APPENDIX O

FACIES MAPS FOR THE UARP PROJECT AREA SITES

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UARP:
Rubicon Dam Reach Site (RD-G1)
Loon Lake Dam Reach Upper Site (LL-G1)
Loon Lake Dam Reach Middle Site (LL-G2)
Loon Lake Dam Reach Lower Site (LL-G3)
Gerle Creek Dam Reach Site (GC-G1)
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Camino Dam Reach Site (CD-G1)
S. F. American Reach Site (SFAR-G1)
Slab Creek Dam Reach Site (SC-G1)
The Rubicon Dam Reach Site is located in an “S” shaped meander. The channel is clear of debris, and lateral bars form the channel margins. At the upstream end of the site, cobble/gravel facies form a riffle, while bedrock forms the first outside river-right bend located just below the upper cross-section. The inside bend at the upper cross-section is a vegetated (small trees and shrubs) cobble/gravel bar with a high-flow channel behind it. Moving downstream, a pool has formed on the river-left outside bend with the start of a vegetated cobble/gravel bar on the inside river-right bend. At the middle cross-section, a second cobble/gravel riffle starts and continues to the end of the reach. The river-right bar continues to the lower cross-section, where a smaller vegetated (small trees and shrubs) cobble/gravel bar has formed on river-right. River banks and mid-channel gravel bars are well vegetated. Bank vegetation on river left consists of large trees with brushy under story, while vegetation on the right bank is composed of mainly small trees and shrubs on the cobble/gravel bars.
North

Approximate scale (1:230)
The Loon Lake Dam Reach Upper Site has vegetated point bars and subtle pool-riffle morphology (there are no true riffle control points). There were many fallen trees across the channel, with some spanning above the water surface elevation, while others are submerged. The reach bed is comprised of silt and fine to coarse sand. A number of down trees are found beginning just upstream of the middle cross-section and continuing to the end of the reach. Some sand and/or silt deposition has occurred in the low-velocity zones on the downstream side of each log and along the channel margins. River banks are well vegetated with trees and grass/shrub understory.
Facies Map Data Sheet

Study reach Name: [REDACTED]
Date: [DELETED] / [DELETED] / [DELETED]  
Start time: [DELETED]  
End time: [DELETED]

Notes:
- A cut of oil with
- Sa Red - kicked
- up and now making
- channel

Mud accumulations
of oil and gas
marshes visible
- Sa facies
- occurs

North

Approximate scale (1:530)

33 rows x 30 columns Each cell equals [DELETED]  

QA Check: [DELETED]

PROJECT CODE:  
TASK CODE:  

Page 1 of [DELETED]
Loon Lake Dam Reach Middle Site (LL-G2)

At the Loon Lake Dam Reach Middle Site, channel and bank conditions are extremely uniform. The channel is wide and unconfined, banks are poorly defined. The entire reach is well vegetated and LWD is plentiful in the reach with several debris jams. Because of the low banks, LWD and debris jams tend to create frequent overflow channels and mid-channel bars. The channel primarily consists of cobble/boulder facies with a meadow on the river-right bank and large trees on the river-left bank. The banks and floodplains on both sides of the channel also consist of cobbles and boulders in a soil matrix with dense vegetation. Many of the forced overflow channels are also well vegetated with grasses and herbaceous plants.
Study reach Name: Loon Lake Middle  
Date: 07/12/03  
Start time: 10:05  
End time: 12:05  

KEY  
- Sand/Gravel  
- Fin  
- Instrument setup  
- Tree  

FLOW  
- Channel face, colluvial  
- Sand, gravel, shallow  
- Rock  

TOP OF REACH, LONG PROFILE STA 0  
- Soil, exposed, begins to slope  
- *Continual change in angle along LS 1 RB generally more open  
- *Continual change in angle along LS 2 RB generally more open  

North  

33 rows x 30 columns. Each cell equals 5' x 25'.  
QA Check ZED  

Approximate scale provided
Approximate scale provided
Loon Lake Dam Reach Lower Site (LL-G3)

Pools at the Loon Lake Dam Reach Lower Site are scarce. Gravel, cobble, and sand form the channel bed downstream of the upper cross-section. Cobble with occasional boulders dominate as the river straightens out. The channel below the middle cross-section widens with several sand and gravel bars. Large cobbles and boulders, with small sand/fine gravel pockets, occur in the channel at the lower cross-section. Here, sand is deposited in high flow channels along the right bank and boulders form the moderately vegetated left bank, while the right bank is well vegetated.
North

Approximate scale provided

33 rows x 30 columns Each cell equals 20 x 20 ft

Sketch by mcm!
Gerle Creek Dam Reach Site (GC-G1)

The Gerle Creek Dam Reach Site is a straight, boulder and bedrock channel. Patches of gravel and small cobble are deposited behind obstructions. Boulder and bedrock facies continues downstream to just above the middle cross-section. Very little fine sediment is stored at this site, except in deepest parts of the big pool. Riparian vegetation grows only in the margin and tailout of a pool below the lower cross-section. There is little or no vegetation in other parts of reach.
Robbs Peak Dam Reach Site (RPD-G1)

The channel substrate at the Robbs Peak Dam Reach Site is primarily coarse gravel, mixed with cobble and sand. Dense boulder deposits also exist, but are discontinuous. The active floodplain is wide with multiple flow paths, and sand is deposited on the margins and along the inside of the river meanders. Willows and some conifers grow in the channel, with frequent large woody debris piles observed above the low-flow wetted channel.

Facies Key*:
GRCBSD = Mixed gravel, cobble, and sand. Algae covering rocks.
CB = Cobble sorted on outside of bend. Estimated d50 = 70mm.
CBGRSD = mixed cobble, gravel, and sand. Coarser than upstream unit. Estimated d50 = 60 mm.
Gravel w/ Sand = Unit of sand and gravel at downstream end of bar.
Willow 2 = Apex 5 ft above water surface elevation. Gravel and cobble with a veneer of sand, and relatively flat. Upstream end is grades to high gravel and cobble bar.
GRCB1 = Gravel and cobble bar, high and exposed with greater than 10% sand. Local sand patches associated with willow growth (>10 ft height) with conifer and minor aspen growing on sand.
Willow 4 = Tall, approximately 8-10 ft, willows along old channel was next to approximately 50 year old conifers and sand.
BOCBSD1 = Deposits of boulder, cobble, and sand with minor amounts of gravel. Estimated d50 without the sand = 120mm.
Mixed GRCBBSOD = Gravel, cobble, boulder, and sand mixed. Sand is in discrete patches. Estimated d50 = 100mm. Very high widely distributed. Sediment covered with algae. Channel boulders dense in some places, but not continuous.
GRCB2 = Cobble with pockets of gravel. Placed for road, no entrance visible from main channel.
*Taken directly from field notes.
Ice House Dam Reach Upper Site (IH-G1)

The active channel of the Ice House Dam Reach Upper Site is chiefly comprised of medium gravel and sand deposits with alternating bars and point bars. Large boulders lie in the channel and along the margins in several locations. Several channel-spanning pieces of LWD were found in the channel near the lower cross-section. Silt and sand are deposited in low-velocity zones on the margins and behind flow obstructions.
Approximate scale (1:300)
Study reach Name: **UPPER ICE HOUSE**

Date: **05/15/03**

Approximate scale (1:300)

North
Ice House Dam Reach Lower Site (IH-G2)

Cobbly gravel facies dominate in most of the channel at the Ice House Dam Reach Lower Site, with intermittent boulder and bedrock outcrops. LWD is located on the river-left bank above and below the middle cross-section. Downstream of the middle cross-section, the boulder and cobble channel sweeps into a bedrock wall on the left. Here, a high flow side channel exists on the right bank. Boulder and cobble is deposited at the head of the overflow channel, gradually becoming cobble and gravel downstream. Terraces have formed on both banks. Vegetation is sparse throughout the reach.
Junction Dam Reach Site (JD-G1)

At the Junction Dam Reach Site, cobble and gravel cover the channel and numerous boulders of various sizes occur over the entire length. Small patches of finer gravel and cobble exist behind large boulder obstructions, along the stream margins, and in the middle of the channel as lateral bar deposits. The channel is bedrock controlled, and outcrops occur on both banks throughout the site. Steep bedrock walls prevent vegetation growth, however trees and shrubs do begin to appear on top of the walls once they flatten out.
Study reach Name: JUNCTION

Date: 05/19/03

Start time: ______ End time: ______

Approximate scale (1:670)

North
Study reach Name: JUNCTION               Crew Initials: JDS/2E0
Date: 02/19/02 Start time: _____ End time: _____
(mo) (day) (y)

Approximate scale (1:670)

CHNL N PERPENDICULAR TO STRIKE OF BDAX
BDAX DIPS UPSTREAM N 45°
MANY EXPOSURES IN CHANNEL - CONTROLS BAVLE CREST ELEVATIONS

North

33 rows x 30 columns Each cell equals _____ X _____   QA Check _____
Camino Dam Reach Site (CD-G1)

The Camino Dam Reach Site is bedrock controlled with a predominantly cobble and gravel bed. Bank ledges are composed of gravel. At the upper cross-section is a pool with a cobble bottom, bound at the bottom end by boulders and bedrock outcrops. The middle cross-section is a run with a boulder/gravel channel and bedrock banks. The lower cross-section is located near a pool with cobble bottom. Bedrock forms the banks at the downstream end of the site.
South Fork American River Reach Site (SFAR-G1)
The channel at the South Fork American River Reach Site is straight with intermittent lateral bars made of coarse material. Sand fills the interstitial spaces between the dominant cobble and boulder facies. Bedrock outcrops are prevalent on both banks, with a coarse cobble and boulder bar development on the left bank near the lower cross-section. The channel is characterized by steep valley walls, is sparsely vegetated with coniferous trees, with smaller trees and shrubs growing closer to the waters edge.
North

Approximate scale (1:290)
Slab Creek Dam Reach Site (SC-G1)

Boulders and large cobble dominate substrate facies along the channel at the Slab Creek Dam Reach Site. The upper banks are characterized by moderate slopes with large boulders and bedrock outcrops. Primary channel flow meanders around two large boulder and cobble point bars. Minimal amounts of gravel are deposited in the low velocity areas behind boulders and bedrock flow obstructions. A thin veneer of silt is deposited along the margins of the low flow channel. Light shrubs and small trees are scattered in the boulder banks, but become denser up slope from the boulders.

Facies Key*:
CO1 = Cobble with few boulders on downstream end of bar. Estimated d50 is 80mm.
BOCO1 = Boulder field with cobbles and small patches of overbank gravel deposits. Estimated d50 is 500 mm.
BO1 = Boulder and bedrock steps in channel.
COBO1 = Channel cobbles and boulders, with very little gravel. Boulders arrangedon small steps. Estimate d50 = 200 mm.
COBO2 = Cobble and boulder bar on left bank, with some gravel. Boulders are not arranged as steps. Estimated d50 = 180mm.
BOCO2 = Channel coarse boulder and cobble deposit along bedrock margin.
Note: There is a thin veneer of silt on the channel margins from slow water effects.
*Taking directly from field notes.