APPENDIX Q

Assessment of Jurisdictional Status - Irrigation Ditches, Ponds & Associated Wetlands on Webb Ranch

ENVIRONMENTAL CONSULTANTS

To: Don Connors, AMEC

From: Tim Funk, PWS, Kerrianne Zdimal, PWS and Sean Moore, SME Environmental, Inc.

Date: 12/06/2013, Revised July 2014

Project: US 550-US 160 Reconnect (SME Project No. 130019)

Re: Assessment of Jurisdictional Status – Irrigation Ditches, Ponds, and Associated Wetlands on Webb Ranch

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SME Environmental, Inc. (SME) conducted a wetland delineation of the pasture portion of the Webb Ranch property on October 22, 2013. As part of this delineation, SME surveyed a series of irrigation ditches, stock ponds, and associated wetlands. The purpose of this memorandum is to assess whether or not these aquatic resources would be considered jurisdictional Waters of the U.S. (WOUS) under the Clean Water Act (CWA) to aid the design team in locating recommended alternatives.

BACKGROUND

On June 5, 2007, the U.S. Environmental Protection Agency (USEPA) and the U.S. Army Corps of Engineers (USACE) issued a memorandum related to CWA jurisdiction following the Supreme Court's decision in the consolidated cases of *Rapanos v. United States* and *Carabell v. United States*. This memorandum, known as the *Rapanos Guidance*, set forth new procedures for determining the jurisdictional status of a water feature based upon the multiple opinions issued by the justices, and was revised on December 2, 2008 based on public comment. The *Rapanos Guidance* divides water features into three basic groups, summarized below:

1. Jurisdictional under CWA:
    - Traditional Navigable Waters (TNWs).
    - Wetlands adjacent to TNWs.
    - Relatively Permanent Waters (RPWs) that are tributaries to TNWs. To meet the definition of a RPW, the tributary must exhibit continuous flow at least seasonally (i.e., three months) in a normal year.
    - Wetlands directly abutting RPWs.

2. Jurisdictional under CWA if a "significant nexus" to a TNW is present:
    - Wetlands adjacent to but not directly abutting RPWs.
    - Tributaries to TNWs that are not RPWs (i.e., ephemeral streams or intermittent streams with less than seasonal flow).
    - Wetlands adjacent to or abutting non-RPWs.

3. Not jurisdictional under CWA:
    - Swales or erosional gullies.
    - Ditches excavated wholly in and draining only uplands that are not RPWs.

RESULTS OF WETLAND DELINEATION

As part of the field delineation effort, SME identified all areas within the subject property that either: 1) meet the three parameters for wetland identification; or 2) exhibited evidence of an Ordinary High Water Mark (OHWM), regardless of jurisdictional status based on the Rapanos Guidance. These waters are depicted on Figure 1, and representative photographs are attached. A summary of the delineated waters within the pasture portion of the Webb Ranch is provided in Table 1 below:

Table 1. Waters surveyed within pasture portion of Webb Ranch

ID #	Linear feet	Square ft	Acres	NWI Class	Wetland Type	Notes/Comments
39-1	842	1,684	0.04	PEM	Irrigation Ditch / Fringe	1' wide PEM fringe along both sides of ditch
39-1a	967	1,934	0.04	N/A	Irrigation Ditch	1-2' wide, no fringing wetlands
39-1b	989	1,978	0.05	N/A	Irrigation Ditch	1-2' wide, no fringing wetlands
39-2	N/A	4,160	0.1	L2EM	Vegetated Stock Pond	Small stock pond, fed by irrigation water, very little water at time of survey
39-2a	55	110	<0.01	N/A	Irrigation Ditch	Ditch that carries water to 39-2
39-2b	21	42	<0.01	N/A	Irrigation Ditch	Ditch that carries overflow water from pond back to 39-1
39-3	N/A	3,458	0.08	L2EM	Vegetated Stock Pond	Small stock pond, fed by irrigation water, standing water present
39-4	N/A	8,214	0.19	PEM	Wet Valley	Hydrology restricted by farm road culvert
39-5	120	240	0.01	N/A	Irrigation Ditch	Carries irrigation water from 39-3 to 39-4
39-6a	N/A	6,369	0.15	L2EM	Vegetated Stock Pond	Stock pond fed by irrigation water, located along natural drainageway, standing water present
39-6b	N/A	4,727	0.11	PEM	Pond Fringe	Wetland fringing the pond (i.e., outside of pond's OHWM)
39-7	100	200	<0.01	N/A	Irrigation Ditch	Ditch that carries water from 39-6a
39-8	N/A	1,725	0.04	PEM/ PSS	Wet Valley	Depression in natural drainageway
39-9	256	512	0.01	N/A	Roadside Ditch	Does not meet three parameters

DISCUSSION OF JURISDICTIONAL STATUS

Due to agricultural uses of the property, natural site topography and drainage conditions appear to be altered. The U.S. Geologic Survey (USGS) 7.5-Minute Quadrangle for Loma Linda, Colorado depicts an intermittent tributary to the Animas River bisecting this portion of the Webb Ranch that was not observed in the field (Figure 1). However, this tributary was observed downstream of the Webb Ranch. Although private property issues prevented SME personnel from walking the entirety of this tributary, the location where this tributary crosses Trestle Lane

was surveyed by SME on December 2, 2013. At this location the tributary is conveyed under Trestle Lane by two corrugated metal pipes (CMPs). Despite seven days with no observable precipitation, and no active irrigation at the time of the survey, water was observed flowing through the pipes and discharging to a stream channel that flows into the Animas River approximately 100 linear feet below the culverts. The presence of the flowing water at the time of survey indicates that this tributary is likely a natural RPW, and the USACE would likely consider this feature to be jurisdictional per the *Rapanos Guidance*. SME collected data on this feature using the USACE OHWM data sheet for ephemeral and intermittent streams in the Arid West (attached). In addition to the flowing stream channel, SME observed palustrine scrub-shrub (PSS) wetlands directly abutting the stream in the area upstream of the CMPs. The presence of these wetlands indicates surface or near-surface hydrology in this area for a significant portion of the growing season.

This tributary was also observed downstream of a man-made pond on the Piccoli property (Figure 1); however, surface flow was not observed in this segment of the channel. It is anticipated that the natural flow of this system is being held back by the pond, which is an impoundment of this tributary. Per the USACE's *Jurisdictional Determination Form Instructional Guidebook* (2007), impoundments generally do not affect the jurisdictional status of a waterway. Therefore both the pond as well as the dry segment of the tributary below pond would be considered WOUS. Based on site topography, we believe other features on the Webb Ranch that are located in-line with the USGS-mapped intermittent waterway (i.e., features 39-4, 39-6a, 39-6b, 39-7, and 39-8) are also impoundments and/or wetlands abutting these impoundments, and therefore meet the criteria for jurisdictional WOUS.

In addition to the water features that are located in-line with the USGS-mapped intermittent stream, the pasture portion of the Webb Ranch includes a series of irrigation ditches and two man-made stock ponds (39-2 and 39-3) that discharge into the features located along the natural drainage described above. The *Rapanos Guidance* states that USACE generally does not assert jurisdiction over ditches (including roadside) provided they are "excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water." We do not believe the irrigation ditches meet the criteria of "draining only uplands" since the source of the water in these ditches appears to be diverted from the Florida River. Further, if irrigation water flows through these ditches continuously for three months in a "typical" (i.e., non-drought) year, then they would meet the definition of an RPW, and would be considered jurisdictional. The stock ponds, which directly abut these features, would also be considered jurisdictional. Conversely, the roadside ditch identified as feature 39-9 appears to only convey stormwater runoff from the adjacent roadway and pasture (not irrigation water derived from the Florida River); therefore, this feature only drains uplands, is not an RPW, and is not a jurisdictional WOUS (subject to USACE verification).

If water flows in the irrigation ditches for less than three months, than the the jurisdictional status would be determined by the USACE through a determination of significant nexus to a TNW These ditches would have a significant nexus if they are determined by USACE to significantly affect the chemical, physical, and biological integrity of a downstream TNW. Examples listed by the *Rapanos Guidance* include the ability to transport pollutants (chemical), floodwaters (physical), and/or organic carbon/nutrients (biological) to TNWs. The *Rapanos Guidance* does

not specifically state what volume or concentration levels need to be reached for the effects to be "significant", as opposed to "speculative or insubstantial", which makes a significant nexus determination somewhat subjective.

The guidance does state that proximity to a TNW is an important consideration. Although the closest downstream officially designated navigable water way (regulated under Section 10 of the Rivers and Harbors Act) is Lake Powell in Utah, based on our conversations with Ms. Kara Hellige, Chief of the Sacramento District's Durango Office, it is our understanding that the USACE considers the Animas River to meet the criteria of a TNW. The fact the subject waters are less than 0.5 mile from the Animas River increases the likelihood of a significant nexus determination.

CONCLUSIONS

In summary, based on the field data (collected and observed by SME in 2013) and the *Rapanos Guidance*, the water features located in-line with the mapped blue-line intermittent tributary are either impoundments of or directly abut a natural RPW, and would be considered jurisdictional WOUS by the USACE and subject to regulation under Section 404 of the CWA. The irrigation ditches and stock ponds also would be considered jurisdictional if flow in the ditches would satisfy the criteria for an RPW (i.e., continuous for at least three months). If these ditches flow for less than three months, then the USACE may still consider these resources to be jurisdictional if they are determined to have a significant nexus to a TNW. Given hydrologic connection to the waters identified as likely jurisdictional, as well as the close proximity to the Animas River, we believe it is likely USACE would determine that these waters have a significant nexus to a TNW. Finally, based on the field data (collected and observed by SME in 2013) and the *Rapanos Guidance*, USACE would not likely assert jurisdiction over the identified roadside ditch.

LIMITATIONS

Field indicators can change with variations in hydrology and other factors. This report assesses the potential for jurisdictional WOUS at the site at the time of our review and does not address conditions at a given time in the past or future. We make no other warranties, either expressed or implied, and our report is not a recommendation to buy, sell or develop the property. This report does not constitute an official significant nexus determination, or a Formal or Preliminary Jurisdictional Determination of WOUS since such determinations must be verified by USACE, and are subject to review by USEPA.

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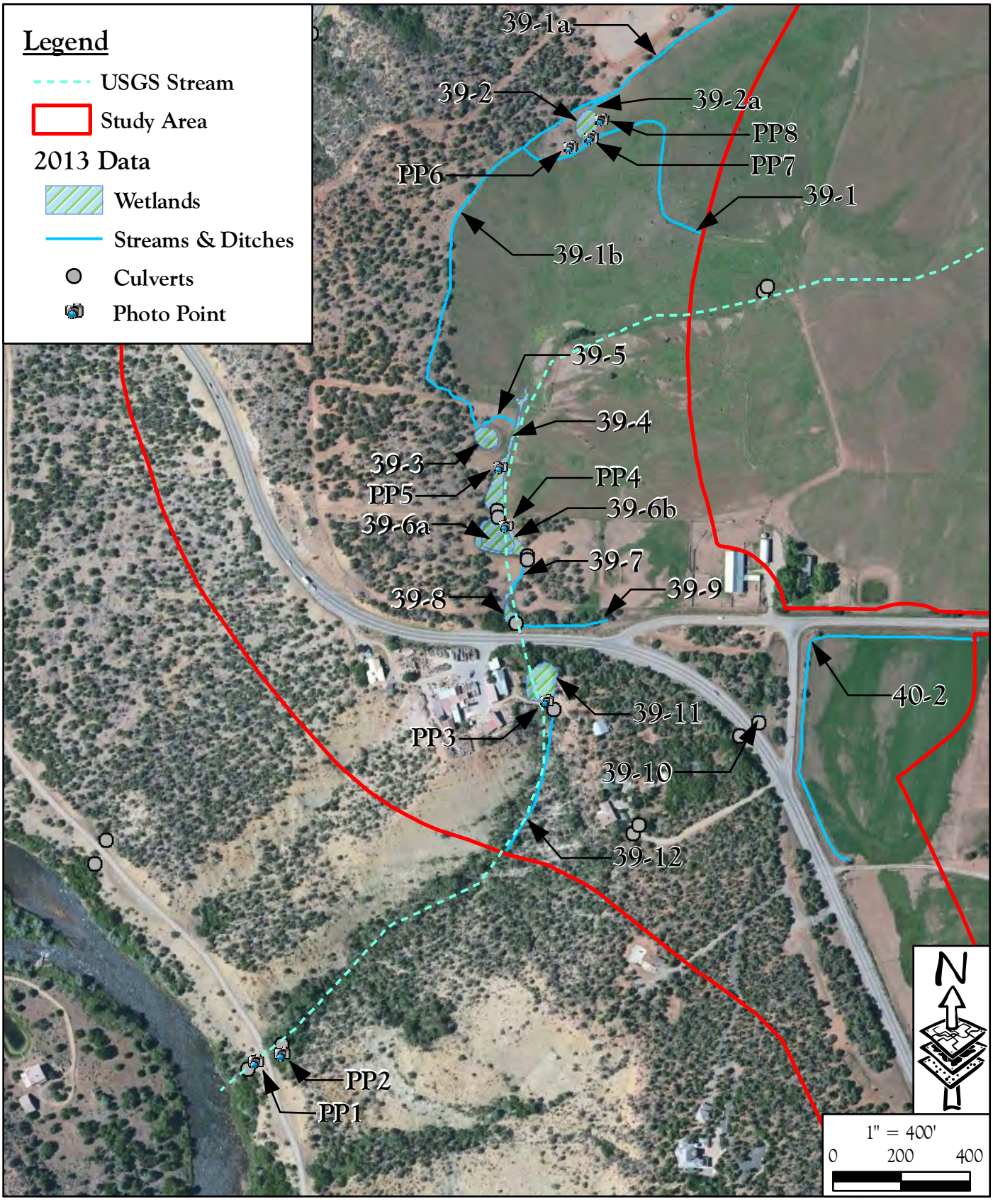

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WETLAND DELINEATION MAP

US 550/160 RECONNECT
WETLAND DELINEATION REPORT

FIGURE 1

Source: Aerial photo provided by Microsoft Corp.
© 2010 Bing Maps (http://www.bing.com/maps)

Select Photos from October 22, 2013 and December 3, 2013 Field Investigations
Photos taken by Julia Hanson- SME Biologist

PP1 depicts the corrugated metal pipes that convey the flow of an unnamed intermittent tributary under Trestle Lane with the discharge located approximately 100 feet from the Animas River. This tributary is downstream of the water features surveyed on the pasture portion of the Webb Ranch.

PP2 depicts the unnamed tributary upstream of Trestle Lane. Flowing water was observed in this segment of the stream and dense willow (*Salix*) shrubs indicating a PSS wetland were observed along the fringes of the stream.

Select Photos from October 22, 2013 and December 3, 2013 Field Investigations
Photos taken by Julia Hanson- SME Biologist

PP3 is facing south from the dam of the pond on the Piccoli property, and depicts the culvert that connects this pond to the unnamed tributary depicted above.

PP4 is depicts features 39-6a and 39-6b, which are a pond and fringing wetlands believed to be the result of an impoundment on the natural unnamed tributary mapped on the USGS quad sheet in this area.

Select Photos from October 22, 2013 and December 3, 2013 Field Investigations
Photos taken by Julia Hanson- SME Biologist

PP5 is facing south and depicts feature 39-4, an emergent wetland located along the mapped intermittent tributary. The lower end of this wetland appears to be impounded. Although no standing water was observed at the time of the survey, this area met the three parameters for wetland identification.

PP6 depicts irrigation ditch 39-1. This ditch and a series of similar ditches convey irrigation water derived from the Florida River to two stock ponds located within the pasture, and discharge into wetland 39-4 depicted above.

Select Photos from October 22, 2013 and December 3, 2013 Field Investigations
Photos taken by Julia Hanson- SME Biologist

PP7 depicts 39-2, one of two vegetated stock ponds, whose source is irrigation water provided by the irrigation ditches depicted above.

PP8 depicts a PVC pipe that conveys overflow water from the stock pond depicted above back into the irrigation ditch.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project:	**Date:** 12-3-13	**Time:**
Project Number:	**Town:**	**State:**
Stream: R4SB	**Photo begin file#:**	**Photo end file#:**
Investigator(s): J HANSON		

Y ☐ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**

Coordinates:

Potential anthropogenic influences on the channel system:

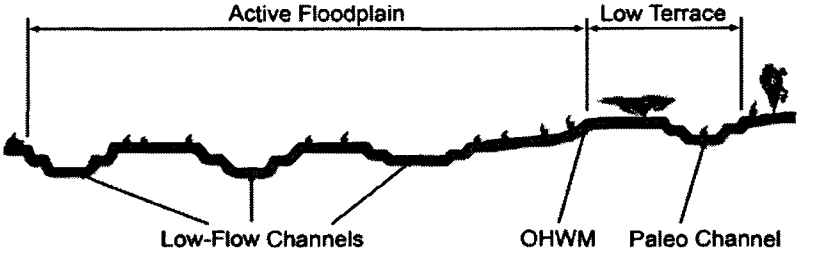
—— channel 2-3ft width

Brief site description: fringe upper. East side of road no wetland road side. - steep bank Riverside

Checklist of resources (if available):

- ☑ Aerial photography
  - Dates:
- ☑ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☐ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  - Gage number:
  - Period of record:
  - ☐ History of recent effective discharges
  - ☐ Results of flood frequency analysis
  - ☐ Most recent shift-adjusted rating
  - ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

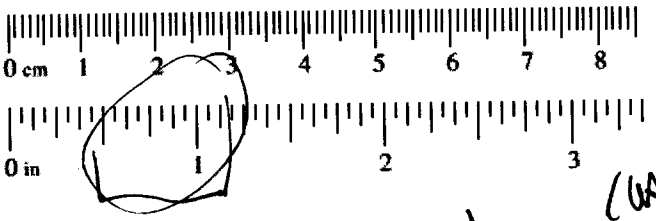


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☐ Mapping on aerial photograph
   - ☑ GPS
   - ☐ Digitized on computer
   - ☐ Other:

Wentworth Size Classes

Millimeters (mm)		Inches (in)		Wentworth size class	
	10.08		256	Boulder	
	2.56		64	Cobble	Gravel
	0.157		4	Pebble	
	0.079		2.00	Granule	
	0.039		1.00	Very coarse sand	
	0.020		0.50	Coarse sand	
1/2	0.0098		0.25	Medium sand	Sand
1/4	0.005		0.125	Fine sand	
1/8	0.0025		0.0625	Very fine sand	
1/16	0.0012		0.031	Coarse silt	
1/32	0.00061		0.0156	Medium silt	Silt
1/64	0.00031		0.0078	Fine silt	
1/128	0.00015		0.0039	Very fine silt	
				Clay	Mud



Very coarse sand → gravel bottom.

Project ID: **Cross section ID:** **Date:** **Time:**

Cross section drawing:

OHWM

GPS point: _____

Indicators:

- [x] Change in average sediment texture
- [x] Change in vegetation species
- [ ] Change in vegetation cover
- [x] Break in bank slope
- [ ] Other: _____
- [ ] Other: _____

Comments:

Floodplain unit:

- [x] Low-Flow Channel
- [ ] Active Floodplain
- [ ] Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: 10 % Shrub: 90 % Herb: _____ %

Community successional stage:

- [ ] NA
- [ ] Early (herbaceous & seedlings)
- [x] Mid (herbaceous, shrubs, saplings)
- [x] Late (herbaceous, shrubs, mature trees)

Indicators:

- [ ] Mudcracks
- [ ] Ripples
- [x] Drift and/or debris
- [x] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: _____
- [ ] Other: _____
- [ ] Other: _____

Comments: