						-		
5.												
<u>. </u>											Sco	ore: <u>1.6</u>
Right Bank												
Buffer Typ	е			Canopy Cover		Vegeta Commi		Land Use	Sco	re	Percentage of Area	Subtota
1. Woods with cedar elm, live oak,	Ashe juni	per		70)	Mix	(High	2		80	1.6
2. Gravel bar with mesquite, Ashe juniper			10)	Undesir	able	High	1		20	0.2	
3.												
4.												
5.												
				1			ı		1		Sco	re: <u>1.8</u>
N-STREAM CONDITION Substrate Composition (estima	ite perc	entages	s)									
Boulder: 5	Grave		,		Fines (silt, clay, muck): 10			Ar	Artificial:			
Cobble: 10	Sand:				Bedrock:			Ot	Other:			
			,						I		Sco	ore: <u>5</u>
n-stream Habitat (check all ha Habitat Type	T1	T2	T3	sent) T4	T5	T6	<i>T7</i>	T8	<i>T</i> 9	T10	T11 T	12 T13
Undercut Banks	1	12	70	, ,		70	 	10	70	110	' ' ' '	72 770
Overhanging Vegetation	✓							+ +				
Rootmats	V							+ +				
Rootwads								+ +				
								+ +				
Woody/Leafy Debris	√											
Boulders/Cobbles	✓											
Aquatic Macrophytes												
Riffle/Pool Sequence												
Artificial Habitat Enhancement												
Other												
Total No. Present	4											
									Ave	rage:	4.0 Scc	re:
HYDROLOGIC CONDITION												
Flow Regime												
☐ Noticeable surface flow pres	ent (4)					solated po	ools an	d no evide	ence of	surfa	ce or interstit	ial flow (1
☐ Continual pool of water but la	acking n	oticeabl	e flow (3	3)		ry chann	el and	no observ	able po	ols or	r interstitial fl	ow (0)
✓ Isolated pools and interstitial	(subsur	face) flo	ow (2)									
											Sco	re: 2
Channel Flow Status												
☐ Water covering greater than	75% of	the cha	nnel hott	om widt	h: les	s than 25	1% of c	nannel sul	ostrate i	is eyr	osed (4)	
	. 0 /0 01	o orial		wildt	, 100	- uiuii <u>-</u> 0	, u Oi Oi	.ao. oui	JULIALU	UNF	, 5 5 5 6 T /	
= =		and hatte	m width	. 25 50	0/. af -							
☐ Water covering 50–75% of the Water covering 25–50% of the Water coverin	ne chani					channel s	ubstrat	e is expos	sed (3)			

Page 2 of 2

Score: 2

☐ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak	Project Type: Fill/Im	oact (Linear Non-li	near) 🗵 Mitigation/Conservation
Stream ID/Name: MS-1	AR No.: MS-1-5 Size (LF): 1,0	90 _{Date:} 4/22/14	_ Evaluator(s): RW, DT
Stream Type: Intermittent Ecor	egion: Cross Timbers	Delineation Perfo	ormed: Previously X Currently
8-Digit HUC: 12060201 Watersh	ed Condition (developed, past	ıre, etc.): Pasture, Impoundme	^{ent} Watershed Size: 44 sq. mi.
Aerial Photo Date and Source: 2012 NAIF	P / BING Site Pho	otos: Yes	_ Representative: X Yes ☐ No
Stressor(s): Land use	Are normal climatic/hydrologic	conditions present? Yes	es X No (If no, explain in Notes)
Notes: Extreme drought. Cattle present	. Pool present over bedrock	In-stream habitat estir	nated from reference reach.
Stream Characteristics			
Stream Width (Feet)	Stream	n Height/Depth (Feet)	
Avg. Bank to Bank: 50	Avg	. Banks: 6	
Avg. Waters Edge: 20	Avg	. Water: 1	
Avg. OHWM: 30	Avg	OHWM: 3	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score					
	Floodplain connectivity	4							
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	20.0					
	Sediment deposition	4	X 20						
Dinarian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10	5.0					
Riparian buffer condition	Riparian buffer (right bank)	Riparian buffer (right bank) 1.0 x 25							
In-stream condition	Substrate composition	22.5							
in-stream condition	In-stream habitat	In-stream habitat 4 x 25							
Lludrologia condition	Flow regime	Flow regime 2 Sum of metric scores / 8							
Hydrologic condition	Channel flow status	3	x 25	15.6					
	Sum of core e	lement scores = c	overall TXRAM stream score	63					
Additional points for limited L R	habitats = overall TXRAM strear	m score x 0.025 fo	or each bank (right/left) if:						
Dominated by native trees greater than 24-inch diameter at breast height Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata									
Sum of overall TXR	AM stream score and additional	points = total ov	rerall TXRAM stream score	63					

Representative Site Photograph:



MS-1-5 facing upstream (northwest).

Version 1.0 - Final Draft TXRAM STREAM DATA SHEET

-				_	
Project/Site Name/No.: Tu					
Stream ID/Name: MS-1	SAR No.: _	MS-1-5 Size (LF): 1,090	Date: 4/22/14 Eval	uator(s): RW, DT	
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently	
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 44 sq. mi.	
Aerial Photo Date and Sou	irce: 2012 NAIP / BING	Site Photos: _\	Yes Repr	esentative: X Yes No	
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? Yes X	lo (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		
	50	Avg. Bank			
Avg. Waters Edge: 2	20	Avg. Wate			
Avg. OHWM: 3	30	Avg. OHW	/M: 3		
Extreme drought. Cattle present. Pool present over bedrock. In-stream habitat estimated from reference reach. CHANNEL CONDITION Floodplain Connectivity Very little incision and access Slight incision and likely Moderate incision and Overwidened or incised Deeply incised channel or					
to the original floodplain or fully developed wide bankfull benches.	having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
Bank Candition				Score: <u>4</u>	
Bank Condition	. 10 0/ Diale	Bank Active Erosion: 15	0/	2.5	
Left Bank Active Erosion:			% Average: <u>12</u>		
Bank Protection/Stabiliza	tion: X Natural Artific	iai:		0	
0 11 1 1 11				Score: <u>4</u>	
Sediment Deposition					
	•	•	ars with established vegeta	` '	
` '	n acyarad by avacaciya a	adiment de position: made	rate deposition on old bars	a and areating naw hara:	
			he channel bottom and a l		
☐ 60–80% of the botton in-stream structures (2)	n covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at	
☐ Greater than 80% of the bottom covered by excessive sediment deposition resulting in aggrading channel (1)					

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Buffer Typ	e			Can	ору	Vegeta	tion	Land	Sc	ore	Percenta	ge	Subtota
			Cov		Commi		Use	300	JI C	of Area	- \	Jubiola	
1. Woods with Ashe juniper, live or	ak, ceda	r elm		50)	Mix	:	High	1	ı	50		0.5
Mesquite pasture				10)	Undesir	able	High	1	ı	50		0.5
3.													
4.													
5.													
Right Bank											;	Score:	1.0
Buffer Typ	е			Can		Vegeta Commu		Land Use	Sc	ore	Percenta of Area		Subtota
1. Woods with cedar elm, live oak, A	Ashe juni	per		50)	Mix		High	1	1	50		0.5
2. Mesquite pasture		<u> </u>		10)	Undesir		High	-	1	50		0.5
3.				†				.5	+			\dashv	
4.													
5.				+					+			+	
											9	Score:	1.0
N-STREAM CONDITION Substrate Composition (estima	te nerc	ontano	z)								·	30010.	
Boulder: 5	Grave		-/		Fir	nes (silt, d	clav. m	uck): 10		Artificia	al:		
Cobble: 10	Sand:	20				drock: 55		uoity: 10		Other:	***		
CODDIE. 10	Garia.				ВС	GU OCK. 55				Juilei.		Score:	5
n-stream Habitat (check all hab	nitat tvr	es that	are nre	sent)							•	JCOI E.	<u> </u>
Habitat Type	T1	T2	T3	T4	<i>T</i> 5	T6	<i>T7</i>	T8	T9	T10	T11	T12	T13
Undercut Banks	/							+ +					
Overhanging Vegetation	✓												
Rootmats	✓												
Rootwads	V							+ +					
Woody/Leafy Debris								+ +					
Boulders/Cobbles								+ +					
	✓							+ +					
Aquatic Macrophytes								1					
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	4												
									Av	erage:	4.0	Score:	4
IYDROLOGIC CONDITION													
low Regime													
☐ Noticeable surface flow prese	ent (4)				☐ Is	olated po	ools an	d no evide	ence of	f surfa	ce or inte	stitial	flow (1)
☐ Continual pool of water but la	cking n	oticeabl	e flow (3	3)	\Box D	ry channe	el and	no observ	able p	ools o	r interstitia	al flow	(0)
☒ Isolated pools and interstitial	(subsur	face) flo	ow (2)										
Channel Flow Status											;	Score:	2
mamiei Fiow Status													
			المصالم مبم	المثنيين مميما	h. loo	s than 25	U/ of ol	aannal cul		ia 01/1	20004 (1)		
☐ Water covering greater than										-	Joseu (4)		
☐ Water covering greater than☑ Water covering 50–75% of the										-	00Seu (4)		

Score: 3

☐ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type	: ☐ Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: MS-2 SAR No.: MS-2-1 Size	e (LF): 860 Date: 4/24/14 Evaluator(s): RW, DT
Stream Type: Ephemeral Ecoregion: Cross Time	nbers Delineation Performed: ☐ Previously ☒ Currently
8-Digit HUC: 12060201 Watershed Condition (devel	oped, pasture, etc.): Pasture, Impoundment Watershed Size: 470 acres
	Site Photos: Yes Representative: ⊠ Yes □ No
Stressor(s): Land use Are normal climatic/	hydrologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
Notes: Extreme drought. Signs of cattle use. Downstream	of moderate erosion, upstream of culvert under railroad tracks.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 40	Avg. Banks: 5
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 10	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score				
	Floodplain connectivity	3						
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3				
	Sediment deposition	4	X 20					
Dinarian buffer condition	Riparian buffer (left bank)	1.9	Sum of bank scores / 10	0.5				
Riparian buffer condition	Riparian buffer (right bank)	1.9	x 25	9.5				
In atroom condition	Substrate composition	15.0						
In-stream condition	In-stream habitat	In-stream habitat 1 x 25						
Lludrologia condition	Flow regime	Flow regime 1 Sum of metric scores / 8						
Hydrologic condition	Channel flow status	1	x 25	6.3				
	Sum of core e	lement scores = c	overall TXRAM stream score	49				
Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if: L R Dominated by native trees greater than 24-inch diameter at breast height Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata								
	AM stream score and additional			49				

Representative Site Photograph:



MS-2-1 facing downstream (south).

TXRAM STREAM DATA SHEET

Project/Site Name/No.: Tu	ırkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [☑ Mitigation/Conservation	
Stream ID/Name: MS-2					
Stream Type: Ephemeral					
8-Digit HUC: 12060201					
Aerial Photo Date and Sou					
Stressor(s): Land use					
Stream Characteristics	Are normal	climatio/nydrologic conditi	ons present: 🔲 res 🔼 r	to (ii iio, explaili iii Notes)	
Stream Width (Feet)		Stream Heir	ght/Depth (Feet)		
	-0	Avg. Bank	· · · · ·		
Avg. Waters Edge: -	<u> </u>	Avg. Wate			
	0	Avg. OHW			
7.11gi					
under railroad	tracks.	use. Downstream of	moderate erosion, t	pstream of curvent	
CHANNEL CONDITION Floodplain Connectivity					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	(3)	2	1	
				Score: 3	
Bank Condition					
Left Bank Active Erosion:	10 % Right	Bank Active Erosion: 10	% Average: <u>1</u>	0.0	
Bank Protection/Stabilization	tion: 🗵 Natural 🗌 Artific	ial:			
				Score: 4	
Sediment Deposition					
Less than 20% of the	bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)	
	•	diment deposition; some e	-	` '	
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the bottom in-stream structures (2)	n covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at	
☐ Greater than 80% of the	ne bottom covered by exce	essive sediment deposition	resulting in aggrading cha	innel (1)	

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank

Buffer Distance: 45.0

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
Woods with Ashe juniper, live oak, cedar elm	70	Mix	High	2	90	1.8
2. Pasture / Trail	10	Undesirable	High	1	10	0.1
3.						
4.						
5.						

Score: 1.9

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, live oak, Ashe juniper	70	Mix	High	2	90	1.8
2. Pasture / Trail	10	Undesirable	High	1	10	0.1
3.						
4.						
5.						

Score: 1.9

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 60	Fines (silt, clay, muck): 20	Artificial:
Cobble: 10	Sand:	Bedrock:	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation	✓				✓								
Rootmats													
Rootwads													
Woody/Leafy Debris								✓					
Boulders/Cobbles	✓							✓					
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	2	0	0	0	1	0	0	2	0				

Average: 0.6 Score: 1

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☒ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: <u>1</u>
Channel Flow Status	

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
🗵 Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: To	urkey Peak Project Type:	Fill/Impact (Linear Nor	n-linear) 🗵 Mitigation/Conservation
Stream ID/Name: MS-2	SAR No.: MS-2-2 Size (LI	e): 912 Date: 4/24/14	Evaluator(s): RW, DT
Stream Type: Ephemera	al Ecoregion: Cross Timbe	rs Delineation Pe	rformed: Previously X Currently
8-Digit HUC: 12060201	Watershed Condition (develope	d, pasture, etc.): Pasture, Impound	Watershed Size: 470 acres
Aerial Photo Date and Sou	rce: 2012 NAIP / BING		
Stressor(s): Land use	Are normal climatic/hydi	ologic conditions present?	Yes X No (If no, explain in Notes)
Notes: Extreme drought.	Signs of cattle use. Downstream of	of gravel road, crossed by p	pipeline, minor pooling evident.
Stream Characteristics			
Stream Width (Feet)		Stream Height/Depth (Feet)	
Avg. Bank to Bank: 20)	Avg. Banks: 6	
Avg. Waters Edge: -		Avg. Water: -	
Avg. OHWM: 1	0	Avg. OHWM: 2	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score		
Channel condition	Floodplain connectivity	2		11.7		
	Bank condition	2	Sum of metric scores / 15 x 25			
	Sediment deposition	3				
Riparian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10 x 25	5.0		
	Riparian buffer (right bank)	1.0				
In-stream condition	Substrate composition	3	Sum of metric scores / 10 x 25	10.0		
	In-stream habitat	1				
Hydrologic condition	Flow regime	1	Sum of metric scores / 8	6.3		
	Channel flow status	1	x 25	0.3		
Sum of core element scores = overall TXRAM stream score				33		
Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if: L R Demonstrated by parties treas greater than 34-inch diameter at breast height				0		
☐ ☐ Dominated by native trees greater than 24-inch diameter at breast height ☐ ☐ Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata						
Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score				33		

Representative Site Photograph:



MS-2-2 facing downstream (southeast).

Version 1.0 - Final Draft TXRAM STREAM DATA SHEET

Project/Site Name/No.: Tu	ırkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [☑ Mitigation/Conservation		
Stream ID/Name: MS-2	SAR No.:	MS-2-2 Size (LF): 912	Date: <u>4/24/14</u> Eval	uator(s): RW, DT		
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	Delineation Performed: [☐ Previously ☒ Currently		
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 470 acres		
Aerial Photo Date and Sou	rce: 2012 NAIP / BING	Site Photos: _	⁄es Repr	esentative: X Yes No		
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 N	lo (If no, explain in Notes)		
Stream Characteristics						
Stream Width (Feet)						
Avg. Bank to Bank: 2	0	Avg. Bank				
Avg. Waters Edge: -		Avg. Wate				
Avg. OHWM: 1	0	Avg. OHW	/M: 2			
Notes: Extreme drought. Signs of cattle use. Downstream of gravel road, crossed by pipeline, minor pooling evident.						
CHANNEL CONDITION Floodplain Connectivity						
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
D				Score: 2		
Bank Condition Left Bank Active Erosion:	30 0/ Diaba	Bank Active Erosion: 30	% Average: ³	0.0		
	tion: 🗵 Natural 🗌 Artific		% Average. <u>-</u>			
Barik i Totoction/Otabilizat	Tratara Tratara	idi.		Score: 2		
Sediment Deposition						
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)						
▼ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
in-stream structures (2)	Greater than 80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2) Greater than 80% of the bottom covered by excessive sediment deposition resulting in aggrading channel (1)					

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Buffer Type				Canopy		y Vegetation		Land	Score				e: 35.0 Subtotal
Buπer Typ	oe			Can		Commi		Use	Sc	ore	of Area	S	Subtota
1. Woods with Ashe juniper, live of	ak			60)	Mix		High		1	50		0.5
2. Pasture				10)	Undesir	able	High		1	50		0.5
3.													
4.													
5.													
Right Bank											50	core:	1.0
Buffer Тур	ре			Cano Cov				Land Use	Sc	ore	Percentag of Area	e s	Subtota
1. Woods with Ashe juniper, live oa	k			60)	Mix		High		1	50		0.5
2. Pasture				10)	Undesir	able	High		1	50		0.5
3.													
4.													
5.													
					•						S	core:	1.0
N-STREAM CONDITION	-4		. 1										
Substrate Composition (estima Boulder: 5	Gravel		<u> </u>		Fir	nas (silt d	rlav m	nck). 20		Artificia	l·		
Cobble: 5	Sand:	- 20			Fines (silt, clay, muck): 70 Bedrock:				Other:				
OODDIG. 5					I KA	arock.							
					Ве	arock:			- 1	Julei.	S	core.	3
n-stream Habitat (check all ha		es that	are pre	esent)	Be	arock:				Julei.	S	core:	3
n-stream Habitat (check all ha Habitat Type		es that	are pre	esent)	<i>T5</i>	T6		T8	T9	T10		core:	
	bitat typ						T7	T8					
Habitat Type	bitat typ						T7	T8					
Habitat Type Undercut Banks	bitat typ	T2					T7	T8					
Habitat Type Undercut Banks Overhanging Vegetation	bitat typ	T2					T7	T8					
Habitat Type Undercut Banks Overhanging Vegetation Rootmats	bitat typ	T2		T4			T7	T8					
Habitat Type Undercut Banks Overhanging Vegetation Rootmats Rootwads	bitat typ	T2		T4		T6	T7	T8					
Habitat Type Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris	bitat typ	T2		T4			77	T8					
Habitat Type Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles	bitat typ	T2		T4		T6	77	T8					
Habitat Type Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes	bitat typ	T2		T4		T6	77	T8					3 T13
Habitat Type Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence	bitat typ	T2		T4		T6	77	T8					
Habitat Type Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement	bitat typ	T2		T4		T6	77	T8					
Habitat Type Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other	bitat typ	T2 ✓	T3	T4 ✓	T5	<i>T6</i>		T8	T9	T10	T11	T12	T13
Habitat Type Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other	bitat typ	T2 ✓	T3	T4 ✓	T5	<i>T6</i>		T8	T9		T11		T13
Habitat Type Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present	bitat typ	T2 ✓	T3	T4 ✓	T5	<i>T6</i>		T8	T9	T10	T11	T12	T13
Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present IYDROLOGIC CONDITION Flow Regime	bitat typ	T2 ✓	T3	T4 ✓	0	<i>T6</i>	0		79 Av	T10	0.4 Se	T12	1
Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present IYDROLOGIC CONDITION Flow Regime Noticeable surface flow pres	bitat typ T1 0 ent (4)	T2 ✓	0	<i>T4</i> ✓	75 0	T6 ✓ 1 olated po	o ools an	d no evide	T9 Avence o	T10		T12	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Undercut Banks Overhanging Vegetation Rootmats Rootwads Woody/Leafy Debris Boulders/Cobbles Aquatic Macrophytes Riffle/Pool Sequence Artificial Habitat Enhancement Other Total No. Present IYDROLOGIC CONDITION Flow Regime	bitat typ T1 0 ent (4) acking no	T2 ✓ 1 oticeabl	0 e flow (3	<i>T4</i> ✓	75 0	T6 ✓ 1 olated po	o ools an	d no evide	T9 Avence o	T10	0.4 Se	T12	1 1 llow (1)

Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4) ☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3) Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2) X Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1) ☐ No water present in the channel; 100% of channel substrate exposed (0) Score: 1

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (Linear Non-linear) Mitigation/Conservation
Stream ID/Name: MS-2 SAR No.: MS-2-3 Size (L	F): <u>627</u> Date: <u>4/24/14</u> Evaluator(s): <u>RW, JT</u>
Stream Type: Ephemeral Ecoregion: Cross Timber	Previously ☐ Currently Previously ☐ Currently
8-Digit HUC: 12060201 Watershed Condition (developed	ed, pasture, etc.): Pasture, Impoundment Watershed Size: 470 acres
	Site Photos: Yes Representative: ⊠ Yes □ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? Yes No (If no, explain in Notes)
Notes: Extreme drought. Signs of cattle use. Downstream of impoundment, fl	ow has been re-routed. Currently abandoned channel that could be restored.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 12	Avg. Banks: 5
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: -	Avg. OHWM: -

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	2			
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	15.0	
	Sediment deposition	3	X 20		
Diparian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10	5.0	
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	5.0	
In-stream condition	Substrate composition	3	Sum of metric scores / 10	7.5	
in-stream condition	In-stream habitat	0	x 25	7.5	
Hydrologia condition	Flow regime	0	Sum of metric scores / 8	0.0	
Hydrologic condition	Channel flow status	0	x 25	0.0	
	Sum of core e	lement scores = c	overall TXRAM stream score	28	
	habitats = overall TXRAM stream	m score x 0.025 fo	or each bank (right/left) if:		
	trees greater than 24-inch diameast (i.e., acorns and nuts) produ			0	
	AM stream score and additional			28	

Representative Site Photograph:



MS-2-3 facing downstream (south).

TXRAM STREAM DATA SHEET

Duningt/Cita Nama/Na . Ti	ırkev Peak	: a a t T. //a a / [□ Linnan □ Nam linnan)	Mitimatian/Componition
Project/Site Name/No.: Tu				
Stream ID/Name: MS-2				
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed:	☐ Previously 🗵 Currently
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Wat	ershed Size: 470 acres
Aerial Photo Date and Sou	rce: 2012 NAIP / BING	Site Photos: _\	Yes Rep	resentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 I	No (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
Avg. Bank to Bank: 1	2	Avg. Bank		
Avg. Waters Edge: -		Avg. Wate		
Avg. OHWM: -		Avg. OHW	/M: -	
re-routed. Cui	ght. Signs of cattle urently abandoned c	use. Downstream of hannel that could be	restored.	has been
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
				Score: 2
Bank Condition				
Left Bank Active Erosion:	10 % Right	Bank Active Erosion: 10	% Average: <u>1</u>	0.0
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artific	ial:		
				Score: 4
Sediment Deposition				
20–40% of the bottom sediments (4)	bottom covered by excess a covered by excessive sec an covered by excessive so	diment deposition; some es	stablished bars with indica	ators of recently deposited rs and creating new bars;
moderate sediment depo features (3)	sits at in-stream structures	s; OR obstructed view of t	he channel bottom and a	lack of other depositional
60–80% of the botton in-stream structures (2)	n covered by excessive se	diment deposition; newly	created bars prevalent; he	eavy sediment deposits at
	he hottom covered by exce	essive sediment denosition	resulting in aggrading ch	annel (1)

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

				-							tance:	
е			Can Co		Vegeta Commu		Land Use	Sco	re	Percentag of Area	ge s	Subtota
			60)	Undesir	able	High	1		50		0.5
			10)	Undesir	able	High	1		50		0.5
											coro	1.0
										3	core.	1.0
е							Land Use	Sco	re			Subtota
			60)		_	High	1		50		0.5
-			10)	Undesira	able	High	1		50		0.5
		s)		Fir	nes (silt (day m	nick). 20	Α	rtificia	al·		
	20											
T1	e s that T2	are pre	T4	<i>T</i> 5	T6	<i>T7</i>	T8	<i>T</i> 9	T10) T11	T12	T13
1							1					1
+						1	1			1		
							+ +			+ +		
0	0	0	0	0	0	0						
	te perce Gravel: Sand:	te percentages Gravel: 20 Sand:	te percentages) Gravel: 20 Sand:	e Cane Cov 60 10 te percentages) Gravel: 20 Sand: Soitat types that are present)	e Canopy Cover 60 10 te percentages) Gravel: 20 Fir Sand: Be	e Canopy Vegeta Cover Commu 60 Undesir 10 Undesir 10 Undesir 80 Undesir 10 Experimental Commu 10 Experimenta	e Canopy Cover Community 60 Undesirable 10 Undesirable 10 Undesirable 10 Example Community 60 Undesirable 10 Undesirable	e Canopy Vegetation Land Cover Community Use 60 Undesirable High 10 Undesirable High 10 Undesirable High Stepercentages) Gravel: 20 Fines (silt, clay, muck): 70 Sand: Bedrock:	e Canopy Vegetation Land Scot Cover Community Use 60 Undesirable High 1 10 Undesirable High 1 10 Undesirable High 1 10 Undesirable High 1 Sect Cover Community Use 1 60 Undesirable High 1 10 Undesirable High 1 Sect Cover Community Use 1 Fines (silt, clay, muck): 70 A Sand: Bedrock: O	e Canopy Vegetation Land Cover Community Use 60 Undesirable High 1 10 Undesirable High 1 10 Undesirable High 1 10 Undesirable High 1 10 Example High 1 10 Undesirable High 1 11 Undesirable High 1 12 Undesirable High 1 13 Undesirable High 1 14 Undesirable High 1 15 Undesirable High 1 16 Undesirable High 1 17 Undesirable High 1 18 Undesirable High 1 19 Undesirable High 1 10 Undesirable High 1	te percentages) Gravel: 20 Fines (silt, clay, muck): 70 Fines (silt types that are present)	10

☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3) Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2) ☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1) ☒ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (Linear Non-linear) Mitigation/Conservation
Stream ID/Name: MS-4 SAR No.: MS-4-1 Size (L	F): 849 Date: 4/22/14 Evaluator(s): RW, JT
Stream Type: Ephemeral Ecoregion: Cross Timber	Previously ☐ Currently Delineation Performed: ☐ Previously
8-Digit HUC: 12060201 Watershed Condition (developed	ed, pasture, etc.): Pasture, Impoundment Watershed Size: 185 acres
	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? Yes No (If no, explain in Notes)
Notes: Extreme drought. Signs of cattle use. Upstream of	impoundment.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 10	Avg. Banks: 2
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 3	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	4			
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	15.0	
	Sediment deposition	2	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10	5.0	
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	5.0	
In atracm condition	Substrate composition	2	Sum of metric scores / 10	7.5	
In-stream condition	In-stream habitat	1	x 25	7.5	
Lludrologia condition	Flow regime	0	Sum of metric scores / 8	0.0	
Hydrologic condition	Channel flow status	0	x 25	0.0	
	Sum of core e	lement scores = c	overall TXRAM stream score	28	
Additional points for limited L R	habitats = overall TXRAM stream	m score x 0.025 f	or each bank (right/left) if:	_	
☐ ☐ Dominated by native	trees greater than 24-inch diameast (i.e., acorns and nuts) produ			0	
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	28	

Representative Site Photograph:



MS-4-1 facing upstream (northeast).

Version 1.0 - Final Draft TXRAM STREAM DATA SHEET

Drainat/Cita Nama/Na : T	iirkev Peak	iaat Tynay 🗖 Fill/Imnaat /		Mitigation/Canaamyatian
	urkey Peak Pro			
	SAR No.: _			
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 185 acres
Aerial Photo Date and Sou	urce: 2012 NAIP / BING	Site Photos: _	res Repr	esentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 N	lo (If no, explain in Notes)
Stream Characteristics			•	
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
	10	Avg. Bank		
Avg. Waters Edge:	-	Avg. Wate	er: -	
Avg. OHWM:	3	Avg. OHW	/M: 1	
CHANNEL CONDITION Floodplain Connectivity Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	(4)	at isolated areas.	2	1
				Score: 4
Bank Condition				
Left Bank Active Erosion			% Average: <u>2</u> 2	2.5
Bank Protection/Stabiliza	ation: 🗵 Natural 🗌 Artific	ial:		
				Score: 3
Sediment Deposition				
Less than 20% of the	bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)
20–40% of the botton sediments (4)	n covered by excessive sec	diment deposition; some e	stablished bars with indica	tors of recently deposited
	m covered by excessive so posits at in-stream structures			
⊠ 60–80% of the bottor in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of t	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)

Page 1 of 2

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank

Buffer Distance: 30.0

-GIL Dalik				Duller Distance. 30.0			
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal	
1. Ashe juniper	50	Undesirable	High	1	60	0.6	
2. Pasture	10	Undesirable	High	1	40	0.4	
3.							
4.							
5.							
	'	•			Sco	re: 1.0	
D. 1 (D. 1							

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Ashe juniper	50	Undesirable	High	1	60	0.6
2. Pasture	10	Undesirable	High	1	40	0.4
3.						
4.						
5.						

Score: 1.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder:	Gravel: 10	Fines (silt, clay, muck): 70	Artificial:
Cobble: 10	Sand: 10	Bedrock:	Other:

Score: 2

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks			✓				✓						
Overhanging Vegetation			✓				✓						
Rootmats													
Rootwads													
Woody/Leafy Debris			✓				✓						
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0	0	3	0	0	0	3	0					

Average: 0.8 Score: 1

HYDROLOGIC CONDITION

Flow	Regime	е
------	--------	---

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☑ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 0

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☒ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (Linear Non-linear) Mitigation/Conservation
Stream ID/Name: MS-5 SAR No.: MS-5-2 Size (L	_F): 967 Date: 4/24/14 Evaluator(s): RW, DT
Stream Type: Ephemeral Ecoregion: Cross Timber	Previously ☑ Currently
8-Digit HUC: 12060201 Watershed Condition (developed	ed, pasture, etc.): Pasture Watershed Size: 40 acres
Aerial Photo Date and Source: 2012 NAIP / BING	Site Photos: Yes Representative: ⊠ Yes □ No
Stressor(s): Land use Are normal climatic/hyd	frologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
Notes: Extreme drought. Signs of cattle use. Downslope	of swale in pasture to rock outcrop. Crossed by trail.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 12	Avg. Banks: 3
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 3	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score Core Element Score Calculation		Core Element Score	
	Floodplain connectivity	4			
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	20.0	
	Sediment deposition	4	X 20		
Diparian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10	5.0	
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	5.0	
In-stream condition	Substrate composition	3	Sum of metric scores / 10	7.5	
in-stream condition	In-stream habitat	0	x 25		
Hydrologic condition	Flow regime	0	Sum of metric scores / 8	0.0	
Hydrologic condition	Channel flow status	0	x 25	0.0	
	Sum of core e	lement scores = c	overall TXRAM stream score	33	
Additional points for limited L R Dominated by native	0				
	ast (i.e., acorns and nuts) produ AM stream score and additional			33	

Representative Site Photograph:



MS-5-2 facing downstream (southwest).

Version 1.0 - Final Draft TXRAM STREAM DATA SHEET

Project/Site Name/No : TI	urkev Peak Pro	iact Type: Fill/Impact (Mitigation/Conservation	
Project/Site Name/No.: To					
Stream ID/Name: MS-5					
				Previously X Currently	
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture Wate	ershed Size: 40 acres	
Aerial Photo Date and Sou	Irce: 2012 NAIP / BING	Site Photos: _	/es Repr	esentative: X Yes No	
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? Yes N	No (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		
Avg. Bank to Bank: 1	2	Avg. Bank	(S: 3		
Avg. Waters Edge: -		Avg. Wate			
Avg. OHWM:	3	Avg. OHW	/M: 1		
Crossed by tra	ght. Signs of cattle uail.	ise. Downslope of s	wale in pasture to re	ock outerop.	
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
Banda Oanalitian				Score: <u>4</u>	
Bank Condition Left Bank Active Erosion:	10 % Pight	Bank Active Erosion: 10	% Average: 1	0.0	
	tion: ☒ Natural ☐ Artific				
Dank Frotodion/Otabiliza				Score: 4	
Sediment Deposition					
	hottom covered by excess	ive sediment denosition: h	are with established vegets	ation (5)	
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)					
	m covered by excessive so sits at in-stream structures				
in-stream structures (2)	n covered by excessive se		•		
☐ Greater than 80% of the bottom covered by excessive sediment deposition resulting in aggrading channel (1)					

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Left Bank				0	I	1/0 = 0.4	tion	ا د د د ا	T -	ı	Buffer Distar	
Buffer Тур	e			Can Co		Vegeta Commi		Land Use	Sc	ore	Percentage of Area	Subto
1. Ashe juniper, mesquite, cactus,	pasture	grasses		20	0	Undesii	rable	High		1	100	1
2.												
3.												
4.												
5.				+								
											Sco	ore: 1.0
Right Bank												
Buffer Тур	е			Can Co		Vegeta Commi		Land Use	Sc	ore	Percentage of Area	Subto
1. Ashe juniper, mesquite, cactus, p	asture di	asses		20		Undesi		High	<u> </u>	1	100	1
2.	aotaro gi	40000				Oriacon	abio	1 11911			100	<u>'</u>
3.												
4.												
5.												
5.					ļ						Cod	10
IN-STREAM CONDITION											500	ore: <u>1.0</u>
Substrate Composition (estima			s)		1							
Boulder: 5	Grave	: 10				nes (silt, d	clay, m	uck): 70	F	Artificia	al:	
Cobble: 10	Sand:				Be	edrock: 5			(Other:		
In-stream Habitat (check all ha	bitat tvr	es that	are pre	esent)							Sco	ore: <u>3</u>
Habitat Type	T1	T2	T3	T4	<i>T</i> 5	<i>T</i> 6	T7	T8	T9	T10) T11 7	12 T
Undercut Banks											+ +	
Overhanging Vegetation											+ +	
Rootmats												
Rootwads											+ +	
Woody/Leafy Debris												
Boulders/Cobbles		-										
											\perp	
Aquatic Macrophytes												
Riffle/Pool Sequence												
Artificial Habitat Enhancement												
Other												
Total No. Present	0	0	0	0	0	0	0	0	0			
HYDROLOGIC CONDITION Flow Regime									Av	erage	: <u>0.0</u> Sco	ore: <u>0</u>
☐ Noticeable surface flow pres	ont (4)					solated 5	2012.27	d no ovid	onee c	f ourf-	ice or intersti	tial flave
-	` '	atte - 11	_ # -: - /:	۵۱								
Continual pool of water but la	•		,	3)	K D	ry cnann	ei and	no obser\	able p	OOIS O	r interstitial fl	ow (U)
☐ Isolated pools and interstitial	(subsur	face) flo	ow (2)								Sco	ore: º
Channel Flow Status												,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
☐ Water covering greater than	75% of	the cha	nnel bot	tom wid	th; les	s than 25	% of c	hannel su	bstrate	is ex	posed (4)	
☐ Water covering 50–75% of the											. ()	
•								•				
☐ Water covering 25–50% of the	ie chaill	ופו טטנונ	iii wiali	1, 50-75	/0 UI (manner S	นมอแสเ	re is exho	seu (2,	,		

Page 2 of 2

Score: 0

☒ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turk	ey Peak Project Ty	pe: Fill/Impact (Lir	near 🗌 Non-li	near) 🗵 Mitigation/Conservation
Stream ID/Name: MS-6	SAR No.: MS-6-1 S	ize (LF): 2,600 Date	4/23/14	Evaluator(s): RW, DT
Stream Type: Ephemeral	Ecoregion: Cross T	imbers De	elineation Perfo	rmed: Previously X Currently
8-Digit HUC: 12060201	Watershed Condition (dev	veloped, pasture, etc.): _	Pasture, Impoundme	Watershed Size: 120 acres
Aerial Photo Date and Source:	2012 NAIP / BING	Site Photos: Yes		_ Representative: X Yes ☐ No
Stressor(s): Land use	Are normal climati	c/hydrologic conditions	present? \(\square\)	es X No (If no, explain in Notes)
Notes: Extreme drought. Signs of cattl	e use. Lower gradient, more incised, an	d fine substrate than upstream.	Meanders and then	parallels Palo Pinto Creek in old floodplain.
Stream Characteristics				
Stream Width (Feet)		Stream Height/D	Depth (Feet)	
Avg. Bank to Bank: 12		Avg. Banks:	5	
Avg. Waters Edge: -		Avg. Water:	-	
Avg. OHWM: 3		Avg. OHWM:	2	

Scoring Table

Core Element	Metric	Metric Score Core Element Score Calculation		Core Element Score	
	Floodplain connectivity	3			
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	
	Sediment deposition	4	, X20		
Dinarian buffer condition	Riparian buffer (left bank)	1.5	Sum of bank scores / 10	- -	
Riparian buffer condition	Riparian buffer (right bank)	1.5	x 25	7.5	
In atroom condition	Substrate composition	3	Sum of metric scores / 10	7.5	
In-stream condition	In-stream habitat	0	x 25		
Lludralagia aanditian	Flow regime	0	Sum of metric scores / 8	0.0	
Hydrologic condition	Channel flow status	0	x 25	0.0	
	Sum of core e	lement scores = c	overall TXRAM stream score	32	
Additional points for limited					
L R Dominated by native Dominated by hard m	0				
	AM stream score and additional			32	

Representative Site Photograph:



MS-6-1 facing downstream (southeast).

TXRAM STREAM DATA SHEET

Project/Site Name/No.: Tu	urkey Peak Pro	iect Tvpe: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	▼ Mitigation/Conservation
Stream ID/Name: MS-6				
Stream Type: Ephemeral				
8-Digit HUC: 12060201				
Aerial Photo Date and Sou				
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ∐ Yes 🗵 N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
5	2	Avg. Bank		
Avg. Waters Edge: -		Avg. Wate		
Avg. OHWM: 3	}	Avg. OHW	/M: 2	
			more incised, and feek in old floodplain	
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	(3)	2	1
5 10 111				Score: 3
Bank Condition	20		20	2.0
Left Bank Active Erosion:		Bank Active Erosion: 20	% Average: 20	J.U
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artifici	ial:		
				Score: <u>3</u>
Sediment Deposition				
	n covered by excessive second covered by excessive second	diment deposition; some es	ars with established vegeta stablished bars with indica rate deposition on old bars he channel bottom and a l	tors of recently deposited s and creating new bars;
☐ 60–80% of the bottom in-stream structures (2)	•		created bars prevalent; he	

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank

Buffer Distance: 31.0

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Ashe juniper, mesquite	60	Undesirable	High	1	50	0.5
2. Cedar elm, live oak, Ashe juniper	70	Mix	High	2	50	1
3.						
4.						
5.						
Right Bank					Sco	re: 1.5
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Ashe juniper, mesquite	60	Undesirable	High	1	50	0.5
2. Cedar elm, live oak, Ashe juniper	70	Mix	High	2	50	1

IN-STREAM CONDITION

3. 4. 5.

Substrate Composition (estimate percentages)

Boulder: 5	Gravel: 10	Fines (silt, clay, muck): 75	Artificial:
Cobble: 10	Sand:	Bedrock:	Other:
			Score: 3

In-stream Habitat (check all habitat types that are present)

☒ No water present in the channel; 100% of channel substrate exposed (0)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	<i>T7</i>	T8	<i>T</i> 9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0	0	0	0	0	0	0	0	0	0	0	0	0

HYDROLOGIC CONDITION
Flow Regime

Noticeable surface flow present (4) | Isolated pools and no evidence of surface or interstitial flow (1) | Dry channel and no observable pools or interstitial flow (0) | Score: 0 |

Channel Flow Status

Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4) | Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2) | Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)

Score: 0____

Score: 0

Average: 0.0

Score: 1.5

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: MS-6 SAR No.: MS-6-2 Size (L	F): <u>735</u> Date: <u>4/23/14</u> Evaluator(s): <u>RW, DT</u>
Stream Type: Ephemeral Ecoregion: Cross Timber	Delineation Performed: Previously X Currently
8-Digit HUC: 12060201 Watershed Condition (develope	ed, pasture, etc.): Pasture, Impoundment Watershed Size: 100 acres
	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? Yes No (If no, explain in Notes)
Notes: Extreme drought. Signs of cattle use. Downstream	of rock outcrop. Crossed by trail.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 12	Avg. Banks: 4
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 3	Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	4		
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	21.7
	Sediment deposition	5	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10	5 0
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	5.0
In atroom condition	Substrate composition	5	Sum of metric scores / 10	10 F
In-stream condition	In-stream habitat	0	x 25	12.5
Lludrologia condition	Flow regime	0	Sum of metric scores / 8	0.0
Hydrologic condition	Channel flow status	0	x 25	0.0
	Sum of core e	lement scores = c	overall TXRAM stream score	39
Additional points for limited L R Dominated by native Dominated by hard m	0			
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	39

Representative Site Photograph:



MS-6-2 facing downstream (southwest).

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _Tu	urkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	Mitigation/Conservation			
Stream ID/Name: MS-6	SAR No.: _	MS-6-2 Size (LF): <u>735</u>	Date: 4/23/14 Eval	uator(s): RW, DT			
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently			
8-Digit HUC: 12060201 Watershed Condition (developed, pasture, etc.): Pasture, Impoundment Watershed Size: 100 acres							
Aerial Photo Date and Sou	rce: 2012 NAIP / BING	Site Photos: _	Yes Repr	esentative: X Yes No			
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ions present? Yes N	lo (If no, explain in Notes)			
Stream Characteristics							
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)				
Avg. Bank to Bank: 1	2	Avg. Bank	(S: 4				
Avg. Waters Edge: -		Avg. Wate	er: -				
Avg. OHWM: 3		Avg. OHW	VM: 1				
Notes: Extreme drought. Signs of cattle use. Downstream of rock outcrop. Crossed by trail.							
CHANNEL CONDITION Floodplain Connectivity							
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.			
5	(4)	at isolated areas.	2	1			
Ŭ .	$\overline{\cdot}$	<u> </u>		Score: 4			
Bank Condition							
Left Bank Active Erosion:	10 % Right	Bank Active Erosion: 10	% Average: <u>10</u>	0.0			
Bank Protection/Stabiliza	tion: 🗵 Natural 🗌 Artifici	ial:					
				Score: 4			
Sediment Deposition							
■ Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)			
20–40% of the bottom sediments (4)	covered by excessive sec	diment deposition; some e	stablished bars with indica	tors of recently deposited			
☐ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)							
☐ 60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)							
☐ Greater than 80% of the	ne bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)			
				Score: 5			

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank

Buffer Distance: 31.0

2011 201111						
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Ashe juniper, mesquite, live oak, cedar elm, cactus	60	Undesirable	High	1	50	0.5
2. Pasture	10	Undesirable	High	1	50	0.5
3.						

Score: 1.0

Right Bank

5.

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Ashe juniper, mesquite, live oak, cedar elm, cactus	60	Undesirable	High	1	50	0.5
2. Pasture	10	Undesirable	High	1	50	0.5
3.						
4.						
5.						

Score: 1.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 25	Gravel: 20	Fines (silt, clay, muck): 10	Artificial:
Cobble: 20	Sand:	Bedrock: 25	Other:

Score: 5

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0	0	0	0	0	0	0						

Average: 0.0 Score: 0

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☑ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	•

Score: 0

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☒ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (☐ Linear ☐ Non-linear) 区 Mitigation/Conservation
Stream ID/Name: MS-6 SAR No.: MS-6-3 Size (L	F): <u>502</u> Date: <u>4/23/14</u> Evaluator(s): <u>RW, DT</u>
Stream Type: Ephemeral Ecoregion: Cross Timber	Delineation Performed: Previously Currently
8-Digit HUC: 12060201 Watershed Condition (develope	d, pasture, etc.): Pasture, Impoundment Watershed Size: 100 acres
Aerial Photo Date and Source: 2012 NAIP / BING	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? Yes No (If no, explain in Notes)
Notes: Extreme drought. Signs of cattle use. Downslope of	of swales in pasture to rock outcrop.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 10	Avg. Banks: 2
Avg. Waters Edge: -	Avg. Water: -
Avg. OHWM: 2	Avg. OHWM: 0.5

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	5		
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	23.3
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.0	Sum of bank scores / 10	5.0
Riparian buffer condition	Riparian buffer (right bank)	1.0	x 25	5.0
In atroom condition	Substrate composition	2	Sum of metric scores / 10	F.O.
In-stream condition	In-stream habitat	0	x 25	5.0
Lludrologia condition	Flow regime	0	Sum of metric scores / 8	0.0
Hydrologic condition	Channel flow status	0	x 25	0.0
	Sum of core e	lement scores = c	overall TXRAM stream score	33
Additional points for limited L R Dominated by native Dominated by hard m	0			
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	33

Representative Site Photograph:



MS-6-3 facing downstream (west).

Version 1.0 - Final Draft TXRAM STREAM DATA SHEET

Project/Site Name/No.: _T	urkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [☑ Mitigation/Conservation
Stream ID/Name: MS-6				
Stream Type: Ephemeral	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [Previously X Currently
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 100 acres
Aerial Photo Date and Sou	Irce: 2012 NAIP / BING	Site Photos: _	/es Repr	resentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☐ Yes 🗵 N	No (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		`	ght/Depth (Feet)	
9	10	Avg. Bank		
Avg. Waters Edge: -		Avg. Wate		
Avg. OHWM: 2	2	Avg. OHV	/M: 0.5	
Extreme drou	ght. Signs of cattle ι	use. Downslope of s	wales in pasture to	rock outcrop.
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
5 10 111				Score: 5
Bank Condition Left Bank Active Erosion:	. () 0/ Diaht	Bank Active Erosion: 0	0/ Avaraga: 0	.0
	tion: ☒ Natural ☐ Artific			
Bariit i Totodioni otabili 2	inioni Entatarai Entatara			Score: 5
Sediment Deposition				
T	bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)
	•	diment deposition; some es	· ·	` '
moderate sediment depo features (3)	sits at in-stream structure	ediment deposition; model s; OR obstructed view of t	he channel bottom and a	lack of other depositional
☐ 60–80% of the botton in-stream structures (2)	n covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of t	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

eft Bank				0	on:	1/00:-4-	tion	100-	T -		Buffer Dist		
Buffer Type			Can Co		Vegeta Commu		Land Use	Sco	ore	Percentag of Area	e s	Subtotal	
1. Pasture with grasses, cactus, m	esquite,	Ashe ju	niper	10	0	Undesir	able	High	1	ı	100		1
2.													
3.													
4.													
5.													
Dight Donk											S	core:	1.0
Right Bank <i>Buffer Typ</i>	e			Can	ору	Vegeta	tion	Land	Sco	ore	Percentag	e s	Subtotal
				Col	/er	Commi		Use			of Area		
1. Pasture with grasses, cactus, me	squite, A	she junip	er	10)	Undesir	able	High	1	ı	100		1
2.													
3.													
4.													
5.													
N-STREAM CONDITION											S	core:	1.0
Substrate Composition (estima			s)										
Boulder: 5	Gravel	:5				nes (silt, d	clay, m	uck): ₈₀		Artificia	l:		
Cobble: 5	Sand:				Ве	drock: 5			Other:				
n-stream Habitat (check all hal	bitat typ	es that	are pre	esent)							S	core:	2
Habitat Type	T1	T2	T3	T4	<i>T</i> 5	T6	T7	T8	<i>T</i> 9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0	0	0	0	0	0							
Total No. 1 Tesent	0	U	0	0	U	0			Λ.,,	l erage:	00 8	core:	0
HYDROLOGIC CONDITION									Αν.	crage.	<u></u>	core.	
Flow Regime	ont (4)					alatad = =	volo or	d no ovide	noc c	f ourse	oo or inter-	stitic! f	low (4)
Noticeable surface flow prese	` '	-41-c-l'	- A /	2)							ce or inters		
Continual pool of water but la				3)	X D	ry cnann	el and i	no observa	able p	ools or	interstitia	flow ((0)
☐ Isolated pools and interstitial	(subsur	face) flo	ow (2)										
Channel Flow Status											5	core:	0
				4 d - d			0/ 6 1				1.74		
☐ Water covering greater than	75% of t	the chai	nnel bot	tom wia	tn; iess	s than 25	% of cr	nannei sur	ostrate	ıs exp	osea (4)		
											osed (4)		
 Water covering greater than Water covering 50–75% of th Water covering 25–50% of th	ne chanr	nel botto	om width	n; 25–50	% of c	hannel s	ubstrat	e is expos	ed (3)		osed (4)		

Score: 0

☒ No water present in the channel; 100% of channel substrate exposed (0)

TXRAM STREAM FINAL SCORING SHEET

Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
F): 1,812 Date: 4/23/14 Evaluator(s): RW, DT
Previously ☐ Previously ☐ Currently
ed, pasture, etc.): Pasture, Impoundment Watershed Size: 45 acres
Site Photos: Yes Representative: ⊠ Yes □ No
Irologic conditions present? ☐ Yes ☒ No (If no, explain in Notes)
of gravel road to confluence with Palo Pinto Creek.
Stream Height/Depth (Feet)
Avg. Banks: 5
Avg. Water: -
Avg. OHWM: 1

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity 3			
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.4	Sum of bank scores / 10	7.0
Riparian buffer condition	Riparian buffer (right bank)	1.4	x 25	7.0
In-stream condition	Substrate composition	3	Sum of metric scores / 10	7.5
in-stream condition	In-stream habitat	0	x 25	7.5
Lludralagia aanditian	Flow regime	0	Sum of metric scores / 8	0.0
Hydrologic condition	Channel flow status	0	x 25	0.0
	Sum of core e	lement scores = c	overall TXRAM stream score	33
L R □ □ Dominated by native	habitats = overall TXRAM stream trees greater than 24-inch diamo ast (i.e., acorns and nuts) produ	eter at breast heig	ght	0
	AM stream score and additional			33

Representative Site Photograph:



MS-7-1 facing upstream (north).

TXRAM STREAM DATA SHEET

Project/Site Name/No.: Tu	ırkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	Mitigation/Conservation
Stream ID/Name: MS-7				
Stream Type: Ephemeral				
8-Digit HUC: 12060201				
Aerial Photo Date and Sou				
Stressor(s): Land use				
Stream Characteristics	/ lic normal	omnation yar ologic contact	ons present: 🗀 res 🔼 r	to (ii iio, explaiii iii ivotes)
Stream Width (Feet)		Stream Heir	ght/Depth (Feet)	
	2	Avg. Bank		
Avg. Waters Edge: -		Avg. Wate		
Avg. OHWM: 3		Avg. OHW		
3		0 1		
Pinto Creek.	gnt. Signs of cattle t	ise. Downslope of g	ravel road to conflue	ence with Paio
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
				Score: 3
Bank Condition				
Left Bank Active Erosion:	% Right	Bank Active Erosion: 10	% Average: <u>1</u>	0.0
Bank Protection/Stabilization	tion: 🗵 Natural 🗌 Artific	ial:		
				Score: 4
Sediment Deposition				
Less than 20% of the	bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)
■ 20–40% of the bottom sediments (4)	covered by excessive sec	diment deposition; some e	stablished bars with indica	tors of recently deposited
	n covered by evessive s	ediment denosition: modo	rate deposition on old bar	s and creating new bars.
			he channel bottom and a	
	n covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at
` '	ne bottom covered by exce	essive sediment deposition	resulting in aggrading cha	innel (1)

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3). Left Bank Buffer Distance: 31.0

Zon Barin					Barror Brotain	<u> </u>
Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Ashe juniper, mesquite, live oak	50	Undesirable	High	1	60	0.6
2. Cedar elm, pecan, Ashe juniper	70	Mix	High	2	40	0.8

3. 4. 5.

Score: 1.4

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Ashe juniper, mesquite, live oak	50	Undesirable	High	1	60	0.6
2. Cedar elm, pecan, Ashe juniper	70	Mix	High	2	40	0.8
3.						
4.						
5.						

Score: 1.4

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder:	Gravel: 30	Fines (silt, clay, muck): 60	Artificial:
Cobble: 10	Sand:	Bedrock:	Other:

Score: 3

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation													
Rootmats													
Rootwads													
Woody/Leafy Debris													
Boulders/Cobbles													
Aquatic Macrophytes													
Riffle/Pool Sequence													
Artificial Habitat Enhancement													
Other													
Total No. Present	0	0	0	0	0	0	0	0	0	0	0	0	0

Average: <u>0.0</u> Score: <u>0</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☐ Continual pool of water but lacking noticeable flow (3)	☑ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 0

Channel Flow Status

☐ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☒ No water present in the channel; 100% of channel substrate exposed (0)

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.:	Turkey Peak	Project Type:	Fill/Impact (☐ Linear ☐ Non-I	inear) 🗵 Mitigation/C	onservation
Stream ID/Name: MS-9	9 SAR No	o.: MS-9-1 Size (L	_{-F):} <u>521</u> [Date: 4/22/14	_ Evaluator(s): RW,	DT
Stream Type: Intermit	tent Ecoregion	Cross Timbe	ers	Delineation Perfo	ormed: Previously	
8-Digit HUC: 1206020	01 Watershed Co	ndition (develope	ed, pasture, etc	c.): Pasture, Impoundme	ent Watershed Size: 7	sq. mi.
Aerial Photo Date and S						
Stressor(s): Land use	Are no	ormal climatic/hyd	Irologic condition	ons present? 🗌 Y	es 🗵 No (If no, expla	in in Notes)
Notes: Extreme drought. Signs	of cattle use. Downstream of prope	rty boundary to confluence	ce with Palo Pinto Cre	ek. Small pool present. In-	stream habitat estimated from ref	ference reach.
Stream Characteristics	;					
Stream Width (Feet)			Stream Heig	nht/Depth (Feet)		
Avg. Bank to Bank:	20		Avg. Bank	S: 5		
Avg. Waters Edge:	6		Avg. Wate	r: 0.5		
Avg. OHWM:	10		Avg. OHW	'M: 2		

Scoring Table

Core Element	Metric Score Core Element Score Calculation		Core Element Score Calculation	Core Element Score				
	Floodplain connectivity	3						
Channel condition	Bank condition	5	Sum of metric scores / 15 x 25	21.7				
	Sediment deposition	5	X 20					
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	40.0				
Riparian buffer condition	10.0							
In atroom condition	Substrate composition	5	Sum of metric scores / 10	17.5				
In-stream condition	In-stream habitat	2	x 25	17.5				
Lludrologia condition	Flow regime	2	Sum of metric scores / 8	12.5				
Hydrologic condition	Channel flow status	2	x 25	12.5				
	Sum of core e	lement scores = c	overall TXRAM stream score	62				
Additional points for limited L R Dominated by native Dominated by hard m	ght	0						
Sum of overall TXR	Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score							

Representative Site Photograph:



MS-9-1 facing upstream (northwest).

TXRAM STREAM DATA SHEET

Project/Site Name/No.:	urkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	Mitigation/Conservation
Stream ID/Name: MS-9	SAR No.: _	MS-9-1 Size (LF): <u>521</u>	Date: 4/22/14 Eval	uator(s): RW, DT
Stream Type: Intermittent	Ecoregion: Cro	oss Timbers	_ Delineation Performed: [☐ Previously ☒ Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 7 sq. mi.
Aerial Photo Date and Sou	irce: 2012 NAIP / BING	Site Photos: _\	res Repre	esentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? Yes N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)	
Avg. Bank to Bank: 2	20	Avg. Bank	(S: 5	
Avg. Waters Edge: 6	3	Avg. Wate		
Avg. OHWM:	0	Avg. OHW	/M: 2	
			property boundary t at estimated from re	
CHANNEL CONDITION Floodplain Connectivity				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
		floodplain or bankfull benches at isolated areas.	benches.	
5	4	(3)	2	1 Score: 3
Bank Condition				
Left Bank Active Erosion:	5 % Right	Bank Active Erosion: 5	% Average: ^{5.}	0
	tion: X Natural Artifici			
				Score: 5
Sediment Deposition				
■ Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)
20–40% of the bottom sediments (4)	n covered by excessive sec	diment deposition; some e	stablished bars with indicat	tors of recently deposited
			rate deposition on old bars he channel bottom and a l	
☐ 60–80% of the botton in-stream structures (2)	n covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of t	he bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
-				Score: 5

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

_eft Bank <i>Buffer Typ</i>	 ne			Can	ору	Vegeta	ation	Land	Scor		Buffer Dist Percentag		ubtota
				Cov		Commi		Use	0001		of Area		- dotota
1. Cedar elm, pecan, live oak, Ash	ne junipe	r		70)	Mix	(High	2		100		2
2.													
3.													
4.													
5.													0.0
Right Bank											3	core:	2.0
Вuffer Тур	ре			Can		Vegeta Commi		Land Use	Scor	e	Percentag of Area	e s	ubtota
1. Cedar elm, pecan, live oak, Ashe	juniper			70)	Mix	(High	2		100		2
2.													
3.				1									
4.				1						\neg			
5.				+					1				
									1		S	core:	2.0
N-STREAM CONDITION													
Substrate Composition (estima			5)		T =-	/ '''	-1			r:c: ·	I.		
Boulder: 5	Grave	1: 60				nes (silt, o		uck): 5		tificia	11:		
Cobble: 20	Sand:				Ве	drock: 10)		Ot	her:			
n-stream Habitat (check all ha	hitat tur	ac that	are nre	seant)							S	core:	5
Habitat Type	T1	T2	T3	T4	<i>T</i> 5	T6	<i>T7</i>	T8	T9	T10	T11	T12	T13
Undercut Banks													
Overhanging Vegetation	✓	1		√				+					
Rootmats	•	•		•									
Rootwads			1										
Woody/Leafy Debris			· •										
Boulders/Cobbles		-	/	/									
Aquatic Macrophytes	√	✓	✓	√									
Riffle/Pool Sequence								+ +					
Artificial Habitat Enhancement		-				1		+ +					1
						+	-	+ +			+ +		+-
Other Total No. Present	<u> </u>	_	_			-		+ +			+		1
Total No. Present	2	2	2	2					Λ				
AVDROLOGIC CONSTITUTION									Aver	rage:	2.0 S	core:	2
HYDROLOGIC CONDITION Flow Regime													
						alate di	l	القادة ممالة		e.		41411.0	I (4)
☐ Noticeable surface flow pres				• `							ce or inters		
Continual pool of water but la	_			3)	Пρ	ry chann	el and	no observ	able po	ols or	r interstitial	flow (0)
▼ Isolated pools and interstitial	(subsur	face) flo	w (2)										
											S	core:	2
Channel Flow Status													
☐ Water covering greater than	75% of	the char	nnel bot	tom wid	th; les	s than 25	% of c	hannel sub	ostrate i	s exp	osed (4)		
☐ Water covering 50–75% of the											` '		
-								-					
■ Water covering 25–50% of the Water present but covering I								-		el sub	strate is ex	nose	

Page 2 of 2

Score: 2

☐ No water present in the channel; 100% of channel substrate exposed (0)

Appendix D: \$ Mitig	Stream Final Scor ation SARs (inclu	ing Sheets for F ding Reference	Proposed Mitigation	on – Upstream itions

TXRAM STREAM FINAL SCORING SHEET FOR EVALUATING PROPOSED MITIGATION/IMPACT ACTIVITIES

Notes: <u>Proposed conditions</u> Stream Characteristics Stream Width (Feet)	SAR No.: _1 Siz Ecoregion: _Cross TimbeWatershed Condition (develope ce: 2014 NAIP	e (LF): _1,753 rs d, pasture, etc Site Photos: N c/hydrologic co in mitigation pla	.): Pasture, Ponds Wate 'A Reponditions present? Yes an and based on reference real wht/Depth (Feet)	luator(s): _RW, DT Previously ☐ Currently rshed Size: 44 sq. mi resentative: ☐ Yes ☐ No No (If no, explain in Notes)	Stream ID/Name: PS-1 Additional Notes: Proporthe end of construction. Stream Width (Ft)	sed condition scores at Stream Height (Ft)	Stream ID/Name: PS-1 Additional Notes: Propate the end of monitoring for floodplain connectivity channel dam modification processes, and scores word condition and sediment removal allows revegets score will increase with and improvement of other stream Width (Ft)	osed condition scores Score will improve by based on upstream on to restore channel will improve for bank deposition after cattle ation. In-stream habitat upstream restoration er metrics. Stream Height (Ft)	Stream ID/Name: PS-1 Additional Notes: Proportanget at maturity. Score riparian buffer with cattle vegetation management improve native community Stream Width (Ft)	sed condition scores es will improve for removal and to reduce brush and ty. Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Banks			50	12	50	12	50	12
Avg. Waters Edge: 15 Avg. OHWM: 30		Avg. Wate Avg. OHW			15 30	3	15 30	3	15 30	3
Avg. Offivivi. 30		Avg. Onv	IVI. 3		30	3	30	3	30	3
Scoring Table					Year/Option <u>End</u>	of Construction	Year/Option _ End	d of Monitoring_	Year/Option _At Mate	urit <u>y</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3	4	20.0	5	23.3	5	23.3
	Sediment deposition	4	X 25		5		5		5	
	Riparian buffer (left bank)	1	Sum of bank scores / 10		2.8		3.8		4.8	
Riparian buffer condition	Riparian buffer (right bank)	2	x 25	7.5	2.8	14.0	3.8	19.0	4.8	24.0
	Substrate composition	5	Sum of metric scores / 10		5		5		5	
In-stream condition	In-stream habitat	4	x 25	22.5	4	22.5	5	25.0	5	25.0
	Flow regime	2	Sum of metric scores / 8		2		2		2	
Hydrologic condition	Channel flow status	3	x 25	15.6	3	15.6	3	15.6	3	15.6
		l								
	Sum of core eler	ment scores =	overall TXRAM stream score	64	-	72	-	83	-	88
	habitats = overall TXRAM stream sco	re x 0.025 for e	each bank (right/left) if:							
	trees greater than 24-inch diameter a mast (i.e., acorns and nuts) producing			0	-	0	-	0	-	0
Sum of overall	TXRAM stream score and additional p	oints = total o	verall TXRAM stream score	64	-	72	-	83	-	88
Representative Site Photo	graph:	T								
		Existing se	gment of stream (MS-1-1) facing u channel is split with signs of I		See TXRAM Reference S. proposed activities in mitiga includes enhancement vegetation with liv	tion plan. After construction of channel and planting	See TXRAM Reference SA proposed activities in monitoring includes natural of vege	mitigation plan. After re-generation and growth	See TXRAM Reference SA of proposed activities in mit includes target scores for referen	igation plan. At maturity r mitigation based on

TXRAM STREAM FINAL	Version 1.0 - SCORING SHEET FOR EVAL		OSED MITIGATION/IMPA	CT ACTIVITIES						
Project/Site Name/No.: _	<u>Furkey Peak</u> Project Type	: Fill/Impact (☐ Linear ☐ Non-linear) 🗵	Mitigation/Conservation	Stream ID/Name: PS-1	SAR No.: 2	Stream ID/Name: PS-1	SAR No.: 2	Stream ID/Name: PS-1_	SAR No.: 2
Stream ID/Name: MS-1 / PS	<u>-1</u> SAR No.: <u>2</u> S	Size (LF): <u>716</u>	Date: <u>2016</u> Evalu	ator(s): <u>RW, DT</u>	Additional Notes: Propo		Additional Notes: Prop		Additional Notes: Propo	sed condition scores
Stream Type: Intermittent	Ecoregion: _Cross Tim	bers	Delineation Performed: $oxtime $	Previously	the end of construction.		at the end of monitoring for floodplain connectivi		target at maturity. Scores riparian buffer with cattle	
8-Digit HUC: _12060201	Watershed Condition (develo	ped, pasture, etc	.): <u>Pasture, Ponds</u> Wate	rshed Size: 44 sq. mi.			channel dam modification	n to restore channel	vegetation management	to reduce brush and
Aerial Photo Date and Source	ce: <u>2014 NAIP</u>	_ Site Photos: N/	<u>'A</u> Rep	oresentative: X Yes X No			processes, and scores of condition and sediment	deposition after cattle	improve native communit	y.
Stressor(s): N/A	Are normal clim	atic/hydrologic co	onditions present? X Yes	No (If no, explain in Notes)			removal allows revegeta score will increase with			
	for SAR following activities describe						and improvement of oth			
Stream Characteristics	•	•						l		
Stream Width (Feet)		Stream Heig	ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Banks	s: 10		50	10	50	10	50	10
Avg. Waters Edge: 25		r: 2		25	2	25	2	25	2	
Avg. OHWM: 30 Avg. OHWM: 4				30	4	30	4	30	4	
Scoring Table			,		Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	of Monitoring	Year/Option <u>At Matu</u>	<u>urity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	2			2		3		3	
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	15.0	4	16.7	5	21.7	5	21.7
	Sediment deposition	4	X 20		4		5		5	
Riparian buffer condition	Riparian buffer (left bank)	1	Sum of bank scores / 10	4.5	2.8	11.5	3.8	16.5	5	22.5
Riparian buller condition	Riparian buffer (right bank)	0.8	x 25	4.5	1.8	11.5	2.8	10.5	4	22.0
In-stream condition	Substrate composition	5	Sum of metric scores / 10	22.5	5	22.5	5	25.0	5	25.0
III-Stream condition	In-stream habitat	4	x 25	22.5	4	22.3	5	25.0	5	23.0
Lludralagia condition	Flow regime	2	Sum of metric scores / 8	1E G	2	15.6	2	15.6	2	15.6
Hydrologic condition	Channel flow status	3	x 25	15.6	3	15.6	3	15.6	3	15.6
	Sum of core e	lement scores = 0	overall TXRAM stream score	58	_	66	_	79	_	85



Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if:

Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score

L R

Dominated by native trees greater than 24-inch diameter at breast height

Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata

Existing segment of stream (MS-1-2) facing upstream. Stream banks exhibit livestock usage. Channel parallels railroad tracks.

0

58

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After construction includes enhancement of channel and planting vegetation with livestock exclusion.

0

66

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After monitoring includes natural re-generation and growth of vegetation.

79

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. At maturity includes target scores for mitigation based on reference.

0

85

TXRAM STREAM FINAL	SCORING SHEET FOR EVALUA		OSED MITIGATION/IMPA	CT ACTIVITIES							
Project/Site Name/No.:	Furkey Peak Project Type: [☐ Fill/Impact (☐ Linear ☐ Non-linear) ▷	Mitigation/Conservation	Stream ID/Name: PS-1	SAR No.: 3	Stream ID/Name: PS-1	SAR No.: 3	Stream ID/Name: PS-1_	SAR No.: 3	
Stream ID/Name: MS-1 / PS	<u>-1</u> SAR No.: <u>3</u> Siz	re (LF): <u>1,022</u>	Date: <u>2016</u> Eva	aluator(s): <u>RW, DT</u>	Additional Notes: Propo	<u>– </u>	Additional Notes: Prop	<u>-</u>	Additional Notes: Proposed condition scores		
Stream Type: Intermittent	Ecoregion: _Cross Timbe	ers	Delineation Performed: [>	Previously Currently	the end of construction.		at the end of monitoring for floodplain connectivi		target at maturity. Scores will improve for riparian buffer with cattle removal and vegetation management to reduce brush and improve native community.		
8-Digit HUC: <u>12060201</u>	Watershed Condition (develope	ed, pasture, etc	.): <u>Pasture, Ponds</u> Wate	ershed Size: <u>44 sq. mi.</u>			channel dam modification processes, and scores				
Aerial Photo Date and Source	ce: <u>2014 NAIP</u>	Site Photos: N/	<u>'A</u> Re	presentative: X Yes No			condition and sediment	deposition after cattle	Improve native communi	ty.	
Stressor(s): N/A	Are normal climat	ic/hydrologic co	onditions present? ⊠ Yes □	No (If no, explain in Notes)			removal allows revegets score will increase with and improvement of oth	upstream restoration			
Notes: Proposed conditions	for SAR following activities described	in mitigation pla	an and based on reference re	ach conditions			and improvement of oth	er meurcs.			
Stream Characteristics											
Stream Width (Feet)		Stream Heig	ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	
Avg. Bank to Bank: 50		Avg. Banks	s: 8		50	8	50	8	50	8	
Avg. Waters Edge: 10		Avg. Water	:: 1		10	1	10	1	10	1	
Avg. OHWM: 30		Avg. OHW	M: 3		30	3	30	3	30	3	
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option_ <u>En</u>	d of Monitoring	Year/Option _ <u>At Mate</u>	<u>urity</u>	
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	
	Floodplain connectivity	3			3		4		4		
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3	4	20.0	5	23.3	5	23.3	
	Sediment deposition	4			5		5		5		
Diporion buffor condition	Riparian buffer (left bank)	2	Sum of bank scores / 10	9.3	3	12.8	4	17.8	5	22.8	
Riparian buffer condition	Riparian buffer (right bank)	1.7	x 25	9.3	2.1	12.0	3.1	17.0	4.1	22.0	

Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3	4	20.0	5	23.3	5	23.3
	Sediment deposition	4			5		5		5	
Riparian buffer condition	Riparian buffer (left bank)	2	Sum of bank scores / 10	9.3	3	12.8	4	17.8	5	22.8
Riparian buller condition	Riparian buffer (right bank)	1.7	x 25	9.3	2.1	12.0	3.1	17.0	4.1	22.0
In-stream condition	Substrate composition	5	Sum of metric scores / 10	22.5	5	22.5	5	25.0	5	25.0
m-stream condition	In-stream habitat	4	x 25	22.5	4	22.5	5	25.0	5	25.0
Lludralagia aanditian	Flow regime	2	Sum of metric scores / 8	12.5	2	12.5	2	12.5	2	12.5
Hydrologic condition	Channel flow status	2	x 25	12.5	2	12.5	2	12.5	2	12.5
			overall TXRAM stream score	63	-	68	-	79	-	84
L R □ □ Dominated by native	ditional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if: R Dominated by native trees greater than 24-inch diameter at breast height Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata				-	0	-	0	-	0
Sum of overall	TXRAM stream score and additional	points = total o	verall TXRAM stream score	63	-	68	-	79	-	84



Existing segment of stream (MS-1-3) facing upstream (northwest). A small pool of bedrock substrate was present. Signs of erosion and livestock usage observed.

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After construction includes enhancement of channel and planting vegetation with livestock exclusion.

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After monitoring includes natural re-generation and growth of vegetation.

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. At maturity

includes target scores for mitigation based on reference.

TXRAM STREAM FINAL	Version 1.0 - SCORING SHEET FOR EVAL		OSED MITIGATION/IMPAC	CT ACTIVITIES							
Project/Site Name/No.: _T	urkey Peak Project Type	: Fill/Impact (☐ Linear ☐ Non-linear) 🖂	Mitigation/Conservation	Stream ID/Name: PS-1	SAR No.: 4	Stream ID/Name: PS-1	SAR No.: 4	Stream ID/Name: PS-1_	SAR No.: 4	
Stream ID/Name: MS-1 / PS-	<u>-1</u> SAR No.: <u>_4</u> S	Size (LF): <u>984</u>	Date: <u>2016</u> Evalu	ator(s): <u>RW, DT</u>	Additional Notes: Propo	<u> </u>	Additional Notes: Prop	osed condition scores	Additional Notes: Propo	sed condition scores	
Stream Type: Intermittent	Ecoregion: _Cross Tim	<u>bers</u>	Delineation Performed: $oxtime $	Previously Currently	the end of construction.		at the end of monitoring for floodplain connectivity		target at maturity. Scores will improve for riparian buffer with cattle removal and		
8-Digit HUC: _12060201	Watershed Condition (develo	ped, pasture, etc.): Pasture, Ponds Wate	rshed Size: 44 sq. mi			channel dam modification	on to restore channel	vegetation management	to reduce brush and	
Aerial Photo Date and Sourc	·	_ Site Photos: N/	•	resentative: X Yes No			processes, and scores condition and sediment		improve native community.		
	Are normal clim	·					removal allows reveget	ation. In-stream habitat			
· · · ——		, ,	•				score will increase with and improvement of oth				
	for SAR following activities describe	ed in mitigation pla	an and based on reference rea	ch conditions.							
Stream Characteristics						T				T	
Stream Width (Feet)		Stream Heig Avg. Banks	ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	
Avg. Bank to Bank: 50				50	8	50	8	50	8		
Avg. Waters Edge: 10		: 1		10	1	10	1	10	1		
Avg. OHWM: 30		Avg. OHW	VI: 3		30	3	30	3	30	3	
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring_	Year/Option _At Matu	<u>urity</u>	
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	
	Floodplain connectivity	3			3		4		4		
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3	4	20.0	5	23.3	5	23.3	
	Sediment deposition	4	X 25		5		5		5	1	
Riparian buffer condition	Riparian buffer (left bank)	1.6	Sum of bank scores / 10	8.5	2.8	14.0	3.8	19.0	3.8	21.5	
Riparian buller condition	Riparian buffer (right bank)	1.8	x 25	6.8	2.8	14.0	3.8	19.0	4.8	21.5	
In-stream condition	Substrate composition	5	Sum of metric scores / 10	22.5	5	22.5	5	25.0	5	25.0	
III-Stream condition	In-stream habitat	4	x 25	22.3	4	22.5	5	25.0	5	25.0	
Hydrologic condition	Flow regime	2	Sum of metric scores / 8	12.5	2	12.5	2	12.5	2	12.5	
Hydrologic cortaition	Channel flow status	2	x 25	12.5	2	12.5	2	12.5	2	12.5	
	Sum of core e	element scores = o	overall TXRAM stream score	62	-	69	-	80	-	82	
L R	habitats = overall TXRAM stream s trees greater than 24-inch diamete hast (i.e., acorns and nuts) producir	, ,	0	-	0	-	0	-	0		



Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score

Existing section of stream (MS-1-4) facing upstream (northwest). Cattle present. Some pooling is present.

62

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After construction includes enhancement of channel and planting vegetation with livestock exclusion.

69

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After monitoring includes natural re-generation and growth of vegetation.

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. At maturity includes target scores for mitigation based on reference.

82

TXRAM STREAM FINAL SCORING SHEET FOR EVALUATING PROPOSED MITIGATION/IMPACT ACTIVITIES

Project/Site Name/No.:Turkey Peak Project Type: ☐ Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation Stream ID/Name: MS-1 / PS-1 SAR No.: _5 Size (LF): _1,023 Date: _2016 Evaluator(s): _RW, DT Stream Type: _Intermittent Ecoregion:Cross Timbers Delineation Performed: ☒ Previously ☐ Currently 8-Digit HUC:12060201 Watershed Condition (developed, pasture, etc.): _Pasture, Ponds Watershed Size: _44 sq. mi. Aerial Photo Date and Source: _2014 NAIP Site Photos: _N/A Representative: ☒ Yes ☐ No Stressor(s): _N/A Are normal climatic/hydrologic conditions present? ☒ Yes ☐ No (If no, explain in Notes) Notes: _Proposed conditions for SAR following activities described in mitigation plan and based on reference reach conditions.						SAR No.: <u>5</u> osed condition scores at	Stream ID/Name: PS-1 Additional Notes: Propart the end of monitoring for bank condition and shased on upstream characteristic channel procremoval allows reveget score will increase with and improvement of other streams.	oosed condition scores g. Scores will improve sediment deposition annel dam modification esses and after cattle ation. In-stream habitat upstream restoration	Stream ID/Name: PS-1 SAR No.: 5 Additional Notes: Proposed condition scores target at maturity. Scores will improve for riparian buffer with cattle removal and vegetation management to reduce brush and improve native community.	
Stream Characteristics		-				1				
Stream Width (Feet)			ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Bank			50	6	50	6	50	6
Avg. Waters Edge: 20					20	1	20	1	20	1
Avg. OHWM: 30		Avg. OHW	M: 3		30	3	30	3	30	3
Scoring Table					Year/Option _End	of Construction	Year/Option <u>En</u>	d of Monitorina	Year/Option _At Mate	uritv
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15	20.0	4	20.0	5	23.3	5	23.3
G. G. M. G. G. G. M. G.	Sediment deposition	4	x 25		4	-	5	-	5	-
	Riparian buffer (left bank)	1	O		2.8		3.8		5	
Riparian buffer condition	Riparian buffer (right bank)	1	Sum of bank scores / 10 x 25	5.0	2.8	14.0	3.8	19.0	5	25.0
					-		5.6		5	+
In-stream condition	Substrate composition	5	Sum of metric scores / 10 x 25	22.5	5	22.5		25.0		25.0
	In-stream habitat	4	X 23		4		5		5	
Hydrologic condition	Flow regime	2	Sum of metric scores / 8	15.6	2	15.6	2	15.6	2	15.6
, ,	Channel flow status	3	x 25		3		3		3	
							_		7	
			overall TXRAM stream score	63	<u> </u>	72	-	83	-	89
Additional points for limited L R	d habitats = overall TXRAM stream so	ore x 0.025 for 6	each bank (right/left) if:							
☐ ☐ Dominated by native	e trees greater than 24-inch diameter a			0	-	0	-	0	-	0
Sum of overall	TXRAM stream score and additional p	points = total ov	verall TXRAM stream score	63	-	72	-	83	-	89
Representative Site Photo	and the second s					•		•		
	3. st	Existing strea pool is pres	m segment (MS-1-5) facing upstre ent over a predominately bedrock livestock.	am (northwest). A large shallow substrate. Area frequented by	proposed activities in mitigation includes enhancement	AR data and description of ation plan. After construction of channel and planting vestock exclusion.	monitoring includes natura		See TXRAM Reference SA of proposed activities in mit includes target scores for referen	igation plan. At maturity r mitigation based on

TXRAM STREAM FINAL	Version 1.0 - SCORING SHEET FOR EVAL	—	OSED MITIGATION/IMPA	CT ACTIVITIES							
Project/Site Name/No.:	urkey Peak Project Type	e: 🗌 Fill/Impact (☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: PS-1	SAR No.: 6	Stream ID/Name: PS-1	SAR No.: 6	Stream ID/Name: PS-1_	SAR No.: 6	
Stream ID/Name: Restoratio	n of current impoundment / PS-1 S	SAR No.: <u>6</u> Size (LF): <u>1,199</u> Date: <u>2016</u> Evalua	tor(s): <u>RW, DT</u>	Additional Notes: Propo	sed condition scores at	Additional Notes: Prop	osed condition scores	Additional Notes: Propo	sed condition scores	
Stream Type: Intermittent	Ecoregion: _Cross Tim	bers	Delineation Performed: X	Previously Currently	the end of construction. and hydrologic condition		at the end of monitoring		target at maturity. Scores		
8-Digit HUC: _12060201	Watershed Condition (develo	ped, pasture, etc): <u>Pasture, Ponds</u> Wate	rshed Size: 44 sq. mi.	established) with modific	cation of channel dam to			vegetation management to reduce brush and		
Aerial Photo Date and Source	e: 2014 NAIP	Site Photos: N/	A Rep	oresentative: X Yes X No	restore channel process	es.			improve native communit	y.	
Stressor(s): N/A	Are normal clim		onditions present? ⊠ Yes □	No (If no, explain in Notes)							
· · ·	or SAR following activities describe		·	, , ,							
Stream Characteristics	or or at tonowing doubline docorner	od iii iiiiiiigaaoii pia	an and bacca on reference rec	ton conditions.							
Stream Width (Feet)		Stream Heig	ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	
Avg. Bank to Bank: N/A		Avg. Banks			50	6	50	6	50	6	
Avg. Waters Edge: N/A		: N/A		20	1	20	1	20	1		
Avg. OHWM: N/A		M: N/A		30	3	30	3	30	3		
Scoring Table					Year/Option <u>End</u>	of Construction	Year/Option <u>En</u>	d of Monitoring	Year/Option <u>At Matu</u>	<u>ırity</u>	
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	
	Floodplain connectivity	0			4		4		4		
Channel condition	Bank condition	0	Sum of metric scores / 15 x 25	0	4	20	5	23.3	5	23.3	
	Sediment deposition	0	X 20		4		5]	5		
Riparian buffer condition	Riparian buffer (left bank)	0	Sum of bank scores / 10	0	2.7	14.3	3.6	19.0	4.5	23.8	
Riparian buller condition	Riparian buffer (right bank)	0	x 25	U	3	14.3	4	19.0	5	23.0	
In-stream condition	Substrate composition	0	Sum of metric scores / 10	0	4	17.5	5	22.5	5	25.0	
III-Stream condition	In-stream habitat	0	x 25	U	3	17.5	4	22.5	5	25.0	
Hydrologic condition	Flow regime	0	Sum of metric scores / 8	0	2	15.6	2	15.6	2	15.6	
Trydrologic cortaition	Channel flow status	0	x 25		3	15.0	3	13.0	3	15.0	
			overall TXRAM stream score	0	-	67	-	80	-	88	
L R	habitats = overall TXRAM stream strees greater than 24-inch diametenast (i.e., acorns and nuts) producing	r at breast height	, ,	0	-	0	-	0	-	0	



Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score

Stream is currently impounded (right side of photo, upstream of channel dam)

0

See design and description of proposed activities in mitigation plan. After construction includes restoration of channel and planting vegetation with livestock exclusion.

67

See design and description of proposed activities in mitigation plan. After monitoring includes natural regeneration and growth of vegetation.

See design and description of proposed activities in mitigation plan. At maturity includes target scores for mitigation based on reference.

TXRAM STREAM FINAL	Version 1.0 – . SCORING SHEET FOR EVALU		POSED MITIGATION/IMPAG	CT ACTIVITIES						
Project/Site Name/No.: Stream ID/Name: MS-2 / PS Stream Type: Ephemeral/Inf 8-Digit HUC:12060201 Aerial Photo Date and Source Stressor(s): N/A	Stream ID/Name: PS-2 Additional Notes: Proporthe end of construction. Intermittent with upstreat channel restoration as with management, considering reference reaches.	sed condition scores at Anticipated to become m pond removals / rell as vegetation	Stream ID/Name: PS-2 Additional Notes: Prop at the end of monitoring for floodplain connectivi dam removals to restore and scores will improve after cattle removal allow stream habitat score will upstream restoration and based on restoring nature.	osed condition scores Score will improve by based on upstream channel processes, for bank condition ws revegetation. In- increase with d hydrology metrics	Stream ID/Name: PS-2 Additional Notes: Proportarget at maturity. Score riparian buffer with cattle vegetation management improve native communities sediment deposition will restoration of channel proof cattle allowing reveget	osed condition scores s will improve for removal and to reduce brush and ty. Score for improve with ocesses and removal				
Notes: Proposed conditions	for SAR following activities described	l in mitigation pl	an and based on reference rea	ach conditions.			based on restoring natu	rai stream nows.		
Stream Characteristics										
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 40	vg. Bank to Bank: 40 Avg. Banks: 5					5	40	5	40	5
Avg. Waters Edge:		Avg. Wate	r:							
Avg. OHWM: 10 Avg. OHWM: 1				10	1	10	1	10	1	
Scoring Table					Year/Option _ <u>End</u>	of Construction_	Year/Option _ <u>En</u>	d of Monitoring_	Year/Option _At Mate	<u>urity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3	4	18.3	5	23.3	5	23.3
	Sediment deposition	4	^25		4		5		5	
Dinavian huffar anndition	Riparian buffer (left bank)	1.9	Sum of bank scores / 10	0.5	2.5	12.5	3.5	17.5	4.5	22.5
Riparian buffer condition	Riparian buffer (right bank)	1.9	x 25	9.5	2.5	12.5	3.5	17.5	4.5	22.5
la staran condition	Substrate composition	5	Sum of metric scores / 10	45.0	5	45.0	5	47.5	5	47.5
In-stream condition	In-stream habitat	1	x 25	15.0	1	15.0	2	17.5	2	17.5
	Flow regime	1	Sum of metric scores / 8		1		2		2	
Hydrologic condition	Channel flow status	1	x 25	6.3	1	6.3	2	12.5	2	12.5
	Sum of core ele	ement scores =	overall TXRAM stream score	49	-	52	-	71	-	76



Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if:

Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score

Dominated by native trees greater than 24-inch diameter at breast height
Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata

Existing stream segment (MS-2-1) facing south (downstream). This area is located upstream of a culvert underneath railroad tracks. Signs of cattle usage and moderate erosion.

0

49

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After construction includes enhancement of channel and planting vegetation with livestock exclusion.

0

52

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After monitoring includes natural re-generation and growth of vegetation, as well as becoming intermittent as described above.

0

71

See TXRAM Reference SAR data and description includes target scores for mitigation based on reference.

0

76

of proposed activities in mitigation plan. At maturity

TXRAM STREAM FINAL	Version 1.0 – SCORING SHEET FOR EVALU		OSED MITIGATION/IMPA	CT ACTIVITIES								
Project/Site Name/No.:	Stream ID/Name: PS-2	SAR No.: 2	Stream ID/Name: PS-2_ SAR No.: 2			tream ID/Name: PS-2_	SAR No.: 2					
Stream ID/Name: MS-2 / PS-2 SAR No.: _2 Size (LF): _912 Date: 2016 Evaluator(s): _RW, DT [Additional Notes: Proposed condition scores at		oosed condition scores	Additional Notes: Proposed condition scores			
Stream Type: Ephemeral/Int	ermittent_ Ecoregion: <u>Cross Timbe</u>	rs	Delineation Performed: 🛛	Previously Currently	the end of construction.		at the end of monitoring			rget at maturity. Scores		
8-Digit HUC: _12060201	Watershed Condition (develop	<u></u>			intermittent with upstream pond removals / channel restoration as well as vegetation		for floodplain connectivity based on upstream dam removals to restore channel processes,			riparian buffer with cattle removal and vegetation management to reduce brush and		
-					management, consideri reference reaches.	ng watershed size and	and scores will improve for bank condition after cattle removal allows revegetation. Instream habitat and substrate scores will increase with upstream restoration and hydrology metrics based on restoring natural			improve native community. Score for sediment deposition will improve with restoration of channel processes and removal of cattle allowing revegetation.		
Aerial Photo Date and Source			_	presentative: X Yes No	reference reaches.							
			onditions present? ⊠ Yes □									
Notes: Proposed conditions	for SAR following activities described	l in mitigation pl	an and based on reference rea	ach conditions.			sediment transport and					
Stream Characteristics												
Stream Width (Feet)			ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	_	Stream Width (Ft)	Stream Height (Ft)	
Avg. Bank to Bank: 20		Avg. Bank			20	6	20	6	-	20	6	
Avg. Waters Edge: Avg. OHWM: 10		Avg. Wate Avg. OHW			10	2	10	2	-	10	2	
Avg. Or ivvivi. 10		Avg. Of iv	TIVI. Z		10	2	10	2		10	2	
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option _ End of Monitoring_			Year/Option <u>At Maturity</u>		
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score		Proposed Metric Score	Proposed Core Element Score	
Channel condition	Floodplain connectivity	2	Sum of metric scores / 15 x 25	11.7	2		4			4		
	Bank condition	2			4	16.7	5	23.3		5	23.3	
	Sediment deposition	3			4	1	5			5		
	Riparian buffer (left bank)	1	Sum of bank scores / 10 x 25	5.0	2.5	40.5	3.5			4.5	22.5	
Riparian buffer condition	Riparian buffer (right bank)	1			2.5	12.5	3.5	17.5		4.5		
	Substrate composition	3	Sum of metric scores / 10 x 25	10.0	3	10.0	4	15.0		4	15.0	
In-stream condition	In-stream habitat	1			1		2			2		
	Flow regime	1	Sum of metric scores / 8 x 25	6.3	1	0.0	2	10.5		2	40.5	
Hydrologic condition	Channel flow status	1			1	6.3	2	12.5	2	12.5		
			overall TXRAM stream score	33	-	46	-	68		-	73	
Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if:												
☐ ☐ Dominated by native trees greater than 24-inch diameter at breast height ☐ ☐ Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata			0	-	0	-	0		-	0		
Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score 33					-	46	-	68		-	73	
Denvesentation Oir Distri	arranda.					•		•				
Representative Site Photo	graph:											



Existing stream segment (MS-2-2) facing downstream (southeast). Channel area is downstream of a gravel road and crossed by a pipeline ROW. Small pockets of water in channel used by livestock.

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After construction includes enhancement of channel and planting vegetation with livestock exclusion.

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After monitoring includes natural re-generation and growth of vegetation, as well as becoming intermittent as described above.

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. At maturity includes target scores for mitigation based on reference.

TXRAM STREAM FINAL	Version 1.0 – F SCORING SHEET FOR EVALUA		OSED MITIGATION/IMPAG	CT ACTIVITIES							
Project/Site Name/No.:	Turkey Peak Project Type: [☐ Fill/Impact (☐ Linear ☐ Non-linear) ☐	Mitigation/Conservation	Stream ID/Name: PS-2	SAR No.: <u>3</u>	Stream ID/Name: PS-2	SAR No.: <u>3</u>	Stream ID/Name: PS-2	SAR No.: <u>3</u>	
						Additional Notes: Proposed condition scores at		osed condition scores	Additional Notes: Proposed condition scores		
						Anticipated to become m pond removals /	at the end of monitoring for floodplain connectivity		target at maturity. Scores will improve for riparian buffer with cattle removal and vegetation management to reduce brush and improve native community. Score for		
8-Digit HUC: 12060201 Watershed Condition (developed, pasture, etc.): Pasture, Ponds Watershed Size: 470 ac.						rell as vegetation ng watershed size and	dam removals to restore and scores will improve	channel processes,			
Aerial Photo Date and Source	ce: <u>2014 NAIP</u>	Site Photos: N	<u>/A</u> Rep	resentative: X Yes No	reference reaches.		after cattle removal allow		sediment deposition will improve with		
Stressor(s): N/A			stream habitat and subsincrease with upstream		restoration of channel processes and removal of cattle allowing revegetation.						
Notes: Proposed conditions			hydrology metrics based sediment transport and								
Stream Characteristics							sediment transport and	Stream nows.			
Stream Width (Feet) Stream Height/Depth (Feet)			Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)			
Avg. Bank to Bank: 12 Avg. Banks: 5			12	5	12	5	12	5			
Avg. Waters Edge: Avg. Water:											
Avg. OHWM:											
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option _ <u>En</u>	d of Monitoring	Year/Option _ <u>At Matu</u>	ırity	
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	
	Floodplain connectivity	2	Sum of metric scores / 15 x 25	15.0	4	20.0	4	23.3	4		
Channel condition	Bank condition	4			4		5		5	23.3	
	Sediment deposition	3			4		5		5		
Riparian buffer condition	Riparian buffer (left bank)	1	Sum of bank scores / 10 x 25	5.0	2		3	45.0	4	22.2	
	Riparian buffer (right bank)	1			2	10.0	3	15.0	4	20.0	
In atroom condition	Substrate composition	3	Sum of metric scores / 10	7.5	3	10.0	4	15.0	4	15.0	
In-stream condition						7 10 0		150		150	

	Sediment deposition	3			4		5		5	
Riparian buffer condition	Riparian buffer (left bank)	1	Sum of bank scores / 10 x 25	5.0	2	10.0	3	- 15.0	4	20.0
	Riparian buffer (right bank)	1			2		3		4	20.0
In-stream condition	Substrate composition	3	Sum of metric scores / 10	7.5	3	10.0	4	15.0	4	15.0
	In-stream habitat	0	x 25		1		2		2	
Hydrologic condition	Flow regime	0	Sum of metric scores / 8 x 25	0.0	1	6.3	2	12.5	2	12.5
	Channel flow status	0			1		2		2	
Sum of core element scores = overall TXRAM stream score 28					-	46	-	66	-	71
Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if: L R			0		0				0	
 ☐ Dominated by native trees greater than 24-inch diameter at breast height ☐ Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata 			U	-		_		-	0	
Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score				28	-	46	-	66	-	71



Existing stream segment (MS-2-3) facing downstream (south). Abandoned channel downstream of an impoundment with restoration potential. Flow has been diverted from this area sometime in the past. Signs of cattle activity.

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After construction includes restoration of channel and planting vegetation with livestock exclusion.

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. After monitoring includes natural re-generation and growth of vegetation as well as becoming intermittent as described above.

See TXRAM Reference SAR data and description of proposed activities in mitigation plan. At maturity includes target scores for mitigation based on reference.

TXRAM STREAM FINAL SCORING SHEET FOR EVALUATING PROPOSED MITIGATION/IMPACT ACTIVITIES

Project/Site Name/No.: Stream ID/Name: Restoration Stream Type: Intermittent 8-Digit HUC:12060201 Aerial Photo Date and Sour Stressor(s): N/A Notes: Proposed conditions Stream Characteristics	Additional Notes: Proposed condition scores at the end of construction. Anticipated to become intermittent with upstream pond removals / channel restoration as well as vegetation management, considering watershed size and reference reaches. Channel, in-stream, and hydrologic condition will increase (be reestablished) with dam removal to restore channel processes.		Stream ID/Name: PS-2 SAR No.: 4 Additional Notes: Proposed condition scores at the end of monitoring.		Stream ID/Name: PS-2 SAR No.: 4 Additional Notes: Proposed condition scores target at maturity. Scores will improve for riparian buffer with cattle removal and vegetation management to reduce brush and improve native community.					
Stream Width (Feet)		Stream Heig	ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: N/A		Avg. Bank	s: N/A		10	1	10	1	10	1
Avg. Waters Edge: N/A		Avg. Wate			-	-	-	-	-	-
Avg. OHWM: N/A		Avg. OHW	M: N/A		6	0.5	6	0.5	6	0.5
Scoring Table					Year/Option _ <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring	Year/Option <u>At Mat</u>	<u>turity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	0	Sum of metric scores / 15 x 25		4		4	23.3	4	23.3
Channel condition	Bank condition	0		0	4	20.0	5		5	
	Sediment deposition	0			4		5		5	
Riparian buffer condition	Riparian buffer (left bank)	0	Sum of bank scores / 10 x 25	0	2	10.0	3		4	
	Riparian buffer (right bank)	0			2		3	15.0	4	20.0
In-stream condition	Substrate composition	0	Sum of metric scores / 10 x 25		3		4		4	
	In-stream habitat	0		0	1	10.0	2	15.0	2	15.0
Hydrologic condition	Flow regime	0	Sum of metric scores / 8 x 25	0	1		2		2	12.5
	Channel flow status	0			1	6.3	2	12.5	2	
	Sum of core e	lement scores =	overall TXRAM stream score	0	1 <u> </u>	46] [66		71
Additional points for limited	habitats = overall TXRAM stream s									
L R Dominated by native trees greater than 24-inch diameter at breast height Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata			0	-	0	-	0	-	0	
	TXRAM stream score and additiona			0	-	46	-	66	-	71
Representative Site Photo		·								<u> </u>
			Stream is currently imp	pounded	mitigation plan. After cons of channel and planting	on of proposed activities in truction includes restoration vegetation with livestock usion.	See design and descriptio mitigation plan. After moni generation and growth o becoming intermittent	toring includes natural re- of vegetation, as well as	See design and description mitigation plan. At maturity for mitigation base	y includes target scores

Project/Site Name/No.: _	Turkey Peak Project Type:	☐ Fill/Impact ((☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: PS-3	SAR No.: 1	Stream ID/Name: PS-3	SAR No.: 1	Stream ID/Name: PS-3	SAR No.: 1
Stream ID/Name: MS-3 / PS	S-3 SAR No.: _1 S	ize (LF): <u>476</u>	Date: <u>2016</u> Evalu	ator(s): <u>RW, DT</u>	Additional Notes: Propo	· · · · · · · · · · · · · · · · · · ·	Additional Notes: Prop		Additional Notes: Propo	<u> </u>
Stream Type: Ephemeral	Ecoregion: _Cross Timbers_		Delineation Performed: ⊠ Pre	eviously Currently	the end of construction.		at the end of monitoring for bank condition after	. Score will improve cattle removal allows	target at maturity. Score riparian buffer with cattle	e removal and
8-Digit HUC: <u>12060201</u>	Watershed Condition (develor	oed, pasture, etc	c.): Pasture, Ponds Wate	rshed Size: 165 ac.			revegetation.		vegetation management	
Aerial Photo Date and Sour	ce: <u>2014 NAIP</u>	Site Photos: N	<u>/A</u> Rep	oresentative: X Yes No					improve native commun sediment deposition will	improve with removal
Stressor(s): N/A	Are normal clima	atic/hydrologic co	onditions present? ⊠ Yes □	No (If no, explain in Notes)					of cattle allowing revege	tation.
Notes: Proposed conditions	for SAR following activities described	d in mitigation pl	an and based on reference rea	ach conditions						
Stream Characteristics									1	
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 12		Avg. Bank	s: 3		12	3	12	3	12	3
Avg. Waters Edge:		Avg. Wate								
Avg. OHWM: 3		Avg. OHW	′M: 1		3	1	3	1	3	1
Scoring Table					Year/Option _ <u>End</u>	of Construction	Year/Option <u>En</u>	d of Monitoring	Year/Option <u>At Mat</u>	<u>turity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15	20.0	4	20.0	5	23.3	5	23.3
	Sediment deposition	4	x 25		4		5	_	5	
	Riparian buffer (left bank)	1	Compathank assume / 40		2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	1	Sum of bank scores / 10 x 25	5.0	2	10.0	3	15.0	1	20.0
	Substrate composition	3	0 (); (40		3		3		3	
In-stream condition	In-stream habitat	0	Sum of metric scores / 10 x 25	7.5		7.5	0	7.5	0	7.5
		_			0		1			
Hydrologic condition	Flow regime	0	Sum of metric scores / 8 x 25	0.0	0	0.0	0	0.0	0	0.0
	Channel flow status	0	X 25		0		0		0	
					1		1		1	
Additional paints for limited			overall TXRAM stream score	33	-	38	-	46	-	51
L R	habitats = overall TXRAM stream so	core x 0.025 for (each bank (right/left) ir:	0		0				
□ □ Dominated by native	e trees greater than 24-inch diameter mast (i.e., acorns and nuts) producing			0	-	0	-	0	-	0
	TXRAM stream score and additional	·		33	-	38	-	46	-	51
Representative Site Photo	ograph:							1		- 1
The second and the second seco	3.45									
		Exis	sting stream section (MS-3-1) facin	g downstream (south).	proposed activities in mitigation includes enhancement	AR data and description of ation plan. After construction of channel and planting vestock exclusion.	See TXRAM Reference Sometivities in monitoring includes natura of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference So of proposed activities in mi includes target scores fo referen	tigation plan. At maturity or mitigation based on
	A STATE OF THE STA									

Stream ID/Name: MS-3 / PS Stream Type: Ephemeral 8-Digit HUC: 12060201 Aerial Photo Date and Source Stressor(s): N/A	Watershed Condition (develop	ze (LF): _1,344 ed, pasture, etc Site Photos: N tic/hydrologic co	Date: 2016 Evaluation Performed: ☑ Preside Delineation Performed:	uator(s): _RW, DTeviously ☐ Currently rshed Size: 160 ac. presentative: ☒ Yes ☐ No No (If no, explain in Notes)	Stream ID/Name: PS-3 Additional Notes: Proposithe end of construction. Stream Width (Ft) 12		Stream ID/Name: PS-3 Additional Notes: Prop at the end of monitoring for bank condition after revegetation. Stream Width (Ft) 12	osed condition scores . Score will improve	Stream ID/Name: PS-3 Additional Notes: Proportian target at maturity. Score riparian buffer with cattle vegetation management improve native communisediment deposition will of cattle allowing revege	osed condition scores es will improve for e removal and to reduce brush and ty. Score for improve with remova
Avg. Waters Edge:		Avg. Wate								
Avg. OHWM: 3		Avg. OHW			3	1	3	1	3	1
Scoring Table		-			Year/Option _End o	of Construction_	Year/OptionEn	d of Monitoring	Year/Option <u>At Mat</u>	<u>urity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15	20.0	4	20.0	5	23.3	5	23.3
	Sediment deposition	4	x 25		4		5	=	5	
	Riparian buffer (left bank)	1	Sum of bank scores / 10		2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	1	x 25	5.0	2	10.0	3	15.0	4	20.0
	Substrate composition	3	Sum of metric scores / 10		3		3		3	
In-stream condition	In-stream habitat	0	x 25	7.5	0	7.5	0	7.5	0	7.5
	Flow regime	0	0		0		0		0	
Hydrologic condition	Channel flow status	0	Sum of metric scores / 8 x 25	0.0	0	0.0	0	0.0	0	0.0
	Sum of core ele	ment scores -	overall TXRAM stream score	33	_	38	1 -	46] [51
Additional points for limited	habitats = overall TXRAM stream sco					30	<u> </u>	40		31
L R Dominated by native	trees greater than 24-inch diameter a	at breast height	,	0	-	0	-	0	-	0
Sum of overall	TXRAM stream score and additional p	points = total o	verall TXRAM stream score	33	-	38	-	46	-	51
Representative Site Photo	graph:	Exis	sting stream section (MS-3-2) facin	g downstream (south).	See TXRAM Reference SA proposed activities in mitigat includes enhancement o vegetation with live	ion plan. After construction f channel and planting	See TXRAM Reference SA proposed activities in monitoring includes natural of vege	mitigation plan. After re-generation and growth	See TXRAM Reference SA of proposed activities in mi includes target scores fo referer	tigation plan. At maturity or mitigation based on

Project/Site Name/No.: _	Furkey Peak Project Type: [☐ Fill/Impact ((☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: PS-4_	SAR No.: 1	Stream ID/Name: PS-4	SAR No.: 1	Stream ID/Name: PS-4	SAR No.: 1
Stream ID/Name: MS-4 / PS	<u>-4</u> SAR No.: <u>1</u> Siz	ze (LF): <u>852</u>	Date: <u>2016</u> Evalu	ator(s): <u>RW, DT</u>	Additional Notes: Propos	<u> </u>	Additional Notes: Prop	<u> </u>	Additional Notes: Propo	
Stream Type: Ephemeral	Ecoregion: Cross Timbers		_ Delineation Performed: 🛛 Pr	reviously	the end of construction. increase with upstream of	lam removal to restore	at the end of monitoring for bank condition after		target at maturity. Score riparian buffer with cattle	
8-Digit HUC: <u>12060201</u>	Watershed Condition (developed	ed, pasture, etc	c.): Pasture, Ponds Wate	rshed Size: 185 acres	hydrology of natural strea	am flows and pooling.	revegetation. Substrate		vegetation management	
Aerial Photo Date and Source	ce: <u>2014 NAIP</u>	Site Photos: N	<u>/A</u> Rep	resentative: 🛛 Yes 🗌 No			increase with upstream sediment transport simi		improve native communi sediment deposition will restoration of channel pr	improve with
Stressor(s): N/A	Are normal climat	tic/hydrologic c	onditions present? X Yes	No (If no, explain in Notes)					of cattle allowing revege	
Notes: Proposed conditions	for SAR following activities described	in mitigation pl	an and based on reference rea	ach conditions.						
Stream Characteristics										
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 10		Avg. Bank	s: 2		10	2	10	2	10	2
Avg. Waters Edge:		Avg. Wate	r:							
Avg. OHWM: 3		Avg. OHW	′M: 1		3	1	3	1	3	1
Scoring Table					Year/Option _ <u>End c</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring	Year/Option <u>At Mat</u>	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	3	Sum of metric scores / 15	15.0	4	18.3	5	23.3	5	23.3
	Sediment deposition	2	x 25		3		5		5	-
	·						3		4	+
Riparian buffer condition	Riparian buffer (left bank)	1	Sum of bank scores / 10 x 25	5.0	2	10.0		15.0	4	20.0
	Riparian buffer (right bank)	1	X 25		2		3		4	
In-stream condition	Substrate composition	2	Sum of metric scores / 10	5.1	2	5.0	3	7.5	3	7.5
in stream condition	In-stream habitat	0	x 25	0.1	0	0.0	0	7.5	0	7.5
	Flow regime	0	Sum of metric scores / 8		1		1		1	
Hydrologic condition	Channel flow status	0	x 25	0.0	0	3.1	0	3.1	0	3.1
	Sum of core ele	ement scores =	overall TXRAM stream score	25	_	36	_	49	_	54
Additional points for limited	habitats = overall TXRAM stream sco									
L R			,	0	_	0	_	0	_	0
Dominated by native	trees greater than 24-inch diameter a nast (i.e., acorns and nuts) producing	at breast height	in the tree strate	Ŭ						Ŭ
-	TXRAM stream score and additional p			25	-	36	-	49	-	54
Representative Site Photo	granh:									
			eam segment (MS-4-1) facing upst I upstream of an impoundment with		See TXRAM Reference SA proposed activities in mitigat includes enhancement o vegetation with live	ion plan. After construction of channel and planting	See TXRAM Reference Some proposed activities in monitoring includes natura of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference SA of proposed activities in mi includes target scores fo referer	tigation plan. At maturity or mitigation based on

Project/Site Name/No.: _	Turkey Peak Project Type:	☐ Fill/Impact	(☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: PS-4	L SAR No.: <u>2</u>	Stream ID/Name: PS-4	SAR No.: <u>2</u>	Stream ID/Name: PS-4_	SAR No.: <u>2</u>
Stream ID/Name: MS-4 / PS	<u>S-4</u> SAR No.: <u>2</u> Si	ze (LF): <u>1,290</u>	Date: <u>2016</u> Eval	uator(s): <u>RW, DT</u>		osed condition scores at	Additional Notes: Prop	osed condition scores	Additional Notes: Propo	sed condition scores
Stream Type: Ephemeral	Ecoregion: _Cross Timbers_		Delineation Performed: ⊠ Pre	eviously	the end of construction		at the end of monitoring for bank condition after	. Score will improve cattle removal allows	target at maturity. Score riparian buffer with cattle	
8-Digit HUC: <u>12060201</u>	Watershed Condition (develop	ed, pasture, etc	c.): Pasture, Ponds Wate	rshed Size: 130 ac.			revegetation.		vegetation management	
Aerial Photo Date and Sour	ce: 2014 NAIP	Site Photos: N	/ARep	oresentative: X Yes No					improve native communi sediment deposition will	
			onditions present? ⊠ Yes □						of cattle allowing reveger	tation.
Notes: Proposed conditions	for SAR following activities described	I in mitigation pl	an and based on reference rea	ach conditions.						
Stream Characteristics	<u> </u>									
Stream Width (Feet)		Stream Heid	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 12		Avg. Bank			12	3	12	3	12	3
Avg. Waters Edge:		Avg. Wate	r:							
Avg. OHWM: 3		Avg. OHW	′M: 1		3	1	3	1	3	1
Scoring Table					Year/Option_End	of Construction	Year/Option <u>En</u>	d of Monitoring_	Year/Option _At Mat	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15	20.0	4	20.0	5	23.3	5	23.3
	Sediment deposition	4	_ x 25		4		5	-	5	
	Riparian buffer (left bank)	1	Sum of bank scores / 10		2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	1	x 25	5.0	2	10.0	3	15.0	4	20.0
1 / 120	Substrate composition	3	Sum of metric scores / 10	7.5	3	7.5	3	7.5	3	7.5
In-stream condition	In-stream habitat	0	x 25	7.5	0	7.5	0	7.5	0	7.5
I bushesia association	Flow regime	0	Sum of metric scores / 8	0.0	0	0.0	0	0.0	0	0.0
Hydrologic condition	Channel flow status	0	x 25	0.0	0	0.0	0	0.0	0	0.0
			overall TXRAM stream score	33	-	38	-	46	-	51
Additional points for limited L R	d habitats = overall TXRAM stream sc	ore x 0.025 for	each bank (right/left) if:							
☐ ☐ Dominated by native	e trees greater than 24-inch diameter a	at breast height native species	in the tree strata	0	-	0	-	0	-	0
Sum of overall	TXRAM stream score and additional p	points = total o	verall TXRAM stream score	33	-	38	-	46	-	51
Representative Site Photo	ogranh.									
		Existin	ng stream section (MS-4-2) facing	downstream (southwest).	proposed activities in mitig includes enhancement	SAR data and description of ation plan. After construction tof channel and planting ivestock exclusion.	See TXRAM Reference SA proposed activities in monitoring includes natura of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference SA of proposed activities in mit includes target scores fo referen	igation plan. At maturity r mitigation based on

	Turkey Peak Project Type:			_	Stream ID/Name: PS-5	· <u> </u>	Stream ID/Name: PS-5		Stream ID/Name: PS-5	
Stream Type: Ephemeral			Delineation Performed: 🛛 Pi		Additional Notes: Proposithe end of construction.	sed condition scores at	Additional Notes: Prop at the end of monitoring bank condition after cati	. Score will improve	Additional Notes: Properture at maturity. Score riparian buffer with cattle	es will improve for
8-Digit HUC: <u>12060201</u>	Watershed Condition (develop	ed, pasture, etc	c.): Pasture, Ponds Wate	ershed Size: 40 ac			revegetation		vegetation management	
Aerial Photo Date and Sour	ce: <u>2014 NAIP</u>	Site Photos: N	/ARep	oresentative: ⊠ Yes ☐ No					improve native commun	ny.
Stressor(s): N/A	Are normal clima	tic/hydrologic c	onditions present? ⊠ Yes □	No (If no, explain in Notes)						
Notes: Proposed conditions	for SAR following activities described	l in mitigation pl	an and based on reference rea	ach conditions.						
Stream Characteristics							I			
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft,
Avg. Bank to Bank: 12		Avg. Bank	s: 4		12	4	12	4	12	4
Avg. Waters Edge:		Avg. Wate								
Avg. OHWM: 3		Avg. OHW	/M: 1		3	1	3	1	3	1
Scoring Table					Year/Option _ <u>End (</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring	Year/Option _ <u>At Mat</u>	turity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	21.7	4	21.7	5	23.3	5	23.3
	Sediment deposition	5	_		5		5	1	5	
5	Riparian buffer (left bank)	1	Sum of bank scores / 10		2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	1	x 25	5.0	2	10.0	3	15.0	4	20.0
	Substrate composition	5	Sum of metric scores / 10		5		5		5	
In-stream condition	In-stream habitat	0	x 25	12.5	0	12.5	0	12.5	0	12.5
	Flow regime	0	Sum of metric scores / 8		0		0		0	
Hydrologic condition	Channel flow status	0	x 25	0.0	0	0.0	0	0.0	0	0.0
									J. L.	
	Sum of core ele	ement scores =	overall TXRAM stream score	39	-	44	-	51	-	56
	habitats = overall TXRAM stream sc	ore x 0.025 for	each bank (right/left) if:							
L R	trees greater than 24-inch diameter a	at hreast height		0	-	0	-	0	-	0
	mast (i.e., acorns and nuts) producing									
Sum of overall	TXRAM stream score and additional p	points = total o	verall TXRAM stream score	39	-	44	-	51	-	56
Representative Site Photo	graph:									
		Existing	segment of SAR MS-5-1 facing up downstream end. Signs of	stream (northwest) from the f cattle use.	See TXRAM Reference SA proposed activities in mitigat includes enhancement o vegetation with live	ion plan. After construction of channel and planting	See TXRAM Reference SA proposed activities in monitoring includes natural of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference So of proposed activities in mi includes target scores fo referen	tigation plan. At maturity or mitigation based on

Stream ID/Name: MS-5 / PS Stream Type: Ephemeral 8-Digit HUC: 12060201 Aerial Photo Date and Sour Stressor(s): N/A	Watershed Condition (develop	ze (LF): _967	Date: 2016 Evalue Delineation Performed: ⊠ Precent Pasture, Ponds Water /A Reproductions present? ⊠ Yes □	eviously Currently ershed Size: 40 ac. presentative: Yes No No (If no, explain in Notes)	Stream ID/Name: PS-5 Additional Notes: Prop the end of construction.	osed condition scores at	Stream ID/Name: PS-5 Additional Notes: Propat the end of monitoring bank condition after cat revegetation.	osed condition scores J. Score will improve	Stream ID/Name: PS-5 Additional Notes: Proporting target at maturity. Score riparian buffer with cattle vegetation management improve native communisediment deposition will of cattle allowing revege	esed condition scores es will improve for e removal and to reduce brush and ty. Score for improve with removal
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 12		Avg. Bank			12	3	12	3	12	3
Avg. Waters Edge:		Avg. Wate								
Avg. OHWM: 3		Avg. OHW			3	1	3	1	3	1
						1		1		1
Scoring Table					Year/Option _ <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring_	Year/Option _At Mat	<u>urity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15	20.0	4	20.0	5	23.3	5	23.3
	Sediment deposition	4	_ x 25		4		5	_	5	
	Riparian buffer (left bank)	1	Sum of bank scores / 10		2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	1	x 25	5.0	2	10.0	3	15.0	4	20.0
	Substrate composition	3	Sum of metric scores / 10		3		3		3	
In-stream condition	In-stream habitat	0	x 25	7.5	0	7.5	0	7.5	0	7.5
	Flow regime	0	0		0		0		0	
Hydrologic condition	Channel flow status	0	Sum of metric scores / 8 x 25	0.0	0	0.0	0	0.0	0	0.0
	Chamie new status									
	Sum of core ele	ement scores -	overall TXRAM stream score	33	_	38		46] [51
Additional points for limited	d habitats = overall TXRAM stream so			00			<u> </u>	10		01
L R Dominated by native	e trees greater than 24-inch diameter mast (i.e., acorns and nuts) producing	at breast height		0		0	-	0	-	0
Sum of overall	TXRAM stream score and additional	points = total o	verall TXRAM stream score	33	-	38	-	46	-	51
Representative Site Photo	ograph:							•		
		Existing strea	m section (MS-5-2) facing downsti used by livestock downslope of	ream (southwest). Within pasture rock outcropping.	proposed activities in mitigation	AR data and description of ation plan. After construction of channel and planting vestock exclusion.	See TXRAM Reference S, proposed activities in monitoring includes natura of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference SA of proposed activities in mi includes target scores fo referer	tigation plan. At maturity or mitigation based on

Project/Site Name/No.: _	Turkey Peak Project Type: [Fill/Impact	(☐ Linear ☐ Non-linear) 🏻	Mitigation/Conservation	Stream ID/Name: PS-6	_ SAR No.: 1	Stream ID/Name: PS-6	SAR No.: 1	Stream ID/Name: PS-6	SAR No.: 1
Stream ID/Name: MS-6 / PS	<u>-6</u> SAR No.: <u>1</u> Siz	ze (LF): <u>2,600</u>	Date: <u>2016</u> Eva	luator(s): <u>RW, DT</u>	Additional Notes: Propo	sed condition scores at	Additional Notes: Prop		Additional Notes: Propo	
Stream Type: Ephemeral	Ecoregion: Cross Timbe	<u>rs</u>	Delineation Performed: 🛛	Previously Currently	the end of construction.		at the end of monitoring for bank condition after	. Score will improve cattle removal allows	target at maturity. Score riparian buffer with cattle	removal and
8-Digit HUC: <u>12060201</u>	Watershed Condition (develope	ed, pasture, etc	c.): Pasture, Ponds Wate	rshed Size: 120 ac.			revegetation.		vegetation management improve native communi	
Aerial Photo Date and Source			_	resentative: X Yes No					sediment deposition will of cattle allowing revege	improve with remova
Stressor(s): N/A	Are normal climat	ic/hydrologic c	onditions present? 🛭 Yes 🔲 I	No (If no, explain in Notes)					or cautie allowing revege	tation.
Notes: Proposed conditions	for SAR following activities described	in mitigation pl	an and based on reference rea	ch conditions.						
Stream Characteristics										
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft,
Avg. Bank to Bank: 12		Avg. Bank	s: 5		12	5	12	5	12	5
Avg. Waters Edge:		Avg. Wate	r:							
Avg. OHWM: 3		Avg. OHW	/M: 2		3	2	3	2	3	2
Scoring Table					Year/Option _End	of Construction_	Year/Option _ En	d of Monitoring	Year/Option _ <u>At Mat</u>	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		3		3	
Channel condition	Bank condition	3	Sum of metric scores / 15	16.7	4	18.3	4	20.0	4	20.0
	Sediment deposition	4	x 25	. •	4		5	-	5	
	· ·	•			<u> </u>					
Riparian buffer condition	Riparian buffer (left bank)	1.5	Sum of bank scores / 10	7.5	2.5	12.5	3.2	16.0	4	20.0
	Riparian buffer (right bank)	1.5	x 25		2.5		3.2		4	
In-stream condition	Substrate composition	3	Sum of metric scores / 10	7.5	3	7.5	3	7.5	3	7.5
in-stream condition	In-stream habitat	0	x 25	7.5	0	7.5	0	7.5	0	7.5
	Flow regime	0	Sum of metric scores / 8		0		0		0	
Hydrologic condition	Channel flow status	0	x 25	0.0	0	0.0	0	0.0	0	0.0
	Sum of core ele	ment scores =	overall TXRAM stream score	32	-	38	_	44		48
Additional points for limited	habitats = overall TXRAM stream sco			<u> </u>		00		11		10
L R			,	0		0		0		0
Dominated by native	trees greater than 24-inch diameter a	t breast height	in the store store.	U	-	0				
	mast (i.e., acorns and nuts) producing TXRAM stream score and additional p			20		20		4.4		40
Sum of overall	TARAM Stream Score and additional p	oomis = total o	verali TARAM Stream Score	32	-	38	-	44	-	48
Representative Site Photo	graph:									
		Existing st meanders ar	ream section (MS-6-1) facing dowr nd parallels Palo Pinto Creek in old	nstream (southeast). Channel floodplain. Signs of cattle use.	See TXRAM Reference SA proposed activities in mitigat includes enhancement o vegetation with liv	ion plan. After construction of channel and planting	See TXRAM Reference SA proposed activities in monitoring includes natural of vege	mitigation plan. After re-generation and growth	See TXRAM Reference SA of proposed activities in mit includes target scores fo referer	tigation plan. At maturity or mitigation based on

.,			OSED WITTOATTOWN A							
Project/Site Name/No.:	Furkey Peak Project Type:	Fill/Impact (☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: PS-6	SAR No.: 2	Stream ID/Name: PS-6	SAR No.: 2	Stream ID/Name: PS-6	SAR No.: 2
Stream ID/Name: MS-6 / PS	<u>-6</u> SAR No.: <u>2</u> S	ize (LF): <u>735</u>	Date: <u>2016</u> Evalu	ator(s): <u>RW, DT</u>	Additional Notes: Propo	_	Additional Notes: Prop	-	Additional Notes: Propo	
Stream Type: Ephemeral	Ecoregion: _Cross Timbers	3	_ Delineation Performed: 🛛 Pr	reviously	the end of construction.		at the end of monitoring for bank condition after	. Score will improve cattle removal allows	target at maturity. Score riparian buffer with cattle	removal and
8-Digit HUC: <u>12060201</u>	Watershed Condition (develop	oed, pasture, etc	:.): <u>Pasture, Ponds</u> Wate	rshed Size: 100 ac.			revegetation.		vegetation management improve native communi	
Aerial Photo Date and Source	ce: 2014 NAIP	Site Photos: N	<u>/A</u> Rep	resentative: X Yes No					Improve native communi	ty.
Stressor(s): N/A	Are normal clima	atic/hydrologic co	onditions present? 🛛 Yes 🔲	No (If no, explain in Notes)						
Notes: Proposed conditions	for SAR following activities described	d in mitigation pl	an and based on reference rea	ach conditions.						
Stream Characteristics							<u> </u>		<u> </u>	
Stream Width (Feet)		Stream Heig	nht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 12		Avg. Bank	s: 4		12	4	12	4	12	4
Avg. Waters Edge:		Avg. Wate								
Avg. OHWM: 3		Avg. OHW	M: 1		3	1	3	1	3	1
Scoring Table					Year/Option _End	of Construction_	Year/Option <u>En</u>	d of Monitoring	Year/Option _At Mat	<u>urity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	21.7	4	21.7	5	23.3	5	23.3
	Sediment deposition	5	X 25		5	1	5		5	
	Riparian buffer (left bank)	1	Sum of bank scores / 10		2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	1	x 25	5.0	2	10.0	3	15.0	4	20.0
	Substrate composition	5	Sum of metric scores / 10		5		5		5	
In-stream condition	In-stream habitat	0	x 25	12.5	0	12.5	0	12.5	0	12.5
	Flow regime	0	Sum of metric scores / 8		0		0		0	
Hydrologic condition	Channel flow status	0	x 25	0.0	0	0.0	0	0.0	0	0.0
								1	J L	
	Sum of core el	ement scores =	overall TXRAM stream score	39	-	44	-	51	-	56
•	habitats = overall TXRAM stream so	ore x 0.025 for	each bank (right/left) if:							
L R	trees greater than 24-inch diameter	at breast height		0	-	0	-	0	-	0
☐ ☐ Dominated by hard r	nast (i.e., acorns and nuts) producing	g native species	in the tree strata							
Sum of overall	TXRAM stream score and additional	points = total o	verall TXRAM stream score	39	-	44	-	51	-	56
Representative Site Photo	graph:									
		Existing seg	gment of creek (MS-6-2) facing dov cattle use. Area downstream of r		proposed activities in mitigation	AR data and description of ation plan. After construction of channel and planting vestock exclusion.	See TXRAM Reference SA proposed activities in monitoring includes natura of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference SA of proposed activities in mit includes target scores fo referen	igation plan. At maturity r mitigation based on

Stream ID/Name: MS-6 / PS Stream Type: Ephemeral 8-Digit HUC: _12060201 Aerial Photo Date and Sour Stressor(s): N/A Notes: Proposed conditions		Date: 2016 Evalu Delineation Performed: ⊠ Poc.): Pasture, Ponds Wate /A Reponditions present? ⊠ Yes □	reviously Currently ershed Size: 100 acres. presentative: Yes No No (If no, explain in Notes)	Stream ID/Name: PS-6 Additional Notes: Propthe end of construction.	osed condition scores at	Stream ID/Name: PS-6 Additional Notes: Propat the end of monitoring	osed condition scores	Stream ID/Name: PS-6 Additional Notes: Proportian target at maturity. Score riparian buffer with cattle vegetation management improve native commun sediment deposition will of cattle allowing revege	esed condition scores es will improve for e removal and to reduce brush and ity. Score for improve with removal	
Stream Characteristics Stream Width (Feet)		Ctroom Hois	sht/Donth (Foot)		Ctroom Width (Ft)	Ctroom Hoight (Ft)	Stroom Width (Ft)	Ctroom Hoight (Ft)	Ctroom Width (Ft)	Ctroom Hoight (Ft)
Avg. Bank to Bank: 10		Avg. Bank	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Waters Edge:		Avg. Wate			10					
Avg. OHWM: 2		Avg. Wate			2	0.5	2	0.5	2	0.5
7.vg. 011vvivi. 2		7.vg. 011v	101.0.0			0.0		0.0		0.0
Scoring Table					Year/Option _End	of Construction	Year/Option _ En	d of Monitoring	Year/Option _At Mat	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	5			5		5		5	
Channel condition	Bank condition	5	Sum of metric scores / 15	23.3	5	23.3	5	25.0	5	25.0
	Sediment deposition	4	_ x 25		4		5		5	1
	Riparian buffer (left bank)	1	Come of bonk occurs / 40		2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	1	Sum of bank scores / 10 x 25	5.0	2	10.0	3	15.0	4	20.0
	Substrate composition	2			2		2		2	
In-stream condition	•	+	Sum of metric scores / 10 x 25	5.0		5.0		5.0		5.0
	In-stream habitat	0	720		0		0		0	
Hydrologic condition	Flow regime	0	Sum of metric scores / 8	0.0	0	0.0	0	0.0	0	0.0
, ,	Channel flow status	0	x 25		0		0		0	
					_		_	T		
			overall TXRAM stream score	33	-	38	-	45	-	50
	d habitats = overall TXRAM stream so	core x 0.025 for	each bank (right/left) if:							
L R ☐ Dominated by native	e trees greater than 24-inch diameter	at breast height		0	-	0	-	0	-	0
	mast (i.e., acorns and nuts) producing									
Sum of overall	TXRAM stream score and additional	points = total o	verall TXRAM stream score	33	-	38	-	45	-	50
Representative Site Photo	ograph:									
		Existing str activity. Area	eam segment (MS-6-3) facing dow is downslope of several swales in	rnstream (west). Signs of cattle a pasture with rock outcropping.	proposed activities in mitigation includes enhancement	AR data and description of ation plan. After construction of channel and planting vestock exclusion.		mitigation plan. After I re-generation and growth	See TXRAM Reference So of proposed activities in mi includes target scores fo referen	tigation plan. At maturity or mitigation based on

TANAM STREAM THAE	SCORING SHEET TOR EVALUA	ATING T KOI	COLD WITHOATION WITH	31 ACTIVITIES						
Project/Site Name/No.: _	Turkey Peak Project Type: [☐ Fill/Impact	(☐ Linear ☐ Non-linear) 🏻	Mitigation/Conservation	Stream ID/Name: PS-7_	SAR No.: <u>1</u>	Stream ID/Name: PS-7	SAR No.: <u>1</u>	Stream ID/Name: PS-7	SAR No.: <u>1</u>
Stream ID/Name: MS-7 / PS	S-7 SAR No.: _1 Siz	e (LF): <u>1,812</u>	2 Date: <u>2016</u> Eva	lluator(s): <u>RW, DT</u>	Additional Notes: Propos	sed condition scores at	Additional Notes: Prop		Additional Notes: Propo	
Stream Type: Ephemeral	Ecoregion: _Cross Timber	rs	Delineation Performed: 🛛	Previously Currently	the end of construction.		at the end of monitoring deposition will improve		target at maturity. Score riparian buffer with cattle	es will improve for removal and
8-Digit HUC: <u>12060201</u>	Watershed Condition (develope	ed, pasture, etc	c.): Pasture, Ponds Wate	rshed Size: 45 ac.			allowing revegetation.		vegetation management	to reduce brush and
Aerial Photo Date and Sour	ce: 2014 NAIP	Site Photos: N	I/A Rep	oresentative: X Yes No					improve native communi	ty.
	Are normal climati									
	for SAR following activities described	in mitigation p	lan and based on reference rea	ach conditions.						
Stream Characteristics	<u> </u>									
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 12		Avg. Bank			12	5	12	5	12	5
Avg. Waters Edge:		Avg. Wate	er:							
Avg. OHWM: 3		Avg. OHW	/M: 1		3	1	3	1	3	1
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring_	Year/Option _ <u>At Mat</u>	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		3		3	
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	18.3	5	20.0	5	21.7	5	21.7
	Sediment deposition	4	^ ^ 25		4		5		5	
5	Riparian buffer (left bank)	1.4	Sum of bank scores / 10		3.2		4		5	
Riparian buffer condition	Riparian buffer (right bank)	1.4	x 25	7.0	3.2	16.0	4	20.0	5	25.0
	Substrate composition	3	Sum of metric scores / 10		3		3		3	
In-stream condition	In-stream habitat	0	x 25	7.5	0	7.5	0	7.5	0	7.5
11 1 1 2 2 22	Flow regime	0	Sum of metric scores / 8	2.2	0	0.0	0	0.0	0	0.0
Hydrologic condition	Channel flow status	0	x 25	0.0	0	0.0	0	0.0	0	0.0
			overall TXRAM stream score	33	-	44	-	49	-	54
Additional points for limited L R	habitats = overall TXRAM stream sco	re x 0.025 for	each bank (right/left) if:							
☐ ☐ Dominated by native	trees greater than 24-inch diameter a	t breast height	t .	0	-	0	-	0	-	0
	mast (i.e., acorns and nuts) producing TXRAM stream score and additional p			33	-	44	-	49	-	54
	·		<u> </u>			<u> </u>		1		
Representative Site Photo	grapn:						<u> </u>			
		Existing secti road lea	ion of stream (MS-7-1) facing upstra Iding to confluence with Palo Pinto	eam (north).Downslope of gravel Creek. Signs of cattle use.	See TXRAM Reference SA proposed activities in mitigat includes enhancement o vegetation with liv	ion plan. After construction of channel and planting	See TXRAM Reference SA proposed activities in monitoring includes natural of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference SA of proposed activities in min includes target scores fo referer	tigation plan. At maturity or mitigation based on

.,,										
Project/Site Name/No.: _	Turkey Peak Project Type:	Fill/Impact (☐ Linear ☐ Non-linear) 🗵	Mitigation/Conservation	Stream ID/Name: PS-8	SAR No.: 1	Stream ID/Name: PS-8	B SAR No.: 1	Stream ID/Name: PS-8	SAR No.: 1
Stream ID/Name: MS-8 / PS	S-8 SAR No.: <u>1</u> S	ize (LF): <u>730</u>	Date: <u>2016</u> Evalua	tor(s): <u>RW, DT</u>	Additional Notes: Propo		Additional Notes: Prop		Additional Notes: Propo	
Stream Type: Ephemeral	Ecoregion: _Cross Timbers_		Delineation Performed: Pre	eviously Currently	the end of construction.		at the end of monitoring for bank condition after	g. Score will improve cattle removal allows	target at maturity. Score riparian buffer with cattle	
8-Digit HUC: _12060201	Watershed Condition (develor	oed, pasture, etc	:.): Pasture, Ponds Wate	rshed Size: 30 ac			revegetation.		vegetation management	
Aerial Photo Date and Source	ce: <u>2014 NAIP</u>	Site Photos: N	<u>/A</u> Rep	resentative: X Yes No					improve native commun sediment deposition will	improve with removal
Stressor(s): N/A	Are normal clima	atic/hydrologic co	onditions present? ⊠ Yes □	No (If no, explain in Notes)					of cattle allowing revege	tation.
Notes: Proposed conditions	for SAR following activities described	d in mitigation pl	an and based on reference rea	ach conditions.						
Stream Characteristics										
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 12		Avg. Bank			12	3	12	3	12	3
Avg. Waters Edge:		Avg. Wate								
Avg. OHWM: 3		Avg. OHW	'M: 1		3	1	3	1	3	1
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option _ <u>En</u>	d of Monitoring	Year/Option <u>At Mat</u>	<u>turity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15	20.0	4	20.0	5	23.3	5	23.3
	Sediment deposition	4	x 25		4		5		5	
	Riparian buffer (left bank)	1	Sum of bank scores / 10		2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	1	x 25	5.0	2	10.0	3	15.0	4	20.0
	Substrate composition	3	Sum of metric scores / 10		3		3		3	
In-stream condition	In-stream habitat	0	x 25	7.5	0	7.5	0	7.5	0	7.5
	Flow regime	0	Sum of metric scores / 8		0		0		0	
Hydrologic condition	Channel flow status	0	x 25	0.0	0	0.0	0	0.0	0	0.0
	Sum of core el	ement scores =	overall TXRAM stream score	33	-	38	-	46	-	51
	habitats = overall TXRAM stream so	ore x 0.025 for	each bank (right/left) if:							
L R	trees greater than 24-inch diameter	at breast beight		0	-	0	-	0	-	0
	mast (i.e., acorns and nuts) producing									
Sum of overall	TXRAM stream score and additional	points = total o	verall TXRAM stream score	33	-	38	-	46	-	51
Representative Site Photo	aranh:									
		Exis	sting stream section (MS-8-1) facin	g downstream (south).	proposed activities in mitigation	AR data and description of ation plan. After construction of channel and planting vestock exclusion.	proposed activities in monitoring includes natura	AR data and description of mitigation plan. After al re-generation and growth etation.	See TXRAM Reference So of proposed activities in mi includes target scores fo referen	tigation plan. At maturity or mitigation based on

Stream ID/Name: MS-9 / PS Stream Type: Intermittent 8-Digit HUC: _12060201 Aerial Photo Date and Sour	Ecoregion: <u>Cross Timb</u> Watershed Condition (develop	oers ped, pasture, etc Site Photos: <u>N</u>	Date: 2016 Evalu Delineation Performed: c.): Pasture, Ponds Wate	ator(s): _RW, DT	Stream ID/Name: PS-9 Additional Notes: Properthe end of construction.	osed condition scores at	Stream ID/Name: PS-9 Additional Notes: Propat the end of monitoring	osed condition scores	Stream ID/Name: PS-9 Additional Notes: Proportarget at maturity. Score riparian buffer with cattle vegetation management improve native communication.	osed condition scores as will improve for a removal and to reduce brush and
	for SAR following activities described		•							
Stream Characteristics	Tor Ortic Tollowing activities accombes	a in militigation pi	an and based on reference rec	deri cortaliono.						
Stream Width (Feet)		Stream Heio	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 20		Avg. Bank	· · · · ·		20	5	20	5	20	5
Avg. Waters Edge: 6		Avg. Wate			6	0.5	6	0.5	6	0.5
Avg. OHWM: 10		Avg. OHW			10	2	10	2	10	2
7.1.g. 0.111111111			···· =			<u> - </u>				<u> </u>
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring_	Year/Option <u>At Mat</u>	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		3		3	
Channel condition	Bank condition	5	Sum of metric scores / 15	21.7	5	20.0	5	21.7	5	21.7
	Sediment deposition	5	x 25		4		5	_	5	7
	Riparian buffer (left bank)	2	Compathank assume /40		3		4		5	
Riparian buffer condition	Riparian buffer (right bank)	2	Sum of bank scores / 10 x 25	10.0	3	15.0	3.9	19.8	4.9	24.8
					-		-			
In-stream condition	Substrate composition	5	Sum of metric scores / 10 x 25	17.5	5	17.5	5	17.5	5	17.5
	In-stream habitat	2	X 25		2		2		2	
Hydrologic condition	Flow regime	2	Sum of metric scores / 8	12.5	2	12.5	2	12.5	2	12.5
, a. e. e g. e e e	Channel flow status	2	x 25	.=.0	2		2	1 - 10	2	
			overall TXRAM stream score	62	-	65	-	72	-	77
L R	d habitats = overall TXRAM stream so e trees greater than 24-inch diameter mast (i.e., acorns and nuts) producing	at breast height		0	-	0		0		0
•	TXRAM stream score and additional	·		62		65	_	72		77
Representative Site Photo		pointe = total o		02				12		, , , ,
		Existing downstream	g stream segment (MS-9-1) facing of property boundary to confluenc pool present in area frequente	e with Palo Pinto Creek. Small	proposed activities in mitigation includes enhancement	AR data and description of ation plan. After construction of channel and planting vestock exclusion.	See TXRAM Reference SA proposed activities in monitoring includes natura of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference SA of proposed activities in mi includes target scores fo referer	tigation plan. At maturity or mitigation based on

	Turkey Peak Project Type:			Mitigation/Conservation	Stream ID/Name: PS-1	<u>0</u> _ SAR No.: <u>1</u>	Stream ID/Name: PS-1	<u>0</u> _ SAR No.: <u>1</u>	Stream ID/Name: PS-10	SAR No.: <u>1</u>
Stream ID/Name: Stream re Stream Type: Ephemeral	estoration / PS-10 SAR No.: _1 Size Ecoregion: <u>Cross Timb</u>			tor(s): <u>RW, DT</u> Previously	Additional Notes: Proporthe end of construction. and hydrologic condition	Channel, in-stream,	Additional Notes: Prop at the end of monitoring		Additional Notes: Proportarget at maturity. Score riparian buffer with cattle	s will improve for
8-Digit HUC: _12060201	Watershed Condition (develo	ped, pasture, etc	:.): Pasture, Pond Water	shed Size: 198 ac	established) with dam re	emoval to restore			vegetation management	to reduce brush and
Aerial Photo Date and Sour				oresentative: X Yes No	channel processes. Flo	w regime score will val to restore hydrology			improve native communi	ty.
			onditions present? 🛛 Yes 🗌		of natural stream flows					
Stressor(s): N/A			·							
Notes: <u>Proposed conditions</u>	for SAR following activities describe	d in mitigation pl	an and based on reference rea	ach conditions.						
Stream Characteristics						T =	1 1 2	T	1 2	T
Stream Width (Feet)			ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: N/A Avg. Waters Edge: N/A		Avg. Bank Avg. Wate			<u> </u>	1 -	1 -	1		1 -
Avg. OHWM: N/A		Avg. Wate			3	0.5	3	0.5	3	0.5
Scoring Table] 3 -			Year/Option _End		Year/Option_En		Year/Option _At Mat	
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	0			4		4		4	
Channel condition	Bank condition	0	Sum of metric scores / 15 x 25	0	4	21.7	5	23.3	5	23.3
	Sediment deposition	0	X 25		5		5		5	
	Riparian buffer (left bank)	0	Sum of bank scores / 10	_	2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	0	x 25	0	2	10.0	3	15.0	4	20.0
	Substrate composition	0	Sum of metric scores / 10		3		4		4	
In-stream condition	In-stream habitat	0	x 25	0	0	7.5	0	10.0	0	10.0
	Flow regime	0	Sum of metric scores / 8		1		1		1	
Hydrologic condition	Channel flow status	0	x 25	0	0	3.1	0	3.1	0	3.1
	Sum of core e	lement scores =	overall TXRAM stream score	0	-	42	-	51	-	56
Additional points for limited	habitats = overall TXRAM stream s	core x 0.025 for	each bank (right/left) if:							
L R Dominated by native	e trees greater than 24-inch diameter mast (i.e., acorns and nuts) producin	r at breast height	in the tree strata	0	-	0	-	0	-	0
•	TXRAM stream score and additional	· .		0	-	42	-	51	-	56
Representative Site Photo				·		<u> </u>		1		1
	1.2/16/2015		Stream is currently non-existent du	ue to upslope pond.	of channel and planting	on of proposed activities in truction includes restoration vegetation with livestock usion.	See design and descriptio mitigation plan. After mon vegeta	itoring includes growth of	See design and description mitigation plan. At maturity for mitigation base	includes target scores

Stream Type: Intermittent 8-Digit HUC: _12060201 Aerial Photo Date and Source Stressor(s): N/A	SAR No.: _1 Size (LF) Ecoregion: _Cross Timb Watershed Condition (development) Detail 2014 NAIP	ers ped, pasture, etc Site Photos: 24 atic/hydrologic co	Delineation Performed: ⊠ a.): Pasture, Woods Wate 4-30 Reproductions present? ⊠ Yes □	S): _RW Currently Previously ☐ Currently Preshed Size: 22 sq. mi resentative: ☐ Yes ☐ No No (If no, explain in Notes)	Stream ID/Name: RS-1 Additional Notes: Proporthe end of construction.	<u> </u>	Stream ID/Name: RS-1 Additional Notes: Prop at the end of monitoring for bank condition after normalize and cattle rer revegetation.	osed condition scores Score will improve flooding affects	Stream ID/Name: RS-1 Additional Notes: Proporting target at maturity. Score riparian buffer with cattle vegetation management improve native communications.	osed condition scores es will improve for e removal and to reduce brush and
Stream Width (Feet)		Stream Hein	nht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Bank			50	8	50	8	50	α stream rieight (ri)
Avg. Waters Edge: 15		Avg. Wate			15	1	15	1	15	1
Avg. OHWM: 20		Avg. Wate			20	3	20	3	20	3
Avg. OHWW. 20		Avg. Onw	IVI. 3		20	3	20] 3	20] 3
Scoring Table					Year/Option _End	of Construction	Year/Option _ En	d of Monitoring_	Year/Option _At Mat	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15	21.7	4	21.7	5	23.3	5	23.3
	Sediment deposition	5	x 25		5		5		5	
	Riparian buffer (left bank)	2	0 (1 1 /40		4		4.5		4.5	
Riparian buffer condition	Riparian buffer (right bank)	1.8	Sum of bank scores / 10 x 25	9.5	3.8	19.5	4.3	22.0	4.5	22.5
					_		-		-	
In-stream condition	Substrate composition	5	Sum of metric scores / 10 x 25	22.5	5	22.5	5	22.5	5	22.5
	In-stream habitat	4	X 25		4		4		4	
Hydrologic condition	Flow regime	2	Sum of metric scores / 8	15.6	2	15.6	2	15.6	2	15.6
, a. c. eg.c co a	Channel flow status	3	x 25		3		3		3	
	Sum of core ele	ement scores =	overall TXRAM stream score	69	-	79	-	83	-	84
L R ☐ Dominated by native	habitats = overall TXRAM stream so trees greater than 24-inch diameter hast (i.e., acorns and nuts) producing	at breast height	, ,	0	-	0		0	-	0
Sum of overall	TXRAM stream score and additional	points = total ov	verall TXRAM stream score	69	-	79	-	83	-	84
Representative Site Photo	graph:	Ex	isting SAR facing upstream near th	ne middle of the SAR.	proposed activities in mitigation	AR data and description of tion plan. After construction f vegetation with livestock sion.	See TXRAM Reference SA proposed activities in monitoring includes natura of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference SA of proposed activities in mi includes target scores fo referen	tigation plan. At maturity or mitigation based on

Version 1.0 – Final Draft TXRAM STREAM FINAL SCORING SHEET FOR EVALUATING PROPOSED MITIGATION/IMPACT ACTIVITIES

Project/Site Name/No.:	Turkey Peak Project Type:	☐ Fill/Impact (☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: RS-1	SAR No.: <u>2</u>	Stream ID/Name: RS-1	SAR No.: <u>2</u>	Stream ID/Name: RS-1	_ SAR No.: <u>2</u>
Stream ID/Name: RS-1 Stream Type: Intermittent	SAR No.: <u>2</u> Size (LF) Ecoregion: <u>Cross Timber</u>		Date: 2017 Evaluator(s	· —	Additional Notes: Proporthe end of construction.		Additional Notes: Propat the end of monitoring for bank condition after	. Score will improve	Additional Notes: Proportarget at maturity. Score riparian buffer with cattle	es will improve for
8-Digit HUC: <u>12060201</u>	Watershed Condition (develop	ed, pasture, etc	.): Pasture, Woods Wate	ershed Size: 22 sq. mi.			normalize and cattle rer revegetation.	noval allows	vegetation management improve native communi	
Aerial Photo Date and Source	ce: <u>2014 NAIP</u>	Site Photos: 31	1 <u>-37</u> Rep	resentative: X Yes No			revegetation.		Improve native communi	ity.
Stressor(s): N/A	Are normal clima	tic/hydrologic co	onditions present? ⊠ Yes □	No (If no, explain in Notes)						
Notes: Proposed conditions	for SAR following activities described	in mitigation pla	an and based on current refere	ence reach conditions.						
Stream Characteristics					L		_L		L	
Stream Width (Feet)		Stream Heig	nht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Banks	s: 8		50	8	50	8	50	8
Avg. Waters Edge: 15		Avg. Wate			15	1	15	1	15	1
Avg. OHWM: 20		Avg. OHW	M: 3		20	3	20	3	20	3
Scoring Table		T =			Year/Option _End	of Construction_	Year/Option _ En	d of Monitoring	Year/Option _At Mat	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	20.0	3	20.0	4	21.7	4	21.7
	Sediment deposition	5	, X25		5		5		5	7
D: 1 / // 199	Riparian buffer (left bank)	2	Sum of bank scores / 10		4	40.0	5	0.4.0	5	0.5.0
Riparian buffer condition	Riparian buffer (right bank)	1.7	x 25	9.3	3.7	19.3	4.7	24.3	5	25.0
	Substrate composition	5	Sum of metric scores / 10		5		5		5	
In-stream condition	In-stream habitat	5	x 25	25.0	5	25.0	5	25.0	5	25.0
	Flow regime	2	Sum of metric scores / 8		2		2		2	
Hydrologic condition	Channel flow status	3	x 25	15.6	3	15.6	3	15.6	3	15.6
									J L	
	Sum of core ele	ement scores =	overall TXRAM stream score	70	-	80	-	87	-	87
	habitats = overall TXRAM stream sc	ore x 0.025 for 6	each bank (right/left) if:							
L R Dominated by native	trees greater than 24-inch diameter a	at breast height native species	in the tree strata	0	-	0	-	0	-	0
Sum of overall	TXRAM stream score and additional p	points = total ov	verall TXRAM stream score	70	-	80	-	87	-	87
Representative Site Photo	graph:	T						1		
		Exis	ting SAR facing downstream near	the middle of the SAR.	proposed activities in mitigation includes enhancement o	AR data and description of ation plan. After construction f vegetation with livestock usion.	See TXRAM Reference S, proposed activities in monitoring includes natura of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference SA of proposed activities in mit includes target scores fo referen	tigation plan. At maturity or mitigation based on

.,, 0										
Project/Site Name/No.: _	Turkey Peak Project Type: [Fill/Impact	(□ Linear □ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: RS-1	SAR No.: 3	Stream ID/Name: RS-1	SAR No.: 3	Stream ID/Name: RS-1	SAR No.: 3
Stream ID/Name: RS-1	SAR No.: <u>3</u> Size (LF):	_ <u>914</u> Da	te: <u>2017</u> Evaluator(s):	_ <u>RW</u>	Additional Notes: Propo		Additional Notes: Prop	<u> </u>	Additional Notes: Prop	
Stream Type: Intermittent	Ecoregion: _Cross Timbe	ers	Delineation Performed: 🛛	Previously Currently	the end of construction.		at the end of monitoring for bank condition after	flooding affects	target at maturity. Score riparian buffer with cattle	e removal and
8-Digit HUC: <u>12060201</u>	Watershed Condition (developed	ed, pasture, etc	c.): Pasture, Woods Wate	ershed Size: 21 sq. mi.			normalize and cattle rer	noval allows	vegetation management	
Aerial Photo Date and Source	ce: <u>2014 NAIP</u>	Site Photos: 43	3-47 Repi	resentative: X Yes No			revegetation.		improve native commun	ıty.
Stressor(s): N/A	Are normal climat	ic/hydrologic c	onditions present? 🛛 Yes 🔲 I	No (If no, explain in Notes)						
Notes: Proposed conditions	for SAR following activities described	in mitigation pl	an and based on current refere	ence reach conditions.						
Stream Characteristics										
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft,
Avg. Bank to Bank: 50		Avg. Bank			50	8	50	8	50	8
Avg. Waters Edge: 15		Avg. Wate			15	1	15	1	15	1
Avg. OHWM: 20		Avg. OHW	/M: 3		20	3	20	3	20	3
Scoring Table		T	,		Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring	Year/Option <u>At Ma</u>	turity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		3		3	
Channel condition	Bank condition	4	Sum of metric scores / 15	20.0	4	20.0	5	21.7	5	21.7
	Sediment deposition	5	x 25		5	_	5	1	5	
	Riparian buffer (left bank)	1.9	0		3.9		4.9		5	
Riparian buffer condition	Riparian buffer (right bank)	2	Sum of bank scores / 10 x 25	9.8	2.7	16.5	3.3	20.5	3.3	20.8
	Substrate composition	5			5		5.5		5	
In-stream condition	In-stream habitat	5	Sum of metric scores / 10 x 25	25.0	5	25.0	5	25.0	5	25.0
	Flow regime				2		2		2	
Hydrologic condition	Channel flow status	2	Sum of metric scores / 8 x 25	15.6	3	15.6	3	15.6	3	15.6
	Channel flow status	3	X 20		3		3		3	
			II TVD AAA	70		77	1	00	1	1 00
Additional points for limited	habitats = overall TXRAM stream sco		overall TXRAM stream score	70	-	77	-	83	-	83
L R	Habitats = Overall TARAW Stream Sco	DIE X 0.025 IOI	each bank (nghi/left) ii.	0		0		0		
Dominated by native	trees greater than 24-inch diameter a	at breast height	in the tree etrets	Ü	-	0	-	0	-	0
	TXRAM stream score and additional p			70	-	77	-	83	-	83
Representative Site Photo	graph:							•		
		Exis	sting SAR facing downstream near	the middle of the SAR.	See TXRAM Reference SA proposed activities in mitiga includes enhancement of exclu	tion plan. After construction vegetation with livestock	See TXRAM Reference SA proposed activities in monitoring includes natura of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference S, of proposed activities in mi includes target scores fo referen	tigation plan. At maturity or mitigation based on

Project/Site Name/No.: _			☐ Linear ☐ Non-linear) ⊠	-	Stream ID/Name: RS-1		Stream ID/Name: RS-1		Stream ID/Name: RS-1	<u> </u>
Stream Type: Intermittent	SAR No.: _4 Size (LF) Ecoregion: _Cross Timb		te: <u>2017</u> Evaluator(s): Delineation Performed: 🛭		Additional Notes: Proporthe end of construction.		Additional Notes: Prop at the end of monitoring for bank condition after	. Score will improve flooding affects	Additional Notes: Proportarget at maturity. Score riparian buffer with cattle	es will improve for removal and
8-Digit HUC: <u>12060201</u>	Watershed Condition (develop	ed, pasture, etc	.): Pasture, Woods Wate	ershed Size: 21 sq. mi.			normalize and cattle rer revegetation.	noval allows	vegetation management improve native communi	
Aerial Photo Date and Sour	ce: <u>2014 NAIP</u>	Site Photos: 48	<u>8-50</u> Rep	resentative: X Yes \tag No						·y.
Stressor(s): N/A	Are normal clima	tic/hydrologic co	onditions present? ⊠ Yes □	No (If no, explain in Notes)						
Notes: Proposed conditions	for SAR following activities described	l in mitigation pla	an and based on current refere	ence reach conditions.						
Stream Characteristics										
Stream Width (Feet)			ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Bank			50	8	50	8	50	8
Avg. Waters Edge: 15 Avg. OHWM: 20		Avg. Wate Avg. OHW			15 20	3	15 20	3	15 20	3
Avg. Of Ivvivi. 20		Avg. Or ivv	IVI. 3		20	3	20] 3	20	3
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring_	Year/Option _At Mat	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	20.0	3	20.0	4	21.7	4	21.7
	Sediment deposition	5	, X25		5	1	5		5	
	Riparian buffer (left bank)	1.9	Sum of bank scores / 10		3.9		4.9		5	
Riparian buffer condition	Riparian buffer (right bank)	2	x 25	9.8	4	19.8	5	24.8	5	25.0
	Substrate composition	5	Sum of metric scores / 10		5		5		5	
In-stream condition	In-stream habitat	5	x 25	25.0	5	25.0	5	25.0	5	25.0
	Flow regime	2	Sum of metric scores / 8		2		2		2	
Hydrologic condition	Channel flow status	3	x 25	15.6	3	15.6	3	15.6	3	15.6
		-								
	Sum of core ele	ement scores =	overall TXRAM stream score	70	-	80	-	87	-	87
	habitats = overall TXRAM stream sc	ore x 0.025 for 6	each bank (right/left) if:							
L R	e trees greater than 24-inch diameter	at hreast height		0	-	0	-	0	-	0
Dominated by hard	mast (i.e., acorns and nuts) producing	native species	in the tree strata							
Sum of overall	TXRAM stream score and additional	points = total ov	verall TXRAM stream score	70	-	80	-	87	-	87
Representative Site Photo	graph:									
		Ex	isting SAR facing upstream near tl	he middle of the SAR.	proposed activities in mitigation includes enhancement of	AR data and description of tion plan. After construction f vegetation with livestock usion.	See TXRAM Reference Sometivities in monitoring includes natura of vege	mitigation plan. After re-generation and growth	of proposed activities in mit	igation plan. At maturity r mitigation based on

Project/Site Name/No.:	Turkey Peak Project Type:	☐ Fill/Impact (☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: RS-1	SAR No.: <u>5</u>	Stream ID/Name: RS-1	SAR No.: <u>5</u>	Stream ID/Name: RS-1	_ SAR No.: <u>5</u>
Stream ID/Name: RS-1 Stream Type: Intermittent	SAR No.: <u>5</u> Size (LF) Ecoregion: <u>Cross Timbe</u>	Pate: 2017 Evaluator(s	· —	Additional Notes: Properthe end of construction.		Additional Notes: Prop at the end of monitoring for bank condition after	J. Score will improve	Additional Notes: Proportarget at maturity. Score riparian buffer with cattle	es will improve for	
8-Digit HUC: _12060201	Watershed Condition (develop	ed, pasture, etc	.): Pasture, Woods Wate	ershed Size: 21 sq. mi.			normalize and cattle rer revegetation.		vegetation management improve native communi	to reduce brush and
Aerial Photo Date and Source	ce: <u>2014 NAIP</u>	Site Photos: 5	1 <u>-57</u> Rep	resentative: X Yes \ \ \ No			revegetation.		improve native communi	ty.
Stressor(s): N/A	Are normal clima	tic/hydrologic co	onditions present? ⊠ Yes □	No (If no, explain in Notes)						
Notes: Proposed conditions	for SAR following activities described	in mitigation pla	an and based on current refere	ence reach conditions.						
Stream Characteristics							<u> </u>		<u> </u>	
Stream Width (Feet)		Stream Heig	ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Bank	s: 8		50	8	50	8	50	8
Avg. Waters Edge: 15		Avg. Wate			15	1	15	1	15	1
Avg. OHWM: 20		Avg. OHW	M: 3		20	3	20	3	20	3
Scoring Table					Year/Option _ <u>End</u>	of Construction	Year/Option <u>En</u>	d of Monitoring	Year/Option _ <u>At Mat</u>	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4		4	
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	21.7	4	21.7	5	23.3	5	23.3
	Sediment deposition	5	, X25		5	7	5		5	
D: 1 / // 194	Riparian buffer (left bank)	2	Sum of bank scores / 10	40.0	4		4.9	24.2	4.9	0.1.0
Riparian buffer condition	Riparian buffer (right bank)	2	x 25	10.0	4	20.0	5	24.8	5	24.8
	Substrate composition	5	Sum of metric scores / 10		5		5		5	
In-stream condition	In-stream habitat	5	x 25	25.0	5	25.0	5	25.0	5	25.0
	Flow regime	2	Sum of metric scores / 8		2		2		2	
Hydrologic condition	Channel flow status	3	x 25	15.6	3	15.6	3	15.6	3	15.6
									J L	
	Sum of core ele	ement scores =	overall TXRAM stream score	72	-	82	-	89	-	89
	habitats = overall TXRAM stream sc	ore x 0.025 for e	each bank (right/left) if:							
L R Dominated by native Dominated by hard r	trees greater than 24-inch diameter a	at breast height native species	in the tree strata	0	-	0	-	0	-	0
Sum of overall	TXRAM stream score and additional p	points = total ov	verall TXRAM stream score	72	-	82	-	89	-	89
Representative Site Photo	graph:							•		
		Ex	isting SAR facing upstream near tl	he middle of the SAR.	proposed activities in mitigation includes enhancement of	AR data and description of ation plan. After construction f vegetation with livestock usion.	See TXRAM Reference So proposed activities in monitoring includes natura of vege	mitigation plan. After I re-generation and growth	See TXRAM Reference SA of proposed activities in mi includes target scores fo referer	tigation plan. At maturity or mitigation based on

Appendix E: Stream Final Scoring Sheets for Proposed Mitigation – On-Site Mitigation SARs Proposed Conditions

Project/Site Name/No.:	Turkey Peak Project Type: [☐ Fill/Impact (☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: S-17	SAR No.: 1	Stream ID/Name: <u>S-17</u>	SAR No.: 1	Stream II	D/Name: <u>S-17</u>	SAR No.: 1
Stream ID/Name: On-site st	ream enhancement SAR No.: S-17-1	Size (LF): <u>51</u>	<u>0</u> Date: <u>2016</u> Eval	uator(s): <u>RW, DT</u>		osed condition scores at	Additional Notes: Prop	_		<u> </u>	osed condition scores
Stream Type: Ephemeral	Ecoregion: _Cross Timbers_		_ Delineation Performed: 🛛 Pr	eviously	the end of construction composition will improv		at the end of monitoring deposition will improve	g. Score for sediment after upstream pond	target at riparian b	maturity. Score	es will improve for removal and
8-Digit HUC: <u>12060201</u>	Watershed Condition (develope	ed, pasture, etc	:.): Pasture, Ponds Wate	rshed Size: 110 ac.	removal restores sedim	ent transport and cattle	removal restores sedim removal allows reveget	ent transport and cattle	vegetatio	n management	to reduce brush and ty. Score for bank
Aerial Photo Date and Source	ce: <u>2014 NAIP</u>	Site Photos: N	<u>/A</u> Rep	resentative: X Yes No	Terrioval allows reveget	auon.	Terrioval allows reveget	auon.	condition	will improve wi	th restoration of
Stressor(s): N/A	Are normal climat	ic/hydrologic co	onditions present? 🛛 Yes 🔲	No (If no, explain in Notes)						revegetation.	removal of cattle
Notes: Proposed conditions	for SAR following activities described	in mitigation pl	an and based on reference rea	ach conditions.							
Stream Characteristics									•		
Stream Width (Feet)		Stream Heig	nht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream	m Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 8		Avg. Bank	s: 2		8	2	8	2	8		2
Avg. Waters Edge: -		Avg. Wate	r: -		-	-	-	-	-		-
Avg. OHWM: 4		Avg. OHW	M: 0.5		4	0.5	4	0.5	4		0.5
Scoring Table					Year/Option <u>Enc</u>	of Construction	Year/Option <u>En</u>	d of Monitoring	Year/0	Option <u>At Mat</u>	<u>urity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proj	posed Metric Score	Proposed Core Element Score
	Floodplain connectivity	4			4		4			4	
Channel condition	Bank condition	4	Sum of metric scores / 15 x 25	20.0	4	20.0	5	23.3		5	23.3
	Sediment deposition	4	X 25		4		5			5	
	Riparian buffer (left bank)	1.7	Sum of bank scores / 10		2.4		3.7			4	
Riparian buffer condition	Riparian buffer (right bank)	1.7	x 25	8.5	2.4	12.0	3.7	18.5		4	20.0
	Substrate composition	3	Sum of metric scores / 10		4		4			4	
In-stream condition	In-stream habitat	0	x 25	7.5	0	10.0	0	10.0		0	10.0
	Flow regime	0	Sum of metric scores / 8		0		0			0	
Hydrologic condition	Channel flow status	0	x 25	0	0	0	0	0		0	0
									J	-	
	Sum of core ele	ment scores =	overall TXRAM stream score	36	-	42	-	52		-	53
Additional points for limited	habitats = overall TXRAM stream sco					-		7-			
L R Dominated by native	trees greater than 24-inch diameter a	it breast height		0	-	0	-	0		-	0
	mast (i.e., acorns and nuts) producing TXRAM stream score and additional p	•		20	-	40		50			50
Sulli di overali	TARAW Stream Score and additional p	onits = total o	verall TARAWI Stream Score	36	-	42	-	52		-	53
Representative Site Photo	graph:				·						
		Fe	acing downstream near the middle	of the existing SAR.	proposed activities in mitig includes restricting cleari well as upstream chan	SAR data and description of ation plan. After construction ng and livestock access as nel restoration to restore t transport.	See TXRAM Reference S proposed activities ir monitoring includes	mitigation plan. After	of propose	ed activities in mit	AR data and description tigation plan. At maturity or mitigation based on nce.

TXRAM STREAM FINAL	SCORING SHEET FOR EVAL		OSED MITIGATION/IMPAC	CT ACTIVITIES						
Project/Site Name/No.:	Turkey Peak Project Type	e: ☐ Fill/Impact (☐ Linear ☐ Non-linear) 🏻	Mitigation/Conservation	Stream ID/Name: OPSF	R-2 SAR No.: 1	Stream ID/Name: OPSR	-2 SAR No.: 1	Stream ID/Name: OPSR-	·2 SAR No.: 1
Stream ID/Name: On-site str	ream restoration SAR No.: OPSR-2	2-1 Size (LF):	_827 Date: 2017 E	valuator(s): _RW	Additional Notes: Propo		Additional Notes: Prope		Additional Notes: Propos	
Stream Type: Ephemeral	Ecoregion: _Cross Tim	ibers	Delineation Performed: 🛛	Previously Currently	the end of construction. condition will increase (b		at the end of monitoring.		target at maturity. Scores	s will improve for removal and
8-Digit HUC: <u>12060201</u>	Watershed Condition (develo	oped, pasture, etc	c.): Pasture, Ponds Water	rshed Size: 19 ac.	dam removal to restore	channel processes.			vegetation management/p	
Aerial Photo Date and Source	ce: 2014 NAIP	Site Photos: N	<u>/A</u> Rep	resentative: X Yes No	Substrate composition s dam removal to restore s	sediment transport of			native tree canopy and discommunity.	versity or
Stressor(s): N/A	Are normal clim	natic/hydrologic co	onditions present? ⊠ Yes ☐ !	No (If no, explain in Notes)	natural stream flows and drops.	design / natural rock				
Notes: Proposed conditions	for SAR following activities describe	ed in mitigation pl	an and based on reference rea	uch conditions.						
Stream Characteristics					L					
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: N/A		Avg. Banks			5	1	5	1	5	1
Avg. Waters Edge: N/A		Avg. Water			<u> </u>	-	-	-	<u> </u>	-
Avg. OHWM: N/A		Avg. OHW	M: N/A		2	0.5	2	0.5	2	0.5
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option _ End	of Monitoring	Year/Option _ <u>At Matu</u>	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	0			4		4		4	
Channel condition	Bank condition	0	Sum of metric scores / 15 x 25	0	4	21.7	5	23.3	5	23.3
	Sediment deposition	0			5	1	5		5	
Discrice buffer condition	Riparian buffer (left bank)	0	Sum of bank scores / 10	0	2	40.0	3	45.0	4	20.0
Riparian buffer condition	Riparian buffer (right bank)	0	x 25	0	2	10.0	3	15.0	4	20.0
In-stream condition	Substrate composition	0	Sum of metric scores / 10	0	4	10.0	4	10.0	4	10.0
III-Stream condition	In-stream habitat	0	x 25		0	10.0	0	10.0	0	10.0
Hydrologic condition	Flow regime	0	Sum of metric scores / 8	0	0	0	0	0	0	0
Hydrologic cortaillori	Channel flow status	0	x 25		0		0	<u> </u>	0	
							1		_	
			overall TXRAM stream score	0	-	42	-	48	-	53
L R ☐ Dominated by native	I habitats = overall TXRAM stream s trees greater than 24-inch diamete mast (i.e., acorns and nuts) producir	er at breast height		0	-	0	-	0		0
Sum of overall	TXRAM stream score and additiona	al points = total or	verall TXRAM stream score	0	-	42	-	48	-	53
Depresentative Site Photo	aranh.									
Representative Site Photog	grapn:				See TXRAM Reference	e SAR data, design and	See TYPAM Reference	CAD data design and	See TXRAM Reference S.	SAR data, design and



Facing east below and existing pond that will be removed to restore the proposed SAR OPSR-2-1.

See TXRAM Reference SAR data, design and description of proposed activities in mitigation plan.

After construction includes restoration of channel and planting vegetation with livestock exclusion.

See TXRAM Reference SAR data, design and description of proposed activities in mitigation plan. After monitoring includes growth of vegetation.

See TXRAM Reference SAR data, design and description of proposed activities in mitigation plan. At maturity includes target scores for mitigation based on reference.

TXRAM STREAM FINAL	Version 1.0 – SCORING SHEET FOR EVALU		OSED MITIGATION/IMPAG	CT ACTIVITIES						
Project/Site Name/No.: _	Turkey Peak Project Type:	☐ Fill/Impact (☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: OPS	R-5_ SAR No.: 1	Stream ID/Name: OPS	R-5 SAR No.: 1	Stream ID/Name: OPSR	-5 SAR No.: 1
Stream ID/Name: On-site st	ream restoration SAR No.: 5-1_ Si		osed condition scores at	Additional Notes: Prop		Additional Notes: Proposed condition scores				
Stream Type: Ephemeral Ecoregion: Cross Timbers Delineation Performed: Previously Currently						Channel and in-stream	at the end of monitoring	g.	target at maturity. Score	
8-Digit HUC: _12060201	Watershed Condition (develop	<u></u>		•	condition will increase (dam removal to restore	,			riparian buffer with cattle vegetation management	
		•			Substrate composition	score will increase with			native tree canopy and c	
Aerial Photo Date and Source	ce: 2014 NAIP	Site Photos: N	<u>/A</u> Rep	resentative: X Yes No	dam removal to restore natural stream flows an				community.	
Stressor(s): N/A	Are normal clima	tic/hydrologic co	onditions present? $oxtimes$ Yes $ igsqcup$ I	No (If no, explain in Notes)	drops.	a design / natural rock				
Notes: Proposed conditions	for SAR following activities described	d in mitigation pl	an and based on reference rea	ach conditions						
Stream Characteristics		-								
Stream Width (Feet)		Stream Heio	nht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: N/A		Avg. Bank	· · · · · · · · · · · · · · · · · · ·		8	1	8	1	8	1
Avg. Waters Edge: N/A		Avg. Wate	r: N/A		-	-	-	-	-	-
Avg. OHWM: N/A		Avg. OHW	M: N/A		2	0.5	2	0.5	2	0.5
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	nd of Monitoring	Year/Option <u>At Mat</u>	<u>urity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	0			4		4		4	
Channel condition	Bank condition	0	Sum of metric scores / 15	0	4	21.7	5	23.3	5	23.3
	Sediment deposition	0	_ x 25		5		5		5	-
	Riparian buffer (left bank)	0	Sum of bank scores / 10		2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	0	x 25	0	2	10.0	3	15.0	4	20.0
	Substrate composition	0	O		4		4		4	
In-stream condition	In-stream habitat	0	Sum of metric scores / 10 x 25	0	0	10.0	0	10.0	0	10.0
	Flow regime	0	-		0		0		0	
Hydrologic condition		-	Sum of metric scores / 8 x 25	0		0	0	0	0	0
1	Channel flow status	0	A 20				U U		U	

Representative Site Photograph:



Facing north at existing pond where no stream currently exists.

0

0

0

Additional points for limited habitats = overall TXRAM stream score x 0.025 for each bank (right/left) if:

Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score

Dominated by native trees greater than 24-inch diameter at breast height
Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata

Sum of core element scores = overall TXRAM stream score

See TXRAM Reference SAR data, design and description of proposed activities in mitigation plan. After construction includes restoration of channel and planting vegetation with livestock exclusion.

42

0

42

description of proposed activities in mitigation plan.

After monitoring includes growth of vegetation.

See TXRAM Reference SAR data, design and description of proposed activities in mitigation plan.

At maturity includes target scores for mitigation based on reference.

53

0

53

See TXRAM Reference SAR data, design and

48

0

48

•	Turkey Peak Project Type:	·	•	Mitigation/Conservation	Stream ID/Name: OPS	<u>R-17</u> SAR No.: <u>1</u>	Stream ID/Name: OPSI	R-17 SAR No.: 1	Stream ID/Name: OPSR	:-17 SAR No.: <u>1</u> _
Stream ID/Name: On-site st Stream Type: Ephemeral 8-Digit HUC: 12060201 Aerial Photo Date and Source Stressor(s): N/A Notes: Proposed conditions	Additional Notes: Properthe end of construction. condition will increase (dam removal to restore Substrate compositions dam removal to restore natural stream flows and drops.	Channel and in-stream be re-established) with channel processes. score will increase with sediment transport of	Additional Notes: Prop at the end of monitoring		Additional Notes: Proposed condition scores target at maturity. Scores will improve for riparian buffer with cattle removal and vegetation management/planting to increase native tree canopy and diversity of community.					
Stream Characteristics										
Stream Width (Feet)		Stream Heio	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: N/A		Avg. Bank			8	1	8	1	8	1
Avg. Waters Edge: N/A		Avg. Wate			-	-	-	-	-	·
Avg. OHWM: N/A		Avg. OHW			2	0.5	2	0.5	2	0.5
						1		1		1
Scoring Table	1			<u></u>	Year/Option _ <u>End</u>	of Construction_	Year/Option <u>En</u>	<u>d of Monitoring</u>	Year/Option _At Mat	turity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	0			4		4		4	
Channel condition	Bank condition	0	Sum of metric scores / 15	0	4	21.7	5	23.3	5	23.3
	Sediment deposition	0	_ x 25		5		5		5	
	Riparian buffer (left bank)	0	Sum of bank scores / 10		2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	0	x 25	0	2	10.0	3	15.0	4	20.0
	Substrate composition	0	Sum of metric scores / 10		4		4		4	
In-stream condition	In-stream habitat	0	x 25	0	0	10.0	0	10.0	0	10.0
	Flow regime				0		0		0	
Hydrologic condition	Channel flow status	0	Sum of metric scores / 8 x 25	0	0	0	0	0	0	0
	Charmer now status		N = 0				0			
	Sum of core of	omont scores -	overall TXRAM stream score	0	_	42		48	_	53
Additional points for limited	habitats = overall TXRAM stream so			0	-	42	-	40	 	55
L R	e trees greater than 24-inch diameter mast (i.e., acorns and nuts) producing	at breast height		0		0	-	0	-	0
	TXRAM stream score and additional			0	-	42	-	48	-	53
Representative Site Photo	graph:	·		L						
		Facing east	at existing pond that will be remove OPSR-17-1.	ed to restore the proposed SAR	description of proposed a After construction includes	e SAR data, design and activities in mitigation plan. s restoration of channel and vith livestock exclusion.	See TXRAM Reference description of proposed a After monitoring include	ctivities in mitigation plan.	See TXRAM Reference description of proposed ac At maturity includes targe based on re	tivities in mitigation plan. et scores for mitigation

TXRAM STREAM FINAL	Version 1.0 - SCORING SHEET FOR EVAL		OSED MITIGATION/IMPAG	CT ACTIVITIES						
Project/Site Name/No.: _]	Furkey Peak Project Type	: Fill/Impact (☐ Linear ☐ Non-linear) 🖂	Mitigation/Conservation	Stream ID/Name: OPSI	R-18_ SAR No.: 1	Stream ID/Name: OPSF	R-18 SAR No.: 1	Stream ID/Name: OPSR	<u>-18</u> SAR No.: 1_
Stream ID/Name: On-site stream restoration SAR No.: OPSR-18-1 Size (LF): _470 Date: 2017 Evaluator(s): _RW					Additional Notes: Propo		Additional Notes: Prop		Additional Notes: Propo	
Stream Type: Ephemeral	Ecoregion: _Cross Tim	Delineation Performed: 🛛	Previously Currently	the end of construction. condition will increase (b		at the end of monitoring		target at maturity. Score riparian buffer with cattle		
8-Digit HUC: <u>12060201</u>	Watershed Condition (develo	ned pasture etc): Pasture Ponds Wate	rshed Size: 11 ac	dam removal to restore				vegetation management	
	·		•	presentative: X Yes No	Substrate composition s dam removal to restore				native tree canopy and community.	diversity of
Aerial Photo Date and Source		_ Site Photos: N/	-		natural stream flows and				community.	
Stressor(s): N/A	Are normal clim	atic/hydrologic co	nditions present? 🛛 Yes 🔲 I	No (If no, explain in Notes)	drops.	· ·				
Notes: Proposed conditions	for SAR following activities describe	ed in mitigation pla	an and based on reference rea	ach conditions.						
Stream Characteristics									1	
Stream Width (Feet)		Stream Heig	ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: N/A		Avg. Banks	s: N/A		5	1	5	1	5	1
Avg. Waters Edge: N/A		Avg. Water	: N/A		-	-	-	-	-	-
Avg. OHWM: N/A		Avg. OHW	M: N/A		2	0.5	2	0.5	2	0.5
Scoring Table					Year/Option <u>End</u>	of Construction	Year/Option <u>En</u>	d of Monitoring_	Year/Option <u>At Mat</u>	turity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	0			4		4		4	
Channel condition	Bank condition	0	Sum of metric scores / 15 x 25	0	4	21.7	5	23.3	5	23.3
	Sediment deposition	0	X 25		5		5		5	
S	Riparian buffer (left bank)	0	Sum of bank scores / 10	_	2		3		4	
Riparian buffer condition	Riparian buffer (right bank)	0	x 25	0	2	10.0	3	15.0	4	20.0
	Substrate composition	0	Sum of metric scores / 10	_	4		4		4	
In-stream condition	In-stream habitat	0	x 25	0	0	10.0	0	10.0	0	10.0
	Flow regime	0	Sum of metric scores / 8	0	0	- 0	0	0	0	
1 1 1 1 2 199	3	_								⊣ 0
Hydrologic condition	Channel flow status	0	x 25	0	0	O O	0		0	
Hydrologic condition					0	0	0	0	0	
	Channel flow status	0 element scores = 0	x 25 overall TXRAM stream score	0	-	42	-	48	0	53

Representative Site Photograph:



L R

Dominated by native trees greater than 24-inch diameter at breast height

Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata

Sum of overall TXRAM stream score and additional points = total overall TXRAM stream score

Facing southeast at existing pond that will be removed to restore the proposed SAR OPSR-18-1.

0

See TXRAM Reference SAR data, design and description of proposed activities in mitigation plan. After construction includes restoration of channel and planting vegetation with livestock exclusion.

42

See TXRAM Reference SAR data, design and description of proposed activities in mitigation plan.

After monitoring includes growth of vegetation.

48

See TXRAM Reference SAR data, design and description of proposed activities in mitigation plan.

At maturity includes target scores for mitigation based on reference.

53

Appendix F: Stream Data Sheets and Final Scoring Sheets – Downstream Mitigation SARs Existing Conditions

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.:	Turkey Peak Project Type: □	Fill/Impact (Li	inear 🗌 Non-lin	ear) 🗵 Mitigation/Conservation
Stream ID/Name: DS-1	SAR No.: DS-1-1 Size (LF	=): <u>990</u> Date	e: <u>2017</u>	Evaluator(s): RW
Stream Type: Perennia	ıl - Artificial Ecoregion: Cross Timbe	rs De	elineation Perfor	med: X Previously Currently
8-Digit HUC: 1206020	Matershed Condition (develope	d, pasture, etc.): _	Pasture, Impoundmen	Watershed Size: 471 sq. mi.
Aerial Photo Date and S	ource: 2014 NAIP / Bing			
Stressor(s): Land use	Are normal climatic/hydr	ologic conditions	present? X Yes	s ☐ No (If no, explain in Notes)
Notes: Based on review of aerial ph dated January 2009). Artifici	otography and data from previous field delineation of upstream reach al flow from Lake Palo Pinto releases, so flow regime score reduced by	see HDR report dated June 2 1. Incision and widening from	2009) as well as aquatic life m upstream lake. Cattle and	monitoring surveys (see water rights application d human use. In-stream habitat estimated.
Stream Characteristics				
Stream Width (Feet)		Stream Height/L	Depth (Feet)	
Avg. Bank to Bank:	50	Avg. Banks:	10	
Avg. Waters Edge:	20	Avg. Water:	4	
Avg. OHWM:	25	Avg. OHWM:	6	

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	3			
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	
	Sediment deposition	4	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	2.0	Sum of bank scores / 10	10.0	
Riparian buffer condition	Riparian buffer (right bank)	2.0	x 25	10.0	
la atracas condition	Substrate composition	4	Sum of metric scores / 10	22.5	
In-stream condition	In-stream habitat	5	x 25	22.5	
Lludrologia condition	Flow regime	3	Sum of metric scores / 8	21.9	
Hydrologic condition	Channel flow status	4	x 25	21.9	
	Sum of core e	lement scores = c	overall TXRAM stream score	71	
	habitats = overall TXRAM stream	m score x 0.025 f	or each bank (right/left) if:		
L R	0				
☐ ☐ Dominated by native☐ ☐ Dominated by hard m					
	AM stream score and additional			71	

Representative Site Photograph:



Facing downstream near the upper end of the SAR. Note erosion and sedimentation. A riffle stabilized with construction debris occurs just downstream.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _	Turkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation	
	SAR No.: [
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently	
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 471 sq. mi.	
	urce: 2014 NAIP / Bing				
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)			ght/Depth (Feet)		
5	50	Avg. Bank	s: 10		
111911111111111111111111111111111111111	20	Avg. Wate			
Avg. OHWM:	25	Avg. OHW	/M: 6		
reach (see H water rights a so flow regim	view of aerial photogr DR report dated Jund application dated Jan he score reduced by a n-stream habitat esti	e 2009) as well as a uary 2009). Artificia 1. Incision and widel	quatic life monitoring	g surveys (see o Pinto releases,	
CHANNEL CONDITION Floodplain Connectivity	,				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
Bank Condition				Score: 3	
Left Bank Active Erosion	20 0/ Dight	Dank Astiva Fracian, 20	0/ Avarage 20	0.0	
			% Average: <u>20</u>		
Bank Protection/Stabiliza	ation: ☒ Natural ☐ Artifici	al		Score: 3	
Sediment Deposition				ocore. <u>-</u>	
	hottom covered by excessi	ive sediment denosition: h	ars with established vegeta	etion (5)	
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5) 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)					
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the botto in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at	
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)	
	Score: 4				

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 125.0
-----------	------------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	50	1.5
2. Savannah with pecan and bermudagrass	60	Mix	High	1	50	0.5
3.						
4.						
5.						

Score: 2.0

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	50	1.5
2. Brush with Ashe juniper, oak, mesquite	50	Mix	High	1	30	0.3
3. Trail and regenerative with non-natives	10	Undesirable	High	1	20	0.2
4.						
5.						

Score: 2.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial: 5
Cobble: 20	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: <u>5.3</u> Score: <u>5</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

Score: 3

Channel Flow Status
☑ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Score: 4

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (Linear Non-linear) Mitigation/Conservation
Stream ID/Name: DS-1 SAR No.: DS-1-5 Size (L	F): 1,022 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timber	Delineation Performed: 🗵 Previously 🗌 Currently
8-Digit HUC: 12060201 Watershed Condition (developed	ed, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
	Site Photos: Yes Representative: ⊠ Yes □ No
Stressor(s): Land use Are normal climatic/hyd	Irologic conditions present? ☒ Yes ☐ No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous field delineation of upstream react dated January 2009). Artificial flow from Lake Palo Pinto releases, so flow regime score reduced	n (see HDR report dated June 2009) as well as aquatic life monitoring surveys (see water rights application by 1. Incision and widening from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 10
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	3			
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	
	Sediment deposition	4	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	2.1	Sum of bank scores / 10	40.5	
Riparian buffer condition	Riparian buffer (right bank)	2.1	x 25	10.5	
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5	
In-stream condition	In-stream habitat	5	x 25	22.5	
Lludrologia condition	Flow regime	3	Sum of metric scores / 8	21.9	
Hydrologic condition	Channel flow status	4	x 25	21.9	
	Sum of core e	lement scores = c	overall TXRAM stream score	72	
Additional points for limited L R Dominated by native Dominated by hard m	0				
	AM stream score and additional			72	

Representative Site Photograph:



Facing downstream near the middle of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _	Turkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation	
	SAR No.: [
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently	
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 471 sq. mi.	
	urce: 2014 NAIP / Bing				
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)	
Stream Characteristics					
Stream Width (Feet)			ght/Depth (Feet)		
5	50	Avg. Bank	s: 10		
111911111111111111111111111111111111111	20	Avg. Wate			
Avg. OHWM:	25	Avg. OHW	/M: 6		
reach (see H water rights a so flow regim	view of aerial photogr DR report dated Jund application dated Jan he score reduced by a n-stream habitat esti	e 2009) as well as a uary 2009). Artificia 1. Incision and widel	quatic life monitoring	g surveys (see o Pinto releases,	
CHANNEL CONDITION Floodplain Connectivity	,				
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.	
5	4	3	2	1	
Bank Condition				Score: 3	
Left Bank Active Erosion	o. 20 % Pight	Rank Active Eresion: 20	% Average: 20	0.0	
	i=º				
Dank Flotection/Stabiliza	ation. 🔼 Natural 🔲 Artifici	ai		Score: 3	
Sediment Deposition					
☐ Less than 20% of the	bottom covered by excessi	ive sediment deposition: ba	ars with established vegeta	ation (5)	
∑ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4)					
☐ 40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)					
☐ 60–80% of the botto in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at	
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)	
	Score: 4				

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 125.0
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Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	30	0.9
2. Savannah with pecan and bermudagrass	70	Mix	High	2	60	1.2
3. _{Trail}	10	Undesirable	Intensive	0	10	0
4.						
5.						

Score: 2.1

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	60	1.8
2. Brush with Ashe juniper, oak, mesquite	50	Mix	High	1	20	0.2
3. Pasture / berm with non-natives	10	Undesirable	High	1	15	0.1
4. Trail	10	Undesirable	Intensive	0	5	0
5.						

Score: 2.1

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial: 5
Cobble: 20	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: 5.3 Score: 5

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

	Score: 3
Channel Flow Status	
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4	-)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
\square Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is	exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

Score: 4____

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type: Till/In	npact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: DS-1 SAR No.: DS-1-10 Size (LF): 1,	229 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timbers	Delineation Performed: ✓ Previously ☐ Currently
8-Digit HUC: 12060201 Watershed Condition (developed, pas	ture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
Aerial Photo Date and Source: 2014 NAIP / Bing Site Ph	
Stressor(s): Land use Are normal climatic/hydrologic	conditions present? ☒ Yes ☐ No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation of upstream reach (see HDR Notes: dated January 2009). Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision	
Stream Characteristics	
Stream Width (Feet) Stree	am Height/Depth (Feet)
Avg. Bank to Bank: 50 Av	g. Banks: 10
Avg. Waters Edge: 20 Av	g. Water: 4
Avg. OHWM: 25 Av	g. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score				
	Floodplain connectivity	3						
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7				
	Sediment deposition	4	X 20					
Dinarian buffer condition	Riparian buffer (left bank)	1.9	Sum of bank scores / 10	0.5				
Riparian buffer condition	Riparian buffer (right bank)	1.5	x 25	8.5				
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5				
In-stream condition	In-stream habitat	5	x 25	22.5				
Lludrologie condition	Flow regime	3	Sum of metric scores / 8	21.9				
Hydrologic condition	Channel flow status	4	x 25	21.9				
	Sum of core e	lement scores = c	overall TXRAM stream score	70				
· ·	habitats = overall TXRAM stream	m score x 0.025 f	or each bank (right/left) if:					
L R	0							
	 ☐ Dominated by native trees greater than 24-inch diameter at breast height ☐ Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata 							
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	70				

Representative Site Photograph:



Facing downstream near the middle of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _	Turkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation
Stream ID/Name: DS-1	SAR No.: [OS-1-10 Size (LF): 1,229	Date: 2017 Eval	uator(s): RW
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	▼ Previously ☐ Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 471 sq. mi.
	urce: 2014 NAIP / Bing			
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
5	50	Avg. Bank		
111911111111111111111111111111111111111	20	Avg. Wate		
Avg. OHWM:	25	Avg. OHW	/M: 6	
reach (see H water rights a so flow regim	view of aerial photogr DR report dated Jund application dated Jan he score reduced by fin-stream habitat esti	e 2009) as well as a uary 2009). Artificia 1. Incision and widel	quatic life monitoring	g surveys (see o Pinto releases,
CHANNEL CONDITION Floodplain Connectivity	,			
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: 3
Left Bank Active Erosion	20 9/ Bight	Pank Astiva Fracian: 20	% Average: 20	0.0
	i=º			
Dank Flotection/Stabiliza	ation. 🔼 Natural 🔲 Artifici	ai		Score: 3
Sediment Deposition				
Less than 20% of the	bottom covered by excessi	ive sediment deposition; ba	ars with established vegeta	ation (5)
	m covered by excessive sec	· · · · · · · · · · · · · · · · · · ·	=	
	om covered by excessive se osits at in-stream structures			
☐ 60–80% of the botto in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
				Score: 4

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 125.0
-----------	------------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	50	1.5
2. Savannah with pecan and bermudagrass	50	Mix	High	1	40	0.4
3. Trail	10	Undesirable	Intensive	0	10	0
4.						
5.						

Score: 1.9____

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	30	0.9
Pasture with bermudagrass and scattered pecans	30	Undesirable	High	1	60	0.6
3. Trail	10	Undesirable	Intensive	0	10	0
4.						
5.						

Score: 1.5

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial: 5
Cobble: 20	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: <u>5.3</u> Score: <u>5</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

5	Score: 3
Channel Flow Status	
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)	
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is e	xposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

Score: 4

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type: ☐ Fi	ill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: DS-1 SAR No.: DS-1-13 Size (LF):	1,229 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timbers	Delineation Performed: ☒ Previously ☐ Currently
8-Digit HUC: 12060201 Watershed Condition (developed,	pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
Aerial Photo Date and Source: 2014 NAIP / Bing Site	
Stressor(s): Land use Are normal climatic/hydrole	ogic conditions present? ✓ Yes ☐ No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation of upstream reach (see Notes: dated January 2009). Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1.	HDR report dated June 2009) as well as aquatic life monitoring surveys (see water rights application
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 10
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	3			
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	
	Sediment deposition	4	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	1.8	Sum of bank scores / 10	0.0	
Riparian buffer condition	Riparian buffer (right bank)	1.7	x 25	8.8	
In-stream condition	Substrate composition	4	Sum of metric scores / 10	22.5	
	In-stream habitat	5	x 25	22.5	
Lludralagia aanditian	Flow regime	3	Sum of metric scores / 8	21.9	
Hydrologic condition	Channel flow status	4	x 25	21.9	
	70				
Additional points for limited					
L R Dominated by native	0				
Dominated by hard m					
Sum of overall TXR	70				

Representative Site Photograph:



Facing upstream at the downstream end of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _	urkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation		
	SAR No.: [[]					
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently		
8-Digit HUC: 12060201 Watershed Condition (developed, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.						
	urce: 2014 NAIP / Bing					
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)		
Stream Characteristics						
Stream Width (Feet)			ght/Depth (Feet)			
5	50	Avg. Bank	s: 10			
111911111111111111111111111111111111111	20	Avg. Wate				
Avg. OHWM:	25	Avg. OHW	/M: 6			
reach (see H water rights a so flow regim	riew of aerial photogr DR report dated Jund application dated Jan he score reduced by r n-stream habitat esti	e 2009) as well as a uary 2009). Artificia 1. Incision and widel	quatic life monitoring	g surveys (see o Pinto releases,		
CHANNEL CONDITION Floodplain Connectivity	,					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
Bank Condition				Score: 3		
Left Bank Active Erosion	. 20 % Pight	Rank Active Eresion: 20	% Average: 20	0.0		
	ation: ⊠ Natural ☐ Artifici					
Dank Flotection/Stabiliza	ation. 🔼 Natural 🔲 Artifici	ai		Score: 3		
Sediment Deposition						
☐ Less than 20% of the	bottom covered by excessi	ive sediment deposition: ba	ars with established vegeta	ation (5)		
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
☐ 60–80% of the bottom covered by excessive sediment deposition; newly created bars prevalent; heavy sediment deposits at in-stream structures (2)						
☐ Greater than 80% of the bottom covered by excessive sediment deposition resulting in aggrading channel (1)						
	Score: 4					

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 125.0
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Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	40	1.2
2. Savannah with pecan and bermudagrass	50	Mix	High	1	60	0.6
3.						
4.						
5.						

Score: 1.8____

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	40	1.2
2. Savannah with pecan and bermudagrass	50	Mix	High	1	50	0.5
3. Cultivated field	0	Undesirable	Intensive	0	10	0
4.						
5.						

Score: <u>1.7</u>

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial: 5
Cobble: 20	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: <u>5.3</u> Score: <u>5</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

	Score: 3
Channel Flow Status	
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4))
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
$\hfill\square$ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is	exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

Score: 4____

TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (Linear Non-linear) Mitigation/Conservation
Stream ID/Name: DS-1 SAR No.: DS-1-14 Size (L	F): 1,024 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timber	Previously ☐ Currently ☐ Delineation Performed: ☒ Previously ☐ Currently
8-Digit HUC: 12060201 Watershed Condition (developed	ed, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
Aerial Photo Date and Source: 2014 NAIP / Bing	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? ✓ Yes No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous field delineation of upstream reach dated January 2009). Artificial flow from Lake Palo Pinto releases, so flow regime score reduced to	(see HDR report dated June 2009) as well as aquatic life monitoring surveys (see water rights application by 1. Incision and widening from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 10
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	3		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	1.8	Sum of bank scores / 10	40.5
Riparian buffer condition	Riparian buffer (right bank)	2.4	x 25	10.5
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5
In-stream condition	In-stream habitat	5	x 25	22.5
I hudua la mia assauditiona	Flow regime	3	Sum of metric scores / 8	21.0
Hydrologic condition	Channel flow status	4	x 25	21.9
		•		
	Sum of core e	lement scores = c	overall TXRAM stream score	72
	habitats = overall TXRAM stream	m score x 0.025 fe	or each bank (right/left) if:	
L R Dominated by native Dominated by hard m	0			
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	72

Representative Site Photograph:



Facing downstream near the upstream end of the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.:	Turkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation
Stream ID/Name: DS-1	SAR No.:	DS-1-14 Size (LF): 1,024	Date: 2017 Eval	uator(s): RW
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently
8-Digit HUC: 12060201	Watershed Conditi	on (developed, pasture, et	c.): Pasture, Impoundment Wate	ershed Size: 471 sq. mi.
Aerial Photo Date and So	ource: 2014 NAIP / Bing	Site Photos: _\	/es Repr	esentative: X Yes No
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ✓ Yes ✓ N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
Avg. Bank to Bank:	50	Avg. Bank		
Avg. Waters Edge:	20	Avg. Wate		
Avg. OHWM:	25	Avg. OHW	/M: 6	
reach (see H water rights so flow regin	view of aerial photogration of the serial photogration dated Jan application dated Jan are score reduced by In-stream habitat esti	e 2009) as well as a luary 2009). Artificia 1. Incision and wide	quatic life monitoring I flow from Lake Pal	g surveys (see o Pinto releases,
CHANNEL CONDITION Floodplain Connectivity	y			
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: 3
Left Bank Active Erosio	n: ²⁰ % Right	Bank Active Erosion: 20	% Average: ²⁰	0.0
	zation: 🗵 Natural 🗌 Artific			
				Score: 3
Sediment Deposition				
Less than 20% of the	e bottom covered by excess	ive sediment deposition; ba	ars with established vegeta	ation (5)
	m covered by excessive sec	diment deposition; some es	stablished bars with indica	tors of recently deposited
	om covered by excessive soosits at in-stream structure			
☐ 60–80% of the botto in-stream structures (2)	om covered by excessive se	ediment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)
				Score: <u>4</u>

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 125.0
-----------	------------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	40	1.2
Savannah with pecan and bermudagrass	50	Mix	High	1	60	0.6
3.						
4.						
5.						

Score: 1.8

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	70	2.1
2. Savannah with pecan and bermudagrass	50	Mix	High	1	30	0.3
3.						
4.						
5.						

Score: 2.4

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial: ₅
Cobble: 20	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: 5.3 Score: 5

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

Channel Flow Status
☑ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Score: 4

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type: □	Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: DS-1 SAR No.: DS-1-17 Size (LF	r): 1,228 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timber	Delineation Performed: 🗵 Previously 🗌 Currently
8-Digit HUC: 12060201 Watershed Condition (developed	d, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
Aerial Photo Date and Source: 2014 NAIP / Bing	
Stressor(s): Land use Are normal climatic/hydro	ologic conditions present? ⊠ Yes ☐ No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation of upstream reach (some stated January 2009). Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by	see HDR report dated June 2009) as well as aquatic life monitoring surveys (see water rights application 1. Incision and widening from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 10
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score
	Floodplain connectivity	3		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7
	Sediment deposition	4	X 20	
Dinarian buffer condition	Riparian buffer (left bank)	2.2	Sum of bank scores / 10	40.0
Riparian buffer condition	Riparian buffer (right bank)	3.0	x 25	13.0
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5
In-stream condition	In-stream habitat	5	x 25	22.5
Lhudralagia aanditian	Flow regime	3	Sum of metric scores / 8	21.9
Hydrologic condition	Channel flow status	4	x 25	21.9
		•		
	74			
Additional points for limited				
L R Dominated by native	0			
Dominated by hard m				
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	74

Representative Site Photograph:



Facing downstream at the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _	urkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation				
Stream ID/Name: DS-1	SAR No.: DS-1-17 Size (LF): 1,228 Date: 2017 Evaluator(s): RW							
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	▼ Previously ☐ Currently				
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 471 sq. mi.				
	urce: 2014 NAIP / Bing							
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)				
Stream Characteristics	Stream Characteristics							
Stream Width (Feet)			ght/Depth (Feet)					
5	50	Avg. Bank	s: 10					
111911111111111111111111111111111111111	20	Avg. Wate						
Avg. OHWM:	25	Avg. OHW	/M: 6					
Based on review of aerial photography and data from previous field delineation of upstream reach (see HDR report dated June 2009) as well as aquatic life monitoring surveys (see water rights application dated January 2009). Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by 1. Incision and widening from upstream lake. Cattle and human use. In-stream habitat estimated.								
CHANNEL CONDITION Floodplain Connectivity	,							
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.				
5	4	3	2	1				
Bank Condition				Score: 3				
Left Bank Active Erosion	20 % Bight l	Pank Astiva Fracian: 20	% Average: 20	0.0				
	ation: ⊠ Natural ☐ Artifici							
Dank Flotection/Stabiliza	ation. 🔼 Natural 🔲 Artifici	ai		Score: 3				
Sediment Deposition								
Less than 20% of the bottom covered by excessive sediment deposition; bars with established vegetation (5)								
 ≥ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) 								
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)								
☐ 60–80% of the botto in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at				
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)				
-				Score: 4				

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank			Buffer Distan	ce: <u>125.0</u>

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	60	1.8
2. Savannah with pecan and bermudagrass	50	Mix	High	1	40	0.4
3.						
4.						
5.						22

Score: 2.2____

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	100	3.0
2.						
3.						
4.						
5.						

Score: 3.0

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial: 5
Cobble: 20	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: <u>5.3</u> Score: <u>5</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

Sco	ore: 3
Channel Flow Status	
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)	
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
\square Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exp	osed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

Score: 4

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type: □	Fill/Impact (☐ Linear ☐ Non-linear) ☒ Mitigation/Conservation
Stream ID/Name: DS-1 SAR No.: DS-1-20 Size (LI	=): 1,228 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timbe	rs Delineation Performed: ☒ Previously ☐ Currently
8-Digit HUC: 12060201 Watershed Condition (develope	d, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
Aerial Photo Date and Source: 2014 NAIP / Bing	Site Photos: Yes ☐ Representative: ☐ Yes ☐ No
Stressor(s): Land use Are normal climatic/hydr	rologic conditions present? ✓ Yes ✓ No (If no, explain in Notes)
Notes: Based on review of aerial photography and data from previous field delineation of upstream reach dated January 2009). Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by	(see HDR report dated June 2009) as well as aquatic life monitoring surveys (see water rights application y 1. Incision and widening from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 10
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score		
	Floodplain connectivity	3				
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7		
	Sediment deposition	4	X 20			
Dinarian buffer condition	Riparian buffer (left bank)	2.2	Sum of bank scores / 10	40.0		
Riparian buffer condition	Riparian buffer (right bank)	1.8	x 25	10.0		
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5		
In-stream condition	In-stream habitat	5	x 25	22.5		
Lludrologia condition	Flow regime	3	Sum of metric scores / 8	21.9		
Hydrologic condition	Channel flow status	4	x 25	21.9		
	Sum of core e	lement scores = c	overall TXRAM stream score	71		
· ·	habitats = overall TXRAM stream	m score x 0.025 f	or each bank (right/left) if:			
L R						
☐ ☐ Dominated by native trees greater than 24-inch diameter at breast height ☐ ☐ Dominated by hard mast (i.e., acorns and nuts) producing native species in the tree strata						
	AM stream score and additional			71		

Representative Site Photograph:



Facing downstream at the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.: _	Turkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation		
	SAR No.: [
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently		
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 471 sq. mi.		
	urce: 2014 NAIP / Bing					
Stressor(s): Land use	Stressor(s): Land use Are normal climatic/hydrologic conditions present? X Yes No (If no, explain in Notes)					
Stream Characteristics						
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)			
5	50	Avg. Bank	s: 10			
111911111111111111111111111111111111111	20	Avg. Wate				
Avg. OHWM:	25	Avg. OHW	/M: 6			
reach (see H water rights a so flow regim	view of aerial photogr DR report dated Jund application dated Jan he score reduced by a n-stream habitat esti	e 2009) as well as a uary 2009). Artificia 1. Incision and widel	quatic life monitoring	g surveys (see o Pinto releases,		
CHANNEL CONDITION Floodplain Connectivity	,					
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.		
5	4	3	2	1		
Bank Condition				Score: 3		
Left Bank Active Erosion	o. 20 % Pight	Rank Active Eresion: 20	% Average: 20	0.0		
	i=º					
Bank Protection/Stabiliza		di		Score: 3		
Sediment Deposition						
☐ Less than 20% of the	bottom covered by excessi	ive sediment deposition: ba	ars with established vegeta	ation (5)		
 ≥ 20–40% of the bottom covered by excessive sediment deposition; some established bars with indicators of recently deposited sediments (4) 						
40–60% of the bottom covered by excessive sediment deposition; moderate deposition on old bars and creating new bars; moderate sediment deposits at in-stream structures; OR obstructed view of the channel bottom and a lack of other depositional features (3)						
☐ 60–80% of the botto in-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at		
☐ Greater than 80% of	the bottom covered by exce	essive sediment deposition	resulting in aggrading cha	nnel (1)		
				Score: 4		

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank			Buffer Distance	ce: <u>125.0</u>

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	60	1.8
2. Savannah with pecan and bermudagrass	50	Mix	High	1	40	0.4
3.						
4.						
5.						

Score: 2.2___

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	40	1.2
2. Savannah with pecan and bermudagrass	50	Mix	High	1	60	0.6
3.						
4.						
5.						

Score: 1.8

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial: 5
Cobble: 20	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: <u>5.3</u> Score: <u>5</u>

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

	Score: <u>3</u>
Channel Flow Status	
🗵 Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4))
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)	
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)	
$\hfill\square$ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is	exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)	

Score: 4

Version 1.0 - Final Draft TXRAM STREAM FINAL SCORING SHEET

Project/Site Name/No.: Turkey Peak Project Type:	Fill/Impact (Linear Non-linear) Mitigation/Conservation
Stream ID/Name: DS-1 SAR No.: DS-1-24 Size (L	F): 1,016 Date: 2017 Evaluator(s): RW
Stream Type: Perennial - Artificial Ecoregion: Cross Timber	Delineation Performed: X Previously Currently
8-Digit HUC: 12060201 Watershed Condition (develope	ed, pasture, etc.): Pasture, Impoundment Watershed Size: 471 sq. mi.
	Site Photos: Yes ☐ No
Stressor(s): Land use Are normal climatic/hyd	rologic conditions present? X Yes No (If no, explain in Notes)
Based on review of aerial photography and data from previous field delineation of upstream reach Notes: dated January 2009). Artificial flow from Lake Palo Pinto releases, so flow regime score reduced by	(see HDR report dated June 2009) as well as aquatic life monitoring surveys (see water rights application by 1. Incision and widening from upstream lake. Cattle and human use. In-stream habitat estimated.
Stream Characteristics	
Stream Width (Feet)	Stream Height/Depth (Feet)
Avg. Bank to Bank: 50	Avg. Banks: 10
Avg. Waters Edge: 20	Avg. Water: 4
Avg. OHWM: 25	Avg. OHWM: 6

Scoring Table

Core Element	Metric	Metric Score	Core Element Score Calculation	Core Element Score	
	Floodplain connectivity	3			
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	
	Sediment deposition	4	X 20		
Dinarian buffer condition	Riparian buffer (left bank)	1.7	Sum of bank scores / 10	7.5	
Riparian buffer condition	Riparian buffer (right bank)	1.3	x 25	7.5	
In atroom condition	Substrate composition	4	Sum of metric scores / 10	22.5	
In-stream condition	In-stream habitat	5	x 25	22.5	
Lludralagia aanditian	Flow regime	3	Sum of metric scores / 8	21.9	
Hydrologic condition	Channel flow status	4	x 25	21.9	
	Sum of core e	lement scores = c	overall TXRAM stream score	69	
Additional points for limited L R Dominated by native Dominated by hard m	0				
Sum of overall TXR	AM stream score and additional	points = total ov	verall TXRAM stream score	69	

Representative Site Photograph:



Facing downstream at the SAR.

TXRAM STREAM DATA SHEET

Project/Site Name/No.:	urkey Peak Pro	ject Type: ☐ Fill/Impact ([☐ Linear ☐ Non-linear) [2	☑ Mitigation/Conservation
Stream ID/Name: DS-1	SAR No.: [[]	OS-1-24 Size (LF): 1,016	Date: 2017 Eval	uator(s): RW
Stream Type: Perennial -	Artificial Ecoregion: Cro	oss Timbers	Delineation Performed:	Previously Currently
8-Digit HUC: 12060201	Watershed Condition	on (developed, pasture, et	c.): Pasture, Impoundment Water	ershed Size: 471 sq. mi.
	urce: 2014 NAIP / Bing			
Stressor(s): Land use	Are normal	climatic/hydrologic conditi	ons present? ☒ Yes ☐ N	lo (If no, explain in Notes)
Stream Characteristics				
Stream Width (Feet)			ght/Depth (Feet)	
5	50	Avg. Bank	s: 10	
111911111111 = 11911	20	Avg. Wate		
Avg. OHWM:	25	Avg. OHW	/M: 6	
reach (see H water rights a so flow regim	riew of aerial photogr DR report dated Jund application dated Jan ale score reduced by a n-stream habitat esti	e 2009) as well as a uary 2009). Artificia 1. Incision and widel	quatic life monitoring	g surveys (see o Pinto releases,
CHANNEL CONDITION Floodplain Connectivity	,			
Very little incision and access to the original floodplain or fully developed wide bankfull benches.	Slight incision and likely having regular (i.e., at least once a year) access to bankfull benches or newly developed floodplains along majority of the reach.	Moderate incision and presence of near vertical/ undercut banks; irregular (i.e., greater than 2 year return interval) access to floodplain or possible access to floodplain or bankfull benches at isolated areas.	Overwidened or incised channel and likely to widen further; majority of both banks near vertical/undercut; unlikely/rarely having access to floodplain or bankfull benches.	Deeply incised channel or channelized flow; severe incision with flow contained within the banks; majority of banks vertical/undercut.
5	4	3	2	1
Bank Condition				Score: 3
Left Bank Active Erosion	20 % Bight l	Pank Astiva Fracian: 20	% Average: 20	0.0
	ation: ⊠ Natural ☐ Artifici			
Bank Protection/Stabiliza		al		Score: 3
Sediment Deposition				
☐ Less than 20% of the	bottom covered by excessi	ive sediment deposition: ba	ars with established vegeta	ation (5)
	m covered by excessive sec	· ·	=	
	om covered by excessive se osits at in-stream structures			
☐ 60–80% of the bottomin-stream structures (2)	m covered by excessive se	diment deposition; newly o	created bars prevalent; he	avy sediment deposits at
☐ Greater than 80% of	the bottom covered by exce	ssive sediment deposition	resulting in aggrading cha	nnel (1)
				Score: 4

RIPARIAN BUFFER CONDITION

Riparian Buffer - See Table 22 to determine appropriate buffer distance. Confirm in office review.

Identify each buffer type and score according to canopy cover, vegetation community, and land use (see section 3.3.2.1.3).

Left Bank	Buffer Distance: 125.0
-----------	------------------------

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	40	1.2
2. Savannah with pecan and bermudagrass	50	Mix	High	1	50	0.5
3. Eroded bank	0	Undesirable	Intensive	0	10	0
4.						
5.						

Score: <u>1.7</u>

Right Bank

Buffer Type	Canopy Cover	Vegetation Community	Land Use	Score	Percentage of Area	Subtotal
1. Woods with cedar elm, pecan, hackberry, box elder	70	Mix	Moderate	3	20	0.6
2. Pasture with bermudagrass and scattered pecans	30	Undesirable	High	1	70	0.7
3. Trail	10	Undesirable	Intensive	0	10	0
4.						
5.						

Score: 1.3

IN-STREAM CONDITION

Substrate Composition (estimate percentages)

Boulder: 10	Gravel: 30	Fines (silt, clay, muck): 10	Artificial: 5
Cobble: 20	Sand: 25	Bedrock:	Other:

Score: 4

In-stream Habitat (check all habitat types that are present)

Habitat Type	T1	T2	<i>T</i> 3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Undercut Banks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Overhanging Vegetation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Rootmats	✓	✓	✓	✓	✓	✓	✓	✓					
Rootwads	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Woody/Leafy Debris	✓	✓			✓	✓	✓	✓	✓		✓	✓	
Boulders/Cobbles	✓		✓	✓	✓	✓	✓	✓					
Aquatic Macrophytes													
Riffle/Pool Sequence	✓		✓		✓	✓			✓				
Artificial Habitat Enhancement													
Other													
Total No. Present	7	5	6	5	7	7	6	6	5	3	4	3	

Average: 5.3 Score: 5

HYDROLOGIC CONDITION

Flow Regime

☐ Noticeable surface flow present (4)	☐ Isolated pools and no evidence of surface or interstitial flow (1)
☑ Continual pool of water but lacking noticeable flow (3)	☐ Dry channel and no observable pools or interstitial flow (0)
☐ Isolated pools and interstitial (subsurface) flow (2)	
	Score: 3

Channel Flow Status
☑ Water covering greater than 75% of the channel bottom width; less than 25% of channel substrate is exposed (4)
☐ Water covering 50–75% of the channel bottom width; 25–50% of channel substrate is exposed (3)
☐ Water covering 25–50% of the channel bottom width; 50–75% of channel substrate is exposed (2)
☐ Water present but covering less than 25% of the channel bottom width; greater than 75% of channel substrate is exposed (1)
☐ No water present in the channel; 100% of channel substrate exposed (0)

Score: 4

Appendix G: Stream	Final Scoring She Mitigation SARs I	ets for Proposed Proposed Conditi	Mitigation – Downs ons	stream

Version 1.0 – Final Draft TXRAM STREAM FINAL SCORING SHEET FOR EVALUATING PROPOSED MITIGATION/IMPACT ACTIVITIES

TARAW STREAM FINAL	. SCORING SHEET FOR EVALUA	ATING PROP	OSED WITIGATION/IMPAC	CI ACTIVITIES						
Project/Site Name/No.:	Turkey Peak Project Type: [Fill/Impact	(□ Linear □ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: DS-1	SAR No.: 1	Stream ID/Name: DS-1	SAR No.: 1	Stream ID/Name: DS-1	SAR No.: 1
Stream ID/Name: Palo Pinto	Creek (DS-1) Downstream Enhancer	nent SAR No.:	DS-1-1 Size (LF): 990 Date:	2017 Evaluator(s): RW	Additional Notes: Propo		Additional Notes: Prop	_	Additional Notes: Prop	
Stream Type: Perennial - Ar	tificial Ecoregion: <u>Cross Timbers</u> _		_ Delineation Performed: Pr	eviously Currently	the end of construction.		at the end of monitoring for floodplain connectivi	. Score will improve	target at maturity. Score condition after cattle ren	e will improve for banl
8-Digit HUC: <u>12060201</u>	Watershed Condition (develope	ed, pasture, etc	c.): Pasture, Ponds Wate	rshed Size: 471 sq. mi.			operations plan of proje	ct to increase high flow	allows revegetation to st	abilize soils. Scores
Aerial Photo Date and Source	ce: 2014 NAIP	Site Photos: N	/A Rep	resentative: X Yes No			events that provide regularity bankfull benches. Scor		will improve for riparian removal and vegetation	
	Are normal climat						sediment deposition after planting allows revegeta		planting to improve nativ	
• •	for SAR following activities described		•	,			planting allows reveget	dion to stabilize soils.		
Stream Characteristics	<u></u>	gaop.								
Stream Width (Feet)		Stream Heid	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Bank			50	10	50	10	50	10
Avg. Waters Edge: 20		Avg. Wate	er: 4		20	4	20	4	20	4
Avg. OHWM: 25		Avg. OHW	/M: 6		25	6	25	6	25	6
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring_	Year/Option _At Ma	turity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		4		4	
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	3	16.7	5	23.3	5	23.3
	Sediment deposition	4	X 25		4		5		5	
	Riparian buffer (left bank)	2.0	Sum of bank scores / 10 x 25	40.0	3.5		4		5	
Riparian buffer condition	Riparian buffer (right bank)	2.0		10.0	3.3	17.0	4	20.0	5	25.0
	Substrate composition	4	Sum of metric scores / 10		4		4		4	
In-stream condition	In-stream habitat	5	x 25	22.5	5	22.5	5	22.5	5	22.5
11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Flow regime	3	Sum of metric scores / 8	04.0	3	24.0	3	24.0	3	24.0
Hydrologic condition	Channel flow status	4	x 25	21.9	4	21.9	4	21.9	4	21.9
			overall TXRAM stream score	71	-	78	-	88	-	93
Additional points for limited	habitats = overall TXRAM stream scc	re x 0.025 for	each bank (right/left) if:							
Dominated by native	trees greater than 24-inch diameter a	t breast height		0	-	0	-	0	-	0
	mast (i.e., acorns and nuts) producing TXRAM stream score and additional p	•		71	 	78	<u> </u>	88	_	93
	<u> </u>			· ·						
Representative Site Photo	graph:	1					-1			
		Fac	cing downstream near the upper en	nd of the existing SAR.	See figure and description mitigation plan. After cons trees and restricting clean	truction includes planting	See figure and description mitigation plan. After mon veget	itoring includes growth of	See figure and description mitigation plan. At maturit for mitig	y includes target scores

Project/Site Name/No.: _	Turkey Peak Project Type:	☐ Fill/Impact (☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: DS-1	SAR No : 5	Stream ID/Name: DS-1	SAR No : 5	Stream ID/Name: DS-1	SAR No : 5
Stream ID/Name: Palo Pinto	Creek (DS-1) Downstream Enhance	ment SAR No.:	DS-1-5 Size (LF): 1,022 Date	e: <u>2017</u> Evaluator(s): <u>RW</u>	Additional Notes: Propos	_	Additional Notes: Prop		Additional Notes: Propo	
	rtificial Ecoregion: <u>Cross Timbers</u>				the end of construction.		at the end of monitoring for floodplain connectivi	Score will improve	target at maturity. Score condition after cattle rem	will improve for bank oval and planting
8-Digit HUC: <u>12060201</u>	Watershed Condition (developed	ed, pasture, etc	:.): Pasture, Ponds Wate	rshed Size: <u>471 sq. mi.</u>			operations plan of proje events that provide regu		allows revegetation to sta will improve for riparian b	
Aerial Photo Date and Sour	ce: <u>2014 NAIP</u>	Site Photos: N	<u>/A</u> Rep	resentative: X Yes No			bankfull benches. Score	e will improve for	removal and vegetation r	management /
Stressor(s): N/A	Are normal clima	tic/hydrologic co	onditions present? ⊠ Yes □	No (If no, explain in Notes)			sediment deposition after planting allows revegeta		planting to improve nativ	e community.
Notes: Proposed conditions	for SAR following activities described	in mitigation pl	an.							
Stream Characteristics							- L		<u> </u>	
Stream Width (Feet)		Stream Heig	ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Bank	s: 10		50	10	50	10	50	10
Avg. Waters Edge: 20		Avg. Wate	r: 4		20	4	20	4	20	4
Avg. OHWM: 25		Avg. OHW	M: 6		25	6	25	6	25	6
Scoring Table					Year/Option _ <u>End</u>	of Construction_	Year/Option _ <u>En</u>	of Monitoring	Year/Option _ <u>At Mat</u>	<u>urity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		4		4	
Channel condition	Bank condition	3	Sum of metric scores / 15	16.7	3	16.7	5	23.3	5	23.3
	Sediment deposition	4	x 25		4		5		5	
	Riparian buffer (left bank)	2.1	Sum of bank scores / 10		3.8		4		5	
Riparian buffer condition	Riparian buffer (right bank)	2.1	x 25	10.5	3.4	18.0	4	20.0	5	25.0
	Substrate composition	4	O		4		4		4	
In-stream condition	In-stream habitat	5	Sum of metric scores / 10 x 25	22.5	5	22.5	5	22.5	5	22.5
		-			-		 			
Hydrologic condition	Flow regime Channel flow status	3	Sum of metric scores / 8 x 25	21.9	3 4	21.9	3	21.9	3	21.9
	Chariner now status	4					4		4	
	Cum of core ale	mant agaras	overall TXRAM stream score	72		79]	88		93
Additional points for limited	habitats = overall TXRAM stream sco			12	-	79	-	00	-	93
L R Dominated by native	e trees greater than 24-inch diameter a mast (i.e., acorns and nuts) producing	at breast height	,	0	-	0	-	0	-	0
	TXRAM stream score and additional p	•		72	-	79	-	88	-	93
	·									
Representative Site Photo	ograph:	<u> </u>								
		Fa	acing downstream near the middle	of the existing SAR.	See figure and descriptior mitigation plan. After cons trees and restricting clean	truction includes planting	See figure and descriptior mitigation plan. After mon vegeta	toring includes growth of	See figure and description mitigation plan. At maturity for mitiga	includes target scores

Project/Site Name/No.: _	Turkey Peak Project Type: [☐ Fill/Impact (☐ Linear ☐ Non-linear) 🗵	Mitigation/Conservation	Stream ID/Name: DS-1	SAR No.: 10	Stream ID/Name: DS-1	SAR No.: 10	Stream ID/Name: DS-1	SAR No.: 10
Stream ID/Name: Palo Pinto	Creek (DS-1) Downstream Enhance	ment SAR No.:	DS-1-10 Size (LF): 1,229 Da	te: 2017 Evaluator(s): RW	Additional Notes: Propo		Additional Notes: Prop	<u> </u>	Additional Notes: Propo	
Stream Type: Perennial - Ar	tificial Ecoregion: Cross Timbers_		Delineation Performed: 🛛 Pr	reviously	the end of construction.		at the end of monitoring for floodplain connectivit		target at maturity. Score condition after cattle rem	will improve for bank oval and planting
8-Digit HUC: <u>12060201</u>	Watershed Condition (develope	ed, pasture, etc	.): <u>Pasture, Ponds</u> Wate	rshed Size: 471 sq. mi.			operations plan of project	ct to increase high flow	allows revegetation to sta	abilize soils. Scores
Aerial Photo Date and Sour	ce: 2014 NAIP	Site Photos: N	'A Rep	oresentative: X Yes X No			events that provide regulation bankfull benches. Score		will improve for riparian be removal and vegetation r	
	· · · · · · · · · · · · · · · · · · ·		onditions present? ⊠ Yes □				sediment deposition after planting allows revegeta	er cattle removal and	planting to improve native	
Notes: Proposed conditions	for SAR following activities described	in mitigation pl	an.				planting anows revegeta			
Stream Characteristics							<u> </u>			
Stream Width (Feet)		Stream Heig	ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Bank	s: 10		50	10	50	10	50	10
Avg. Waters Edge: 20		Avg. Wate	r: 4		20	4	20	4	20	4
Avg. OHWM: 25		Avg. OHW	M: 6		25	6	25	6	25	6
Scoring Table					Year/Option <u>End</u>	of Construction	Year/Option <u>End</u>	d of Monitoring	Year/Option <u>At Mat</u>	urity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		4		4	
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	3	16.7	5	23.3	5	23.3
	Sediment deposition	4	X 25		4		5		5	
	Riparian buffer (left bank)	1.9	Sum of bank scores / 10		3.4		4		5	
Riparian buffer condition	Riparian buffer (right bank)	1.5	x 25	8.5	2.6	15.0	4	20.0	5	25.0
	Substrate composition	4	Sum of metric scores / 10	22.5	4		4		4	
In-stream condition	In-stream habitat	5	x 25		5	22.5	5	22.5	5	22.5
	Flow regime	3	Sum of metric scores / 8		3		3		3	
Hydrologic condition	Channel flow status	4	x 25	21.9	4	21.9	4	21.9	4	21.9
	Sum of core ele	ment scores =	overall TXRAM stream score	70	-	76	-	88	-	93
	habitats = overall TXRAM stream sco	ore x 0.025 for o	each bank (right/left) if:							
L R	e trees greater than 24-inch diameter a	t breast height	in the tree starts	0	-	0	-	0	-	0
	mast (i.e., acorns and nuts) producing TXRAM stream score and additional p			70	-	76		88		93
	·	onno – total o	Totali TXIVAIII Stream Socie	70		70		00		
Representative Site Photo	ograph:	Т			T		T			
		Fa	acing downstream near the middle	of the existing SAR.	See figure and description mitigation plan. After cons trees and restricting clear	truction includes planting	See figure and description mitigation plan. After moni vegeta	toring includes growth of	See figure and description o mitigation plan. At maturity for mitiga	includes target scores

Project/Site Name/No.:	Turkey Peak Project Type: [☐ Fill/Impact (☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	0, 10/51 50.4	0.45.1140	0, 10,41 50,4	0.45.11 4.0	0, 15/4, 50.4	040 N 40
•	Creek (DS-1) Downstream Enhancer		•	-	Stream ID/Name: <u>DS-1</u> Additional Notes: Propo		Stream ID/Name: DS-1 Additional Notes: Prop		Stream ID/Name: DS-1 Additional Notes: Prop	
	tificial Ecoregion: <u>Cross Timbers</u>				the end of construction.	sed condition scores at	at the end of monitoring for floodplain connectiv	. Score will improve	target at maturity. Scor	e will improve for banl
8-Digit HUC: <u>12060201</u>	Watershed Condition (develope	ed. pasture. etc	.): Pasture. Ponds Wate	rshed Size: 471 sa. mi.			operations plan of proje	ct to increase high flow	allows revegetation to s	tabilize soils. Scores
Aerial Photo Date and Source				presentative: X Yes No			events that provide registant bankfull benches. Scor	e will improve for	will improve for riparian removal and vegetation	management /
Stressor(s): N/A	Are normal climat	ic/hydrologic co	onditions present? ⊠ Yes □	No (If no, explain in Notes)			sediment deposition aft planting allows reveget:		planting to improve nation	ve community.
	for SAR following activities described		•				planting allows reveged	dion to stabilize solis.		
Stream Characteristics									1	
Stream Width (Feet)		Stream Heig	ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Bank	s: 10		50	10	50	10	50	10
Avg. Waters Edge: 20		Avg. Wate	r: 4		20	4	20	4	20	4
Avg. OHWM: 25		Avg. OHW	M: 6		25	6	25	6	25	6
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring	Year/Option <u>At Ma</u>	turity
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		4		4	
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	3	16.7	5	23.3	5	23.3
	Sediment deposition	4	, <u>, , , , , , , , , , , , , , , , , , </u>		4		5		5	
	Riparian buffer (left bank)	1.8	Sum of bank scores / 10		3.4		4		5	
Riparian buffer condition	Riparian buffer (right bank)	1.7	x 25	8.8	2.9	15.8	4	20.0	5	25.0
	Substrate composition	4	Sum of metric scores / 10		4		4		4	
In-stream condition	In-stream habitat	5	x 25	22.5	5	22.5	5	22.5	5	22.5
	Flow regime	3	0 (): /0		3		3		3	
Hydrologic condition	Channel flow status	4	Sum of metric scores / 8 x 25	21.9	4	21.9	4	21.9	4	21.9
	Chamic new states	'					<u> </u>		J [
	Sum of core ele	ment scores -	overall TXRAM stream score	70	1	77] [88]	93
Additional points for limited	habitats = overall TXRAM stream sco			10		11		00		33
L R Dominated by native	trees greater than 24-inch diameter a	it breast height	, ,	0	-	0	-	0	-	0
	mast (i.e., acorns and nuts) producing			70	-	77	-	00	-	00
Sum of overall	TXRAM stream score and additional p	oints = total ov	Veraii TXKAWI Stream Score	70	-	77	-	88	-	93
Representative Site Photo	graph:									
		Faci	ing upstream at the downstream e.	nd of the existing SAR.	See figure and description mitigation plan. After cons trees and restricting clear	struction includes planting	See figure and descriptio mitigation plan. After mor veget	itoring includes growth of	See figure and description mitigation plan. At maturit for mitig	y includes target scores

TAKAM STREAM TINAL	SCOKING SHEET TOK EVALUA	AT INOT INOT	OSED WITTOATTON/IWIT AC	OI ACTIVITIES							
Project/Site Name/No.:	Turkey Peak Project Type: [Fill/Impact	(□ Linear □ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: DS-1	SAR No.: 14	Stream ID/Name: DS-1	SAR No.: 14	Stream ID/Name: DS-1	SAR No.: 14	
Stream ID/Name: Palo Pinto	Creek (DS-1) Downstream Enhancer	ment SAR No.:	DS-1-14 Size (LF): 1,024 Da	te: <u>2017</u> Evaluator(s): <u>RW</u>	Additional Notes: Propos		Additional Notes: Prop		Additional Notes: Proposed condition scores		
Stream Type: Perennial - Ar	tificial Ecoregion: <u>Cross Timbers</u> _		_ Delineation Performed: Pr	eviously Currently	the end of construction.		at the end of monitoring for floodplain connectivi		target at maturity. Score condition after cattle ren	e will improve for banl	
8-Digit HUC: _12060201	Watershed Condition (develope	ed, pasture, etc	c.): Pasture, Ponds Wate	rshed Size: 471 sq. mi			operations plan of proje	ect to increase high flow	allows revegetation to s	tabilize soils. Scores	
-	ce: <u>2014 NAIP</u>	•		resentative: X Yes No			events that provide regularity bankfull benches. Scor		will improve for riparian removal and vegetation		
	Are normal climat						sediment deposition after planting allows revegeta	er cattle removal and	planting to improve nativ		
Notes: Proposed conditions	for SAR following activities described	in mitigation p	lan.				p.a.rg ao.ro.rorogo				
Stream Characteristics	<u></u>										
Stream Width (Feet)		Stream Heig	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	
Avg. Bank to Bank: 50		Avg. Bank			50	10	50	10	50	10	
Avg. Waters Edge: 20		Avg. Wate	er: 4		20	4	20	4	20	4	
Avg. OHWM: 25		Avg. OHW	/M: 6		25	6	25	6	25	6	
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring	Year/Option _ <u>At Ma</u>	turity	
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	
	Floodplain connectivity	3			3		4		4		
Channel condition	Bank condition	3	Sum of metric scores / 15	16.7	3	16.7	5	23.3	5	23.3	
	Sediment deposition	4	_ x 25		4		5	_	5		
	Riparian buffer (left bank)	1.8	Sum of bank scores / 10 x 25		3.4		4		5		
Riparian buffer condition	Riparian buffer (right bank)	2.4		10.5	3.7	17.8	4	20.0	5	25.0	
	Substrate composition	4	Sum of metric scores / 10		4		4		4		
In-stream condition	In-stream habitat	5	x 25	22.5	5	22.5	5	22.5	5	22.5	
	Flow regime	3	Cura of matric accuracy (3		3		3		
Hydrologic condition	Channel flow status	1	Sum of metric scores / 8 x 25	21.9	4	21.9	1	21.9	4	21.9	
	Ondriner new status						T T		J		
	Sum of core ele	ment scores =	overall TXRAM stream score	72	<u> </u>	79] [88	_	93	
Additional points for limited	habitats = overall TXRAM stream sco			· -							
L R			, ,	0	_	0	_	0	_	0	
Dominated by native	trees greater than 24-inch diameter a mast (i.e., acorns and nuts) producing	it breast neigni native species	in the tree strata								
	TXRAM stream score and additional p	•		72	-	79	-	88	-	93	
Representative Site Photo	graph:										
	12/17/2015	Fac	ing downstream at the upstream ei	nd of the existing SAR.	See figure and description mitigation plan. After cons trees and restricting cleari	truction includes planting	See figure and description mitigation plan. After mon veget	nitoring includes growth of	See figure and description mitigation plan. At maturit for mitig	ty includes target scores	

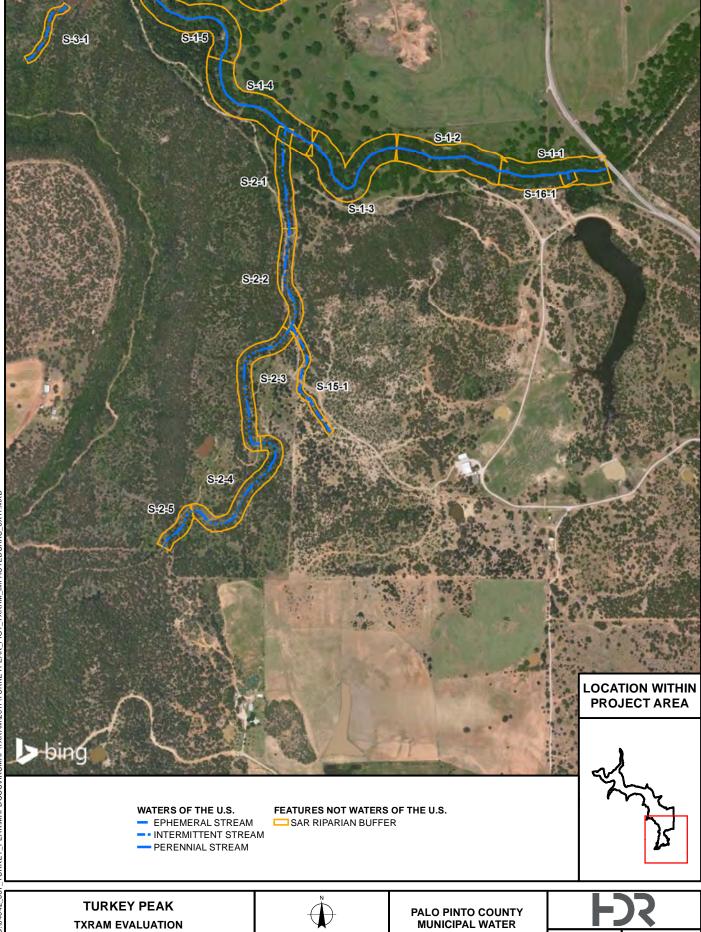
Project/Site Name/No.:	<u>Furkey Peak</u> Project Type: [☐ Fill/Impact (∵ Linear □ Non-linear) ⊠	Mitigation/Conservation						2.2	
•	Creek (DS-1) Downstream Enhancer		•	-	Stream ID/Name: <u>DS-1</u> Additional Notes: Propo		Stream ID/Name: DS-1 Additional Notes: Prop		Stream ID/Name: <u>DS-1</u> SAR No.: <u>17</u> Additional Notes: Proposed condition scores		
	tificial Ecoregion: <u>Cross Timbers</u>				the end of construction.	sed condition scores at	at the end of monitoring	. Score will improve	target at maturity. Score	e will improve for bank	
8-Digit HUC: <u>12060201</u>	Watershed Condition (develope						for floodplain connectivo perations plan of projections	ct to increase high flow	condition after cattle ren allows revegetation to s	tabilize soils. Scores	
Aerial Photo Date and Source				presentative: X Yes No			events that provide registant bankfull benches. Scor	ular flow access to e will improve for	will improve for riparian removal and vegetation		
	Are normal climat						sediment deposition aft planting allows reveget:	er cattle removal and	planting to improve nativ		
	for SAR following activities described		•				planting allows reveget	and it of the single of the s			
Stream Characteristics									<u> </u>		
Stream Width (Feet)		Stream Heig	nht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	
Avg. Bank to Bank: 50		Avg. Bank	s: 10		50	10	50	10	50	10	
Avg. Waters Edge: 20		Avg. Wate	r: 4		20	4	20	4	20	4	
Avg. OHWM: 25		Avg. OHW	M: 6		25	6	25	6	25	6	
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option <u>En</u>	d of Monitoring	Year/Option <u>At Ma</u>	<u>turity</u>	
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	
	Floodplain connectivity	3			3		4		4		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	3	16.7	5	23.3	5	23.3	
	Sediment deposition	4	A 23		4		5		5		
5	Riparian buffer (left bank)	2.2	Sum of bank scores / 10		3.6		4		5		
Riparian buffer condition	Riparian buffer (right bank)	3.0	x 25	13.0	4.0	19.0	4	20.0	5	25.0	
	Substrate composition	4	Sum of metric scores / 10		4		4		4		
In-stream condition	In-stream habitat	5	x 25	22.5	5	22.5	5	22.5	5	22.5	
	Flow regime	3	Sum of metric scores / 8	21.0	3		3		3		
Hydrologic condition	Channel flow status	4	x 25	21.9	4	21.9	4	21.9	4	21.9	
	Sum of core ele	ment scores =	overall TXRAM stream score	74	-	80	-	88	-	93	
	habitats = overall TXRAM stream sco	ore x 0.025 for 6	each bank (right/left) if:								
	trees greater than 24-inch diameter a			0	-	0	-	0	-	0	
	TXRAM stream score and additional p			74	-	80		88	-	93	
Danner and a time Oite Director											
Representative Site Photo	grapn:										
			Facing downstream at the e	xisting SAR.	See figure and description mitigation plan. After cons trees and restricting clear	struction includes planting	See figure and descriptio mitigation plan. After mor veget	itoring includes growth of	See figure and description mitigation plan. At maturit for mitig	y includes target scores	

Project/Site Name/No.: _	Turkey Peak Project Type:	☐ Fill/Impact (☐ Linear ☐ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: DS-1	SAR No.: 20	Stream ID/Name: DS-1	SAR No.: <u>20</u>	Stream ID/Name: DS-1	SAR No.: <u>20</u>
	o Creek (DS-1) Downstream Enhance rtificial Ecoregion: _Cross Timbers				Additional Notes: Proporthe end of construction.	sed condition scores at	Additional Notes: Proposed condition scores at the end of monitoring. Score will improve for floodplain connectivity with proposed		Additional Notes: Proposed condition scores target at maturity. Score will improve for bank condition after cattle removal and planting	
8-Digit HUC: <u>12060201</u>	Watershed Condition (develop						operations plan of proje		allows revegetation to sta	
Aerial Photo Date and Sour	· ·	Site Photos: N	•	presentative: X Yes No			events that provide regularity bankfull benches. Scor		will improve for riparian be removal and vegetation r	
			•				sediment deposition after	er cattle removal and	planting to improve nativ	
· ,			onditions present? ⊠ Yes □	No (if no, explain in Notes)			planting allows revegeta	ation to stabilize soils.		
Notes: <u>Proposed conditions</u>	for SAR following activities described	d in mitigation pl	an.							
Stream Characteristics		1								1
Stream Width (Feet)			ht/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)
Avg. Bank to Bank: 50		Avg. Bank		50	10	50	10	50	10	
Avg. Waters Edge: 20 Avg. OHWM: 25		Avg. Wate Avg. OHW			20 25	6	20 25	6	20 25	6
Avg. OHVVIII. 20		Avg. Onw	IVI. O		23	0	25	U	25	10
Scoring Table					Year/Option <u>End</u>	of Construction_	Year/Option _ En	d of Monitoring	Year/Option <u>At Mat</u>	<u>urity</u>
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score
	Floodplain connectivity	3			3		4		4	
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	3	16.7	5	23.3	5	23.3
	Sediment deposition	4	X 25		4		5		5	
	Riparian buffer (left bank)	2.2	Sum of bank scores / 10		3.6		4		5	
Riparian buffer condition	Riparian buffer (right bank)	1.8	x 25	10.0	3.4	17.5	4	20.0	5	25.0
	Substrate composition	4	Sum of metric scores / 10 x 25		4		4		4	
In-stream condition	In-stream habitat	5		22.5	5	22.5	5	22.5	5	22.5
	Flow regime	3	Cum of matric accres / 9	21.9	3		3		3	
Hydrologic condition	Channel flow status	4	Sum of metric scores / 8 x 25		4	21.9	4	21.9	4	21.9
	Chains now states	<u> </u>			<u> </u>				·	
	Sum of core ele	ement scores =	overall TXRAM stream score	71	-	79	-	88	-	93
	habitats = overall TXRAM stream sc	ore x 0.025 for 6	each bank (right/left) if:							
L R Dominated by native	e trees greater than 24-inch diameter mast (i.e., acorns and nuts) producing	at breast height	in the tree strata	0	-	0	-	0	-	0
	TXRAM stream score and additional			71	-	79	-	88	-	93
Danna and diversity of the Diversity						1				1
Representative Site Photo	ygraph:		Facing downstream at the e	xisting SAR.	See figure and description mitigation plan. After cons trees and restricting clear	struction includes planting	See figure and description mitigation plan. After mon veget	itoring includes growth of	See figure and description of mitigation plan. At maturity for mitiga	includes target scores

TARAM STREAM THAL	. SCOKING SHEET TOK EVALUA	ATINO TROI	OSED WITTOATTON/IWIT A	31 ACTIVITIES							
Project/Site Name/No.: _	Turkey Peak Project Type: [Fill/Impact	(□ Linear □ Non-linear) ⊠	Mitigation/Conservation	Stream ID/Name: DS-1	SAR No.: 24	Stream ID/Name: DS-1	SAR No.: 24	Stream ID/Name: DS-1	SAR No.: 24	
Stream ID/Name: Palo Pinto	Creek (DS-1) Downstream Enhancer	ment SAR No.:	<u>DS-1-24</u> Size (LF): <u>1,016</u> Da	te: <u>2017</u> Evaluator(s): <u>RW</u>	Additional Notes: Propo		Additional Notes: Prop	<u></u>	Additional Notes: Proposed condition scores target at maturity. Score will improve for bank condition after cattle removal and planting		
Stream Type: Perennial - A	tificial Ecoregion: <u>Cross Timbers</u> _		_ Delineation Performed: 🛛 Pr	eviously Currently	the end of construction.		at the end of monitoring for floodplain connectivi				
8-Digit HUC: _12060201	Watershed Condition (develope	ed, pasture, etc	c.): Pasture, Ponds Wate	rshed Size: 471 sq. mi			operations plan of proje	ct to increase high flow	allows revegetation to st	tabilize soils. Scores	
-	ce: <u>2014 NAIP</u>	•		resentative: X Yes No			events that provide regularity bankfull benches. Scor		will improve for riparian removal and vegetation		
	Are normal climat		_				sediment deposition after planting allows revegeta	er cattle removal and	planting to improve nativ		
	for SAR following activities described		•	(·· ·····) - · · · · · · · · · · · · · ·			planting allows revegete	ation to stabilize soils.			
-	Tol OAK following activities described	iii iiiiigation p	an.								
Stream Characteristics Stream Width (Feet)		Stream Heir	ght/Depth (Feet)		Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft)	Stream Width (Ft)	Stream Height (Ft	
Avg. Bank to Bank: 50		Avg. Bank			50	10	50	10	50	10	
Avg. Waters Edge: 20		Avg. Wate			20	4	20	4	20	4	
Avg. OHWM: 25		Avg. OHW			25	6	25	6	25	6	
3		J 3 -	-								
Scoring Table	Year/Option <u>End</u>	of Construction	Year/Option <u>En</u>	<u>d of Monitoring</u>	Year/Option <u>At Maturity</u>						
Core Element	Metric	Existing Metric Score	Core Element Score Calculation	Existing Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	Proposed Metric Score	Proposed Core Element Score	
	Floodplain connectivity	3			3		4		4		
Channel condition	Bank condition	3	Sum of metric scores / 15 x 25	16.7	3	16.7	5	23.3	5	23.3	
	Sediment deposition	4	X 25		4		5		5		
	Riparian buffer (left bank)	1.7	Sum of bank scores / 10	7.5	3.3		4		5		
Riparian buffer condition	Riparian buffer (right bank)	Ouin or bu	x 25		3.1	16.0	4	20.0	5	25.0	
	Substrate composition	4	Sum of matric scarce / 10		4		4		4		
In-stream condition	In-stream habitat	5	Sum of metric scores / 10 x 25	22.5	5	22.5	5	22.5	5	22.5	
	Flow regime	3	Sum of metric scores / 8		3		3		3		
Hydrologic condition	Channel flow status	4	Sum of metric scores / 8 x 25	21.9	4	21.9	4	21.9	4	21.9	
		<u> </u>									
	Sum of core ele	ment scores =	overall TXRAM stream score	69	-	77	_	88	_	93	
	habitats = overall TXRAM stream sco	ore x 0.025 for	each bank (right/left) if:								
L R	trees greater than 24-inch diameter a	t broast boight		0	-	0	-	0	-	0	
Dominated by hard	mast (i.e., acorns and nuts) producing	native species	in the tree strata								
Sum of overall	TXRAM stream score and additional p	oints = total o	verall TXRAM stream score	69	-	77	-	88	-	93	
Representative Site Photo	graph:	_									
			Facing downstream at the e	xisting SAR.	See figure and description mitigation plan. After cons trees and restricting clear	struction includes planting	See figure and description mitigation plan. After mon veget	itoring includes growth of	See figure and description mitigation plan. At maturit for mitig	y includes target scores	

Appendix H: Maps

TXRAM Report Turkey Peak Reservoir



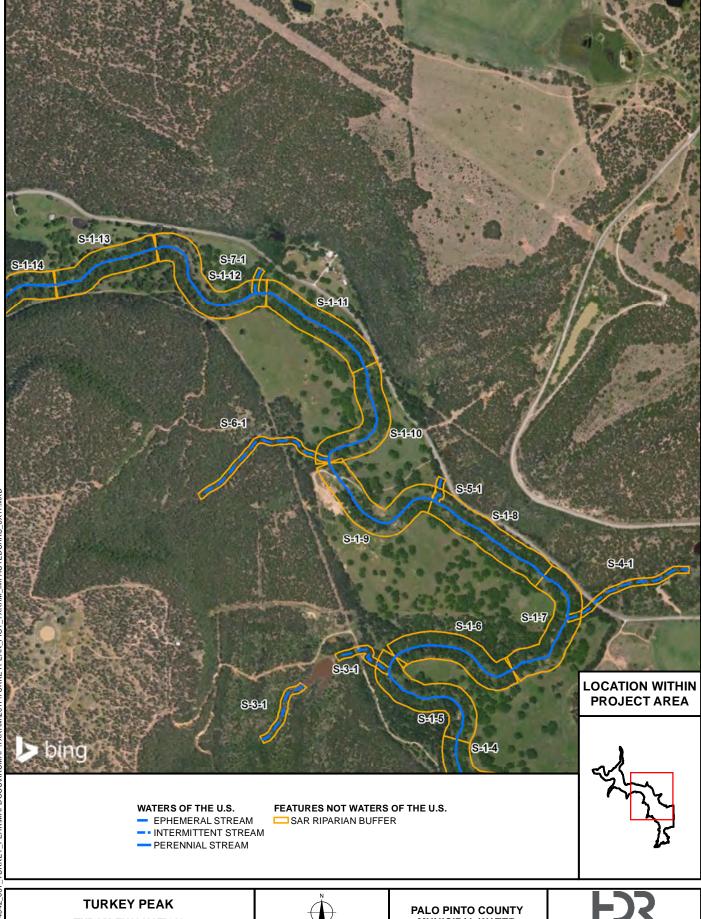
DISTRICT NO. 1

JUN 2017

FIGURE 1-1

PATH: 0:\94042_03

IMPACTED SAR MAPS



TURKEY PEAK

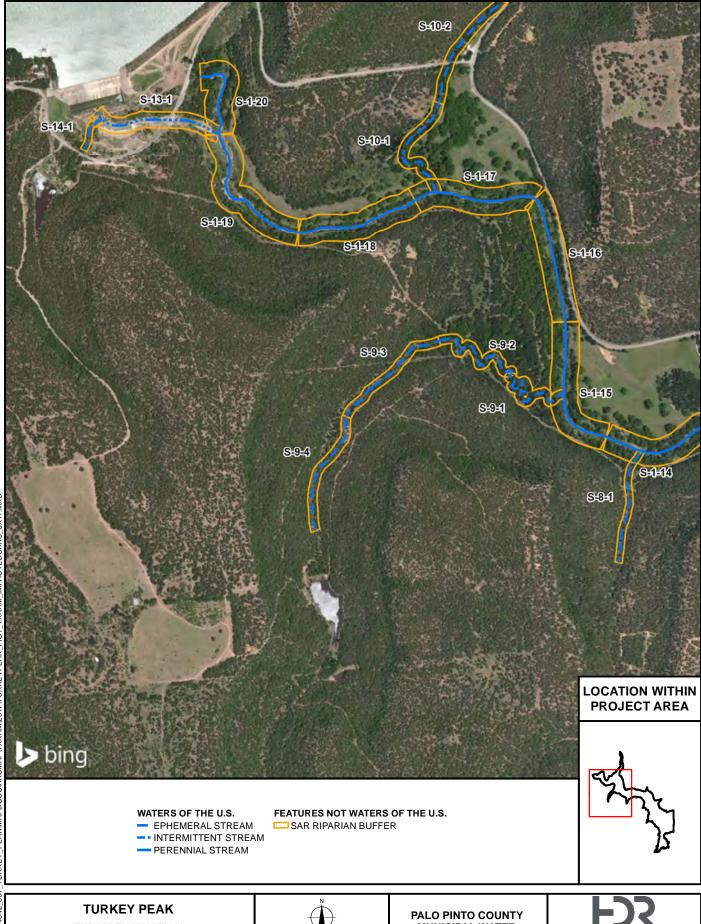
TXRAM EVALUATION

IMPACTED SAR MAPS



PALO PINTO COUNTY MUNICIPAL WATER DISTRICT NO. 1



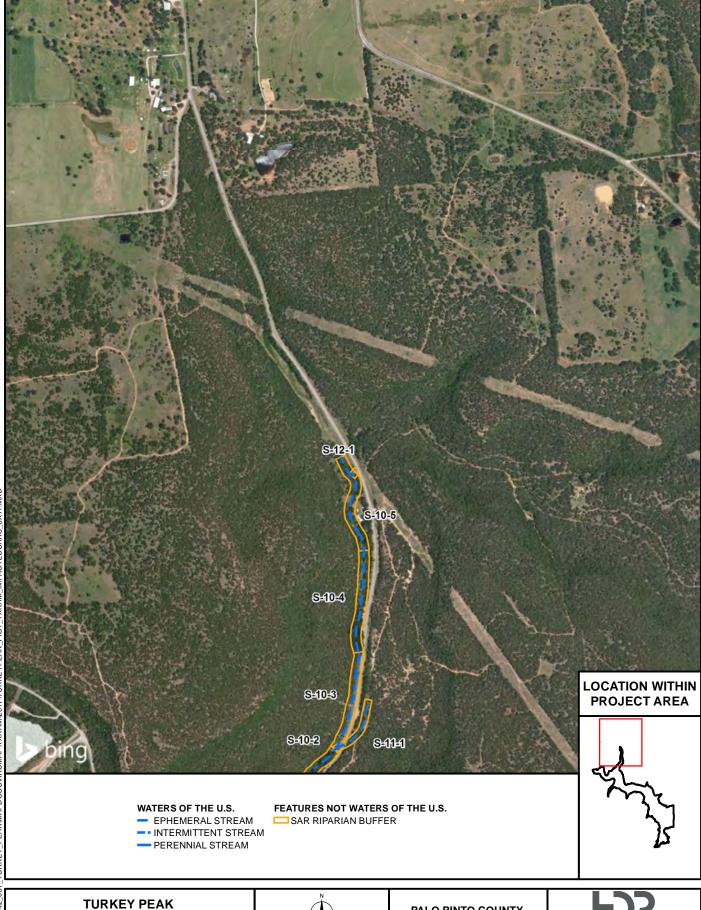


TXRAM EVALUATION
IMPACTED SAR MAPS



PALO PINTO COUNTY MUNICIPAL WATER DISTRICT NO. 1

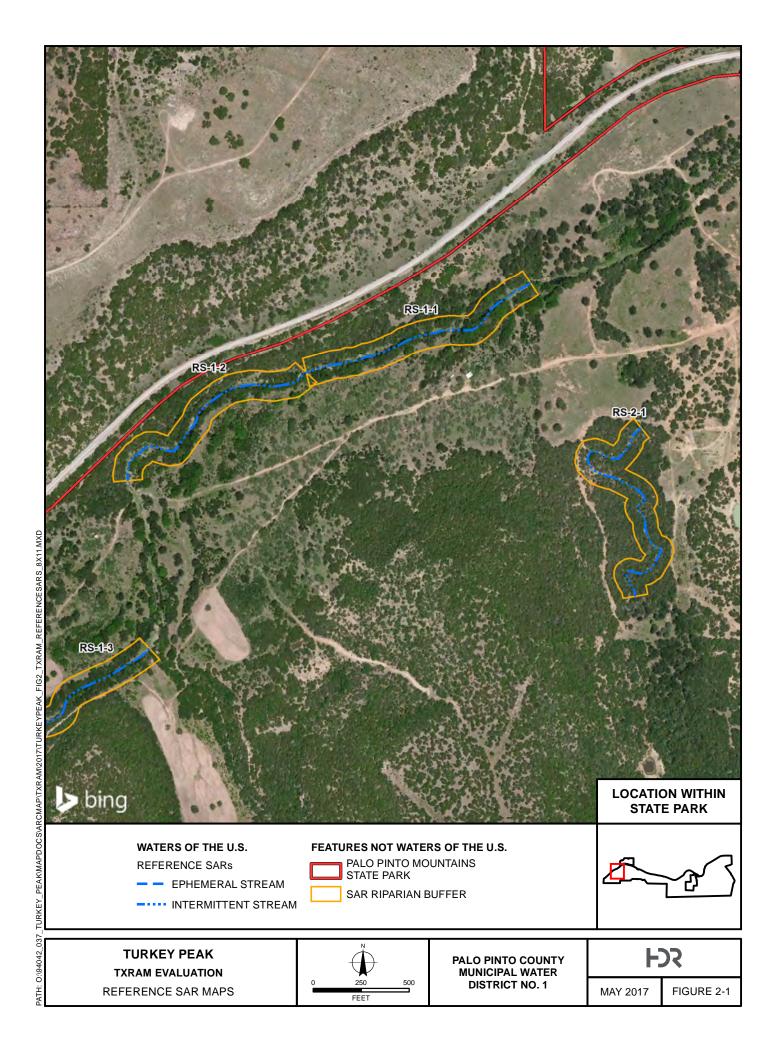


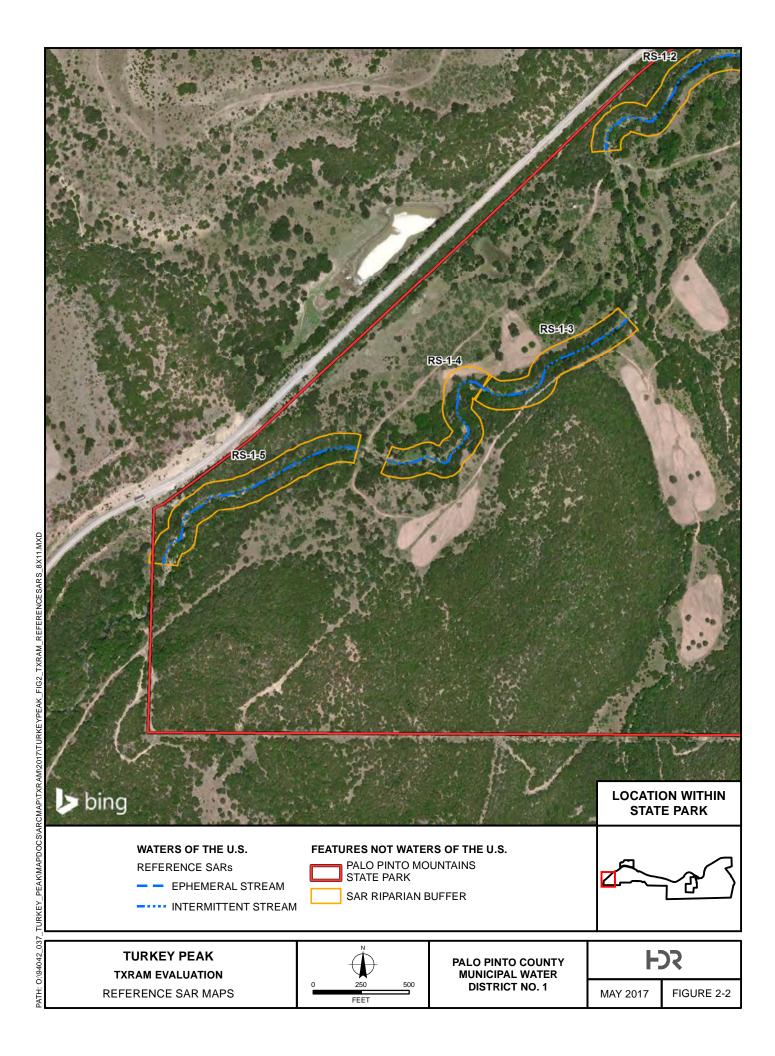


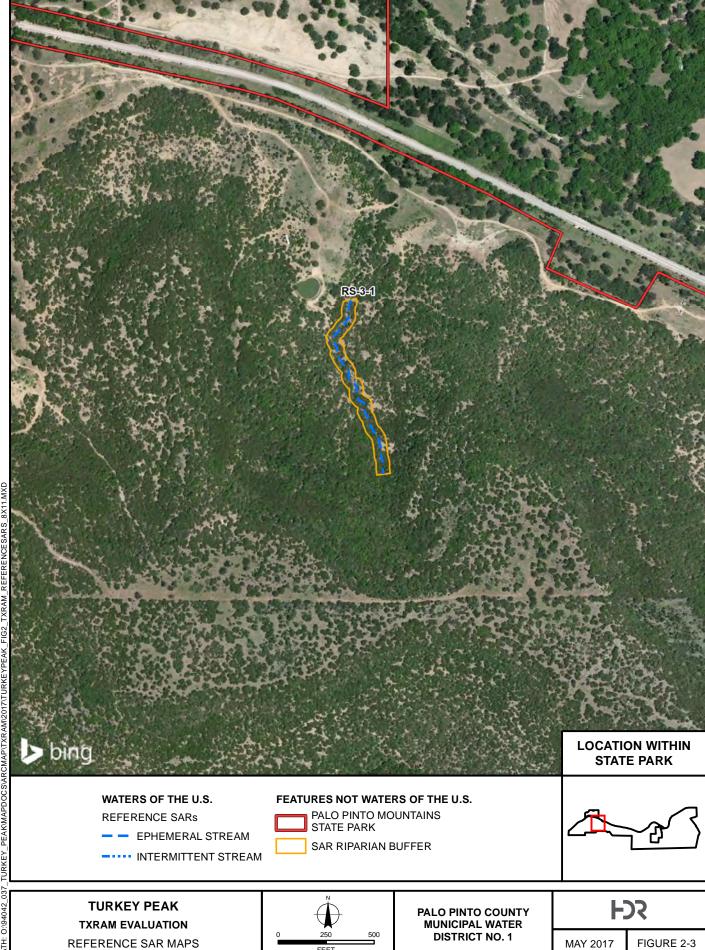
TURKEY PEAK
TXRAM EVALUATION
IMPACTED SAR MAPS

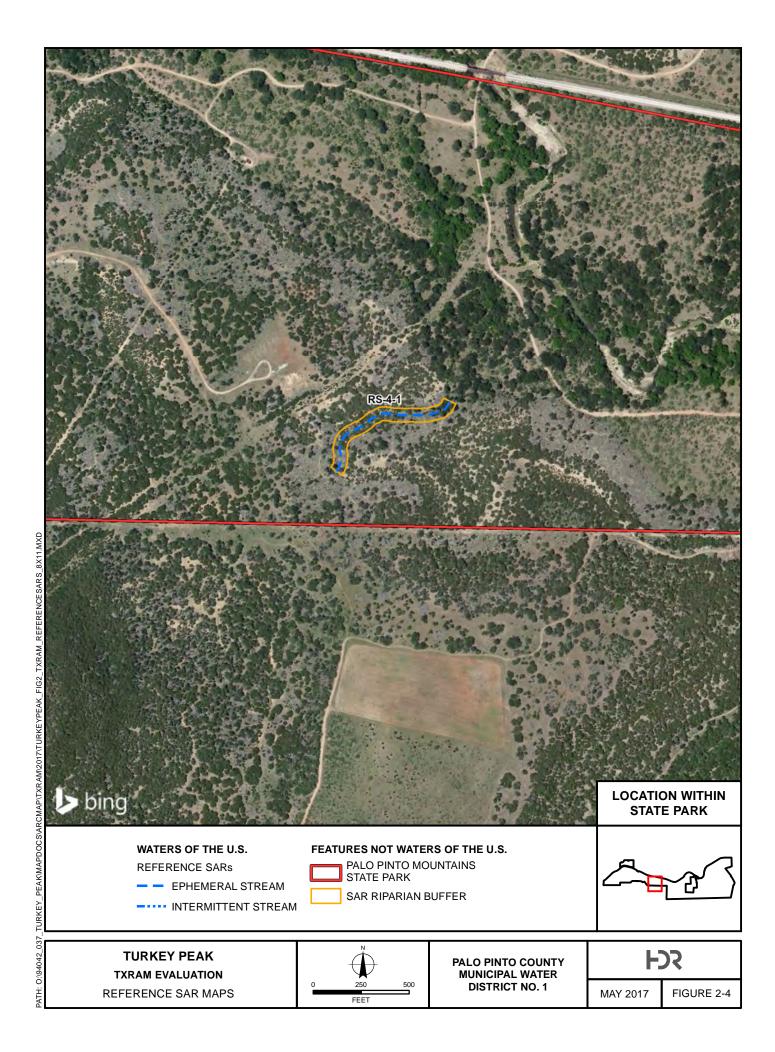


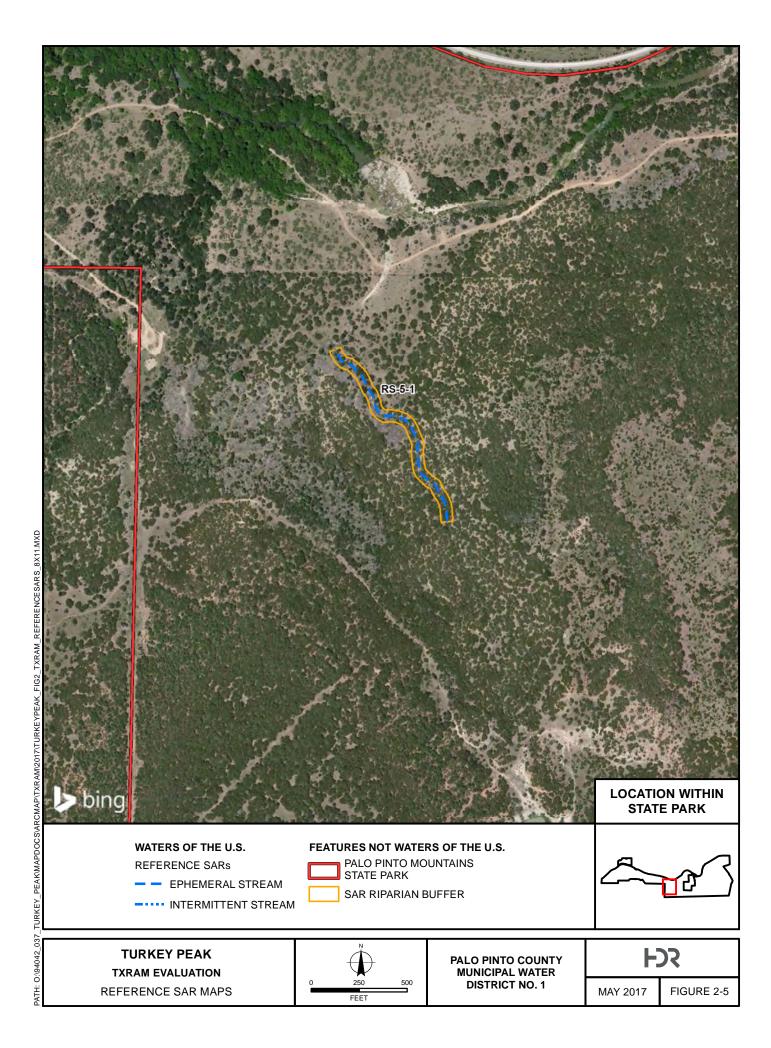
PALO PINTO COUNTY MUNICIPAL WATER DISTRICT NO. 1 JUN 2017 FIGURE 1-4

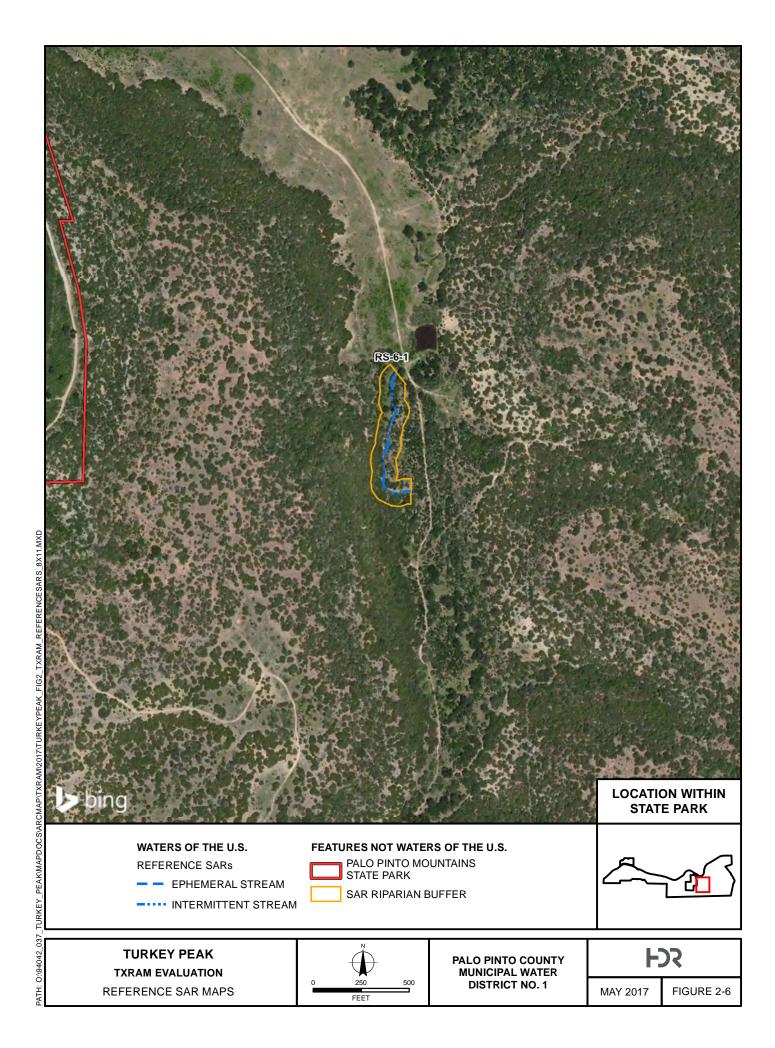


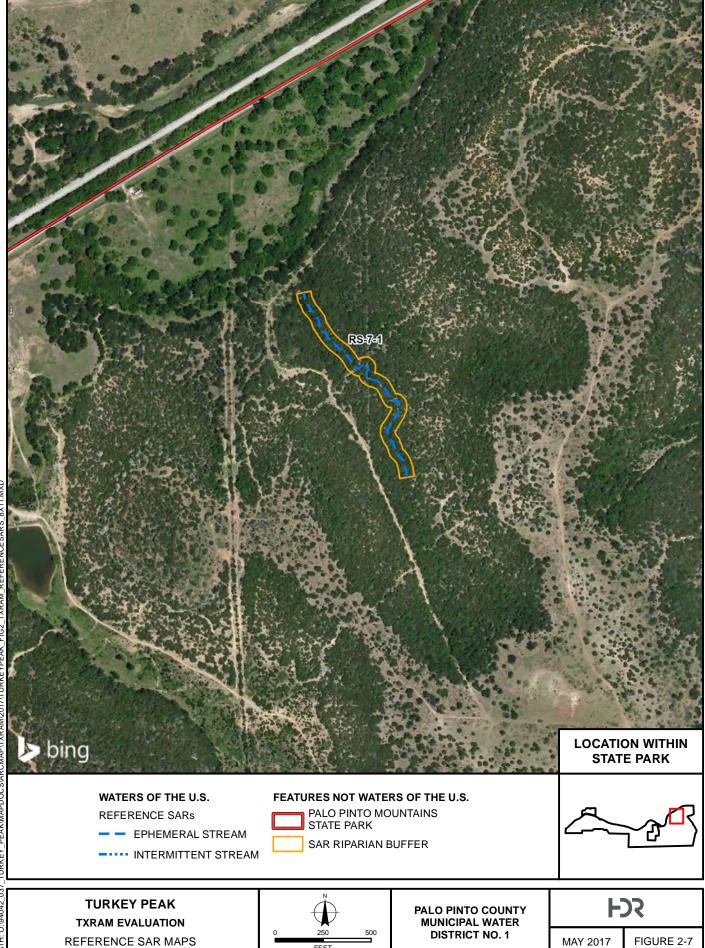




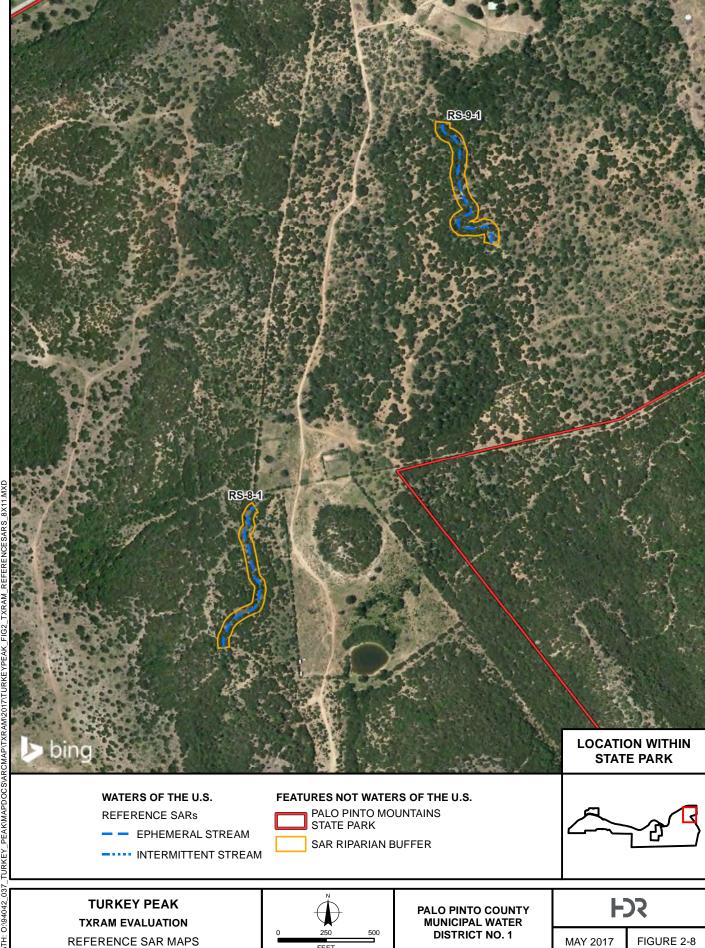






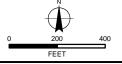


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TXRAM EVALUATION REFERENCE SAR MAPS



PALO PINTO COUNTY MUNICIPAL WATER **DISTRICT NO. 1**

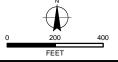
FDR

JUL 2017

FIGURE 2-9



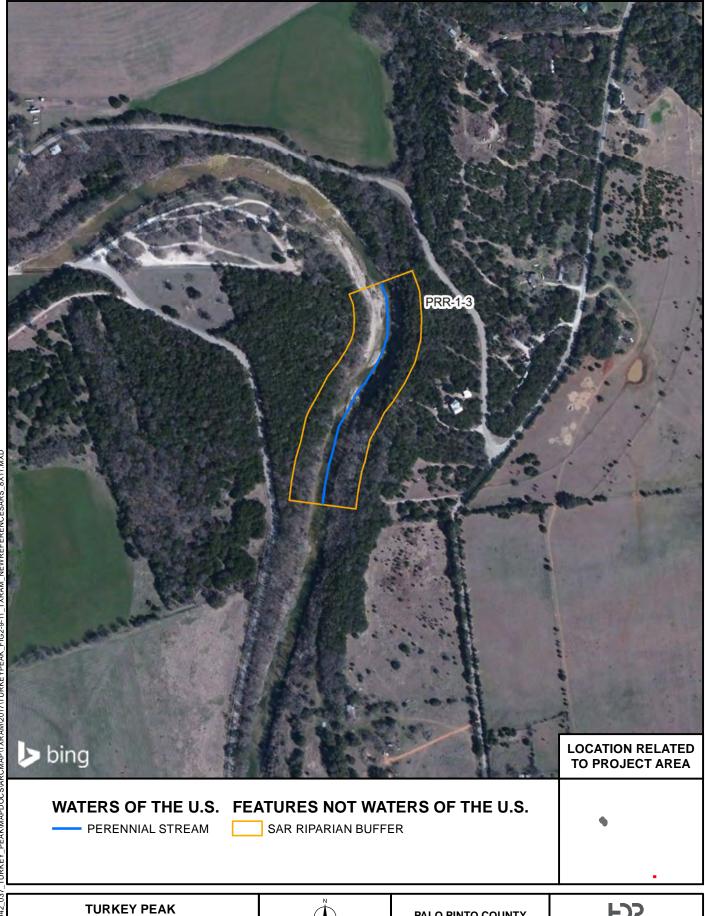
TXRAM EVALUATION REFERENCE SAR MAPS



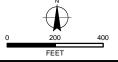
PALO PINTO COUNTY MUNICIPAL WATER **DISTRICT NO. 1**

JUL 2017

FIGURE 2-10



TXRAM EVALUATION REFERENCE SAR MAPS

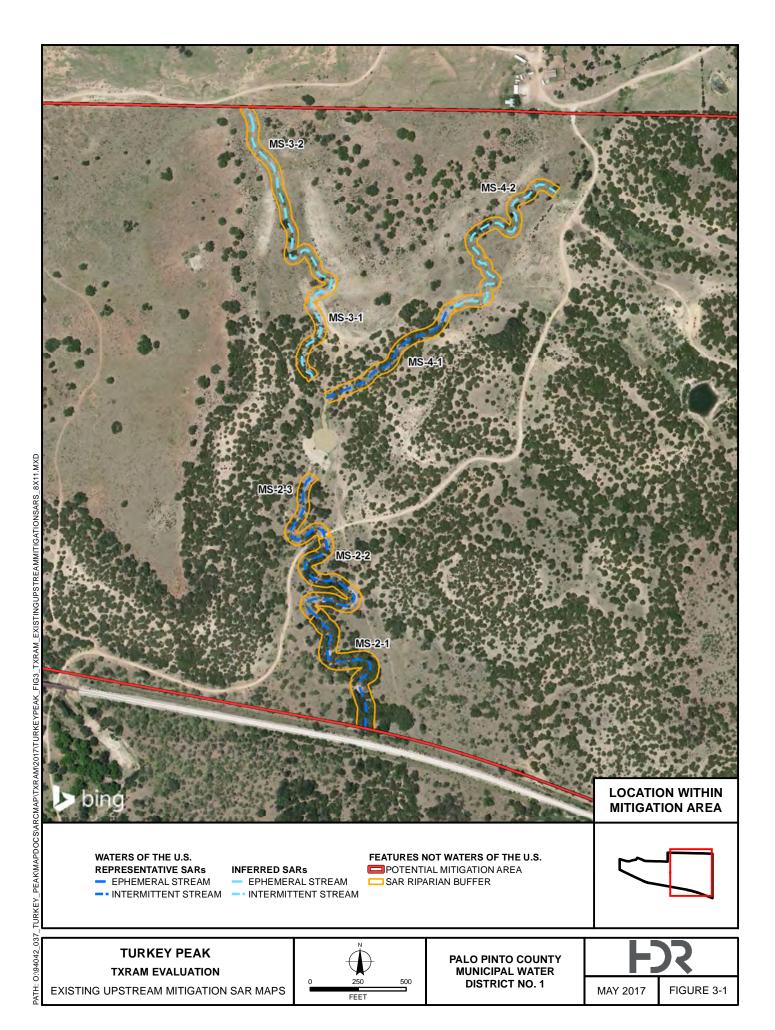


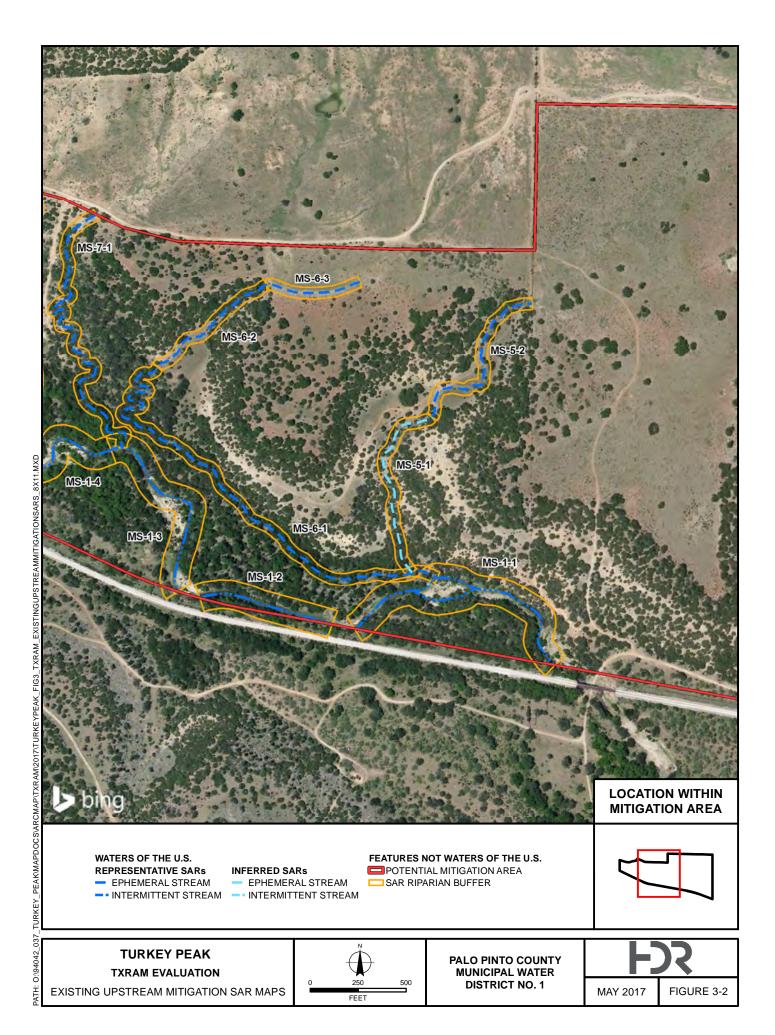
PALO PINTO COUNTY MUNICIPAL WATER **DISTRICT NO. 1**

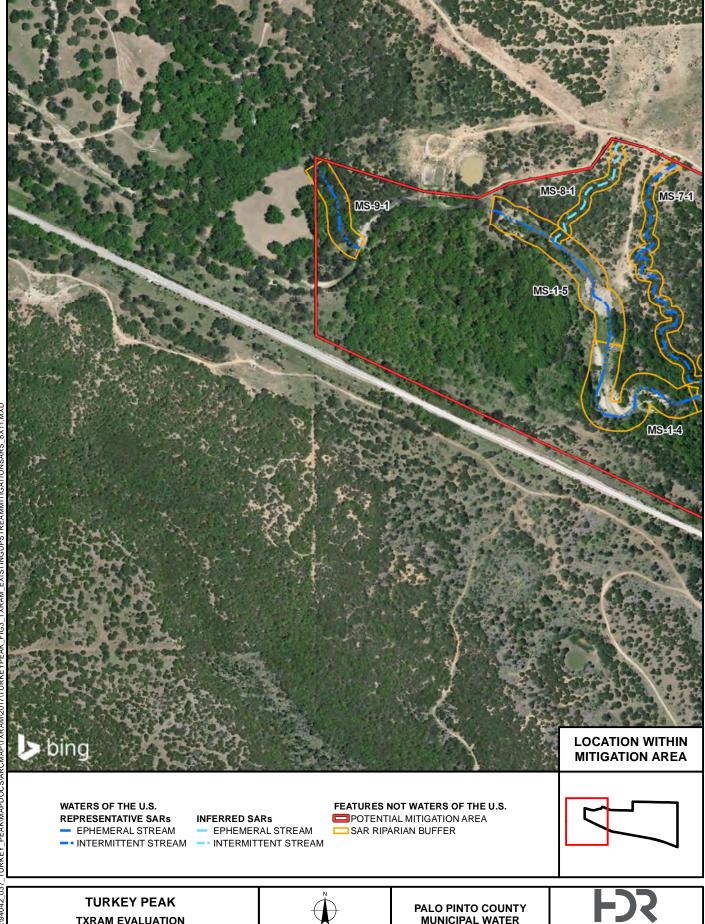
FDR

JUL 2017

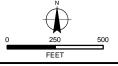
FIGURE 2-11





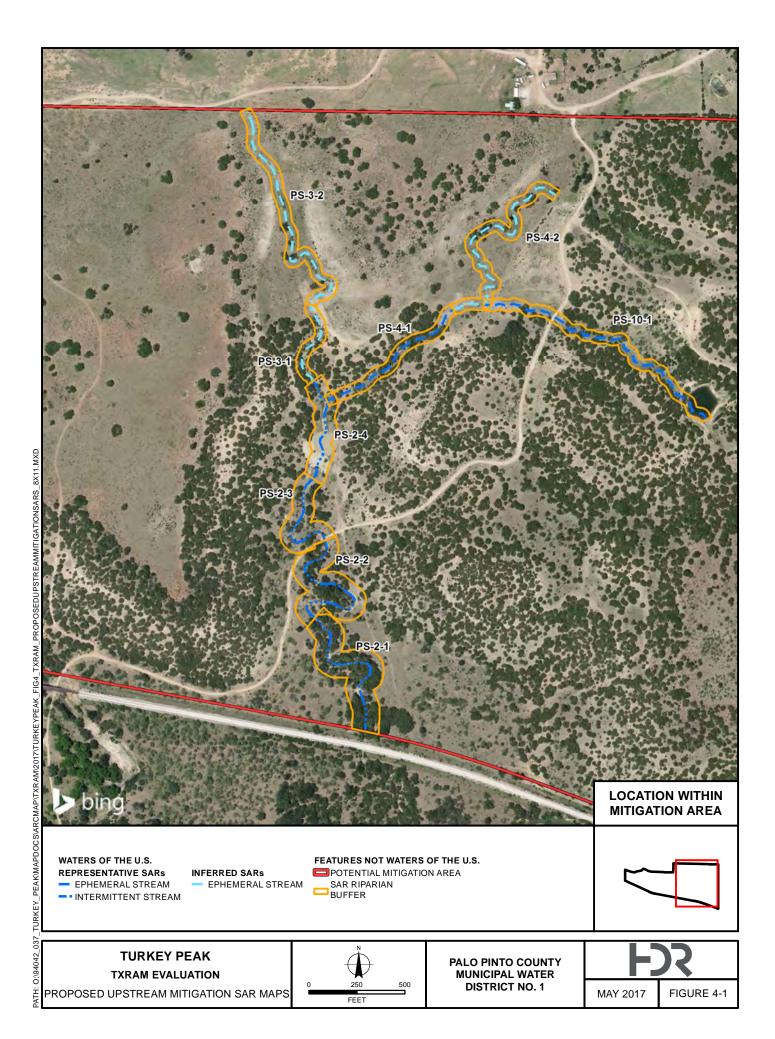


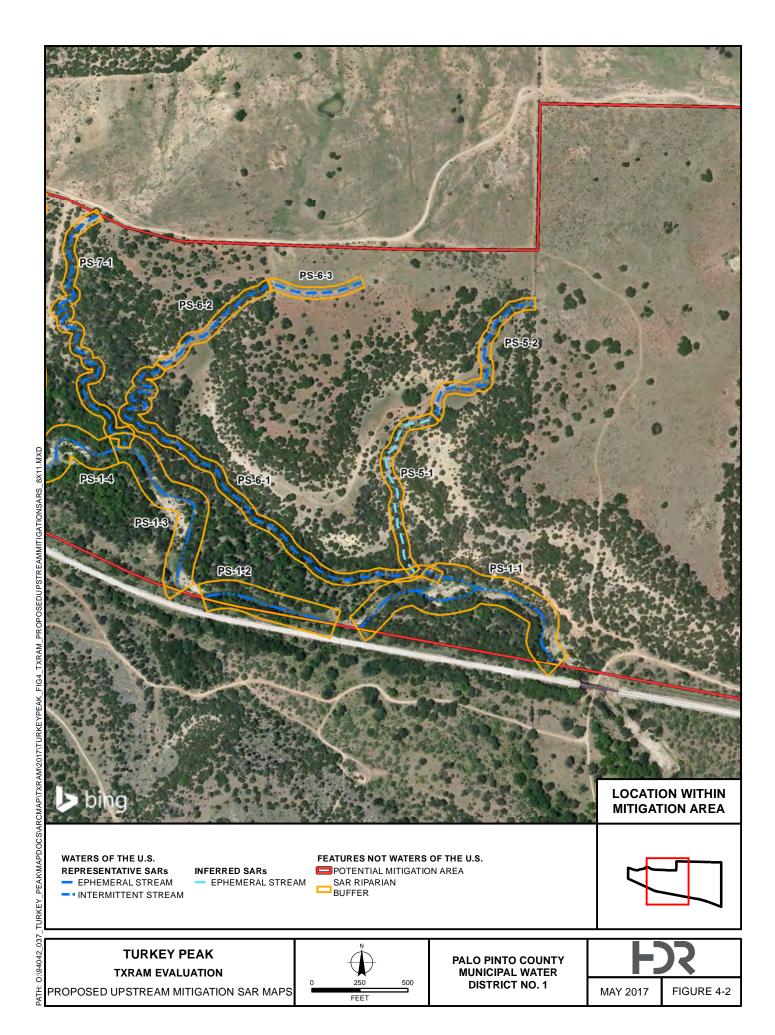
TXRAM EVALUATION EXISTING UPSTREAM MITIGATION SAR MAPS

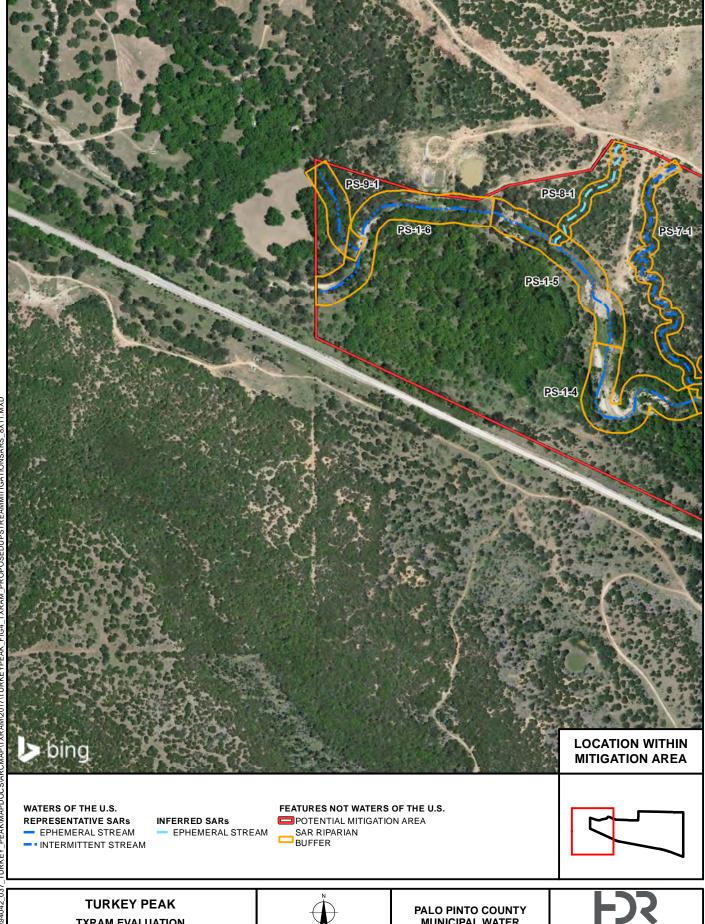


PALO PINTO COUNTY MUNICIPAL WATER **DISTRICT NO. 1**

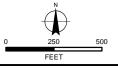






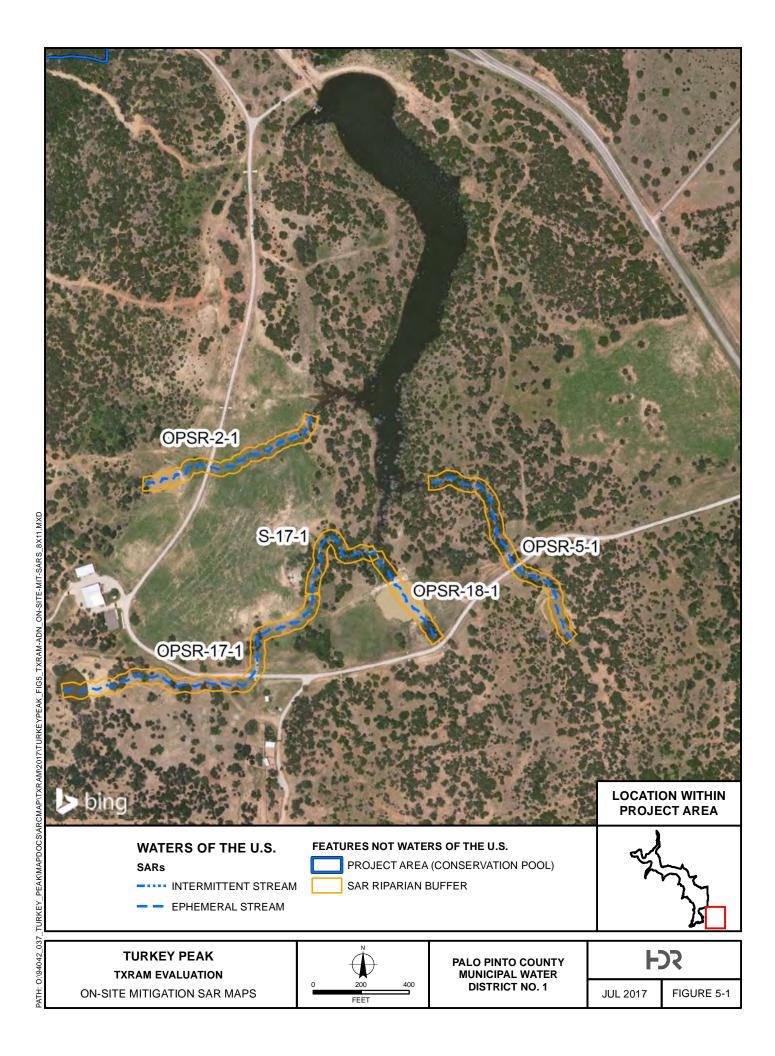


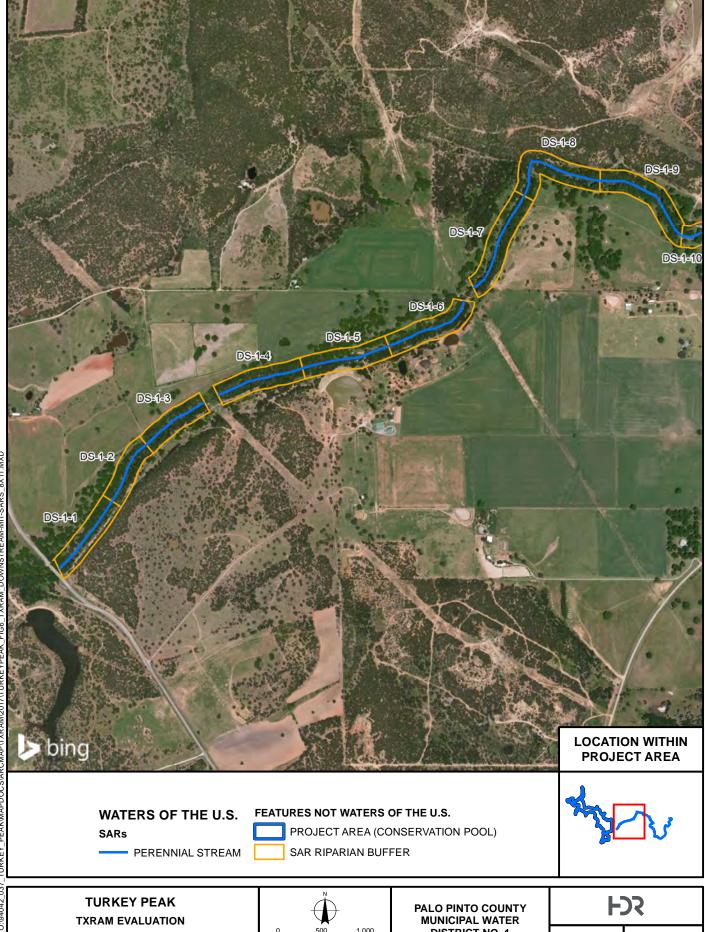
TXRAM EVALUATION PROPOSED UPSTREAM MITIGATION SAR MAPS



PALO PINTO COUNTY MUNICIPAL WATER **DISTRICT NO. 1**

FIGURE 4-3 MAY 2017





DOWNSTREAM MITIGATION SAR MAPS

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DISTRICT NO. 1

MAY 2017

FIGURE 6-1

