MAINSTEM TRINITY RIVER, CALIFORNIA, PHOTOMONITORING.

FINAL

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TRINITY RIVER PHOTOMONITORING PROGRAM
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INTRODUCTION

As restoration activities accelerate as a result of the recent secretarial Record of Decision, one important monitoring component of the Trinity River Restoration Program's river rehabilitation efforts will be ground photo documentation. Photo documentation supplements physical and biological surveys to better illustrate anticipated improvement of the Trinity River. Photomonitoring is the process of taking landscape or feature photographs repeatedly over time from the same location (i.e., the photopoint), perspective, and frame so that differences between years can be compared (Elzinga et al. 1998). To date no consistent and structured photomonitoring program on the Trinity River has been implemented. Therefore, this photomonitoring program was implemented on the Trinity River mainstem between the TRD (RM 112.0) and the North Fork Trinity River (RM 72.4) where a majority of in-channel rehabilitation efforts will be focused. Additional rehabilitation work will be done in tributary watersheds and photopoints at these locations should be integrated into this program. The photomonitoring program will consist of:

1) selecting, and installing photopoints
2) develop a standardized protocol for photopoints relocation and photography
3) taking photographs at all photopoints and taking standardized notes
4) documenting and archiving all photographs taken during photomonitoring

Photomonitoring Target Features

The Trinity River Restoration Program will implement a combination of management actions that rehabilitate the mainstem river corridor by increasing river flows, supplementing coarse sediment and mechanical rehabilitation of channel morphology. Restoring sediment continuity and increasing river flows will create and maintain dynamic alluvial features (e.g., bars, pools, riffles, floodplains). Photomonitoring focuses on locations within the river corridor where changes are expected because of restoration activities (e.g., channel rehabilitation, streamflow and sediment management) have already occurred, or are planned for the future. Therefore, sites selected for photomonitoring should:

- document long term changes in channel morphology, vegetation coverage, channel migration, and fish habitat on the Trinity River and/or,
- document pre-rehabilitation project conditions and post rehabilitation project site evolution and/or,
- document channel morphological response to sediment input (tributary deltas, spawning gravel supplementation) and/or,
- document evolution of unrehabilitated sites to serve as control sites to contrast the rehabilitation sites with and/or,
- document response to the increased flows and coarse sediment introduction at unrehabilitated sites.

METHODS

A photomonitoring program that is able to best document site evolution must take repeated photographs from the same location. To be able to effectively compare photographs taken at the same point on different dates, the photographs must be as equivalent to each other as possible. To ensure this, a standardized photomonitoring method was developed.

New photopoints were installed and old photopoints were considered and some reoccupied. At each potential site, several perspectives (views) were considered, and most illustrative photographed. Photopoints were usually installed on either bridges or hills to record site overview perspectives and on riverbanks, inchannel (by method of triangulation), and bridges to record the upstream view and downstream perspectives. Generally, the higher in elevation that any perspective could be recorded, the better.

Photomonitoring Timing-

We recommend that photopoints be monitoring every year, however there may be times when the length of time between photomonitoring should be determined by the photopoints purpose, ultimately the schedule should be flexible. For example, some photopoints should be reoccupied after high flow events large enough to induce a significant geomorphic or riparian change (Figure 1) or others after mechanical

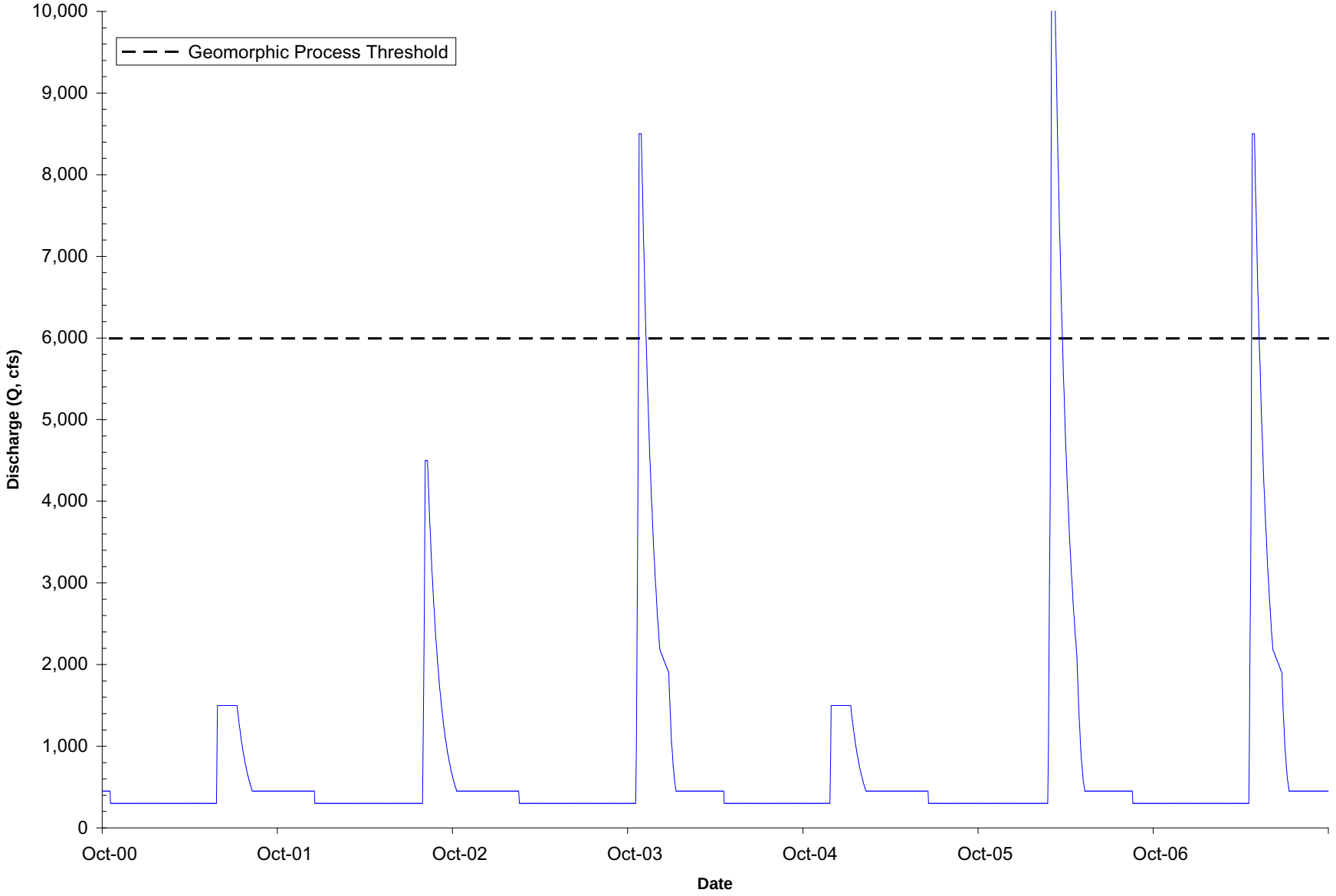


Figure 1: Years when annual streamflow peaks exceed geomorphic process thresholds should be targeted for photomonitoring.

rehabilitation. In drought years however there may be no need to monitor photopoints that monitor geomorphic changes, yet those points that monitor vegetation development and seedling recruitment would need to be taken. For the first year after each photopoint is installed one photo should be taken in the in the winter and one in the summer to determine what time of year best suits the objectives of a particular photopoint. If photographs are not taken every year as recommended, the monitoring schedule should consider taking photographs at:

- All photopoints: when TRD releases or mainstem discharges are greater than that needed to initiate geomorphic processes (streamflows depends on each site and generally should be greater than 6,000 ft^3/sec).
- Bank rehabilitation sites: the year before, immediately after, and a year after construction.
- Gravel introduction sites: after flows exceed thresholds to mobilize and distribute gravel (streamflows to be determined).

In addition to the frequency of monitoring, the program must consider the time of year that the lighting, vegetation, and streamflow will be in a similar condition as the first photograph at the photopoint. Duplication days are the number of days before, and after, the actual date of the previous photomonitoring that define a window of opportunity when a photopoint can be reoccupied, and a similar picture taken to the original (excluding any physical or vegetative changes). Consideration of duplication days is important because they assure a window of time when the lighting, plant growth, and presumably discharge are all similar. Photopoints should be re-occupied no more than two weeks before and two weeks after the actual date of the first photo monitoring. Therefore, a two week period before and after a given date should adequately bracket similar light, discharge, and plant growth characteristics as observed during the first occupation of a photopoint.

Photomonitoring equipment

High quality and consistent photomonitoring equipment are the basis of high quality, standardized photographs. The equipment used to initiate this Trinity River mainstem photomonitoring program is:

Photopoint monument installation equipment:

1. ½" rebar, for photopoint monuments in unstable soils
2. 1" washers for photopoint monuments epoxied to surfaces and as labels for spikes
3. 12" galvanized spikes for photopoint monuments next to roads or more stable soils
4. aluminum tags for labeling rebar photopoint monuments
5. plastic tarp, to paint washers and monuments on
6. wire, wire cutters and pliers for affixing the tags
7. putty Epoxy, to affix 1" washers to bedrock or concrete
8. "PK" nails to for installing monuments into asphalt
9. orange paint, for painting monuments
10. small sledge hammer for installing photopoints
11. stamp kit, for stamping the photopoint numbers on the tags or washers

General photomonitoring equipment:

1. hand pruners, machete, and pruning saw for clearing vegetation
2. magnetic locator, for relocating rebar and spike photopoint monuments
3. Trinity River Photomonitoring Program Fieldbook, with photopoint location descriptions
4. Nikon CoolPix990 Digital camera, shutter release cable, and polarizing filter
5. extra AA batteries
6. camera tripod
7. plumb bob for centering tripod over monument
8. scale pole marked in 0.5 ft increments
9. chalk board and chalk for writing relevant photopoint data
10. blank photomonitoring data sheets, to be filled out after every photograph

11. laptop computer and USB/Serial port cable for downloading camera
12. flagging tape to mark photopoint location
13. handheld transit (Brunton or comparable quality) for measuring the focal point bearing
14. inclinometer for measuring the focal point angle
15. small bubble level for assuring the cameras horizon is level
16. engineers measuring tape (in 0.01 increments) for measuring the camera height above the observation monument
17. two 300 ft survey tapes for triangulating observation points from two fixed tringulation monuments (e.g., cross section pins or installed rebar)
18. extra sharpie pens, pencils, and pencil leads

Personal equipment:

1. waders and wading boots
2. warm clothes
3. food and water
4. sunscreen
5. hat

Photomonitoring program camera

The Trinity River Photomonitoring Program owns a Digital Nikon CoolPix990 camera. This camera was chosen because it has several features that are important to the photomonitoring program. The camera has versatility in the range of focal length, such that large perspective landscape photos can be taken, as well as close up photos. The light metering in the camera is matrix oriented rather than center weighted as in manual single reflex camera, which means that the camera can balance the lens aperture and manage light balance more accurately (see owners manual for more information). This translates into higher accuracy in repeating the same lighting conditions between photomonitoring. The photographs are stored as digital JPEG files that are easily downloaded into an IBM PC compatible platform. The camera has two memory cards that can store up to 95 high

quality images (2048x1536 pixels). The files are digital and are easily archived, easily reproduced, and inexpensive to produce.

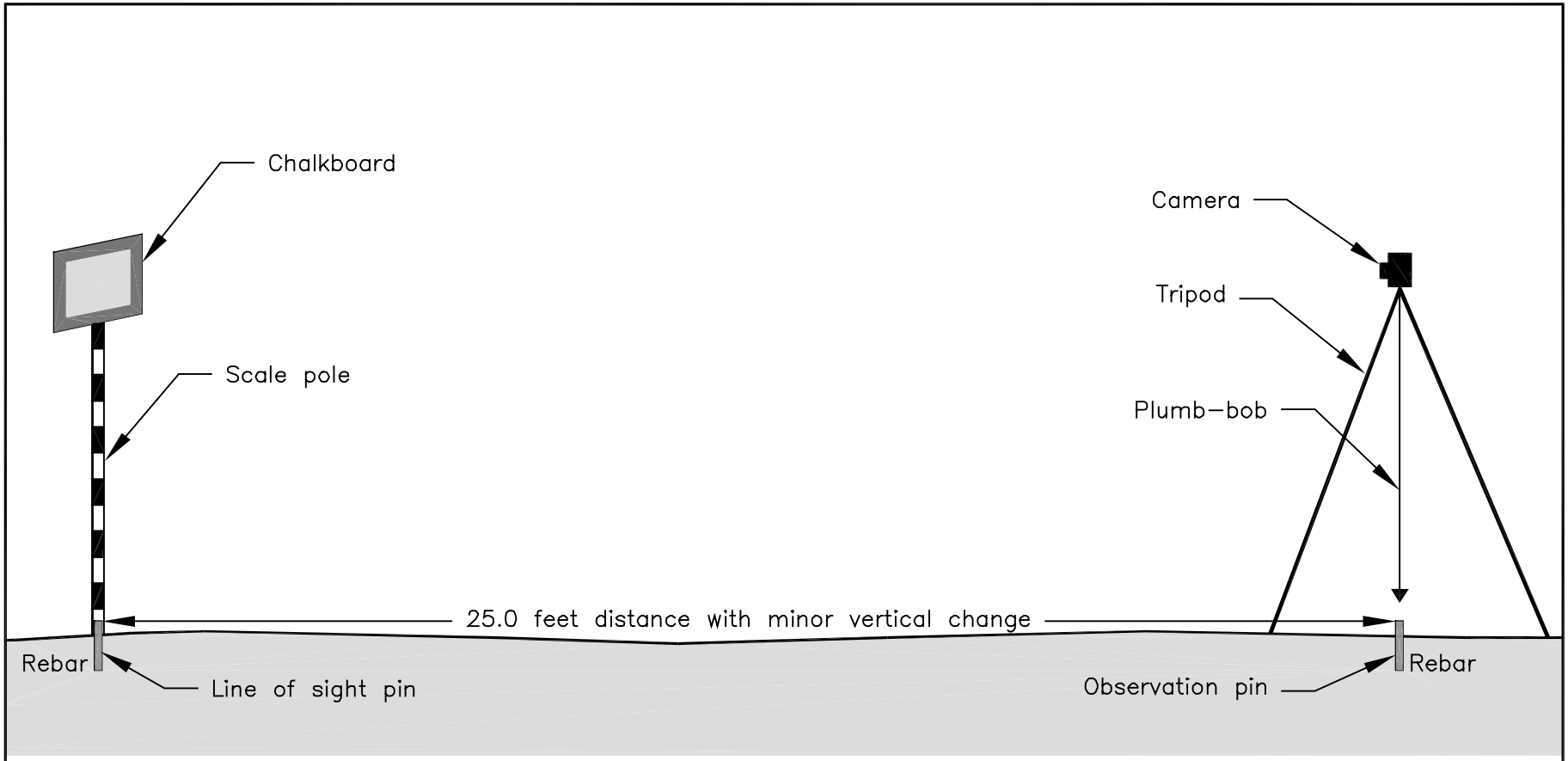
Before going into the field the Coolpix camera settings must be checked to assure photographs are of similar quality as the previous monitoring, and so that the cameras automatic function can be used. Each photomonitoring technician should be urged to use the owners manual to learn how to change, and verify each setting, and to get familiar with camera features. There are many options when considering camera settings; however, only the following settings are considered important to this program: checking the image quality, file size, ISO (light sensitivity, equivalent to ASA), light metering, and the auto bracket feature. The image should be a full size image and fine quality. The ISO setting should be 100. Light metering should be set to matrix weighted (the default), and the automatic bracketing feature should be turned on.

Types of photopoints

In addition to a photopoint being relocatable, each photograph must realigned along an identical focal point bearing to be comparable to the previous photo. There are a range of potential conditions on the Trinity River that would make one consistent type of photopoint unrealistic. We found that photopoints will sometimes need to be installed directly in the river channel and will be periodically scoured away, or other photopoints may need to be taken from steep hillsides where a line of sight might be determined by objects that are miles away. There may be other photopoints where foot traffic and boaters may be injured by rebar pin monuments and a lower profile, less permanent method desired. We foresee three types of photopoints, which are described below.

Photopoint method #1

The first type of photopoint consists of two rebar pins, a line of site pin and an observation pin (Figure 2). Rebar pins monument both the observation point and the line of sight point, and are both labeled with aluminum tags. The camera and tripod are centered over the observation pin using a plumb bob. The line of sight pin is 25 ft away along a fixed compass bearing (the compass bearing is recorded on the photopoint data



Needed equipment
at line of sight pin
Scale pole
Chalkboard

Needed equipment
at observation pin
Camera
Tripod
Plumb–bob

FIGURE 2. PHOTOPOINT MONUMENT METHOD #1: PHOTOPOINT WHERE BOTH OBSERVATION PIN AND LINE OF SIGHT PIN ARE ESTABLISHED

ELEVATION / SIDE VIEW

sheet in the fieldbook). The field of view and focal point (in the cameras viewfinder), is centered on the chalkboard sitting atop the scale pole. No declination compensation (to adjust for difference in true and magnetic north) is required to the bearing recorder on the data sheet.

Photopoint method #2

The second type of photopoint consists of a 12" spike with a 1" washer (the observation point), and a fixed point demarcating the line of sight (Figure 3). This photopoint type is most often used on hillsides. The camera and tripod are setup and centered (using a plumb bob) over the spike/washer combination. A compass bearing and an inclination along the line of sight determine the field of view. In some cases a line of sight monument is used for the photopoint, in other cases no line of sight monument is used. The field of view is centered using the line of sight monument and/or a compass bearing and inclination.

Photopoint method #3

The third type of photopoint consists of two pins from which an observation point is triangulated (Figure 4). This photopoint type was used were the observation point occurred in the river. Two surveying tapes are attached to triangulation points (usually rebar pins), and the distances measured from each triangulation point the observation point is used to relocate the observation point. The camera and tripod are setup over this point. The field of view is determined by a compass bearing and an inclination. The most recent photograph taken from that photopoint helps ensure the same field of view is used as the previous monitoring. In some cases a line of sight monument is used for the photopoint, in other cases no line of sight monument is used. The field of view is centered using the line of sight monument and/or a compass bearing and inclination.

All photopoint monuments were photographed at the time of installation. The monument photographs are intended to capture the monument's immediate surroundings, the monument itself and any other relevant information that could prove useful in relocating

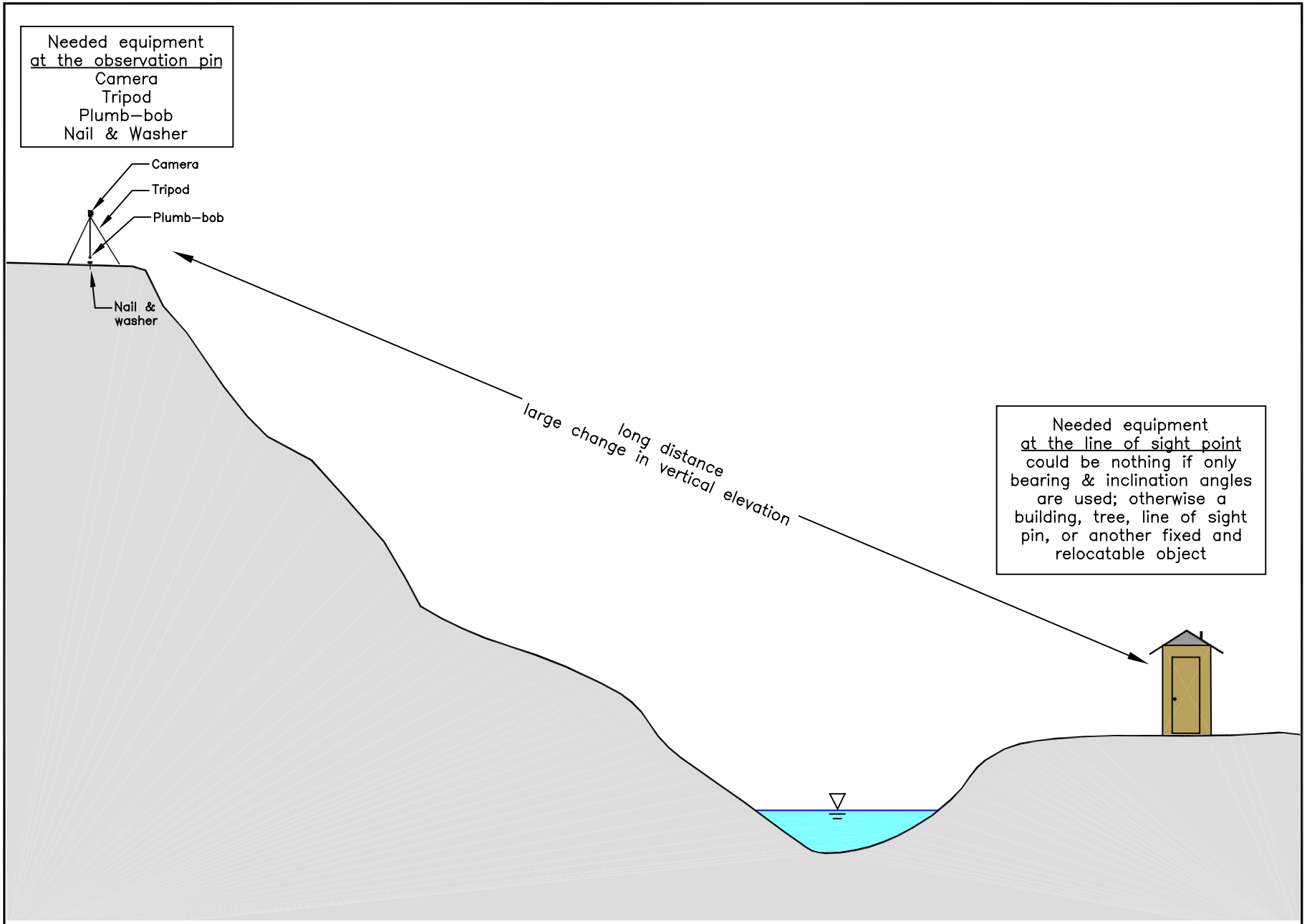


FIGURE 3. PHOTOPOINT MONUMENT METHOD #2: PHOTOPOINT WHERE ONLY THE OBSERVATION PIN MAY BE ESTABLISHED

ELEVATION/SIDE VIEW

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4/25/01

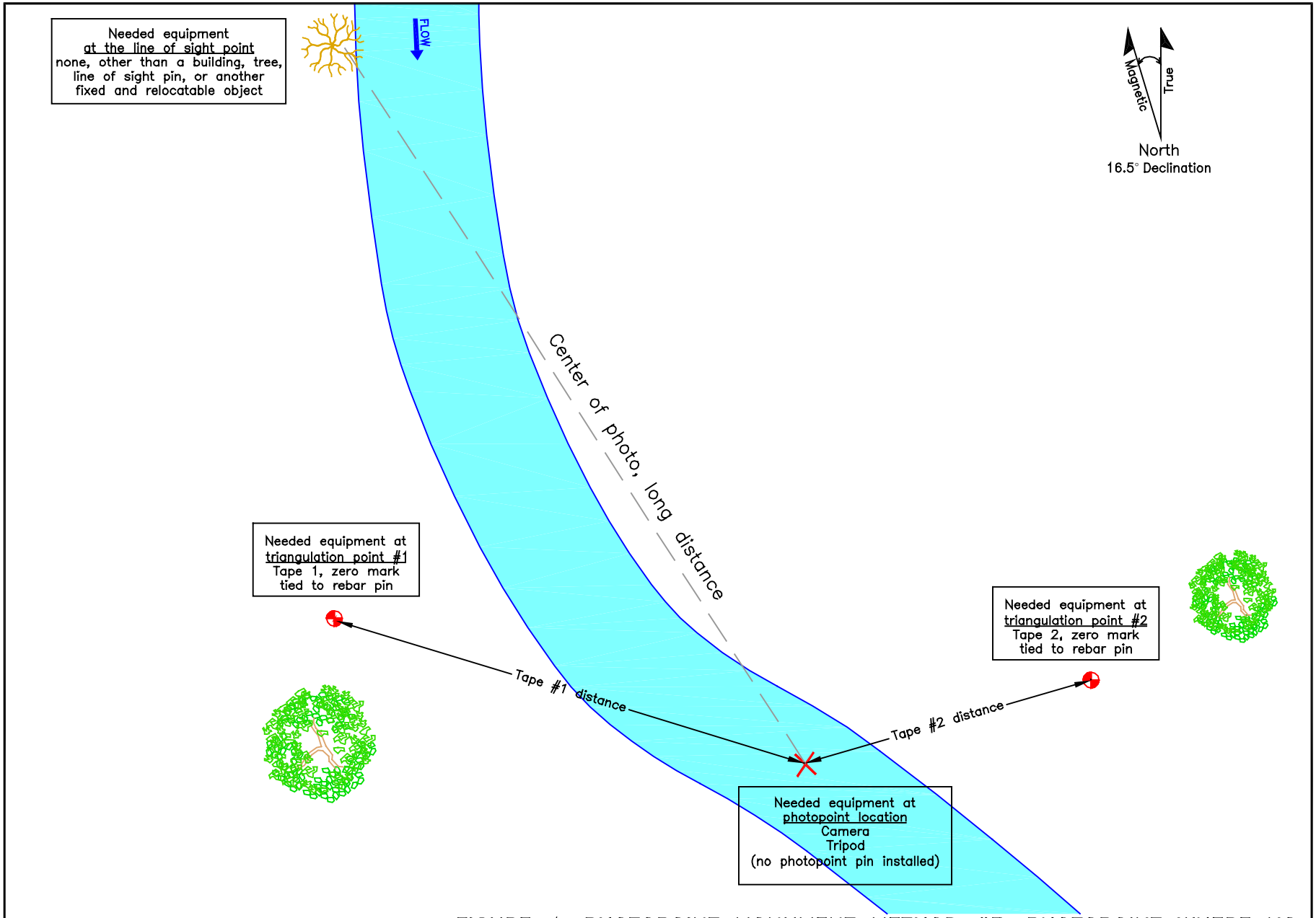

FIGURE 4. PHOTOPOINT MONUMENT METHOD #3: PHOTOPOINT WHERE NO OBSERVATION POINT MONUMENT MAY BE ESTABLISHED

PHOTOPOINT POSITION TRIANGULATED FROM TWO FIXED POINTS (TRIANGULATION POINT 1 & 2)

PLANFORM

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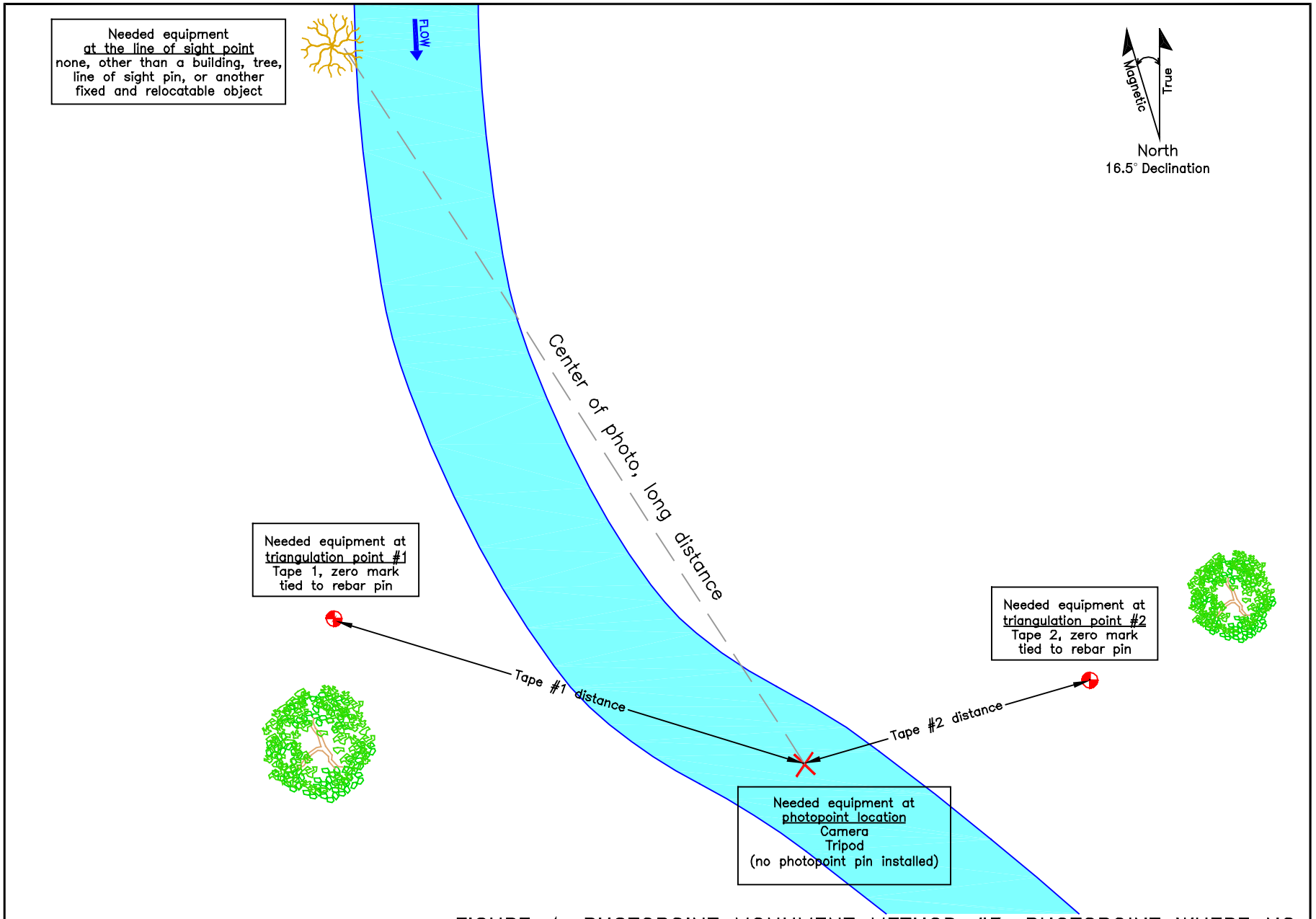


FIGURE 4. PHOTOPOINT MONUMENT METHOD #3: PHOTOPOINT WHERE NO OBSERVATION POINT MONUMENT MAY BE ESTABLISHED

PHOTOPOINT POSITION TRIANGULATED FROM TWO FIXED POINTS (TRIANGULATION POINT 1 & 2)

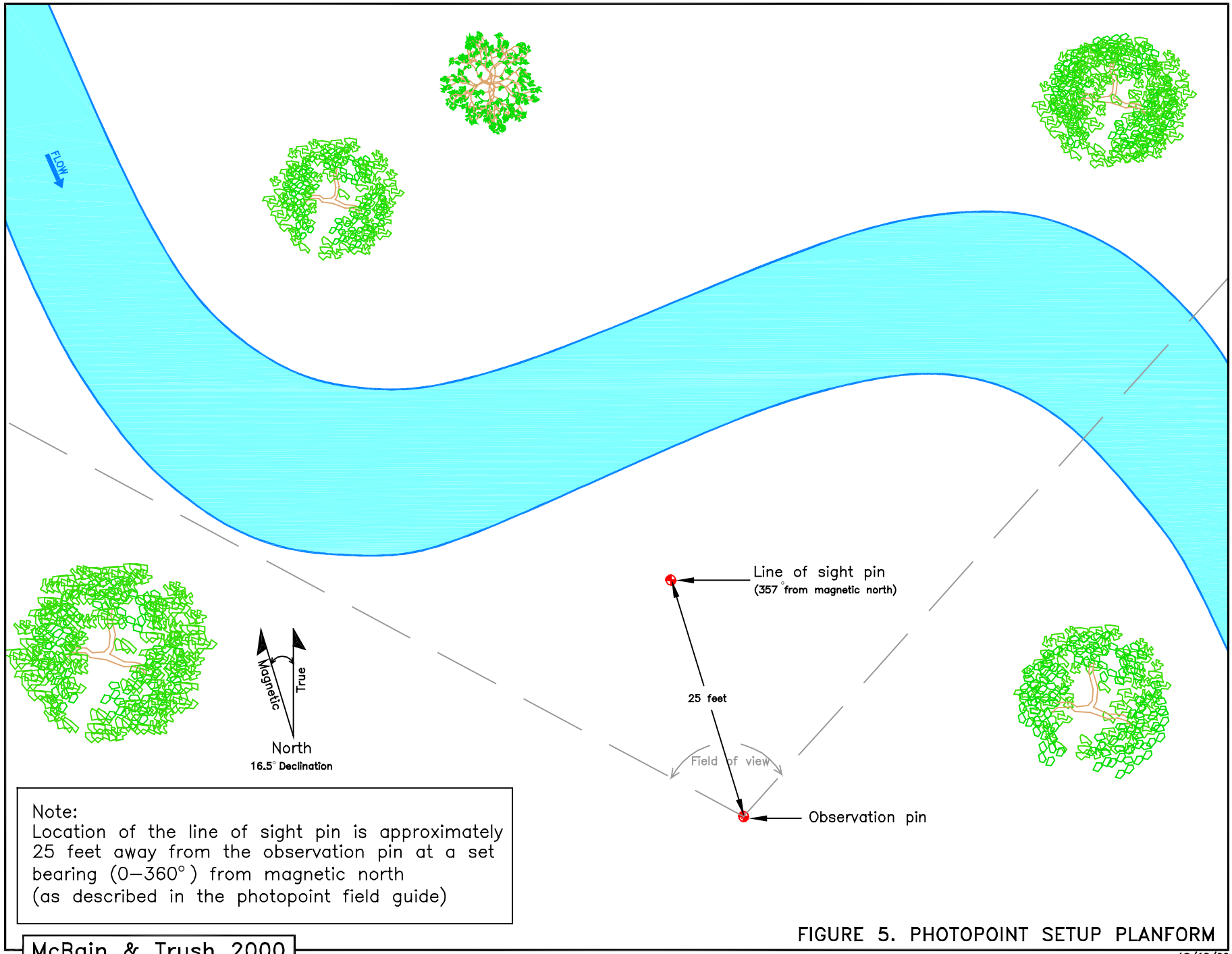
PLANFORM

the monument. The monument photographs are included the photomonitoring fieldbook, along with other location information.

Locating, occupying a photopoint and taking a photograph

In most cases, photopoints are clustered around a site; however there were also singular photopoints installed. For each site, or where a single photopoint occurs, the specific site location was documented and included in the Trinity River photomonitoring program field book. After locating the photopoint monuments, the photomonitoring equipment can be set up and the photopoint reoccupied (Figures 5-7). The camera and tripod are set directly over the observation monument at the predetermined height stated on the photopoint data sheet, and centered over the pin using a plumb-bob (Figure 6). The steel scale with attached chalkboard, are slid over the line of sight monument (if applicable). The specific procedures are:

1. Using the site description and maps in the Trinity River photomonitoring fieldbook, find the observation point/monument, and line of sight monument (Figure 5).
2. Set up the tripod over the observation point/monument (Figure 6)
3. Using a plumb bob hanging from a central point on the tripod, center tripod over the observation monument (Figure 7)
4. Attach camera to tripod, write the date, the discharge and the initials of the location where the discharge was measured, and the photopoint number on the chalkboard (Figures 6 and 7).
5. Using an engineers tape (marked in increments of feet and tenths of feet) raise or lower the base of the camera such that the camera height is the specified distance above the observation monument (indicated on the photopoint data sheet)
6. Using an handheld transit, determine the direction the camera's viewfinder will be aiming, specified as a bearing from magnetic north (indicated on the photopoint data sheet, Figures 6 and 7)



Note:
Location of the line of sight pin is approximately 25 feet away from the observation pin at a set bearing (0–360°) from magnetic north
(as described in the photopoint field guide)

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FIGURE 5. PHOTOPOINT SETUP PLANFORM

12/18/00

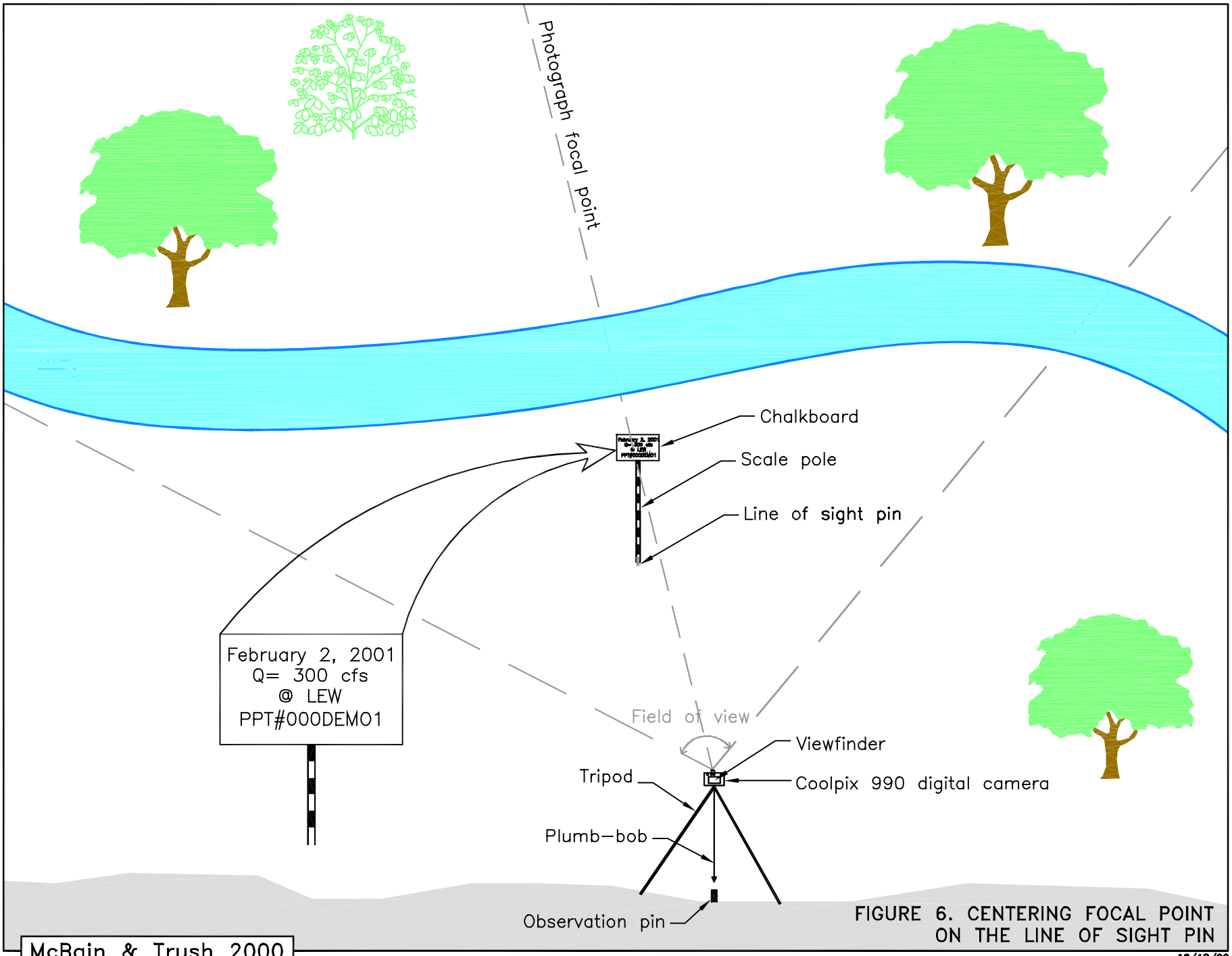

FIGURE 6. CENTERING FOCAL POINT ON THE LINE OF SIGHT PIN

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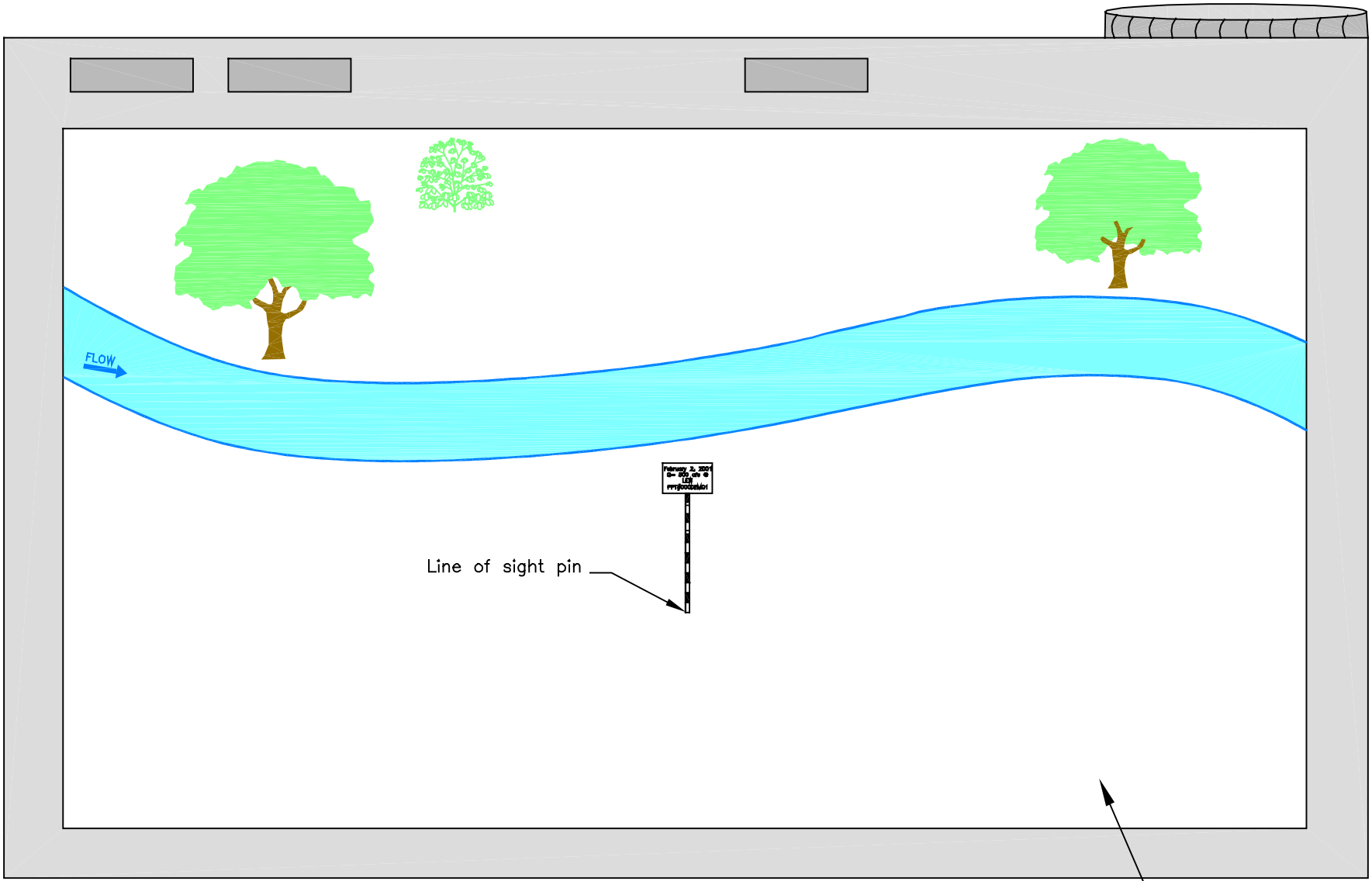

Note:
1. Chalkboard is centered in the picture
2. Compare to previous photo from this photopoint to assure field of view equivelancy

FIGURE 7. VIEW THROUGH CAMERA VIEWFINDER

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7. Center the camera's viewfinder on the line of sight monument (indicated on the photopoint data sheet, Figure 7).
8. Using an inclinometer, determine the angle that the camera's viewfinder will be tilted up or down
9. Using a line bubble level, check to ensure the horizon in the photograph framed in the viewfinder is level
10. Check the camera settings listed on the photopoint data sheet to ensure that the lens (wide angle or telephoto) settings are the same as the previous photo monitoring, and that the camera's image settings allow the photograph to be taken at full size and fine quality.
11. Using the last photograph taken from the photopoint (included in the Trinity River photomonitoring fieldbook), check to make sure the photographs are equivalent (with the exception of physical or vegetative changes), make any fine tuning adjustments as necessary.
12. Three to five photos should be taken at each photopoints to bracket a quality photograph with similar light balance equivalent to the last monitoring (the bracketing function is automatic if the camera has been properly checked before going into the field). Two photographs should be taken at one and two F stops above the suggested F stop (as measured by a light meter), one photograph should be taken at the setting suggested by the light meter, and two photographs should be taken at one and two F stops below the suggested F stop.
13. Replace tags on observation and/or line of sight monuments, or replace missing monuments as needed.
14. Fill out a new photopoint data sheet, noting any changes to the photopoint monuments, camera settings, physical disturbances etc.

Photopoint database and curation

All photopoint monuments are named with a unique moniker according to river mile, site, site photopoint number and whether the pin is the observation or line of sight pin. Each

monument is tagged and/or labeled with the moniker assigned using this nomenclature. This unique name is called the photopoint accession number and is used as the database reference number for the photopoint. For example, the following accession number "PPT#816SC3LS" means:

PPT# = Photopoint number

816 = River mile 81.6

SC = Sheridan Creek

3 = third photopoint

LS = line of sight pin

The accession number can be looked up in the photomonitoring fieldbook to get specific details about the point and its location; this number was also placed on an aluminum tag attached to the photopoint pin. All photographs can be accessed in the database by using the photopoint accession number.

RESULTS

The results reflect the first years photomonitoring efforts. These results consisted of:

1) locating, installing and documenting photopoints
2) developing a comprehensive Trinity River Photomonitoring Program fieldbook to assist future photomonitoring technicians with reoccupying, or installing new photopoints and,
3) presenting photos taken from the initial photopoints.

Image experiments

Before the we deployed this photomonitoring program, a pilot site was occupied (Appendix A: *Image experiments*). We chose the Steel Bridge bank rehabilitation site as the pilot site, and photographs experimented with a wide range of image sizes and qualities. Based on these experiments, we concluded that the full size, fine quality image was the best considering current computer hardware capabilities. Bracketing the aperture settings (F stop) is an automatic camera feature and should be used to capture the best lighting conditions.

Table 1. Photopoint number, site and relevent data

Proposed Photopoint Number	Photopoint Number	Site	Observation Monument	Line of Sight Monument	Bearing	Inclination	Installation Date	Purpose	Date of last monitoring
	1110LD1	Lewiston Dam	Rebar	none	47º	-3º	12/20/00	Gravel Introduction	12/20/00
	1110LD2		Rebar	USGS gage house	113º	-1º	12/20/00	Gravel Introduction	12/20/00
	1110LD3		Rebar	none	33º	-5º	12/20/00	Gravel Introduction	12/20/00
	1108DC1	Deadwood Creek Confluence	Rebar	Rebar	72º	-3.25º	1/30/01	Delta Processing	1/30/01
	1108DC2		Rebar	USGS gage house	41º	-5.0º	1/31/01	Delta Processing	2/1/01
	1108DC3		Rebar	none	112º	-12.25º	1/31/01	Delta Processing	2/1/01
	1100OLB1	Old Lewiston Bridge	Carriage bolt	none	24º	-7.5º	12/21/00	Gravel Introduction	12/21/00
	1100OLB2		Carriage bolt	none	197º	-7.5º	12/21/00	Gravel Introduction	12/21/00
	1075RC1	Rush Creek Confluence	Spike/washer	none	222º	-5.0º	2/1/01	Delta Processing	2/1/01
1075RC2								Delta Processing	
1075RC3								Delta Processing	
	1056Bt1	Bucktail bank rehabilitation site	Rebar	Rebar	299º	0.0º	12/21/00	Channel response	12/21/00
	1056Bt2		Rebar	Rebar	90º	7.9º	12/21/00	Channel response	12/21/00
	1056Bt3		Spike/washer	none	N/A	N/A	12/21/00	Channel response	12/21/00
	1055BtP1	Bucktail (proposed bank rehabilitation site)	Rebar	Rebar	30º	-4.0º	1/30/01	Pre/post BRS	1/30/01
1055BtP2								Pre/post BRS	
1055BtP3								Pre/post BRS	
	1040GvC1	Grass Valley Creek Confluence	Rebar	Rebar	258º	-2.0º	1/30/01	Delta Processing	1/30/01
	1040GvC2		Rebar	Rebar	72º	-3.25º	1/30/01	Delta Processing	1/30/01
	1040GvC3		Spike/washer	none	323º	-11.75º	1/30/01	Delta Processing	1/30/01
1002LkG1		Limekiln Gulch Bank rehabilitation site						Channel response	
1002LkG2								Channel response	
1002LkG3								Channel response	
	988StB1	Steel Bridge Bank rehabilitation site	Rebar	Rebar	229º	-3.0º	7/28/00	Channel response	2/1/01
	988StB2		Spike/washer	none	25º	-5.0º	7/28/00	Channel response	7/28/00
988StB3								Channel response	
983LkG1		Limekiln USGS Gage						Control	
983LkG2								Control	
	952IC1	Indian Creek Confluence	XS Stn 110	none	109º ; 248º	-7.0º ; -9.5º	1/29/01	Delta Processing	1/29/01
	952IC2		Epoxied washer	none	267º	-7.0º	1/29/01	Delta Processing	1/29/01
	952IC3		Spike/washer	none	175º	-20.0º	1/29/01	Delta Processing	1/29/01
	938WC1	Weaver Creek Confluence	Spike/washer	none	353º	-12.25º	1/24/01	Delta Processing	1/24/01
	938WC2		Rebar	Rebar	174º	-2.0º	1/24/01	Delta Processing	1/24/01
	938WC3		Rebar	Rebar	37º	-7.0º	1/24/01	Delta Processing	1/24/01
	928DCC1	Douglas City Campground/Gaging station	Rebar	Rebar	37º	-3.0º	1/29/01	Control	1/29/01
	928DCC2		Rebar	Rebar	194º	-5.25º	1/30/01	Control	1/30/01
	928DCC3		Spike/washer	none	220º	-9.0º	1/29/01	Control	1/29/01
	917SF1	Steiner Flat Bank rehabilitation site	Epoxied washer	none	247º	-25.5º	1/23/01	Channel response	1/23/01
	917SF2		Triangulated point	none	340º	0.0º	1/23/01	Channel response	1/23/01
	917SF3		Triangulated point	none	161º	-6.0º	1/22/01	Channel response	1/22/01
	917SF4		Spike/washer	none	160º	-10.0º	1/22/01	Channel response	1/22/01
	917SFTRA1	Steiner Flat TRA site	Epoxied washer	none	187º	-9.0º	1/24/01	Control	1/24/01
	917SFTRA2		Epoxied washer	none	24º	-4.25º	1/24/01	Control	1/24/01
	917SFTRA3		Spike/washer	none	186º	-7.0º	1/24/01	Control	1/24/01

Table 1. Photopoint number, site and relevent data

Proposed Photopoint Number	Photopoint Number	Site	Observation Monument	Line of Sight Monument	Bearing	Inclination	Installation Date	Purpose	Date of last monitoring
	892LG1	Lorenz Gulch	Rebar	Rebar	167º	+2.5º	1/24/01	Control	1/24/01
	892LG2		Rebar	none	344º	-9.0º	1/24/01	Control	1/24/01
	892LG3		Spike/washer	none	181º	-6.0º	1/24/01	Control	1/24/01
844BG1		Bell Gulch Bank rehabilitation site						Channel response	
844BG2								Channel response	
844BG3								Channel response	
	820DG1	Deep Gulch Bank rehabilitation site	Spike/washer	none	36º	-12.0º	2/2/01	Channel response	2/2/01
	820DG2		Rebar	Rebar	347º	+0.5º	2/2/01	Channel response	2/2/01
	820DG3		Triangulated point	none	179º	-7.25º	2/2/01	Channel response	2/2/01
	816SC1	Sheridan Creek Bank rehabilitation site	Spike/washer	none	36º	-12.0º	2/2/01	Channel response	2/2/01
	816SC2		Triangulated point	none	10º	+7.25º	2/2/01	Channel response	2/2/01
	816SC3		Rebar	Rebar	189º	+0.5º	2/2/01	Channel response	2/2/01
	811USR1	Upper Sky Ranch TRA site	Rebar	Rebar	33º	-1.25º	2/2/01	Control	2/2/01
	811USR2		Rebar	Rebar	214º	-1.0º	2/2/01	Control	2/2/01
	811USR3		Epoxied washer	none	37º	-14.75º	2/2/01	Control	2/2/01
809OG1		Oregon Gulch Confluence						Delta Processing	
809OG2								Delta Processing	
809OG3								Delta Processing	
	796DCB1	Junction City Gage/Dutch Creek Bridge	Epoxied washer	none	10º	-12.0º	2/1/01	Pre/post BRS	2/1/01
	796DCB2		Epoxied washer	none	177º	12.5º	2/1/01	Pre/post BRS	2/1/01
	796DCB3		Rebar	Rebar	183º	-6.5º	2/1/01	Pre/post BRS	2/1/01
	791CC1	Canyon Creek Confluence	Spike/washer	none	183º	-11.75º	2/1/01	Delta Processing	2/1/01
	791CC2		Spike/washer	none	305º	-9.25º	2/2/01	Delta Processing	2/2/01
791CC3								Delta Processing	
785JS1		Jim Smith Bank rehabilitation site						Channel response	
785JS2								Channel response	
785JS3								Channel response	
	751CB1	Coopers Bar (proposed bank rehabilitation site)	Spike/washer	none	72º	-12.25º	2/1/01	Pre/post BRS	2/1/01
751CB2								Pre/post BRS	
751CB3								Pre/post BRS	
731PT1		Pear Tree Bank rehabilitation site						Channel response	
731PT2								Channel response	
731PT3								Channel response	
724NFT1		North Fork Confluence						Delta Processing	
724NFT2								Delta Processing	
724NFT3								Delta Processing	

Photomonitoring fieldbook

The photomonitoring fieldbook is the result of the first years photomonitoring effort (Appendix B: *Photomonitoring fieldbook*); 20 sites were described, 52 photopoints installed at these sites (Table 1). The fieldbook includes for each site:

- Location description
- Photographs and descriptions of monuments (both line of site and observation pin)
- The most recent photopoint data sheet
- The most recent photograph taken from the photopoint

Photopoint database

Two photopoint databases were developed for organizing the photomonitoring program. The first is an Excel database of the sites. The site database is a comprehensive list of the sites (Table 1), the respective photopoints and the relevant photopoint data (inclination, height above the monument, etc.). The second database is for managing the photographic archive. The photograph acrchive database relies on Thumbs-Plus photo album/library software and includes a thumbnail of the actual digital image, the text data file associated with the image and keywords. As more photopoints are installed, or photographs taken, each of these databases are easily updated.

More photopoints were originally proposed than were actually occupied (Table 1). The site database includes those photopoints that were occupied and those points that were proposed and remain uninstalled. The photopoints that were occupied represent those points that were identified as higher priority under the initial installation effort. The remaining proposed photopoints should be installed and monitored because they encompass locations where future restoration efforts will have an affect.

Photo archives

Using Thumbs-plus, images are easily accessed by many people and can be stored in multiple locations. We recommend that the primary archive be located at the AMP center in Weaverville. A data CD was created for the initial photomonitoring effort and includes

the site location map figures, all photographs taken at each photomonitoring point, and all photographs taken at each site. The Hoopa Valley Tribe Fisheries Department is the current curator of the photomonitoring archive; information regarding new photopoints and copies of the archive should contact the Tribe directly.

CONCLUSIONS/RECOMMENDATIONS

With the initiation of the Adaptive Environmental and Management Program contained in the Trinity River Record of Decision, more photopoints should be installed where future restoration activities will be focused, and other "control" sites should be considered. Furthermore, it would be useful to review the photomonitoring program on a yearly basis to update and revise methodologies to reflect contemporary standards and technology. Rather than simply accumulating a large collection of photopoints, the utility of each photopoint should be reviewed yearly and deleted if the perspective is no longer useful.

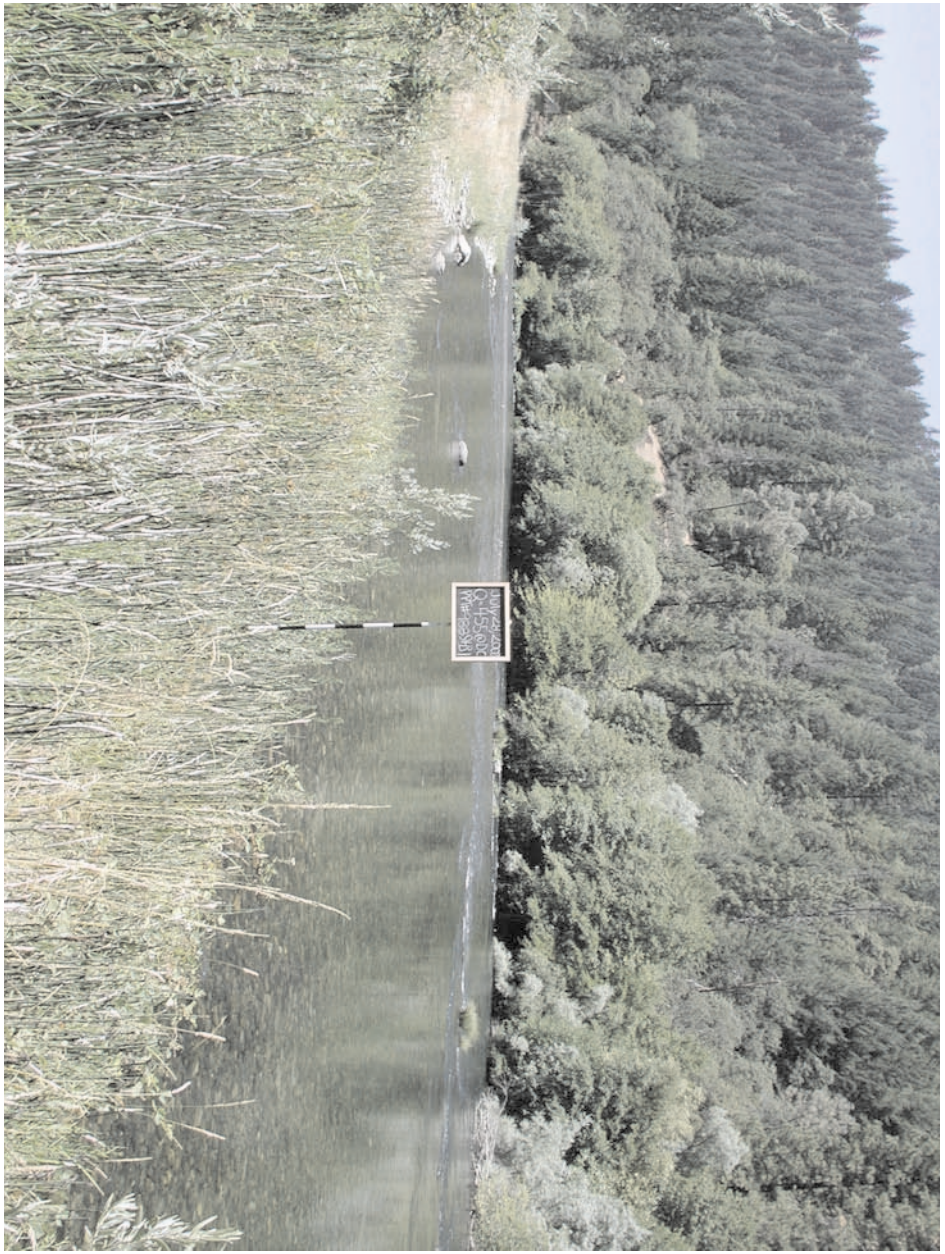
REFERENCES

Elzinga, C. L., D. W. Salzer, and J.W. Willoughby. 1998. Measuring and monitoring plant populations. Denver, Colorado, US Bureau of Land Management.

Appendix A

Image Experiments

300 X 300 dpi DSN 00017 0.63 MB

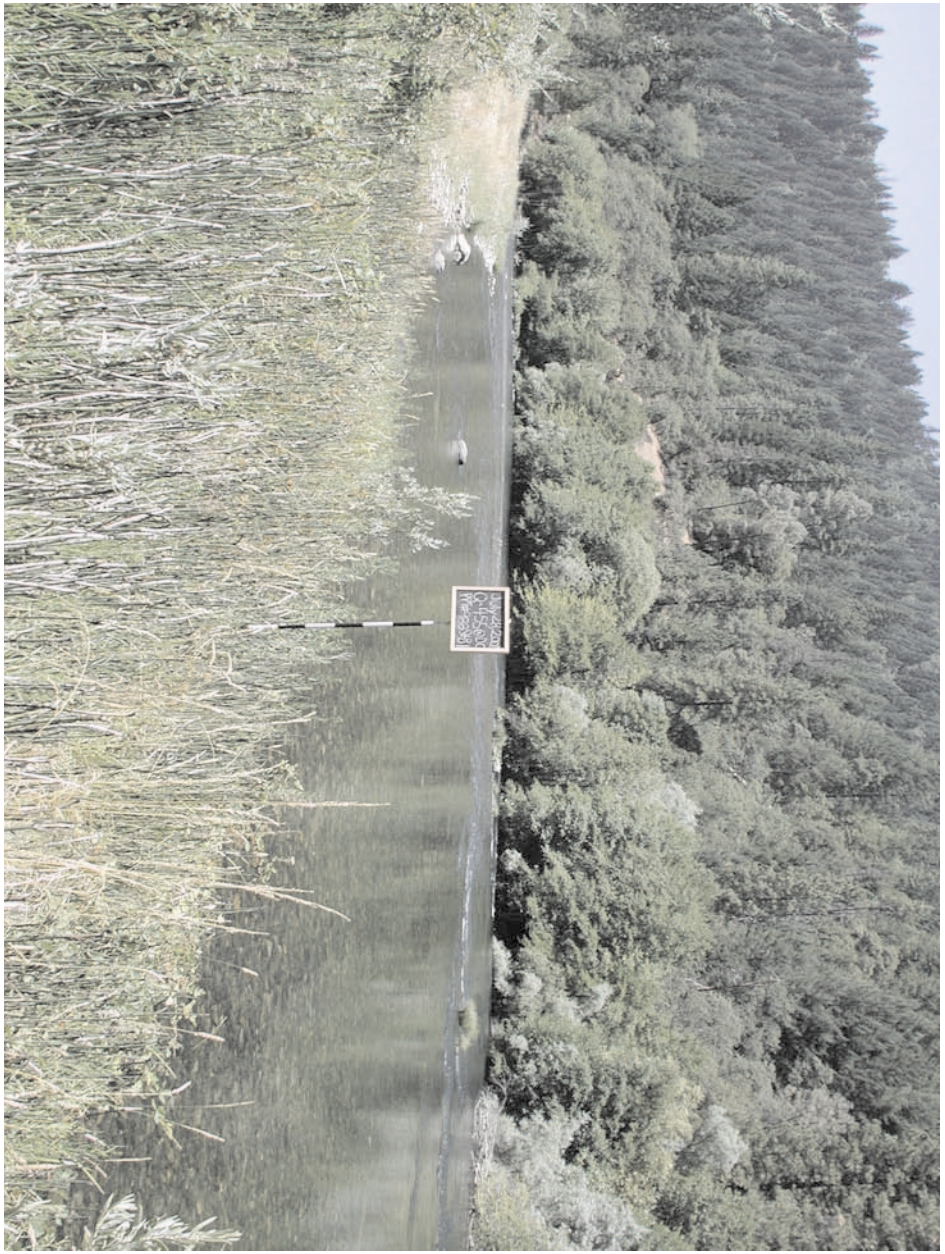


25

Normal

Full Image
2048 x 1536

300 x 300 dpi DSN 00016 1.2 MB



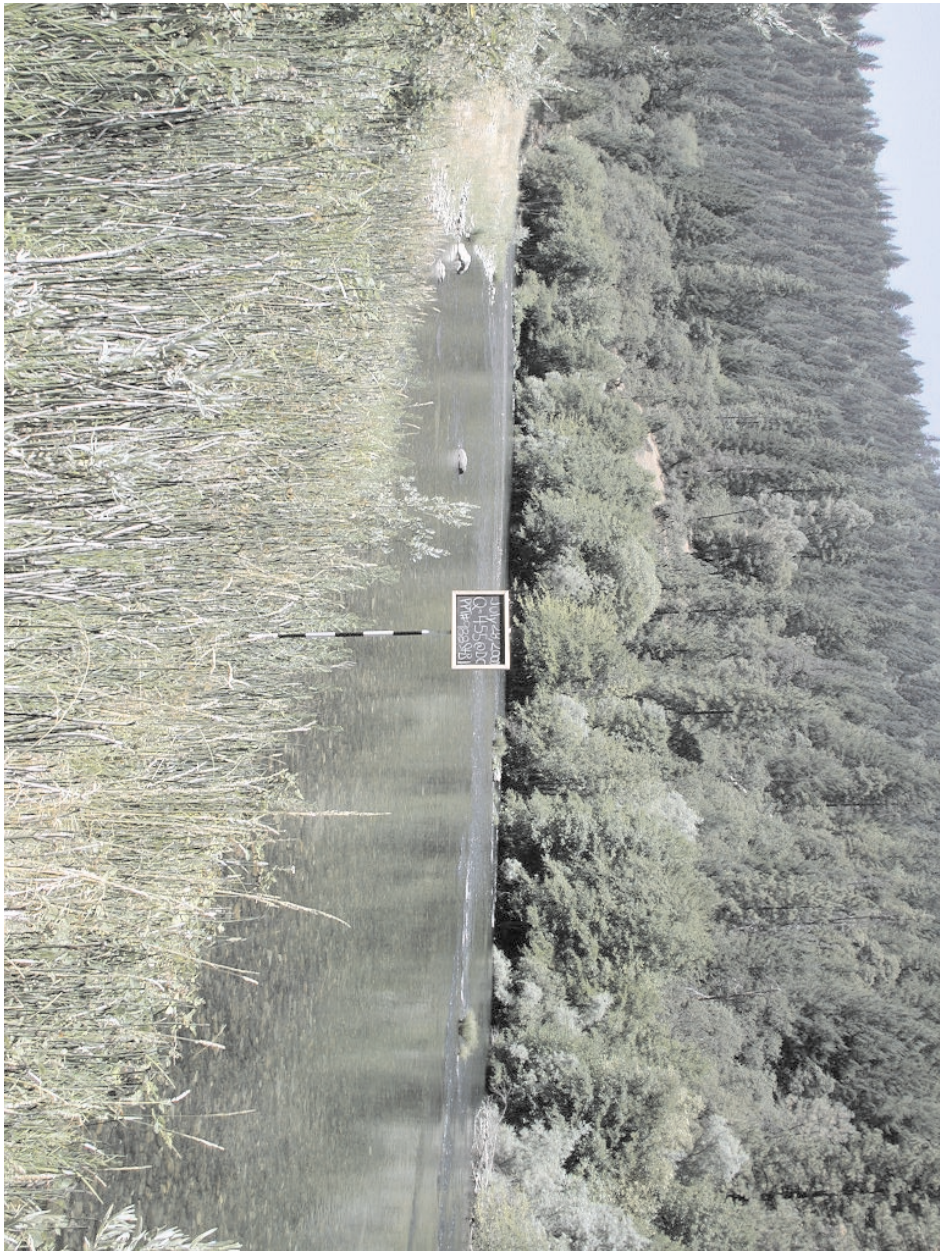
2048

Fine

We'll Buy 96 MB
Full Image
2048 x 1536

ppt#:988StB1

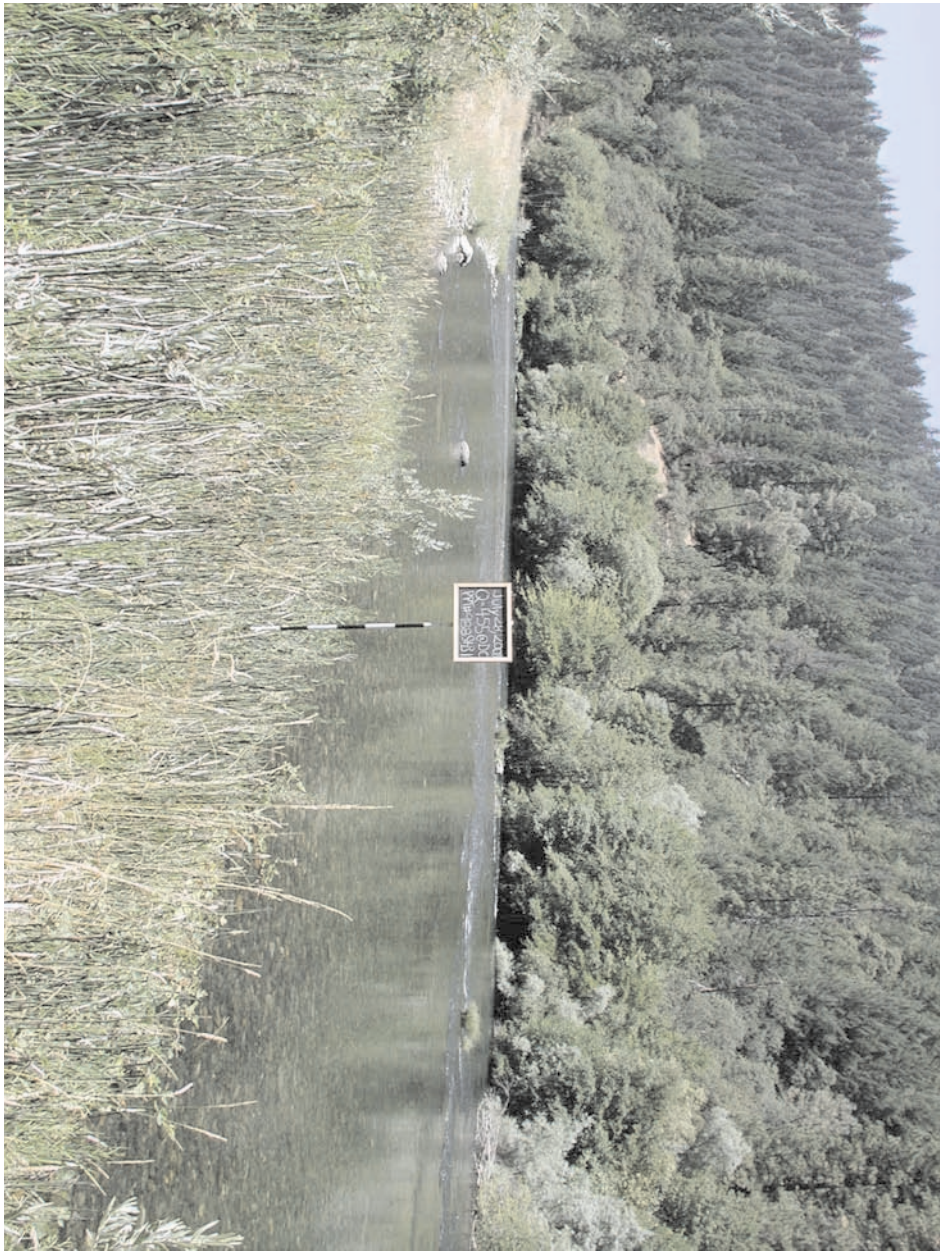
300 X 300 dpi DSCN 00019 0.34 MB



Fine

XGA
1024 x 768

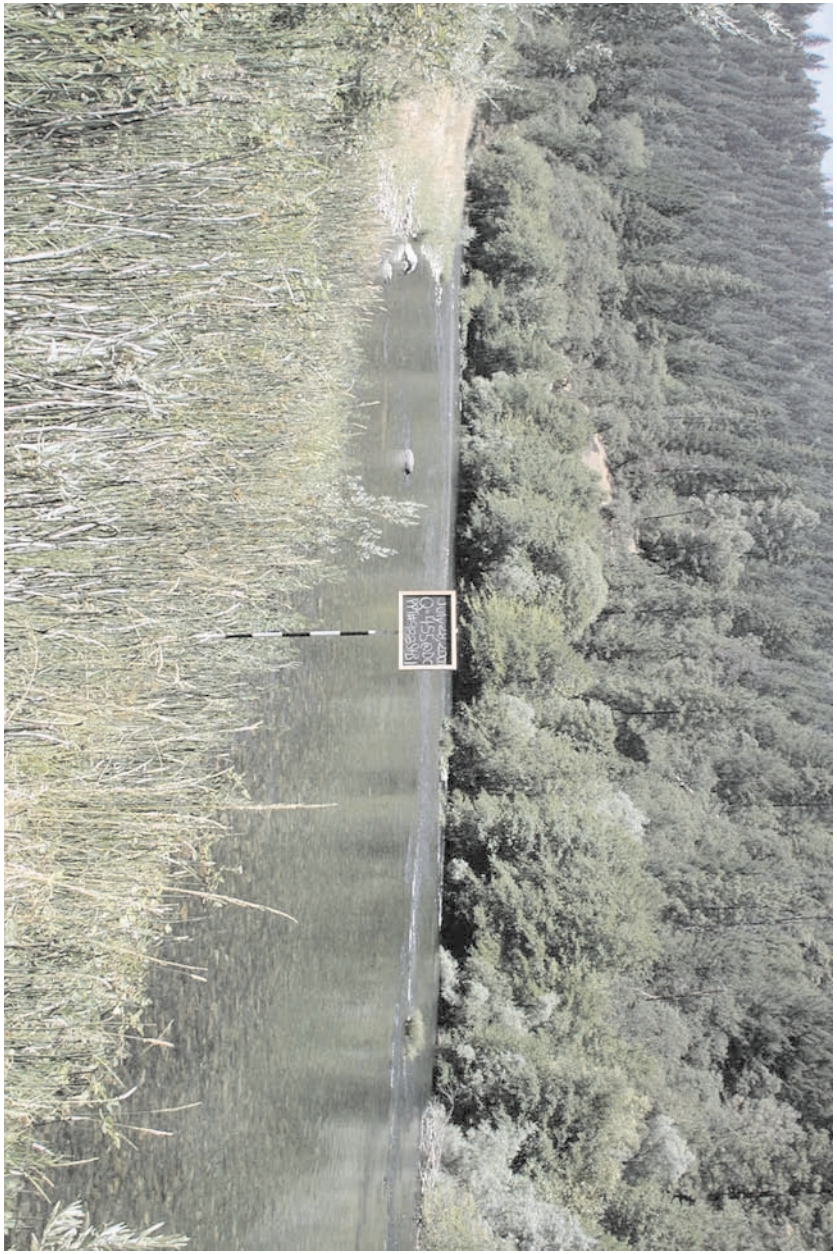
300 x 300 dpi DSCN 00018 .35 MB



Basic

Full Image
1024 x 768

300 X 300 dpi DSCN 00028 0.32 MB



Basic

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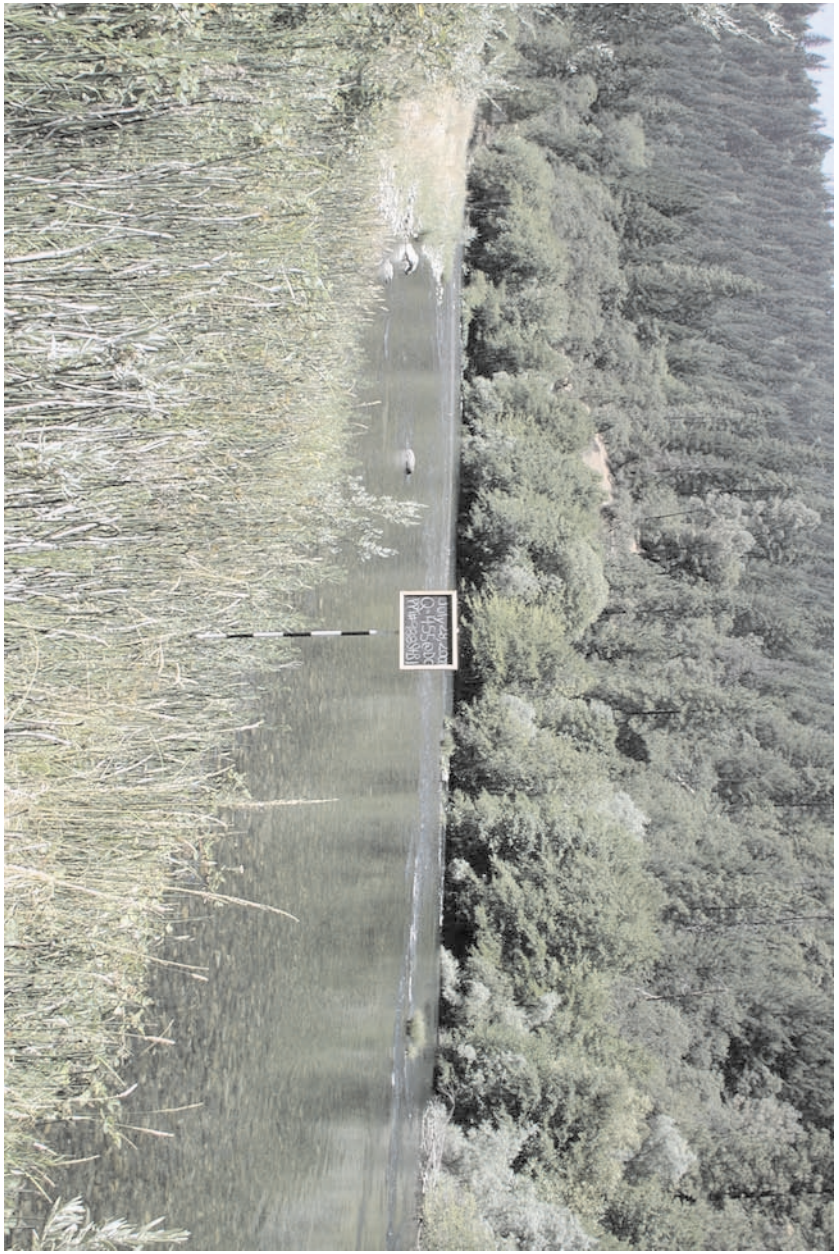

Normal

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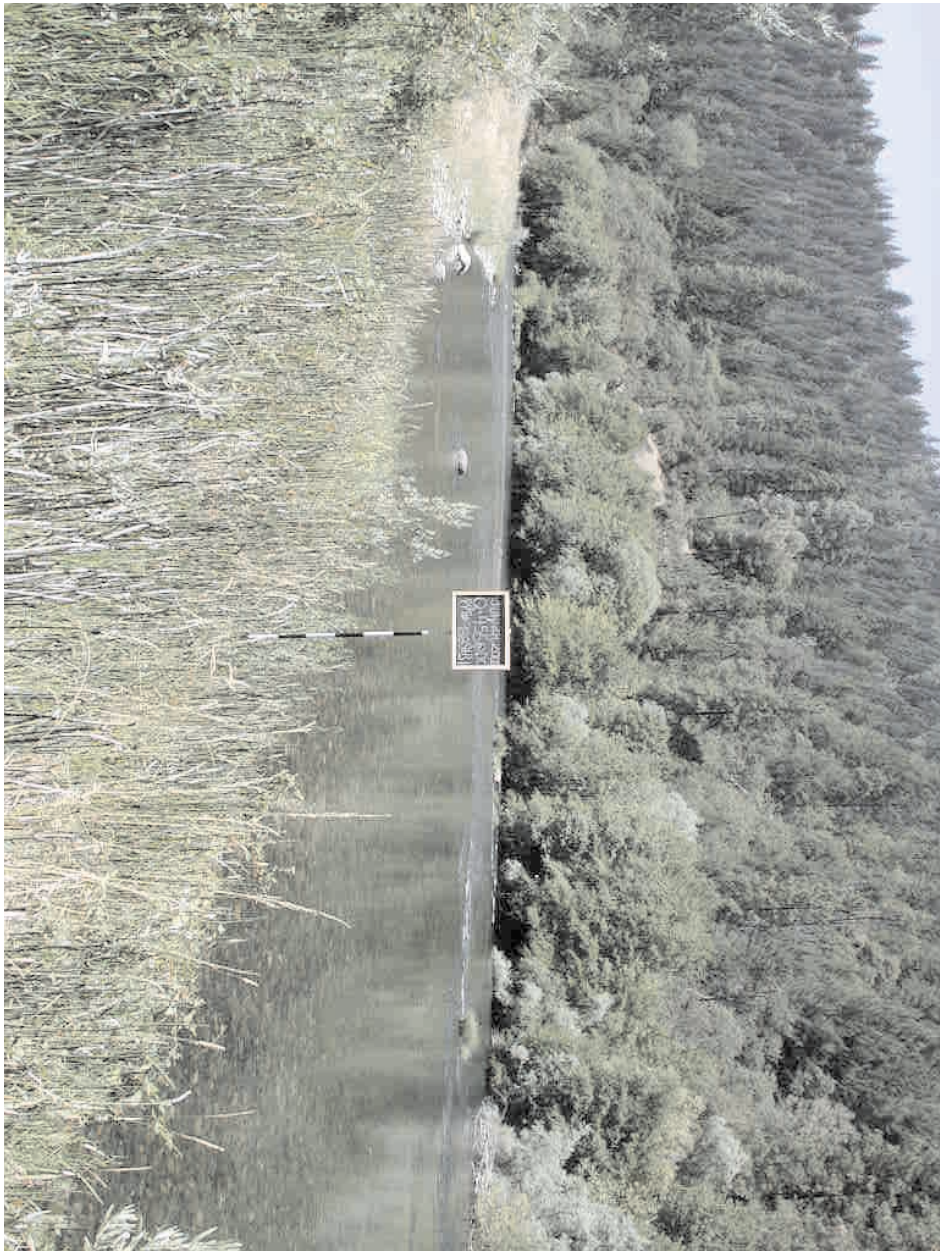
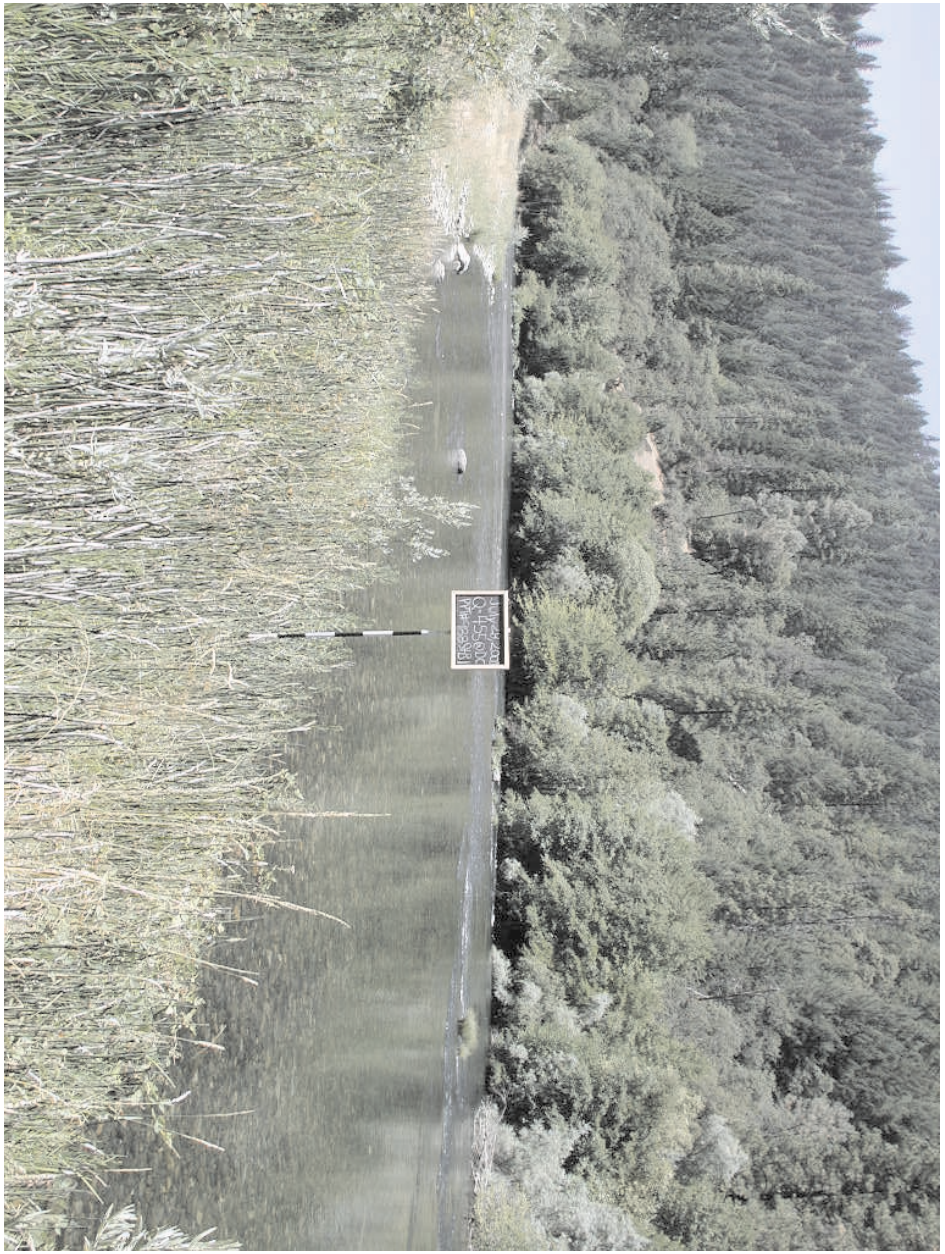


28

Basic

XGA
1024 x 768

300 x 300 dpi DSCN 00020 0.20 MB

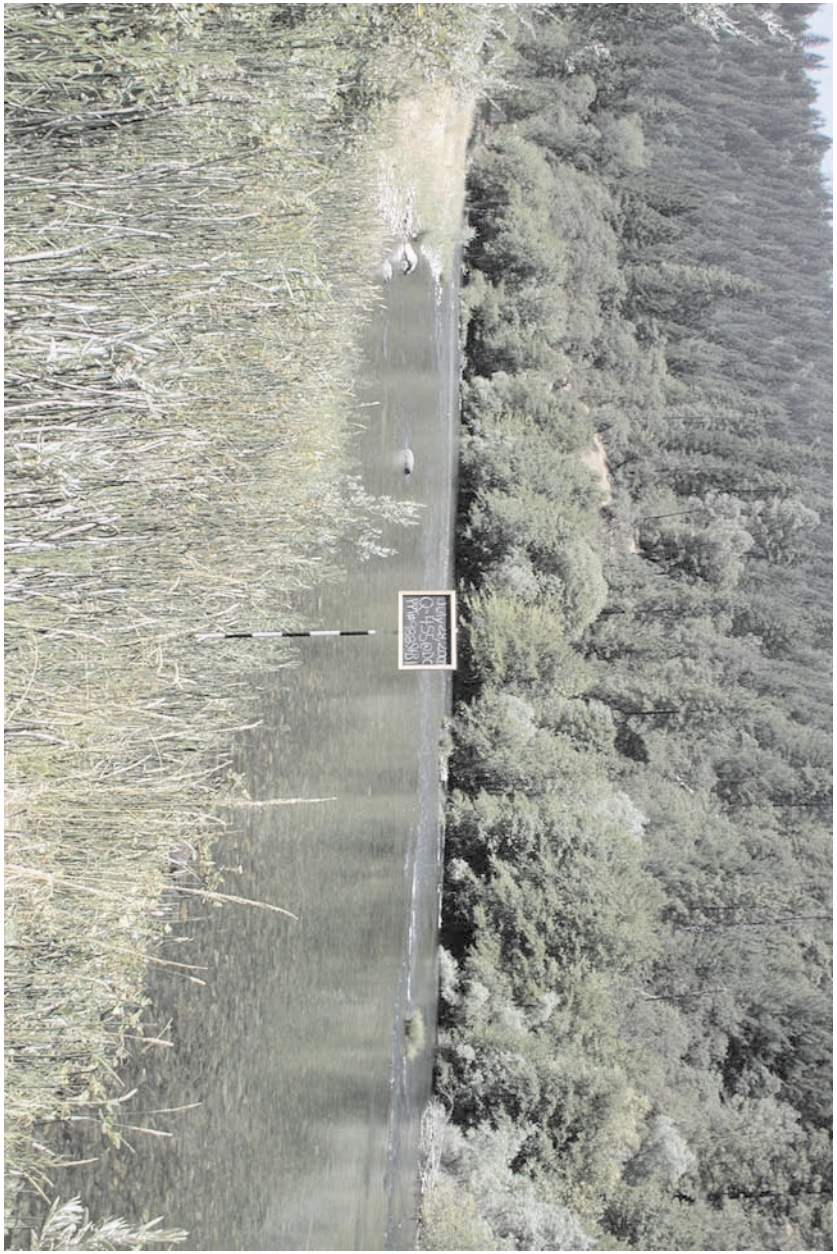


1024

Normal

XGA
1024 x 786

300 X 300 dpi DSCN 00026 1.10 MB



Fine

3:2
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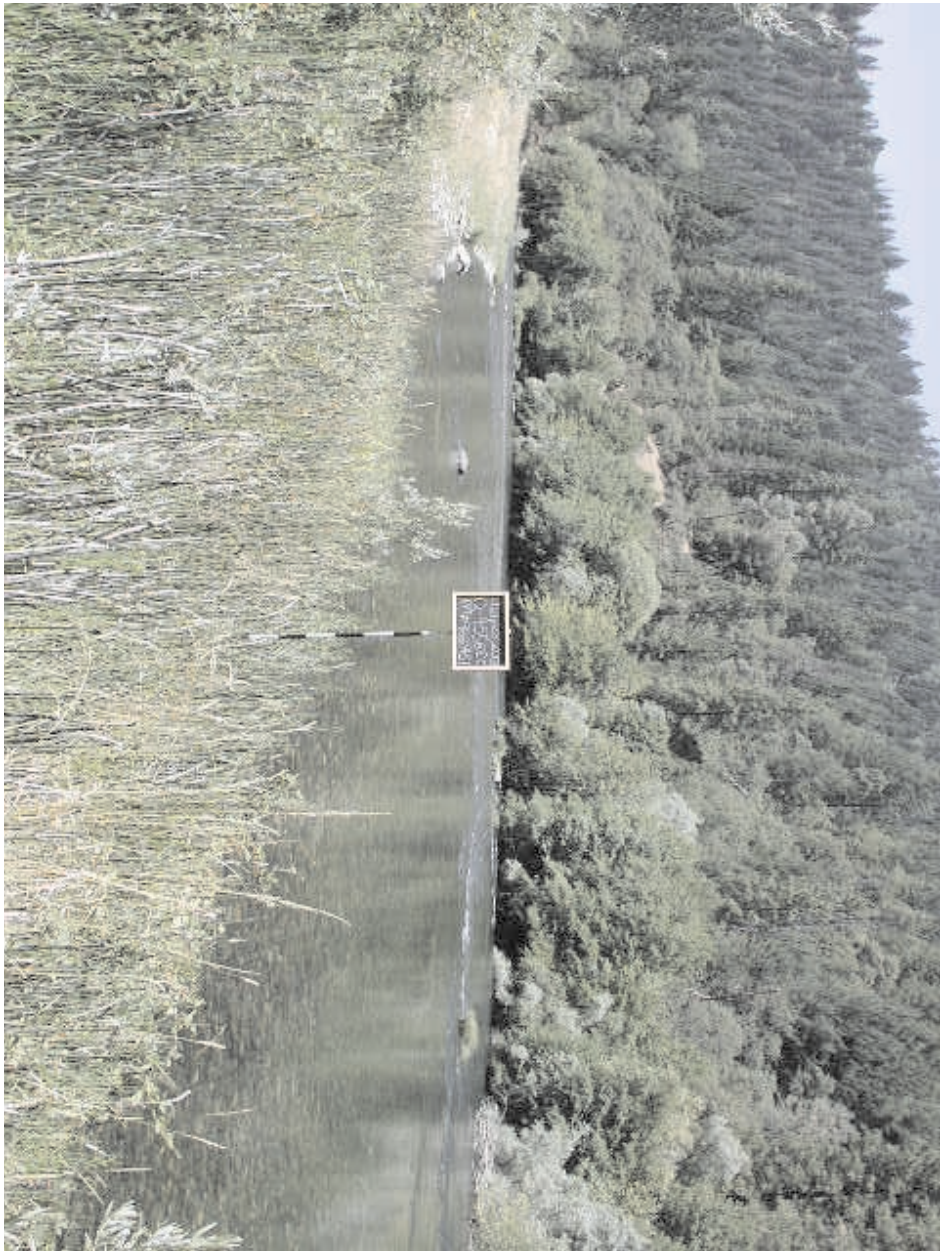
Basic

VGA
640 x 480

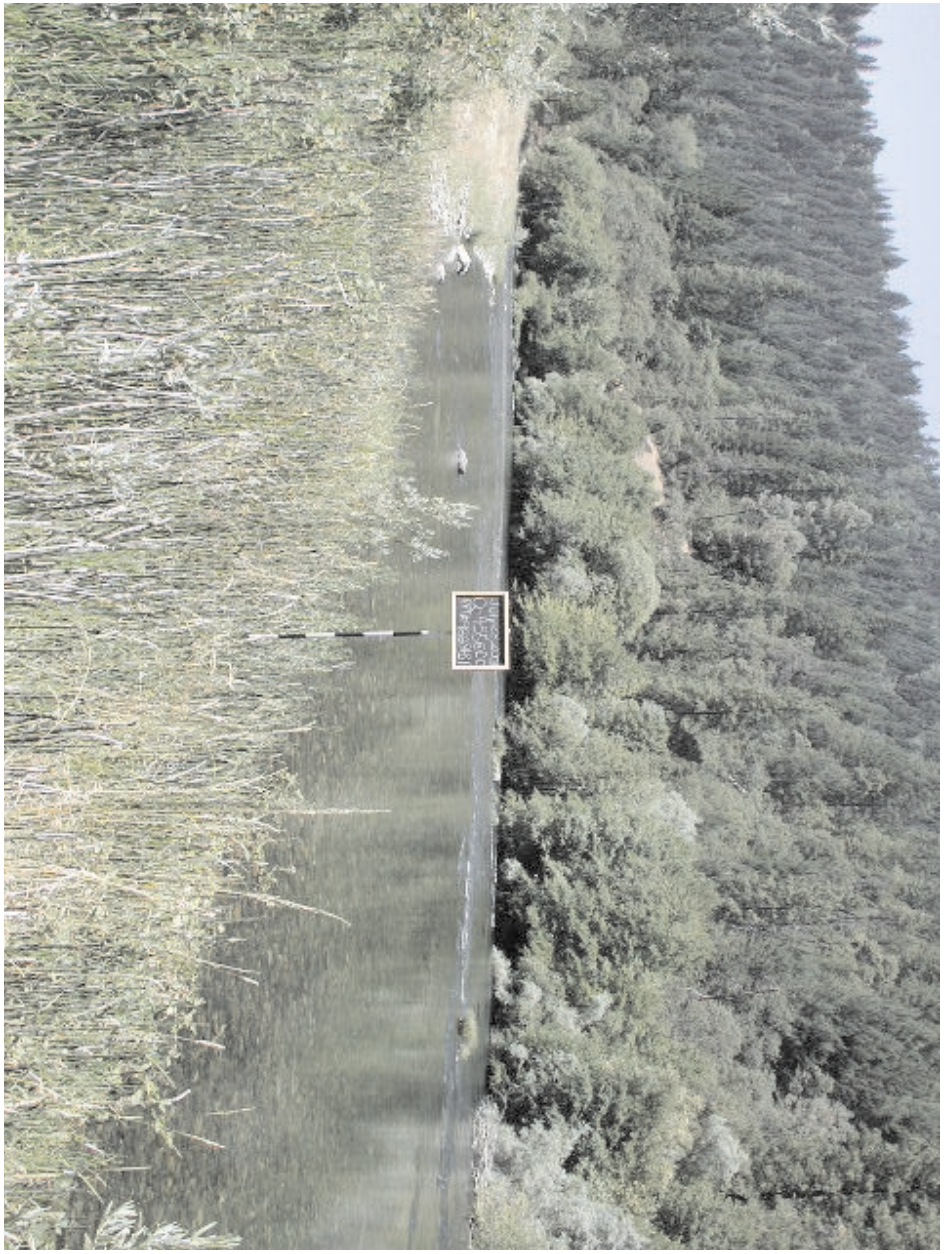
300 X 300 dpi DSCN 00024 0.10 MB



Normal

VGA
640 x 480

300 x 300 dpi DSCN 00023 0.14 MB



Fine

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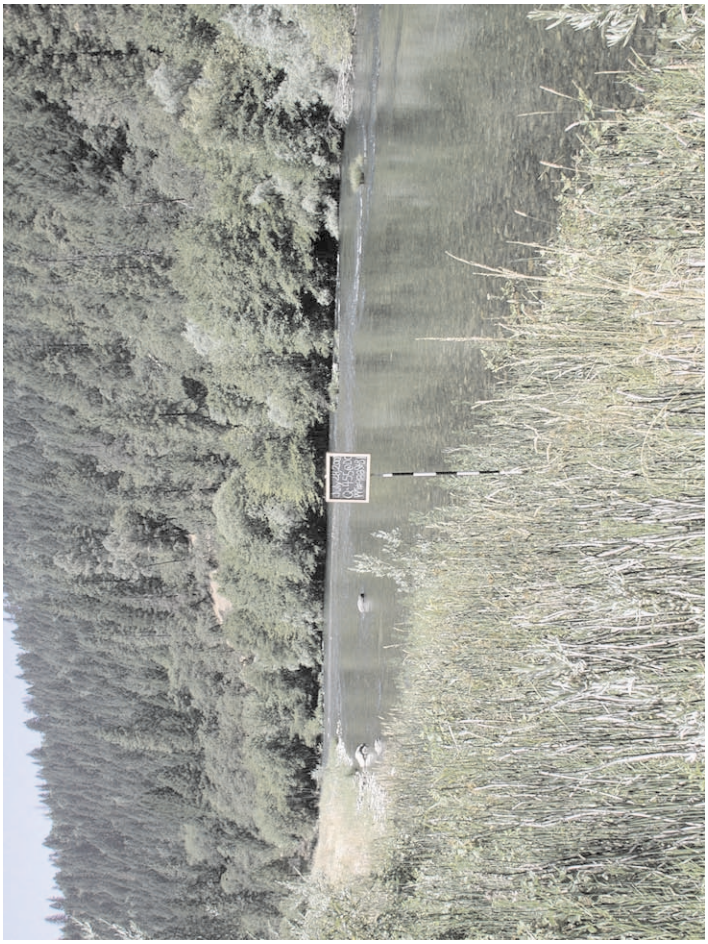
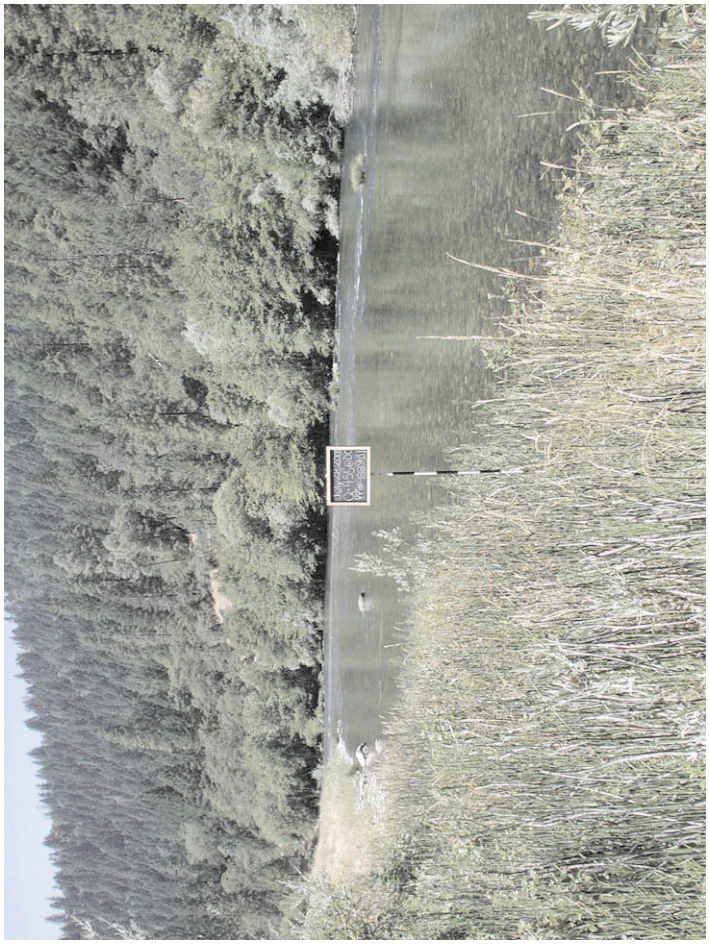
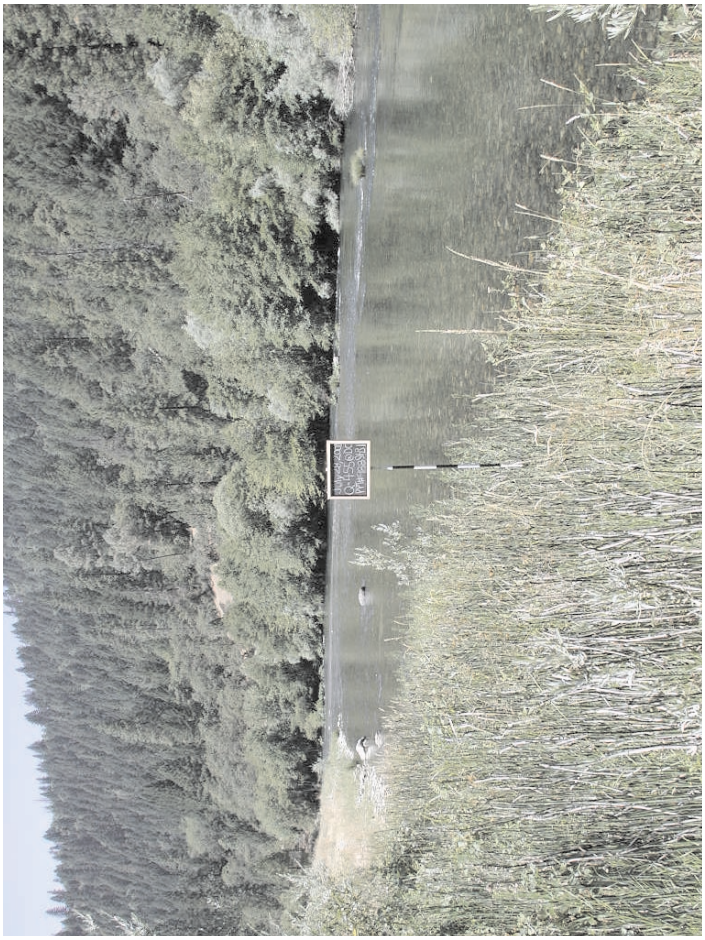
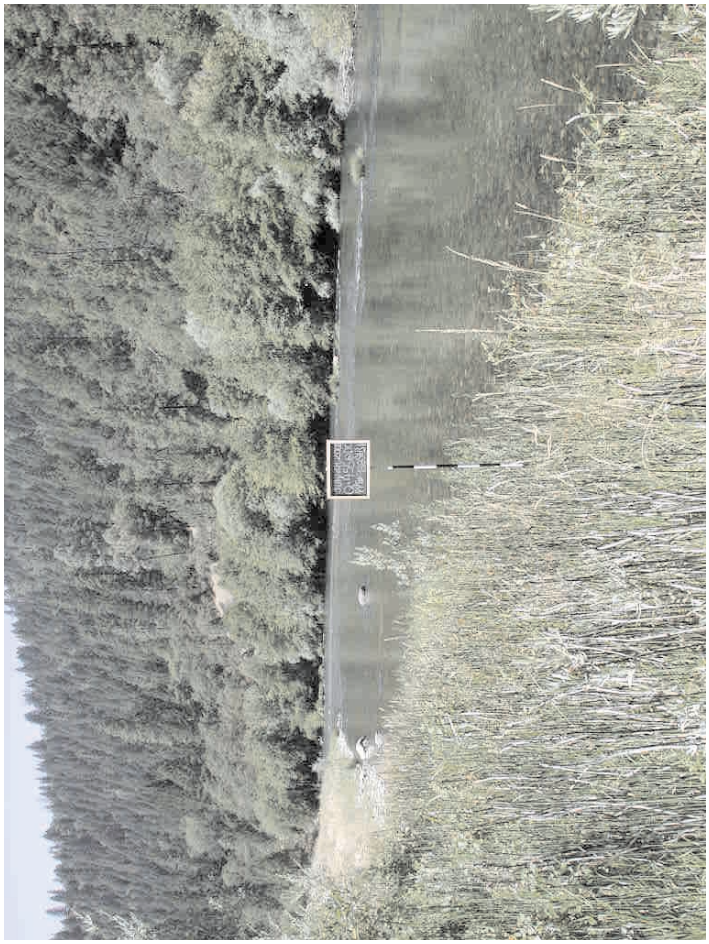
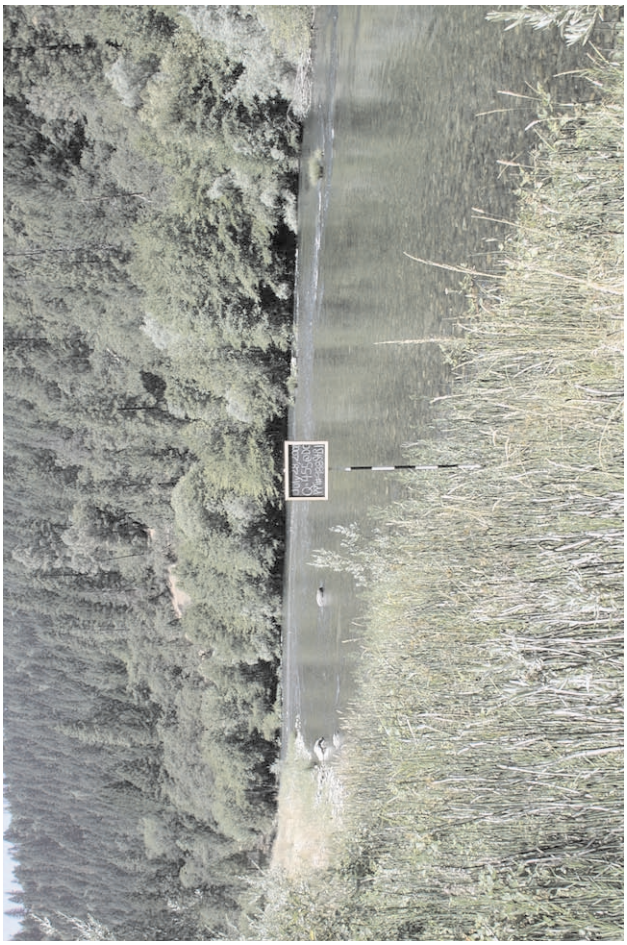
640 x 480

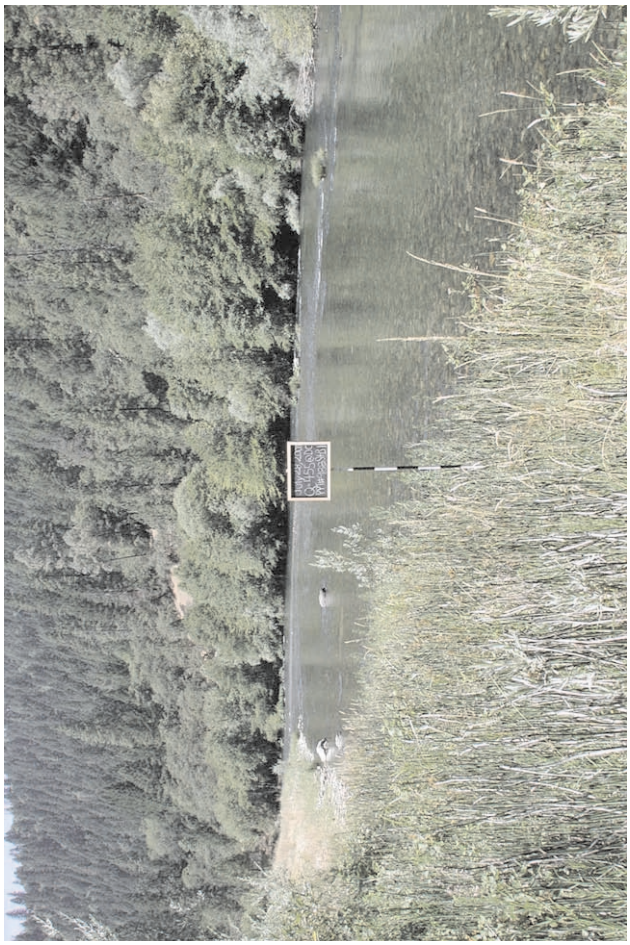


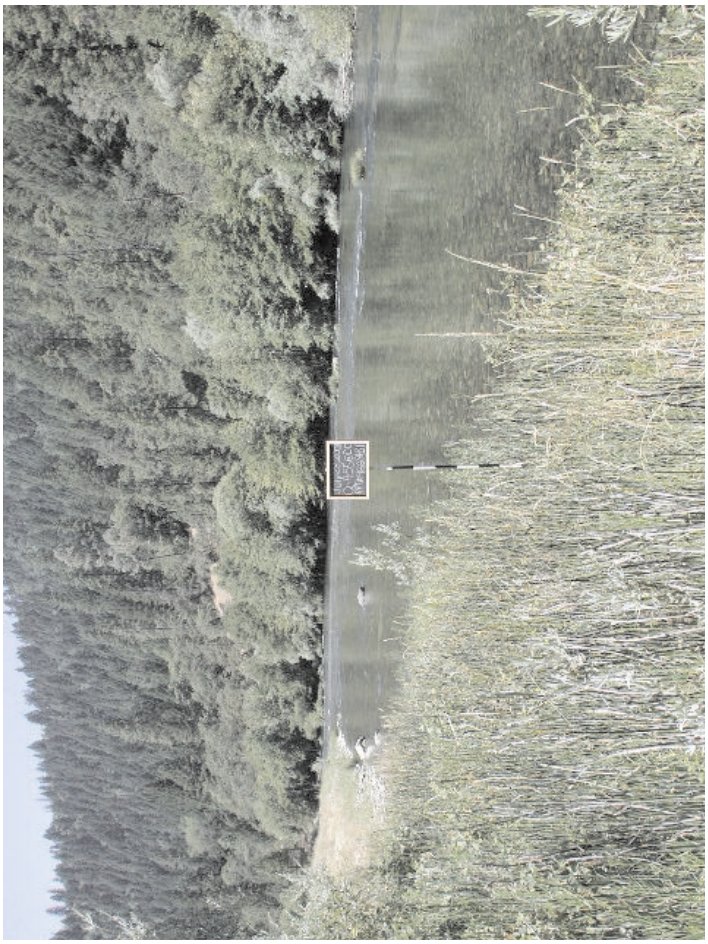


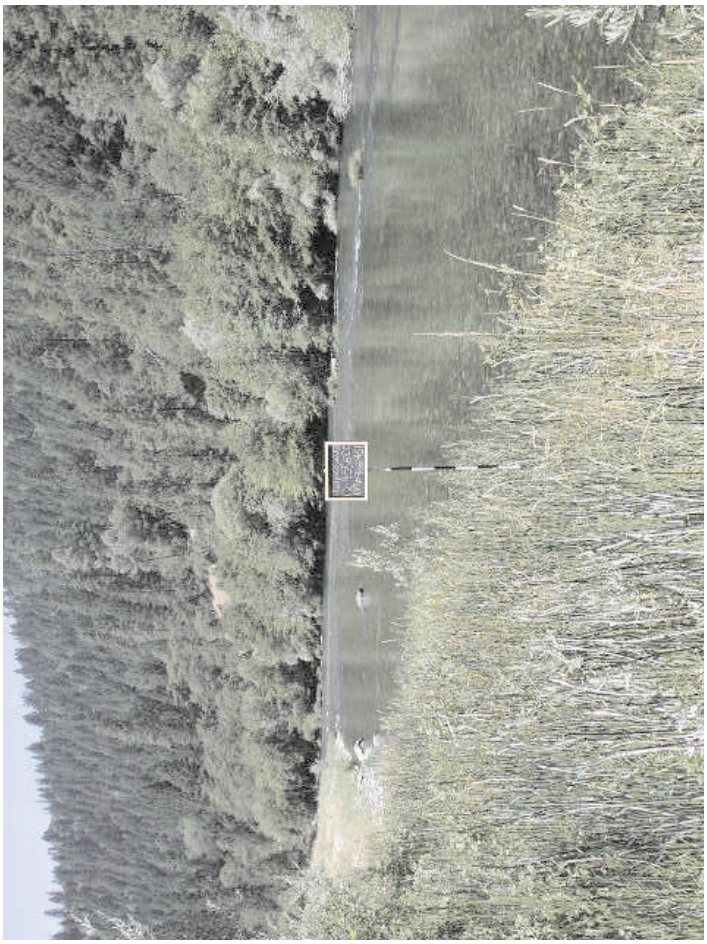


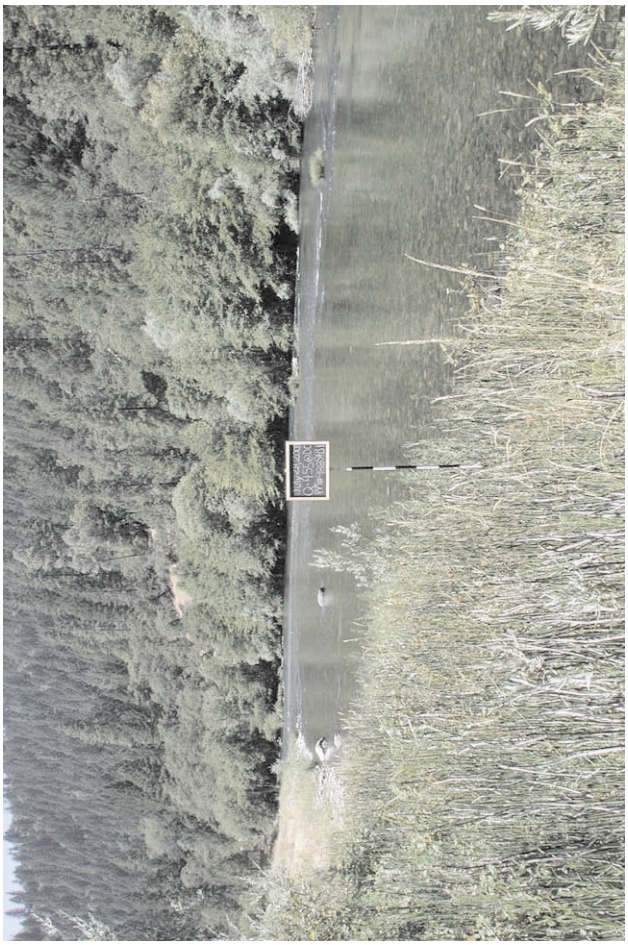












f-Stop Experiments

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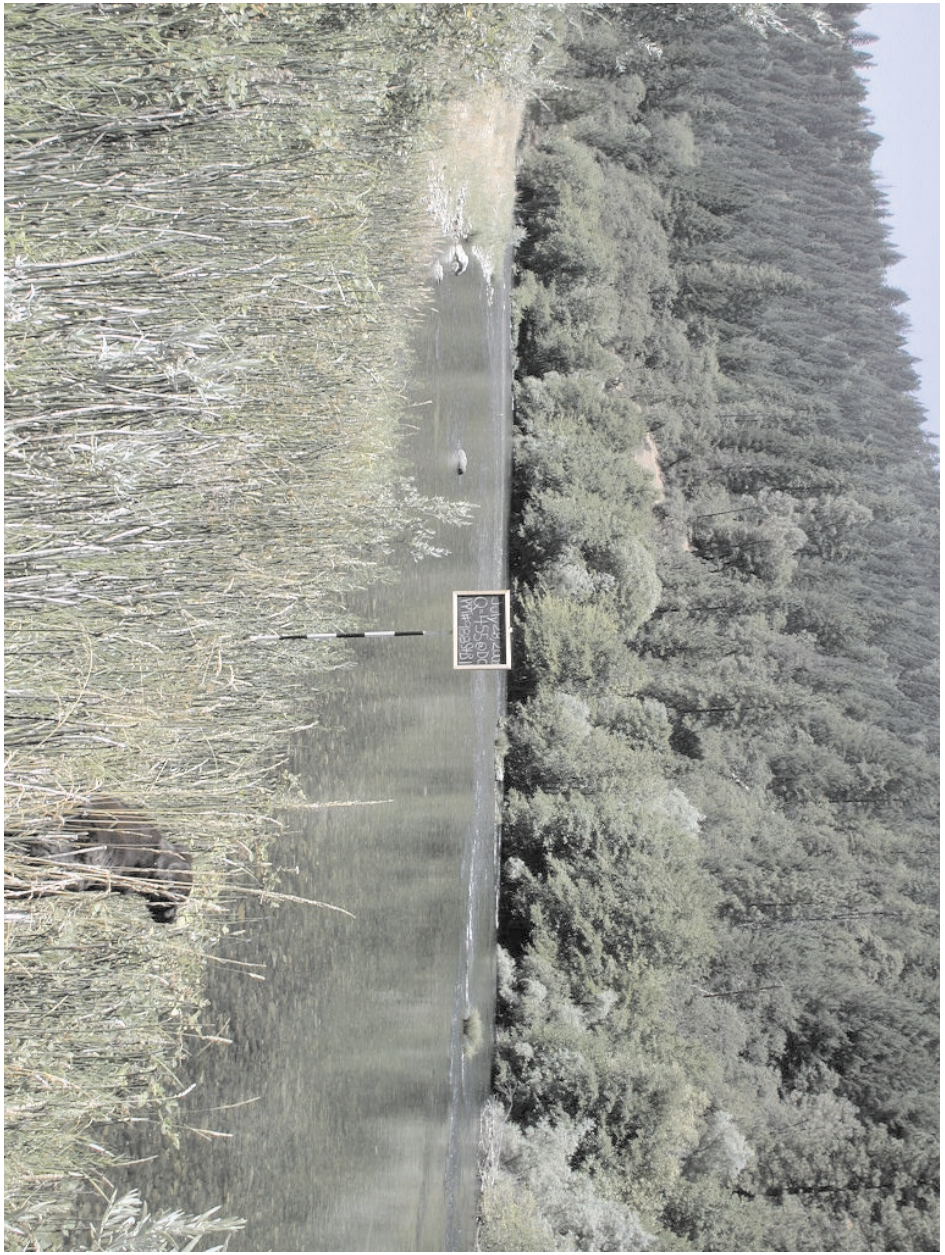

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XGA
1024 x 786

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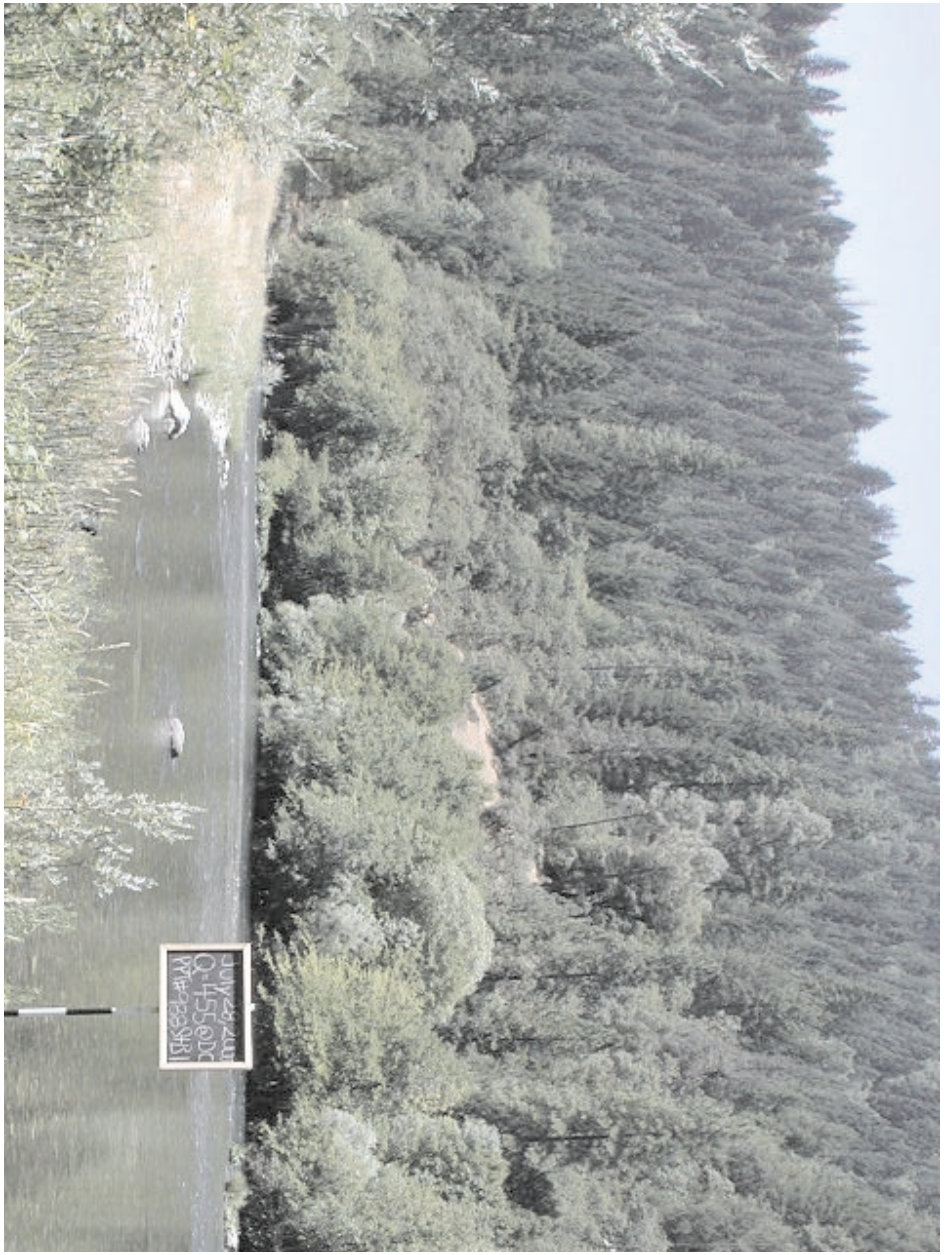

Fine 1/125 F5.5
XGA
1024 x 786

300 x 300 dpi DSCN 00032 0.33 MB

Basic 1/125 F7.0
XGA
1024 x 68

Appendix B

Fieldbook

SITE DESCRIPTION OF PHOTOPOINTS #1120LD1 THROUGH #1120LD3:
TRINITY RIVER AT LEWISTON DAM
(RM 112.0)

Description developed by John H. Bair 1-01 Updated: 1-01 JHB

1. Location

Lewiston Dam and regulates the Trinity River mainstem. Lat. 40° 43' 16" N, Long. 122° 48' 08" W, in NW ¼, SW ¼ Sec.17, T.33 N. R. 8 W. (based on 7.5' USGS topographic sheet, Lewiston, CA Quad., scale 1:24,000), Trinity County, 1.2 mi northeast of Lewiston, on right bank, 0.2 mi upstream of Deadwood Creek confluence, River Mile 112.0.

The site can be reached by traveling 12.0 miles east from the intersection of Highway 3 and Highway 299 in Weaverville to Lewiston Road. Turn left onto Lewiston Road, and travel 5.7 miles to the northeast to the junction of Trinity Dam Blvd, turn left. Travel 1.8 miles to turnout along right hand side of Trinity Dam Blvd (Figure 1.1).

2. Photopoint Description

Photopoint #1120LD1

This photopoint is intended to document bar formation and results of gravel introduction; looking upstream through the site.

Photopoint #1120LD2

This photopoint is intended to document bar formation and results of gravel introduction; looking downstream through the site.

Photopoint #1120LD3

This photopoint is intended to document bar formation and results of gravel introduction; looking upstream through the site.

3. Establishment and History

McBain and Trush installed photopoints #1120LD1 through #1120LD3 on December 20, 2000. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #1120LD1

One 5/8" rebar pin was installed on the right bank hillside (Figure 1.2). Each pin was labeled with an aluminum tag, the observation pin was labeled 1120LD1O no line of sight monument was installed. This observation monument is coincident with photopoint 1120LD2 observation monument.

Photopoint #1120LD2

One 5/8" rebar pin was installed on the right bank hillside (Figure 1.2). Each pin was labeled with an aluminum tag, the observation pin was labeled 1120LD2O no line of sight monument was installed. This observation monument is coincident with photopoint 1120LD1 observation monument.

Photopoint #1120LD3

One 5/8" rebar pin was installed on the right bank hillside (Figure 1.3). Each pin was labeled with an aluminum tag, the observation pin was labeled 1120LD3O no line of sight monument was installed.

5. Land Ownership

The hillside and turnout is publicly owned by the United States Department of Agriculture Forest Service.

6. Purpose of Photopoint(s)

To document changes to the Trinity River mainstem resulting from increased flows, and gravel introduction at the dam site.

Figure 1.1. Lewiston Dam photomonitoring site location and parking.

Figure 1.2. Lewiston Dam photopoint #1120LD1 and #1120LD2 observation point monument.

Figure 1.3. Lewiston Dam photopoint #1120LD3 observation point monument.

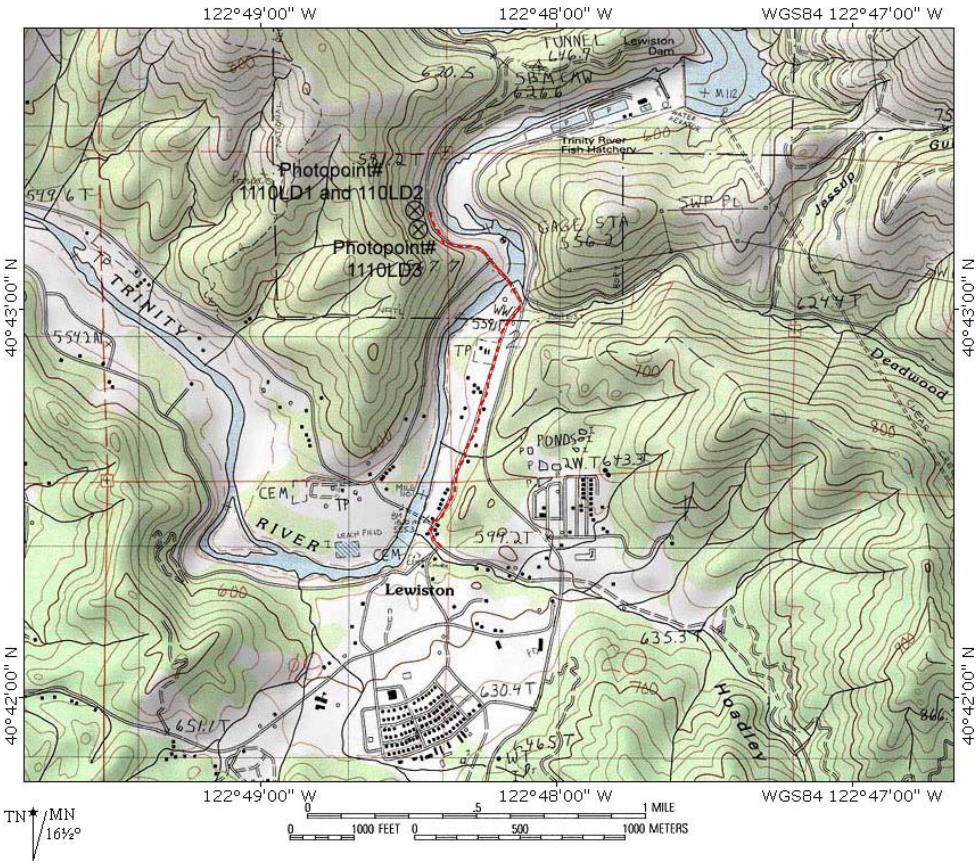

Figure 1.4. Lewiston Dam location and photopoints. Route to the site is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 1.5. PPT#1120LD1 WY2001 photomonitoring result.

Figure 1.6. PPT#1120LD2 WY2001 photomonitoring result.

Figure 1.7. PPT#1120LD3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Lewiston Dam Gravel Introduction Sites
PHOTOPOINT NUMBER: PPT# 1120LD1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 47° from Mag North: ~3° inclination

Date: 12-20-2000 Time: 10:42

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left (Right)

Cross section: N/A Streamflow: 285 cfs @ Lewiston

Where was streamflow measured?: Lewiston USGS gage

Film type: Coolpix 990 digital camera, Film speed: 100 ASA equiv

Camera: _____ Lens (circle one): 28mm 55mm (129mm? Full Telephoto)

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Aperture (Fstop): F Shutter speed: _____

Camera height above observation pin: 5.83ft to bottom of camera

Purpose of photopoint and changes that have occurred since the last monitoring:
This point is to document changes resulting from gravel supplementation and leaks upstream from this point

Any site changes, photopoint location changes, site/pin disturbances, or significant events
This photopoint and 1120LD2 share the same 5/8" rebar observation monument
No line of sight monument possible, none installed

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Lewiston Dam Gravel introduction sites
PHOTOPOINT NUMBER: PPT# 112302
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 113° ; 1° inclination

Date: 12-20-2000 Time: 10:45

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left (Right)

Cross section: N/A Streamflow: 285 cfs @ Lewiston

Where was streamflow measured?: Lewiston USGS gage

Film type: Cool Pix 990, Film speed: 100 ASA equiv

Camera: _____ Lens (circle one): 3 28mm 55mm (129mm? full telephoto

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Aperture (Fstop): F Shutter speed: _____

Camera height above observation pin: 3.83 ft to bottom of camera

Purpose of photopoint and changes that have occurred since the last monitoring:
This point is to document changes resulting from gravel supplementation and looks downstream from the point

Any site changes, photopoint location changes, site/pin disturbances, or significant events
This photopoint and 111012 share the same 5/8" rebar observation monument No line of sight monument possible, USGS Gaging Station used as center of photo

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Lewiston Dam Gravel introduction sites
PHOTOPOINT NUMBER: PPT# 112 9 LD3 US
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 33° from Mag North, ~5° inclination

Date: 12-20-2000 Time: 11:30

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left (Right)

Cross section: _____ Streamflow: 785 cfs @ Lewiston

Where was streamflow measured?: Lewiston USGS gage

Film type: Coolpix 990 digital camera, Film speed: 100 ASA equiv

Camera: _____ Lens (circle one): 28mm 55mm 129mm? full telephoto

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Aperture (Fstop): F Shutter speed: _____

Camera height above observation pin: 3.85 ft to bottom of camera

Purpose of photopoint and changes that have occurred since the last monitoring:
This point is to document changes resulting from gravel supplementation downstream from Lewiston Dam. This point focuses on bar formation resulting from gravel introduction

Any site changes, photopoint location changes, site/pin disturbances, or significant events
The observation point is a 5/8" rebar, No line of sight movement possible, No center point used.

SITE DESCRIPTION OF PHOTOPOINTS #1108DC1 THROUGH #1108DC3: TRINITY RIVER AT DEADWOOD CREEK CONFLUENCE (RM 110.8)

Description developed by John H. Bair 1-01 Updated: 1-01 JHB

1. Location

Deadwood Creek flows into the Trinity River mainstem from the left bank. Lat. 40° 43' 03" N, Long. 122° 48' 06" W, in NW ¼, SW ¼ Sec.17, T.33 N. R. 8 W. (based on 7.5' USGS topographic sheet, Lewiston, CA Quad., scale 1:24,000), Trinity County, 1.2 mi northeast of Lewiston, on right bank, 0.8 mi upstream of Old Lewiston Bridge, 0.2 mi downstream of Lewiston Dam, River Mile 110.8.

The site can be reached by traveling 12.0 miles east from the intersection of Highway 3 and Highway 299 in Weaverville to Lewiston Road. Turn left onto Lewiston Road, and travel 5.7 miles to the northeast to the junction of Trinity Dam Blvd, turn left. Travel 1.3 miles to Hatchery/Dam Access road, turn left. Deadwood Creek Confluence is at the junction of Trinity Dam Blvd and the hatchery access road.

2. Photopoint Description

Photopoint #1108DC1

This photopoint is intended to document delta formation and reduction, vegetation growth and is taken looking downstream through the site (Figure 2.6).

Photopoint #1108DC2

This photopoint is to document delta formation, and reduction, vegetation growth and is taken from the left bank hillside overlooking the site (Figure 2.7).

Photopoint #1108DC3

This photopoint is intended to document changes to the position of Deadwood Creek's confluence location and changes to mainstem channel confinement (Figure 2.8).

3. Establishment and History

McBain and Trush installed photopoints #1108DC1 through #1108DC3 on January 31, and February 1, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #1108DC1

Two 5/8" rebar pins were installed on the right bank. Each pin was labeled with an aluminum tag, the observation pin was labeled 1108DC1O and the line of sight pin was labeled 1108DC1LS (Figures 2.1 and 2.2).

Photopoint #1108DC2

One 5/8" rebar pin was placed on the northwestern side of Rush Creek road ¼ mile from the intersection of Trinity Dam Blvd and Rush Creek Rd (Figure 2.3). An aluminum tag was wired to the rebar and labeled 1108DC2.

Photopoint #1108DC3

One ½" rebar pin was located on the northern side of the Trinity Dam Blvd bridge over the mainstem Trinity River (Figure 2.4). The pin was labeled with an aluminum tag marked with 1108DC3.

5. Land Ownership

Deadwood Creek is publicly owned by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the Deadwood Creek delta resulting from increased flows.

Figure 2.1. Deadwood Creek photopoint #1108DC1 observation point monument.

Figure 2.2. Deadwood Creek photopoint #1108DC1 line of sight point monument.

Figure 2.3. Deadwood Creek photopoint #1108DC2 observation point monument.

Figure 2.4. Deadwood Creek photopoint #1108DC3 observation point monument.

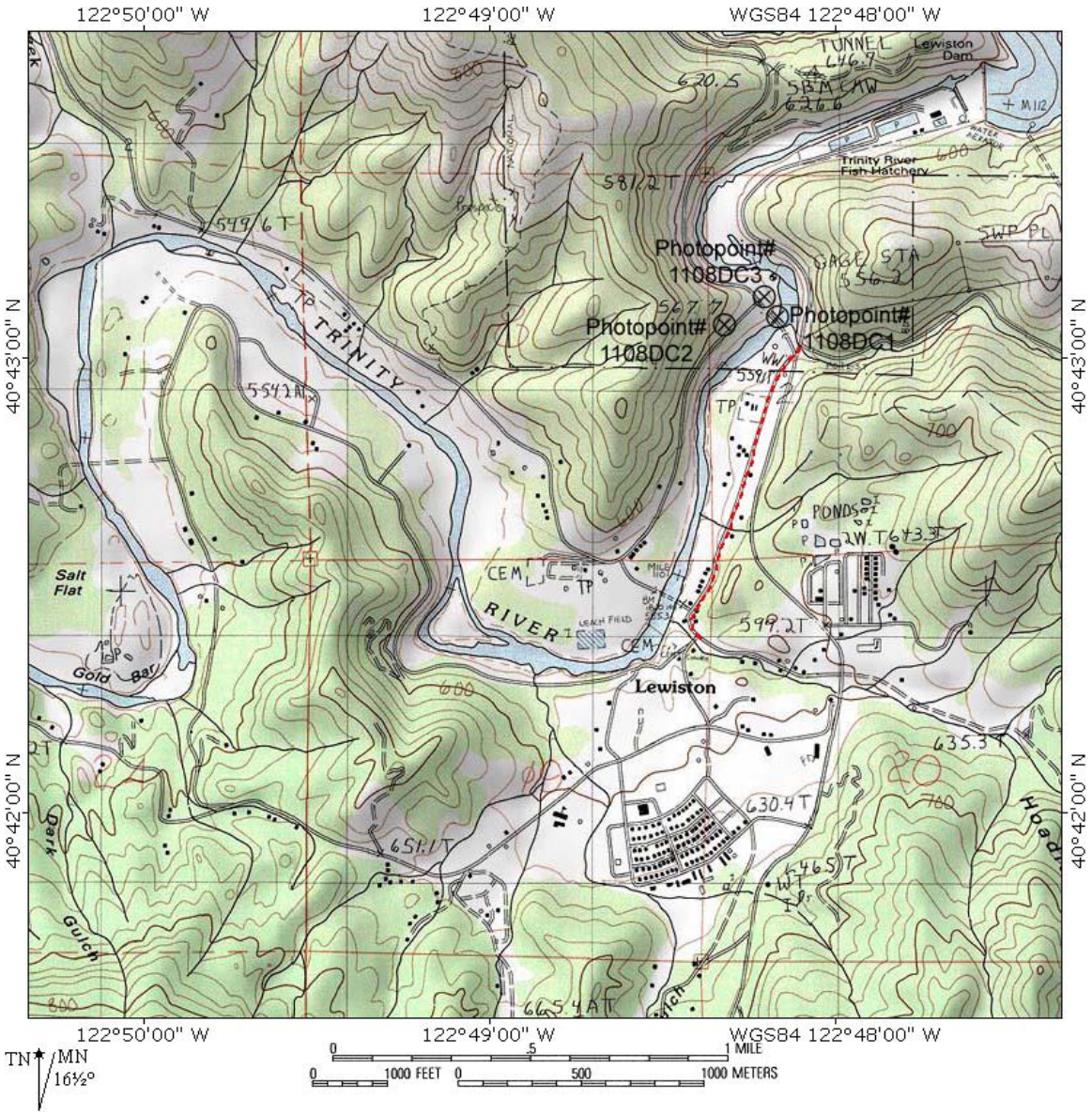

Figure 2.5. Deadwood Creek confluence location and photopoints. Route to the confluence is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 2.6. PPT #1108DC1 WY2001 photomonitoring result.

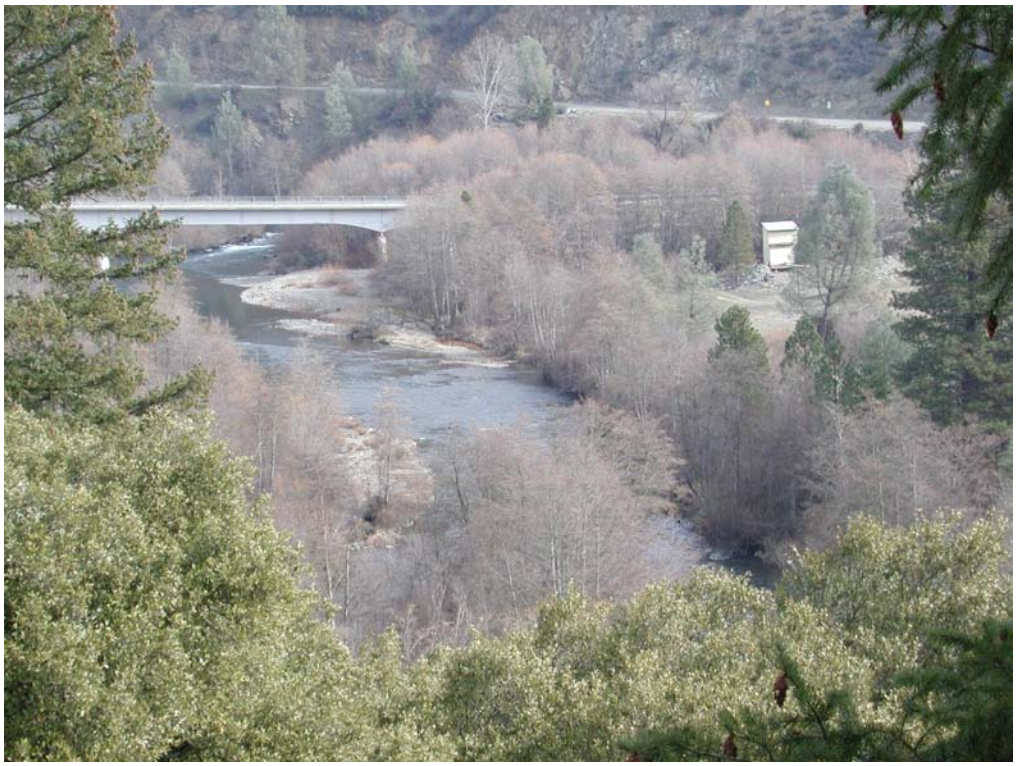

Figure 2.7. PPT #1108DC2 WY2001 photomonitoring result.

Figure 2.8. PPT #1108DC3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Deadwood Creek
PHOTOPOINT NUMBER: PPT# 1108 DC1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 72 °
INCLINATION OF CAMERA AT PHOTOCENTER : -3.25 °

Date: 1-30-01 Time: 16:45

Field Technician(s): John H. Bair

Elevation: ______ ft River bank (circle one): Left Center **(Right)**

Cross section: ______ Streamflow: 3.53 cfs

Where was streamflow measured?: Lewiston USGS gage

Camera (circle one): Nikon CoolPix 990 Other: ______ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W[▓▓▓▓▓▓]T W[▓▓▓▓▓]T W[▓▓▓▓]T
(T) Telephoto = 24mm
(W) Wide angle = 8mm
W[▓▓▓]T W[▓▓]T (W[▓]T) – 100% wide
Aperture (Fstop): 2.5 F
W[ ]T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.82 ft above a 5/8" rebar pin.

Purpose of photopoint and changes that have occurred since the last monitoring:
Upstream of delta looking downstream across pool, delta is on left. Document changes in confluence and delta area

Any site changes, photopoint location changes, site/pin disturbances, or significant events
Two 5/8" rebar pins were installed on the right bank near the active channel.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Deadwood Creek Confluence
PHOTOPOINT NUMBER: PPT# 1108DC2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 41 °
INCLINATION OF CAMERA AT PHOTOCENTER : -5.0 °

Date: 2-1-01 Time: ________

Field Technician(s): John H. Bair

Elevation: ________ ft River bank (circle one): Left Center (Right) - on hillside

Cross section: ________ Streamflow: 3.54 ft ~~cfs~~

Where was streamflow measured?: Lewiston USGS

Camera (circle one): (Nikon CoolPix 990) Other: ________ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): (W[▓▓▓▓▓▓▓▓]T) W[▓▓▓▓▓▓]T W[▓▓▓▓]T — 100% tele
(T) Telephoto = 24mm
(W) Wide angle = 8mm
W[▓▓▓▓]T W[▓▓]T W[▓]T

Aperture (Fstop): 5.0 F W[ ]T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 3.52 ft above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring:
To document changes to the delta and influences of the delta on the mainstem.

Any site changes, photopoint location changes, site/pin disturbances, or significant events
a 5/8" rebar pin was driven in a turnout 1/4 mile from the junction of Rush Creek Road and Trinity Dam Blvd. This is a site overview

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Deadwood Creek Confluence
PHOTOPOINT NUMBER: PPT# 1108DC3
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 112 °
INCLINATION OF CAMERA AT PHOTOCENTER: -12.25 °

Date: 2-1-01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center (Right) By bridge

Cross section: _____ Streamflow: 3.54 ft cfs

Where was streamflow measured?: Lewiston USGS

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T (100% wide)

Aperture (Fstop): 4.4 F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.64 ft down a 3/8" rebar with a yellow plastic cap (Not mine)

Purpose of photopoint and changes that have occurred since the last monitoring: This point is directly across the river from the confluence. Changes in confluence location and mainstem channel confinement will be documented.

Any site changes, photopoint location changes, site/pin disturbances, or significant events
A 1/2" rebar w/ a yellow cap was pre existing on the North side of Trinity Dam Blvd Bridge (river right). An Aluminum tag labeled was placed on the rebar

SITE DESCRIPTION OF PHOTOPOINTS #1100OLB1 THROUGH #110OLB2:
TRINITY RIVER AT OLD LEWISTON BRIDGE
(RM 110.0)

Description developed by John H. Bair 1-01 Updated: 1-01 JHB

1. Location

The Old Lewiston Bridge (Turnpike Road) crosses the river, constructed by the county in the early 1900's. Lat. 40° 42' 28" N, Long. 122° 48' 29" W, in NW ¼, SW ¼ Sec.9, T.33 N. R. 8 W. (based on 7.5' USGS topographic sheet, Lewiston, CA Quad., scale 1:24,000), Trinity County, 0.5 mi north of Lewiston, on left bank, 2.5 mi upstream of Rush Creek confluence, 0.7 mi downstream of Deadwood Creek confluence , 1.0 mi downstream of Lewiston Dam, River Mile 110.0.

The site can be reached by traveling 12.0 miles west from the intersection of Highway 3 and Highway 299 in Weaverville to Lewiston Road. Turn left onto Lewiston Road, and travel 5.7 miles to the northeast to the junction of Trinity Dam Blvd, turn left. Travel 0.2 miles to Turnpike Road, turn left. Follow Turnpike Road to the northwest 1.0 mile, through Old Lewiston and across bridge. Parking is on the left hand side of Turnpike Road across the Old Lewiston Bridge (Figure 3.3).

2. Photopoint Description

Photopoint #1100OLB1

This photopoint is intended to document bar formation and vegetation growth; looking upstream from the bridge (Figures 3.1 and 3.4).

Photopoint #1100PLB2

This photopoint is intended to document bar formation and vegetation growth; looking downstream from the bridge (Figures 3.2 and 3.5).

\3. Establishment and History

McBain and Trush installed photopoints #1100OLB1 and #1100OLB2 on December 21, 2000. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #1100OLB1

The observation monument consists of one pre-existing carriage bolt on the upstream side of the bridge deck. The bolt is in the middle of the bridge, no line of sight monument exists (Figure 3.1).

Photopoint #1100OLB2

The observation monument consists of one pre-existing carriage bolt on the downstream side of the bridge deck. The bolt is in the middle of the bridge, no line of sight monument exists (Figure 3.2).

5. Land Ownership

Old Lewiston Bridge is owned and maintained by Trinity County, it is also a state historic landmark.

6. Purpose of Photopoint(s)

To document transient alluvial features that result from gravel introduction upstream.

Figure 3.1. Old Lewiston Bridge photopoint #1100OLB1 observation point monument.

Figure 3.2. Old Lewiston Bridge photopoint #1100OLB2 observation point monument.

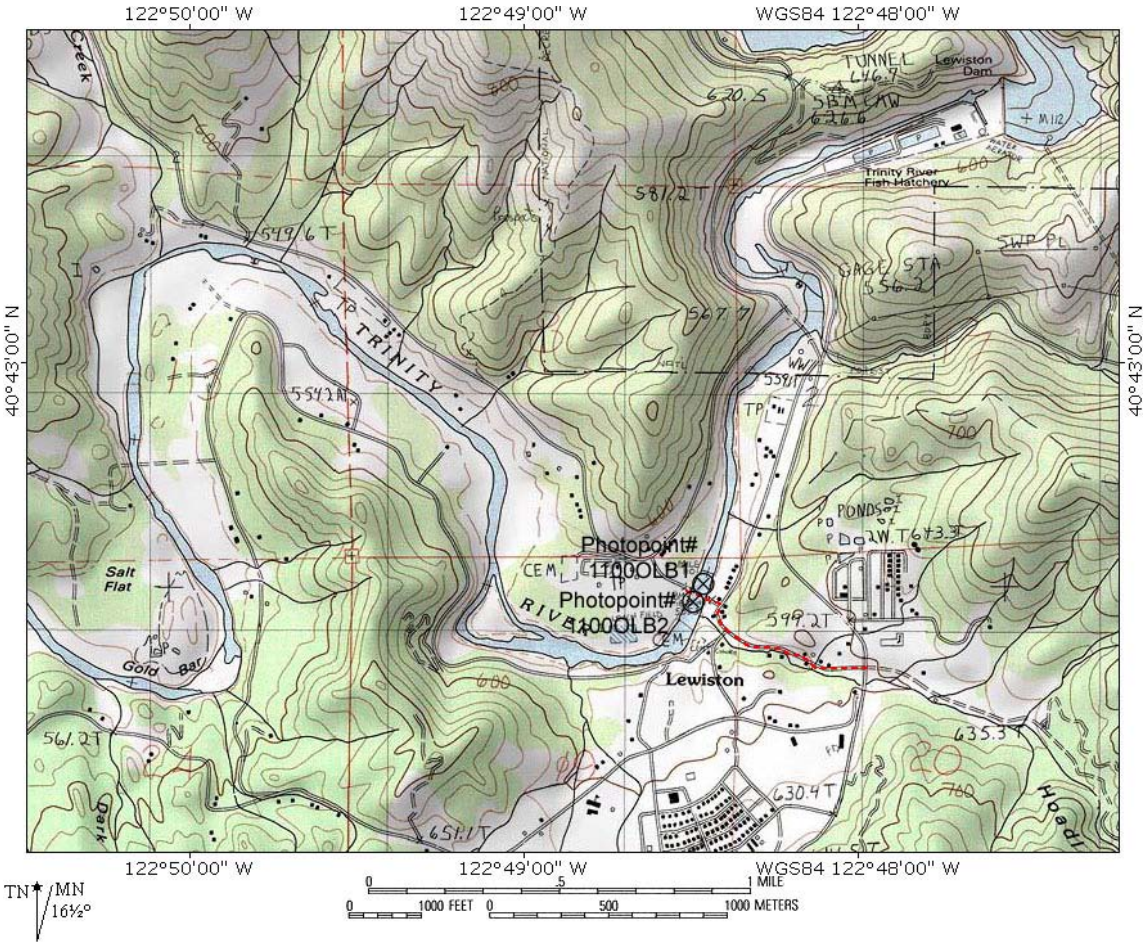

Figure 3.3. Old Lewiston Bridge photopoints. Route to the bridge is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 3.4. PPT#1100OLB1 WY2001 photomonitoring result.

Figure 3.5. PPT#1100OLB2 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Old Lewiston Bridge
PHOTOPOINT NUMBER: PPT# 1100 OLB 1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 24° from Mag North; 7.5° inclination

Date: 12-21-00 Time: 09:30

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Right

Cross section: _____ Streamflow: 3.48 ft @ 09:33 cfs (288 cfs)

Where was streamflow measured?: Trinity River @ Lewiston

Film type: Digital, Film speed: 100 ~~ASA~~ ISO equiv

Camera: CoolPix 990: Nikon Lens (circle one): ~~28~~3mm 55mm → totally wide angle

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Aperture (Fstop): 2.5F Shutter speed: Auto

Camera height above observation pin: 4.40 ft above a carriage bolt

Purpose of photopoint and changes that have occurred since the last monitoring:
Document transient alluvial features that result from gravel introduction upstream. This point is in the middle of the bridge on the upstream side, the monument is a carriage bolt painted orange (observation point). There is no line of sight point/monument. The photograph is taken looking upstream.

Any site changes, photopoint location changes, site/pin disturbances, or significant events

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Old Lewiston Bridge
PHOTOPOINT NUMBER: PPT# 110001BZ
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 197° from MagNorth, 7.5° inclination

Date: 12-21-00 Time: 09:30

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Right

Cross section: _____ Streamflow: 3.48ft @09:33 cfs (288cfs) @Lew

Where was streamflow measured?: Trinity River @ Lewiston USGS gage

Film type: Digital, Film speed: 100 ASA Iso equiv.

Camera: Cool Pix 990 ; Nikon Lens (circle one): 28mm 55mm → totally wide Angle

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Aperture (Fstop): 2-5 F Shutter speed: Auto

Camera height above observation pin: 4.40 ft to bottom of camera above a carriage bolt

Purpose of photopoint and changes that have occurred since the last monitoring:
Document transient alluvial features (Bars) that result from Gravel introduction upstream. This observation point is on the downstream side of the bridge. The monument consists of a carriage bolt in the middle of the metal structure portion of the bridge. There is no line of sight point/monument. The photograph is taken looking downstream.

Any site changes, photopoint location changes, site/pin disturbances, or significant events

SITE DESCRIPTION OF PHOTOPOINTS #1075RC1 THROUGH #1075RC3: TRINITY RIVER AT RUSH CREEK CONFLUENCE (RM 107.5)

Description developed by John H. Bair 1-01 Updated: 1-01 JHB

1. Location

Rush Creek flows into the Trinity River mainstem from the right bank. Lat. 40° 43' 15" N, Long. 122° 50' 05" W, in NW ¼, SW ¼ Sec.13, T.33 N. R. 9 W. (based on 7.5' USGS topographic sheet, Lewiston, CA Quad., scale 1:24,000), Trinity County, 1.7 mi northeast of Lewiston, on right bank, 1.9 mi upstream of Bucktail bank rehabilitation site, 2.5 mi downstream of Old Lewiston Bridge (Turnpike Road), 1.0 mi downstream of Lewiston Dam, River Mile 107.5.

The site can be reached by traveling 12.0 miles west from the intersection of Highway 3 and Highway 299 in Weaverville to Lewiston Road. Turn left onto Lewiston Road, and travel 5.7 miles to the northeast to the junction of Trinity Dam Blvd, turn left. Travel 0.2 miles to Turnpike Road, turn left. Follow Turnpike Road to the northwest 1.5 miles, through Old Lewiston across bridge to Rush Creek road, turn left. Travel 1.9 miles on Rush Creek Road to Wright Ranch Road (Private) turn down Wright Ranch road to the confluence (Figure 4.2).

2. Photopoint Description

Photopoint #1075RC1

This photopoint is intended to document changes in delta area, mainstem channel confinement, and overall changes to the delta and vegetation establishment, this point is looking downstream through the site from the side of Rush Creek Road. (Figures 4.1 and 4.3)

3. Establishment and History

McBain and Trush installed photopoints #1075RC1 on February 1, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #1075RC1

One 12” spike with a 1 inch washer was placed on the northwestern side of Rush Creek road (Figure 4.1)

5. Land Ownership

Rush Creek confluence is privately owned by Carol Wright, Wright Ranch and Bed Breakfast. PPT#1075RC1 is located on the county right of way and may be occupoied without permission. ***Before reoccupying these photopoints, the landowner must be contacted for permission to trespass.***

6. Purpose of Photopoint(s)

To document changes to the Rush Creek delta resulting from increased flows.

Figure 4.1. Rush Creek photopoint #1075RC1 observation point monument.

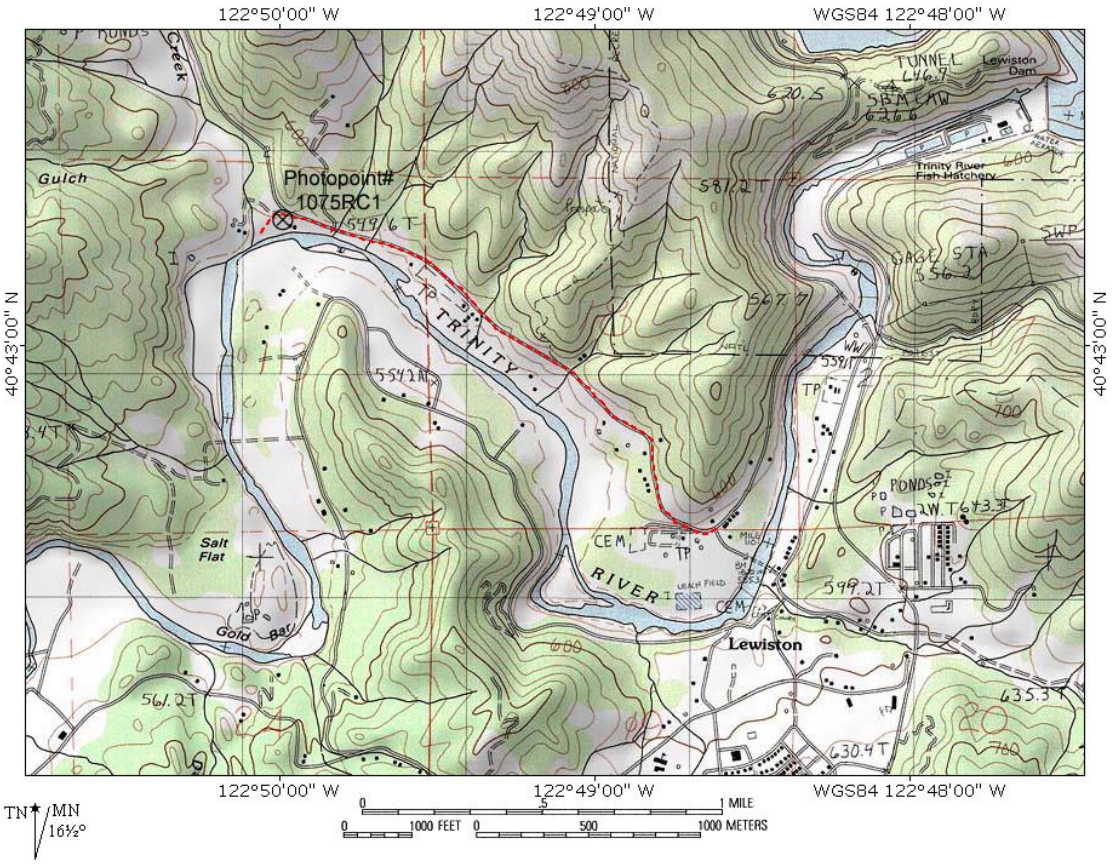

Figure 4.2. Rush Creek confluence location and photopoints. Route to the confluence is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 4.3. PPT#1075RC1 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Rush Creek Confluence

PHOTOPOINT NUMBER: PPT# 1075RC1

LINE OF SITE PIN BEARING FROM OBSERVER PIN: 222 °

INCLINATION OF CAMERA AT PHOTOCENTER : -5.0 °

Date: 2-1-01 Time: ____________

Field Technician(s): John H Bair

Elevation: ________ ft River bank (circle one): Left Center (Right) – By road

Cross section: ____________ Streamflow: 3.54 ft ~~cfs~~

Where was streamflow measured?: Lewiston USGS

Camera (circle one): (Nikon CoolPix 990) Other: ________ Film Speed: Auto ISO

Shutter speed: ______ sec Lens (circle one): W[■■■■■■]T W[■■■■■□]T W[■■■■□□]T

(T) Telephoto = 24mm
(W) Wide angle = 8mm

(W[■■□□□]T) W[■□□□□]T W[□□□□□]T

Aperture (Fstop): ______ F 50% W[ ]T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.70ft above a 12" galvinized Nail with 1" washer

Purpose of photopoint and changes that have occurred since the last monitoring: To document long term changes in delta area and channel confinement of the Mainstem

Any site changes, photopoint location changes, site/pin disturbances, or significant events

A new road will be built soon, and this photopoint lost. However it could be relocated by using a longitudinal road stationing starting at 00+10 which is the first Northwestern bridge from the photopoint. The photopoint is at station 21+88 down the road towards Lewiston. Wright ranch is the turn off at the corner

... = 100 ft St. 21+88 = 21880 ft

SITE DESCRIPTION OF PHOTOPOINTS #1056BT1 THROUGH #1056BT3: TRINITY RIVER AT BUCKTAIL BANK REHABILITATION SITE (RM 105.6)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Proposed bank rehabilitation site on left bank. Lat. 40° 42' 30" N, Long. 122° 50' 37" W, in NW ¼, SW ¼ Sec.24, T.33 N. R. 9 W. (based on 7.5' USGS topographic sheet, Lewiston, CA Quad., scale 1:24,000), Trinity County, 6.4 mi northeast of Douglas City, on left bank, 1.5 mi upstream of Grass Valley Creek, 1.6 mi downstream of Rush Creek , 5.5 mi downstream of Lewiston Dam, River Mile 105.6.

The site can be reached by traveling 12.0 miles east from the intersection of Highway 3 and Highway 299 in Weaverville to Lewiston Road. Turn left onto Lewiston Road, and travel 3.0 miles to the northeast and turn left on Brown's Mountain Road. Follow Brown's Mountain Road to the northwest 0.4 miles, turn/veer right onto access road (Figure 5.6).

2. Photopoint Description

Photopoint #1056Bt1

This photopoint is intended to document bar formation and vegetation growth; looking downstream through the site (Figure 5.7).

Photopoint #1056Bt2

This photopoint is intended to document bar formation and vegetation growth; looking upstream through the site (Figure 5.8).

Photopoint #1056Bt3

This is a site overview, taken from the northeastern hillside across from the site (Figure 5.9).

3. Establishment and History

McBain and Trush installed photopoints #1056Bt1 through #1056Bt3 on December 21, 2000. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #1056Bt1

Two ½" rebar pins were installed on the left bank, at the upstream end of the bank rehabilitation site (Figures 5.1 and 5.2). Each pin was labeled with an aluminum tag, the observation pin was labeled 1056Bt1O and the line of sight pin was labeled 1056Bt1LS.The observation point monument is coincident with cross section 10+00 left bank pin.

Photopoint #1056Bt2

Two ½" rebar pins were installed on the left bank at the terminus of the bank rehabilitation site (Figures 5.3 and 5.4). Each pin was labeled with an aluminum tag, the observation pin was labeled 1056Bt2O and the line of sight pin was labeled 1056Bt2LS.

Photopoint #1055Bt3

One 12" spike with a 1 inch washer was placed on the northeastern side of the Trinity River mainstem, on top of a rocky outcrop (Figure 5.5). Walk upstream from the parking area to the original Bucktail bank rehabilitation site, cross river and climb to ridge top. This photopoint observation monument is coincident with Photopoint #1055BtP3 (*proposed photopoint, photo not taken*).

5. Land Ownership

The proposed Bucktail bank rehabilitation site is publicly owned by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the pre and post rehabilitation site resulting from increased flows and bank rehabilitation site construction.

Figure 5.1. Bucktail bank rehabilitation site photopoint #1056Bt1 observation point monument.

Figure 5.2. Bucktail bank rehabilitation site photopoint #1056Bt1 line of sight point monument.

Figure 5.3. Bucktail bank rehabilitation site photopoint #1056Bt2 observation point monument.

Figure 5.4. Bucktail bank rehabilitation site photopoint #1055Bt2 line of sight point monument.

Figure 5.5. Bucktail bank rehabilitation site photopoint #1056Bt3 observation point monument.

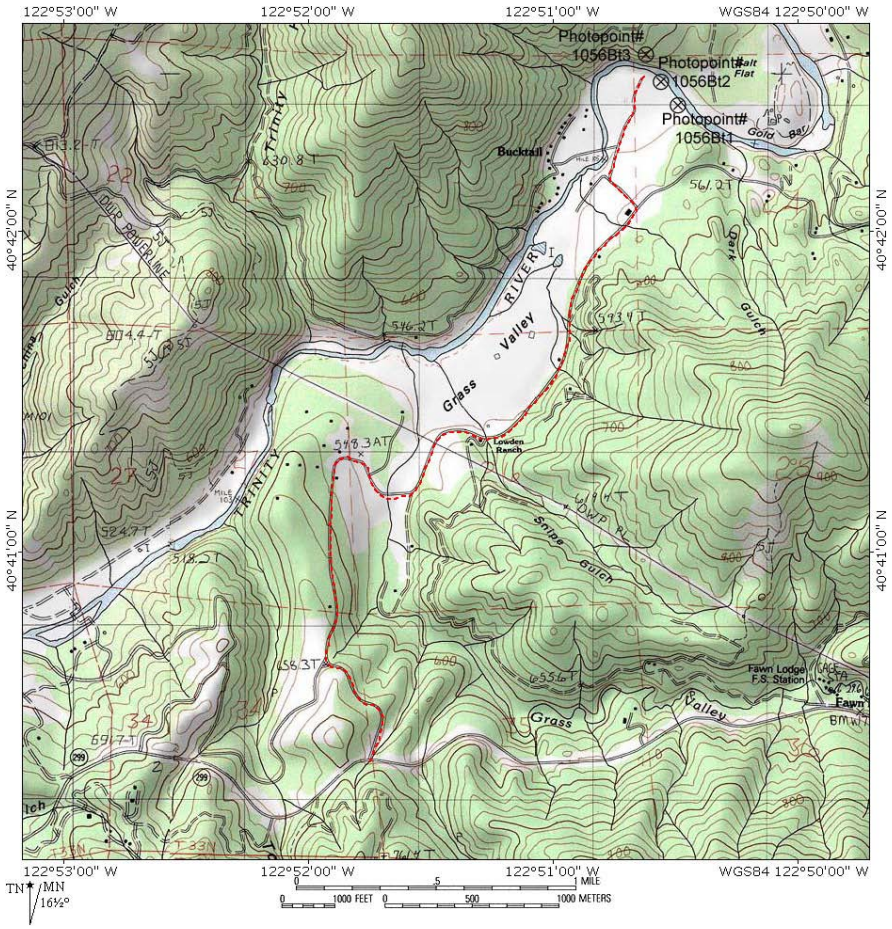

Figure 5.6. Bucktail bank rehabilitation site location and photopoints. Route to the bank rehabilitation site location is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 5.7. PPT#1056Bt1 WY2001 photomonitoring result.

Figure 5.8. PPT#1056Bt2 WY2001 photomonitoring result.

Figure 5.9. PPT#1056Bt3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Buckhail Bank Rehab Site
PHOTOPOINT NUMBER: PPT# 1056 Bt 1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 299° from Mag North; 0.0° inclination

Date: 12-21-00 Time: _____

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): (Left) Right

Cross section: 10+00 Streamflow: 288 cfs 3.48ft @ Lewiston

Where was streamflow measured?: Trinity River @ Lewiston

Film type: Digital, Film speed: 100 ASA Iso equiv

Camera: Cool Pix 990 Lens (circle one): ~~28~~ 38mm 55mm → totally wide angle

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Aperture (Fstop): F Shutter speed: _____

Camera height above observation pin: 4.58ft to bottom of camera

Purpose of photopoint and changes that have occurred since the last monitoring:
This photo point is intended to capture changes to the bank rehab site with implementation of the preferred alternative. The observation point is the 3/8" rebar left bank bank pin for cross section 10+00. The line of sight point is monumented w/ a 5/8" rebar pin. This shot looks downstream

Any site changes, photopoint location changes, site/pin disturbances, or significant events

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Buckhail Bank Rehab Site
PHOTOPOINT NUMBER: PPT# 1056 Bt 2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 90° from Mag North; 7.9° inclination

Date: 12-21-06 Time: _____

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Right

Cross section: _____ Streamflow: 288 cfs 3.48' @ Lew

Where was streamflow measured?: Trinity River @ Lewiston

Film type: Digital, Film speed: 100 ASA ISO equiv

Camera: Cool Pix 990 Lens (circle one): 28mm 55mm

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Aperture (Fstop): F Shutter speed: _____

Camera height above observation pin: 4.21 ft from bottom of the camera

Purpose of photopoint and changes that have occurred since the last monitoring:
This photopoint is intended to "capture" changes in transient alluvial features resulting from bank rehabilitation site morphology and implementation of the "preferred" alternative. The observation point is monumented by a 5/8" rebar pin placed at the downstream end of site. The line of sight point is monumented by a 5/8" rebar pin 25ft upstream from the observation monument. This photo looks upstream

Any site changes, photopoint location changes, site/pin disturbances, or significant events
This point was installed to "formalize" a photo point that has been used since 1994.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Bucktail Bank Rehab Site
PHOTOPOINT NUMBER: PPT# 1056 Bt3
LINE OF SITE PIN BEARING FROM OBSERVER PIN: _____

Date: 12-21-06 Time: _____

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Right

Cross section: _____ Streamflow: 788 cfs 3.48 @ Lew

Where was streamflow measured?: Trinity River @ Lewiston

Film type: Digital, Film speed: 100 ~~ASA~~ Iso equiv

Camera: CoolPix 990 ; Niken Lens (circle one): 28mm 55mm

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Aperture (Fstop): F Shutter speed: _____

Camera height above observation pin: 3.0 ft to bottom of camera

Purpose of photopoint and changes that have occurred since the last monitoring:
This photopoint is intended to be a site overview (pseudo aerial oblique) and will show changes at the site (ie bar growth, channel width changes). A 12inch galvinized spike with a fluorescent orange 1" washer monument the observation point. There is no line of sight monument no photo center.

Any site changes, photopoint location changes, site/pin disturbances, or significant events

SITE DESCRIPTION OF PHOTOPOINTS #1055BTP1 THROUGH #1055BTP3: TRINITY RIVER AT BUCKTAIL (PROPOSED) BANK REHABILITATION SITE (RM 105.5)

Description developed by John H. Bair 1-01 Updated: 1-01 JHB

1. Location

Proposed bank rehabilitation site on left bank. Lat. 40° 42' 29" N, Long. 122° 50' 47" W, in NW ¼, SW ¼ Sec.23, T.33 N. R. 9 W. (based on 7.5' USGS topographic sheet, Lewiston, CA Quad., scale 1:24,000), Trinity County, 6.4 mi northeast of Douglas City, on left bank, 1.5 mi upstream of Grass Valley Creek, 1.6 mi downstream of Rush Creek , 5.5 mi downstream of Lewiston Dam, River Mile 105.5.

The site can be reached by traveling 12.0 miles east from the intersection of Highway 3 and Highway 299 in Weaverville to Lewiston Road. Turn left onto Lewiston Road, and travel 3.0 miles to the northeast and turn left on Brown's Mountain Road. Follow Brown's Mountain Road to the northwest 0.4 miles, turn/veer right onto access road (Figure 6.3).

2. Photopoint Description

Photopoint #1055BtP1

This photopoint is intended to document pre- bank rehabilitation site condition and changes to it with increased flows, and to document bar formation and vegetation growth after bank rehabilitation site construction. The picture looks downstream through the site (Figure 6.4).

3. Establishment and History

McBain and Trush installed photopoint #1056BtP1 on January 30, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #1055BtP1

Two ½" rebar pins were installed on the right bank. Each pin was labeled with an aluminum tag, the observation pin was labeled 1056BtP1O and the line of sight pin was labeled 1056BtP1LS (Figures 6.1 and 6.2).

5. Land Ownership

The proposed Bucktail bank rehabilitation site reach is publicly owned by the Bureau of Land Management, downstream of the fishing area however is privately owned and permission should be requested prior to trespassing.

6. Purpose of Photopoint(s)

To document changes to the pre and post rehabilitation site resulting from increased flows and bank rehabilitation site construction.

Figure 6.1. Bucktail (proposed) bank rehabilitation site photopoint #1055BtP1 observation point monument.

Figure 6.2. Bucktail (proposed) bank rehabilitation site photopoint #1055BtP1 line of sight point monument.

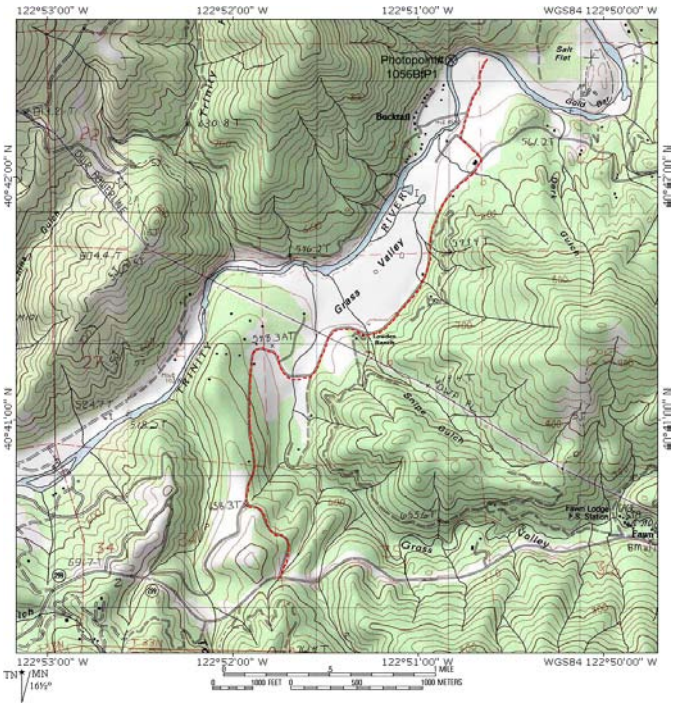

Figure 6.3. Bucktail (proposed) bank rehabilitation site location and photopoints. Route to the proposed bank rehabilitation site location is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 6.4. PPT#1056BtP1WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Proposed Bucktail bank rehabsite - Bucktail Pool
PHOTOPOINT NUMBER: PPT# 1055 BTP1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 30° °
INCLINATION OF CAMERA AT PHOTOCENTER : 4.0 °

Date: 1-30-01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center (Right)

Cross section: _____ Streamflow: 2.15 ft ~~cfs~~

Where was streamflow measured?: Douglas City

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: 1/125 sec Lens (circle one): W [redacted] T W [redacted] T W [redacted] T

(T) Telephoto = 24mm
(W) Wide angle = 8mm

W [redacted] T W [redacted] T (W) [redacted] T (wide wide)

Aperture (Fstop): 3.9 F

W [redacted] T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 3.52 ft above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to document confined, simplified, beran dominated channel morphology prior to bank rehabilitation site construction. The observation point is monumented by 5/8" rebar placed on a cobble bar/bedrock on river right near the fishing "hole". The line of sight pin is 25 ft upstream of the observation monument; the photo looks upstream.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

SITE DESCRIPTION OF PHOTOPOINTS #1040GVC1 THROUGH #1040GVC3: TRINITY RIVER AT GRASS VALLEY CREEK CONFLUENCE (RM 104.0)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Grass Valley Creek flows into the Trinity River mainstem from the left bank. Lat. 40° 41' 38" N, Long. 122° 51' 37" W, in NW ¼, SW ¼ Sec.26, T.33 N. R. 9 W. (based on 7.5' USGS topographic sheet, Lewiston, CA Quad., scale 1:24,000), Trinity County, 5.2 mi northeast of Douglas City, on left bank, 2.9 mi upstream of Poker Bar County Road bridge, 1.6 mi downstream of Bucktail bank rehabilitation site, 7.0 mi downstream of Lewiston Dam, River Mile 104.0.

The site can be reached by traveling 12.0 miles west from the intersection of Highway 3 and Highway 299 in Weaverville to Lewiston Road. Turn left onto Lewiston Road and travel 1.8 miles to the northeast and park in the BLM parking and Grass Valley Creek access lot (Figure 7.6)

2. Photopoint Description

Photopoint #1040GvC1

This photopoint is intended to document bar formation and vegetation growth and changes to mainstem channel morphology resulting from delta formation/reduction and implementation of the preferred alternative; looking downstream through the site (Figure 7.7)

Photopoint #1040GvC2

This photopoint is intended to document bar formation and vegetation growth and changes to mainstem channel morphology resulting from delta formation/reduction and implementation of the preferred alternative; looking upstream the site (Figure 7.8).

Photopoint #1040GvC3

This is a site overview, from the northeastern hillside across from the site (Figure 7.9).

3. Establishment and History

McBain and Trush installed photopoints #1040GvC1 through #104GvC3 on January 30, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #1040GvC1

Two 5/8" rebar pins were installed on an alluvial terrace on the left bank. Each pin was labeled with an aluminum tag, the observation pin was labeled 1040GvC1O and the line of sight pin was labeled 1040GvC1LS (Figure 7.1 and 7.2).

Photopoint #1040GvC2

Two 5/8" rebar pins were installed on the edge of the left bank active channel at the downstream end of the pool created by the Grass Valley Creek delta. Each pin was labeled with an aluminum tag, the observation pin was labeled 1040GvC2O and the line of sight pin was labeled 1040GvC2LS (Figure 7.3 and 7.4).

Photopoint #1040GvC3

One 12" galvanized steel spike with a 1" washer marked PPT104GvC3 was placed on the southwestern side of Browns Mountain Road approximately 3 miles from the junction of Browns Mountain Road and Lewiston Road (Figure 7.5).

5. Land Ownership

Grass Valley Creek confluence is publicly owned by the Bureau of Land Management, but the sedimentation ponds and access is privately owned in some locations, if you are unsure do not trespass!

6. Purpose of Photopoint(s)

To document changes to Grass Valley Creek delta and confluence location site resulting from increased flows.

Figure 7.1. Grass Valley Creek confluence photopoint #1040GvC1 observation point monument.

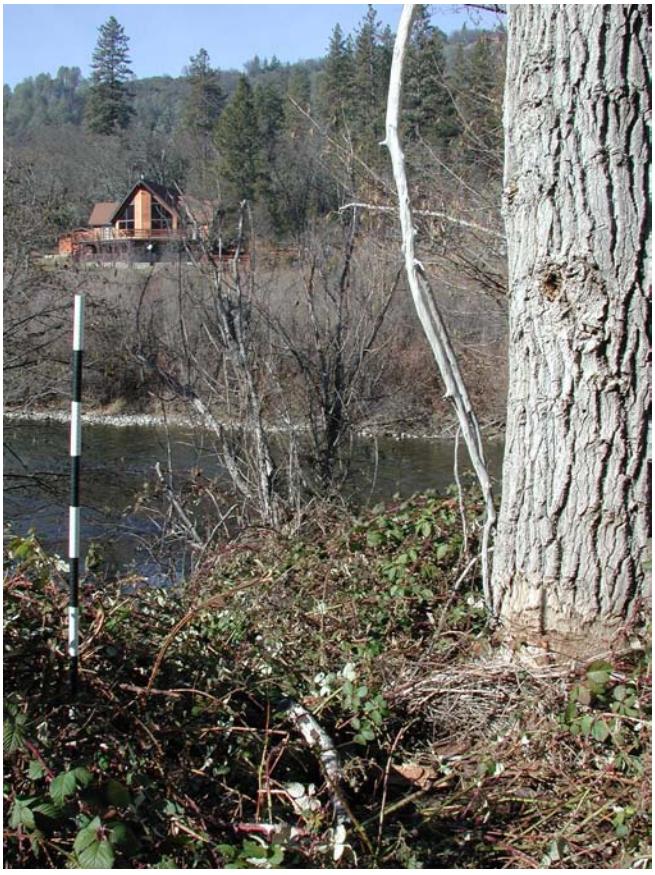

Figure 7.2. Grass Valley Creek confluence photopoint #1040GvC1 line of sight point monument.

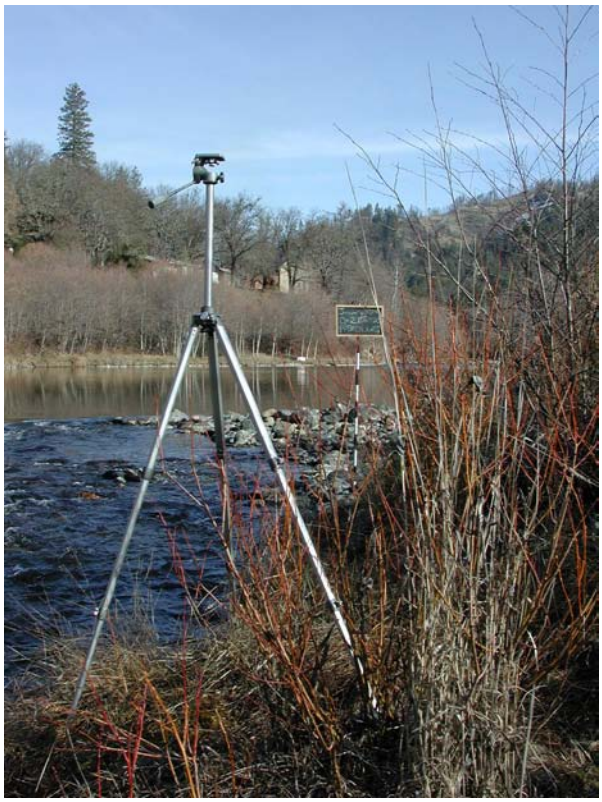

Figure 7.3. Grass Valley Creek confluence photopoint #1040GvC2 observation point monument.

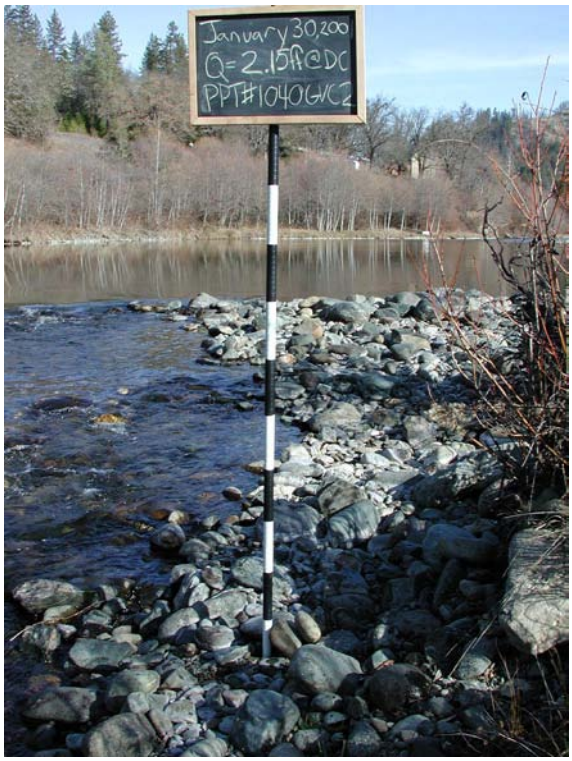

Figure 7.4. Grass Valley Creek confluence photopoint #1040GvC2 line of sight point monument.

Figure 7.5. Grass Valley Creek confluence photopoint #1040GvC3 observation point monument.

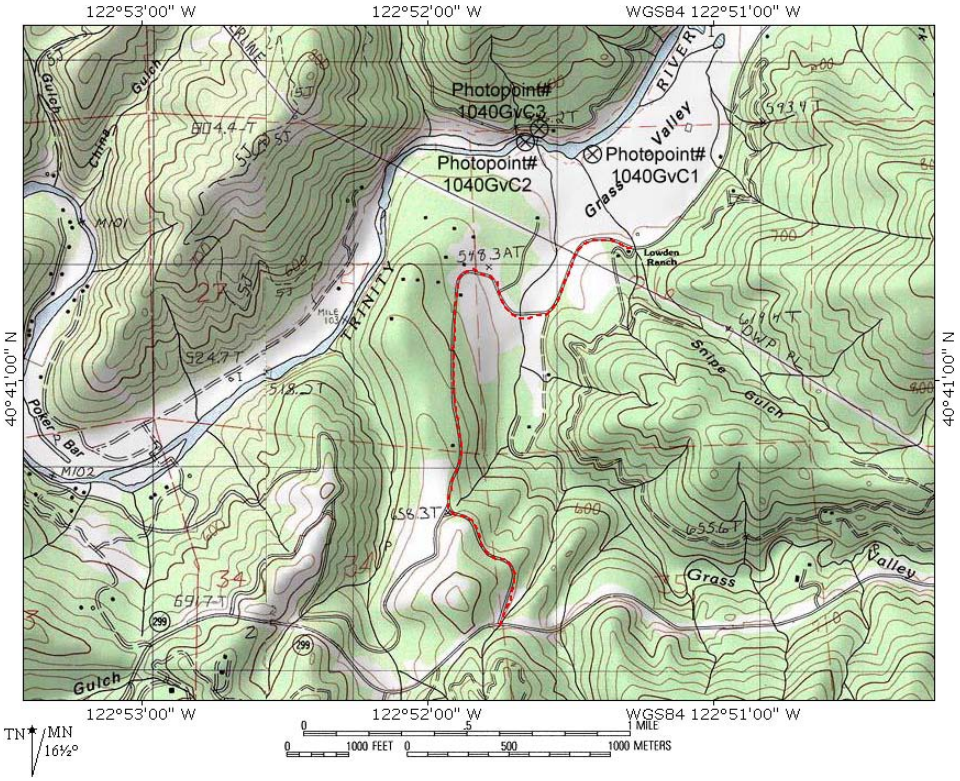

Figure 7.6. Grass Valley Creek confluence location and photopoints. Route to the parking lot location is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 7.7. PPT#1040GvC1 WY2001 photomonitoring result.

Figure 7.8. PPT#1040GvC2 WY2001 photomonitoring result.

Figure 7.9. PPT#1040GvC3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Grass Valley Creek Confluence

PHOTOPOINT NUMBER: PPT# 1040GVC1

LINE OF SITE PIN BEARING FROM OBSERVER PIN: 258 °

INCLINATION OF CAMERA AT PHOTOCENTER : -2.0 °

Date: 1-30-01 Time: ____

Field Technician(s): John H. Bair

Elevation: ____ ft River bank (circle one): (Left) Center Right

Cross section: ____ Streamflow: 2.15 ft ~~cfs~~

Where was streamflow measured?: Douglas City Campground

Camera (circle one): (Nikon CoolPix 990) Other: ____ Film Speed: Auto ISO

Shutter speed: ~1/125 sec Lens (circle one): (W▓▓▓▓▓▓T) * W▓▓▓▓░░T W▓▓▓░░░T *I took one of each

(T) Telephoto = 24mm (W) Wide angle = 8mm (W▓▓▓░░░T) W▓░░░░T W▓░░░░T

Aperture (Fstop): 6.0 F Photo Point setting → W░░░░░T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.76 ft above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to document changes to the mainstem channel morphology resulting from changes in delta area, point bar formation, or low water channel vegetation encroachment. The observation point is monumented with a 5/8" rebar pin placed on an alluvial terrace high above the active channel. The line of sight monument is 25 ft towards the river from the observation point monument. This photo looks downstream across the pool created by the delta.

Any site changes, photopoint location changes, site/pin disturbances, or significant events ____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Grass Valley Creek Confluence
PHOTOPOINT NUMBER: PPT# 1040GVC2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 72 °
INCLINATION OF CAMERA AT PHOTOCENTER : -3.25 °

Date: 1-30-01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one) (Left) Center Right

Cross section: _____ Streamflow: 2.15 ft ~~cfs~~

Where was streamflow measured?: Douglas City Campground

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: a1/175 sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm
W T W T W T
W T Read zoom indicator in viewfinder

I took one at each setting 100% wide angle was used for the photopoint setting

Aperture (Fstop): 5.5 F

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.84' above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to show changes in the delta's area, and subsequent reduction as it relates to changes in stream flow management. The observation point is monumented with a 5/8" rebar pin placed along the left bank at the margin of active channel and floodplain. The line of sight monument is 25 feet upstream on the left bank in a cobble deposit that demarcates the end of the pool and the beginning of a long riffle. This photo looks upstream

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Grass Valley Creek Confluence
PHOTOPOINT NUMBER: PPT# 1040GVCTS
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 323 °
INCLINATION OF CAMERA AT PHOTOCENTER : ~11.75 °

Date: 2-1-01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center (Right) Hillside on Brown's Mtn Rd

Cross section: _____ Streamflow: 3.54 ft ~~cfs~~

Where was streamflow measured?: Lewiston USGS

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: ~1/160 sec Lens (circle one): W [▓▓▓] T W [▓▓▓] T W [▓▓▓] T
(T) Telephoto = 24mm
(W) Wide angle = 8mm
W [▓▓▓] T W [▓▓▓] T (W) [▓▓▓] (T) 100% wide
W [ ] T Read zoom indicator in viewfinder

Aperture (Fstop): 4.4 F

Lens filters (circle all that apply): Polarizing UV Skylight (Other: None)

Camera height above observation pin: 4.59 ft above ~12" galvanized nail with a 1" washer

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to be a pseudo-aerial oblique to document changes in delta area & mainstem channel confinement, & reductions to these resulting from streamflow manipulation. The observation point consists of a 12" galvanized steel nail w/ a 1" washer labeled with the photopoint number

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

SITE DESCRIPTION OF PHOTOPOINTS #988StB1 THROUGH #988StB3: TRINITY RIVER AT STEEL BRIDGE BANK REHABILITATION SITE (RM 98.8)

Description developed by John H. Bair 12-00 Updated: 3-01 JHB

1. Location

Bank rehabilitation site on left bank, constructed by USBR in 1993. Lat. 40° 40' 49" N, Long. 122° 55' 14" W, in NW ¼, SW ¼ Sec.32, T.33 N. R. 9 W. (based on 7.5' USGS topographic sheet, Weaverville, CA Quad., scale 1:24,000), Trinity County, 2.0 mi northeast of Douglas City, on left bank, 3.6 mi upstream of Indian Creek confluence, 2.0 mi downstream of Limekiln Gulch, 13.2 mi downstream of Lewiston Dam, River Mile 98.8.

The site can be reached by traveling 9.4 miles east from the intersection of Highway 3 and Highway 299 in Weaverville. Turn left onto Steel Bridge road and travel 2.3 miles to the west end of the Steel Bridge Road. The bank rehabilitation site is on the left hand side of the road.

2. Photopoint Description

Photopoint #988StB1

This photopoint is intended to document bar formation and vegetation growth; looking downstream through the site.

Photopoint #988StB2

This is a site overview, taken from the southwestern hillside across from the site.

3. Establishment and History

McBain and Trush installed photopoints #988StB1 through #988StB2 on July 28, 2000. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Photo Point Monuments

Photopoint #988StB1

Two ½" rebar pins were installed on the left bank (Figure x.x). Each pin was labeled with an aluminum tag, the observation pin was labeled 988StB1O and the line of sight pin was labeled 988StB1LS.

Photopoint #988StB2

One 12" spike with a 1inch washer was placed on the northeastern side of Union Hill road (Figure x.x) at the intersection of Union Hill Road and unnamed county dirt road 2.35 miles up from the intersection of Union Hill Road and Highway 299, 4.9 miles east of Weaverville on Hwy 299.

5. Land Ownership

Steel Bridge Bank rehabilitation site is publicly owned the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the rehabilitation site resulting from increased flows.

Figure 8.1. Steel Bridge bank rehabilitation site photopoint #988StB1 observation point monument.

Figure 8.2. Steel Bridge bank rehabilitation site photopoint #988StB1 line of sight point monument.

Figure 8.3. Steel Bridge bank rehabilitation site photopoint #988StB2 observation point monument.

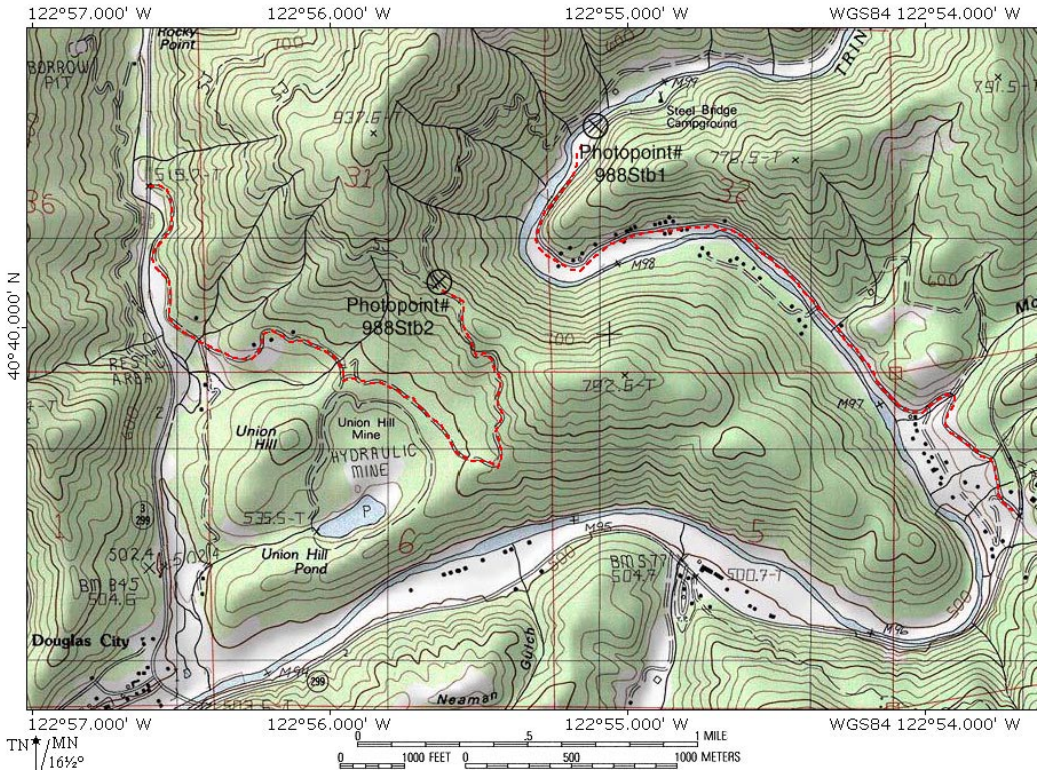

Figure 8.4. Steel Bridge bank rehabilitation site location and photopoints. Route to the bank rehabilitation site is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 8.5. PPT#988StB1 WY2000 photomonitoring result.

Figure 8.6. PPT#988StB1 WY2001 photomonitoring result.

Figure 8.7. PPT#988StB2 WY2000 photomonitoring result.

Distance from O pin to LS pin?

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Steel Bridge Bank Rehabilitation Site
PHOTOPOINT NUMBER: PPT# 988 St B 1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 229°

Date: July 28, 2000 Time: 12:25

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): (Left) Right

Cross section: N/A Streamflow: 455 cfs

Where was streamflow measured?: Staff plate reading at Douglas City gaging station

Film type: Digital, Film speed: 100 ASA

Camera: Nikon Cool Pix 990 Lens (circle one): 28mm 55mm

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Aperture (Fstop): F 4.9 Shutter speed: 1/250

Camera height above observation pin: 4.59 ft from top of pin to center of lens

Purpose of photopoint and changes that have occurred since the last monitoring:
This photopoint is intended to document Bar formation and vegetation growth at Steel Bridge. This point is upstream of the bank rehab site on the left bank.

Any site changes, photopoint location changes, site/pin disturbances, or significant events
We installed (2) ½" rebar pins => 1 pin = 988StB1O (observation pin)
2 pin = 988StB1LS (Line of site pin

229°

All points are 25 ft from the

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Steel Bridge Bank Rehab Site
PHOTOPOINT NUMBER: PPT# PPT # 988SEB2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 25°

Date: July 28, 00 Time: 16:20

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Right D/N/A (on hillside)

Cross section: _____ Streamflow: 455 cfs

Where was streamflow measured?: Staff Plate read by at Douglas City Gage

Film type: Digital, Film speed: 100 ASA

Camera: Coolpix 990 Lens (circle one): 28mm 55mm → Max telephoto on digital camera

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Aperture (Fstop): F 7.0 Shutter speed: 1/165

Camera height above observation pin: 4.96 ft and tilted at 5° down at river

Purpose of photopoint and changes that have occurred since the last monitoring: This is a site overview taken from Union Hill Road.

Any site changes, photopoint location changes, site/pin disturbances, or significant events

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Steel Bridge bank rehabilitation site
PHOTOPOINT NUMBER: PPT# 988.STB
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 229 °
INCLINATION OF CAMERA AT PHOTOCENTER : -3.0 °

Date: 2-1-01 Time: _____

Field Technician(s): Jann H. Bair

Elevation: _____ ft River bank (circle one): (Left) Center Right

Cross section: _____ Streamflow: 3.54 ft ~~cfs~~

Where was streamflow measured?: Lewiston USGS

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: 1/120 sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T ← 100% wide angle

Aperture (Fstop): 3.9 F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.50 ft above a 4/8" (½) rebar-description monument

Purpose of photopoint and changes that have occurred since the last monitoring: _____

Same as before

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

SITE DESCRIPTION OF PHOTOPOINTS #952IC1 THROUGH #952IC3: TRINITY RIVER AT INDIAN CREEK CONFLUENCE (RM 95.2)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Indian Creek flows into the Trinity River mainstem from the left bank. Lat. 40° 39' 30" N, Long. 122° 54' 49" W, in NW ¼, SW ¼ Sec.5, T.32 N. R. 9 W. (based on 7.5' USGS topographic sheet, Weaverville, CA Quad., scale 1:24,000), Trinity County, 1.7 mi northeast of Douglas City, on right bank, 1.4 mi upstream of Weaver Creek confluence, 2.5 mi downstream of Steel Bridge bank rehabilitation site, 15.8 mi downstream of Lewiston Dam, River Mile 95.2.

The site can be reached by traveling 8.1 miles west from the intersection of Highway 3 and Highway 299 in Weaverville to Highway 299 Indian Creek over crossing. Parking is on left hand side of highway.

2. Photopoint Description

Photopoint #952IC1

There are two photos taken from this photopoint, one looking upstream the other looking downstream. This photopoint was intended to document changes to the mainstem's channel morphology resulting form delta build up and reduction downstream of Indian Creek's confluence.

Photopoint #952IC2

This photopoint is intended to document changes in delta area and confinement of the mainstem, and any changes to this resulting from implementation of increased streamflows. This point looks downstream through the delta and Indian Creek confluence.

Photopoint #952IC3

This is a site overview, taken from the southwestern hillside across from the site.

3. Establishment and History

McBain and Trush installed photopoints #952IC1 through #952IC3 on January 29, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #952IC1

Two ½" rebar pins belonging to the Indian Creek cottonwood recruitment transect were used to triangulate the position of the observation point. Each pin was labeled with an aluminum tag, the observation pin was labeled 952IC1 Tri pin 1 and the line of sight pin was labeled 952IC1 Tri pin 2 (Figures 9.1 and 9.2).

Photopoint #952IC2

One 1" washer was epoxied on a bedrock outcrop on the northeastern side of the mainstem channel upstream of where Indian Creek flow into the mainstem, this monument is located on river right (Figure 9.3). The washer was labeled 952IC2.

Photopoint #952IC3

One 12" spike with a 1 inch washer was placed on the northeastern side of the Trinity River Mainstem on southwesterly facing hillside. The washer was labeled 952IC3.

5. Land Ownership

Indian Creek confluence is publicly owned by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the Indian Creek delta resulting from increased flows.

Figure 9.1. Indian Creek photopoint #952IC1 left bank triangulation monument.

Figure 9.2. Indian Creek photopoint #952IC1 right bank triangulation monument.

Figure 9.3. Indian Creek photopoint #952IC2 observation point monument.

Figure 9.4. Indian Creek photopoint #952IC3 observation point monument.

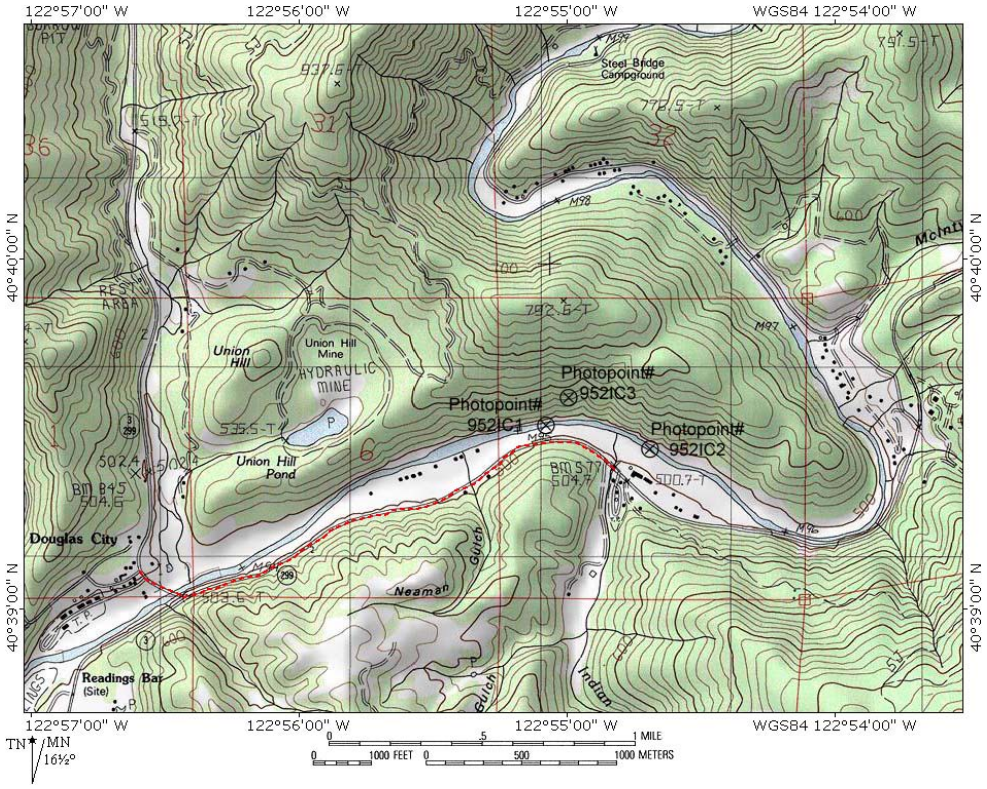

Figure 9.5. Indian Creek confluence location and photopoints. Route to the confluence is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 9.6. PPT#952IC1 looking upstream WY2001 photomonitoring result.

Figure 9.7. PPT#952IC1 looking downstream WY2001 photomonitoring result.

Figure 9.8. PPT#952IC2 WY2001 photomonitoring result.

Figure 9.9. PPT#952IC3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Indian Creek
PHOTOPOINT NUMBER: PPT# 95ICI
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 109 (US) ; 248 (DS) °
INCLINATION OF CAMERA AT PHOTOCENTER : -7.0 (US) ; -9.5 (DS) °

Date: 1-29-01 Time: _____

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Center Right

Cross section: _____ Streamflow: _____ cfs

Where was streamflow measured?: _____

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
3.1 (US) (T) Telephoto = 24mm (W) Wide angle = 8mm W T W T W T
Aperture (Fstop): 4.9 (DS) W T Read zoom indicator in viewfinder

100% wide

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.77 ft above the channel bed

Purpose of photopoint and changes that have occurred since the last monitoring: Total xs length is 169.9ft, setup at station 110.0. 00 is on left bank pin; Two pictures are taken at this setup: one upstream, one downstream. This photopoint was intended to show changes to the mainstem channel morphology downstream of the Indian Creek confluence

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Indian Creek Confluence
PHOTOPOINT NUMBER: PPT# 952IC2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 267 °
INCLINATION OF CAMERA AT PHOTOCENTER : -7.0 °

Date: 1-30-01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center (Right)

Cross section: _____ Streamflow: 2.15ft ~~cfs~~

Where was streamflow measured?: Douglas City Campground

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: ~1/160 sec Lens (circle one): W [■■■■] T W [■■■■] T W [■■■■] T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W [■■■] T W [■■■] T (W [■■■] T) 100% wide
Aperture (Fstop): 4.9 F W [ ] T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 2.31 ft above a 1" washer epoxied to a bedrock outcrop

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to document change to channel confinement and delta area increase and reduction with implementation of a modified streamflow regime. The observation monument consists of a 1" washer epoxied to a bedrock outcrop on the river right.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: India Creek Confluence
PHOTOPOINT NUMBER: PPT# 952 IC 3
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 175 °
INCLINATION OF CAMERA AT PHOTOCENTER : -20.0 °

Date: 1-30-01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center (Right)

Cross section: _____ Streamflow: 2.15 ft ~~cfs~~

Where was streamflow measured?: Douglas City Campground

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: ~~Auto~~ ISO

Shutter speed: 1/170 sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T (W) T 100% wide

Aperture (Fstop): 4.9 F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight (Other): None

Camera height above observation pin: 4.78ft above a 12" galvin Nail with 1" washer

Purpose of photopoint and changes that have occurred since the last monitoring: This was intended to be a pseudo aerial oblique of the India Creek delta. The 12" galvinized spike w/ a 1" washer was placed on the south western hillslope well above any high water.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

SITE DESCRIPTION OF PHOTOPOINTS #938WC1 THROUGH #938WC3: TRINITY RIVER AT WEAVER CREEK CONFLUENCE (RM 93.8)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Weaver Creek flows into the Trinity River mainstem from the left bank. Lat. 40° 39' 05" N, Long. 122° 56' 24" W, in NW ¼, SW ¼ Sec.1, T.32 N. R. 10 W. (based on 7.5' USGS topographic sheet, Weaverville, CA Quad., scale 1:24,000), Trinity County, 0.2 mi northeast of Douglas City, on right bank, 1.0 mi upstream of Douglas City Campground, 1.4 mi downstream of Indian Creek confluence, 17.2 mi downstream of Lewiston Dam, River Mile 93.8.

The site can be reached by traveling 6.3 miles east from the intersection of Highway 3 and Highway 299 in Weaverville. Turn into turnout on left hand side of the highway, just before the Douglas City turnoff, and after the CalTrans rest area (Figure 10.6).

2. Photopoint Description

Photopoint #938WC1

This photopoint is intended to be a site overview, and is taken from the bedrock outcrop/road cut along Highway 3 (Figures 10.1 and 10.7).

Photopoint #938WC2

This photopoint is intended to document bar formation, channel migration and vegetation growth along Weaver Creek and looks downstream towards the creek's confluence with the mainstem (Figures 10.2, 10.3 and 10.8).

Photopoint #938WC3

This photopoint was intended to document changes in confluence location, mainstem channel confinement due changes in delta area, and reductions due to strreaflow management, or natural flood events.

3. Establishment and History

McBain and Trush installed photopoints #938WC1 through #938WC3 on January 24, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #938WC1

One 12" spike with a 1 inch washer was placed on the southeastern side of Highway 3 on top of the first bedrock "terrace". Pull into the first turnout on Highway 3 heading south, cross the road and scramble up the road cut to the first terrace (Figure 10.1). The 1" washer was labeled PPT938WC1.

Photopoint #938WC2

Two ½" rebar pins were installed on the right bank of Weaver Creek on an active bar approximately 1,000 ft upstream of the creek's confluence with the mainstem. Each pin was labeled with an aluminum tag, the observation pin was labeled 938WC2O and the line of sight pin was labeled 938WC2LS (Figures 10.2 and 10.3).

Photopoint #938WC3

Two ½" rebar pins were installed on the right bank of the mainstem, approximately 1,000 ft downstream from the creek's confluence location. Each pin was labeled with an aluminum tag, the observation pin was labeled 938WC3O and the line of sight pin was labeled 938WC3LS (Figures 10.4 and 10.5).

5. Land Ownership

Weaver Creek confluence is publicly owned by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the Weaver Creek delta resulting from increased flows.

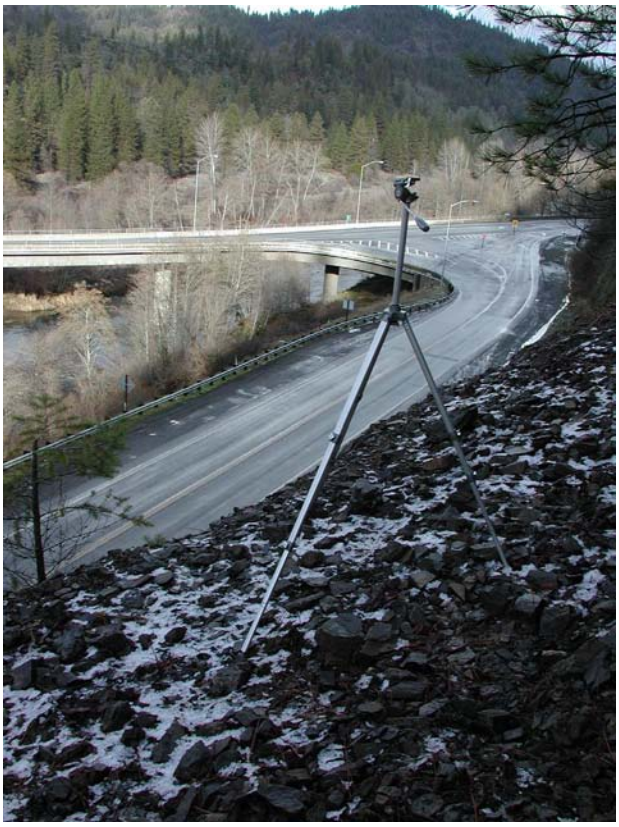

Figure 10.1. Weaver Creek photopoint #938WC1 observation point monument.

Figure 10.2. Weaver Creek photopoint #938WC2 observation point monument.

Figure 10.3. Weaver Creek photopoint #938WC2 line of sight point monument.

Figure 10.4. Weaver Creek photopoint #938WC3 observation point monument.

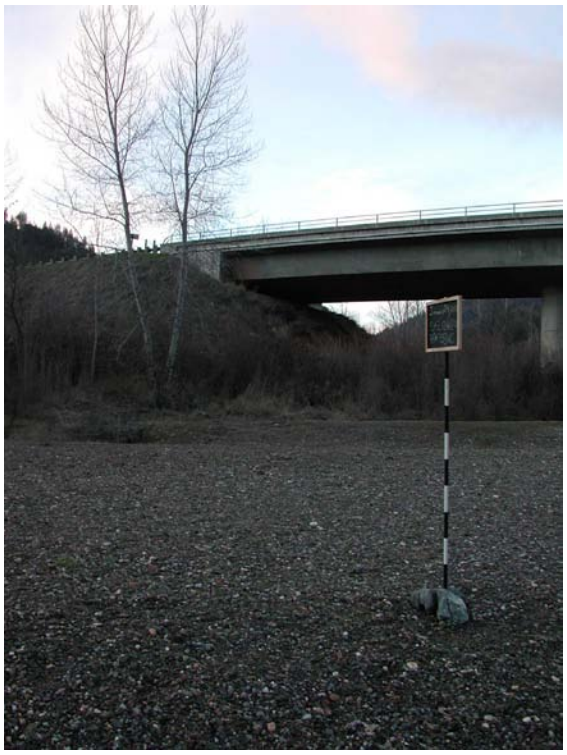

Figure 10.5. Weaver Creek photopoint #938WC3 line of sight point monument.

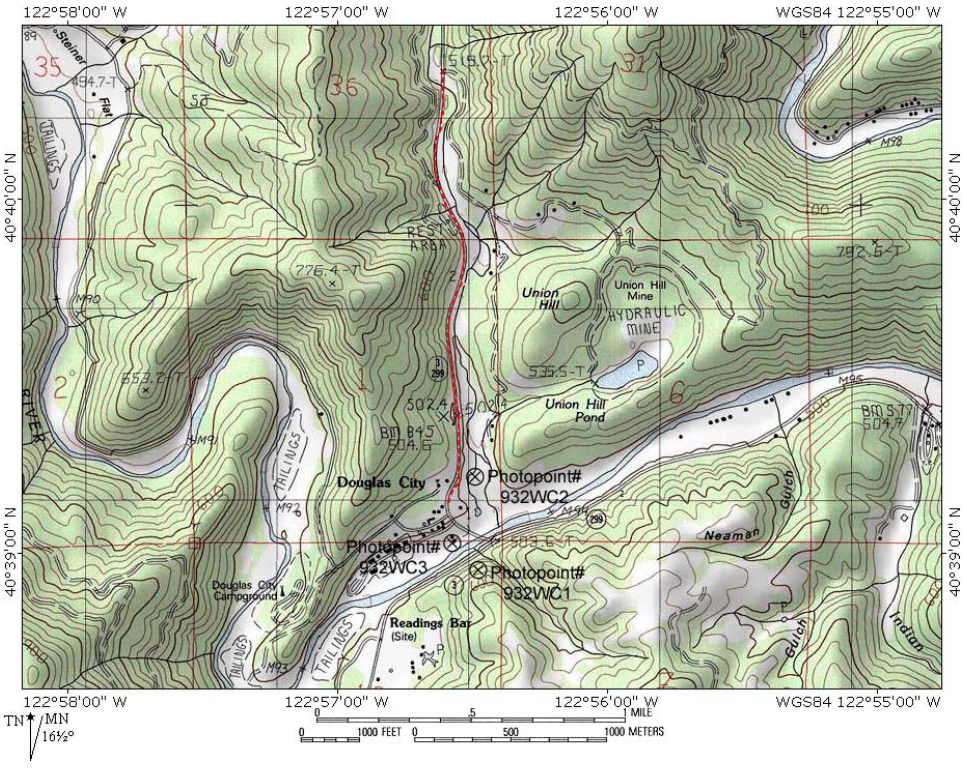

Figure 10.6. Weaver Creek confluence location and photopoints. Route to the confluence is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 10.7. PPT#938WC1 WY2001 photomonitoring result.

Figure 10.8. PPT#938WC2 WY2001 photomonitoring result.

Figure 10.9. PPT#938WC3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Weaver Creek Confluence
PHOTOPOINT NUMBER: PPT# 938wc1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 353 °
INCLINATION OF CAMERA AT PHOTOCENTER : -12.25 °

Date: 1-24-01 Time: 15:30

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): (Left) Center Right Hillside

Cross section: _____ Streamflow: 2.12 ft ~~cfs~~

Where was streamflow measured?: Douglas City Campground

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: _____ ISO

Shutter speed: _____ sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T (W T)

Aperture (Fstop): _____ F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Camera height above observation pin: 4.63 ft above 1" washer and 12" galvinized spike

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to be a pseudo-aerial oblique of the delta and confluence locations. Changes in delta area, confluence location and increases/reductions in mainstem channel confinement with implementation of "restoration" flows should also be documented. The observation monument consists of a 12" galvinized nail and a 1" washer. The washer is marked with the photo point number.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Weaver Creek Confluence
PHOTOPOINT NUMBER: PPT# 938W2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 174° °
INCLINATION OF CAMERA AT PHOTOCENTER : -2.0 °

Date: 1-24-01 Time: 16:15

Field Technician(s): John H. Bair

Elevation: ft River bank (circle one): Left Center (Right) of weaver Creek

Cross section: Streamflow: 2.12 ft cfs

Where was streamflow measured?: Douglas City Campground

Camera (circle one): (Nikon CoolPix 990) Other: Film Speed: ISO

Shutter speed: sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T (W T) 100%W
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other:

Camera height above observation pin: 4.60ft above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint is on the right bank of Weaver Creek looking downstream towards the confluence w/ the mainstem Trinity River. This point was intended to document changes in floodplain vegetation and channel gradient as well as channel migration. The observation monument consists of a 5/8" rebar pin tagged and labeled. The line of sight monument is 25ft downstream and is also a 5/8" rebar pin labeled with an aluminum tag marked with the photopoint number and "LS" for line of sight.

Any site changes, photopoint location changes, site/pin disturbances, or significant events

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Weaver Creek Confluence
PHOTOPOINT NUMBER: PPT# 938WC3
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 37° °
INCLINATION OF CAMERA AT PHOTOCENTER : -7.0 °

Date: 1-24-01 Time: 16:45

Field Technician(s): John H. Bair

Elevation: ft River bank (circle one): Left Center (Right)

Cross section: Streamflow: 2.12 ~~cfs~~ ft

Where was streamflow measured?: Douglas City Campground

Camera (circle one): (Nikon CoolPix 990) Other: Film Speed: ISO

Shutter speed: sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other:

Camera height above observation pin: 4.70ft above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to "capture" changes in mainstem channel morphology and confluence location. Mostly the photopoint looks at the confluence location and delta area. The observation point is monumented w/a 5/8" rebar pin labeled with an aluminum tag. The line of sight pin is monumented with a 5/8" rebar pin labeled with an aluminum tag. The line of sight monument is 25 feet upstream of the observation monument. This photo looks upstream towards the confluence location

Any site changes, photopoint location changes, site/pin disturbances, or significant events

SITE DESCRIPTION OF PHOTOPOINTS #928DCC1 THROUGH #928DCC3: TRINITY RIVER AT DOUGLAS CITY CAMPGROUND (RM 92.8)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Douglas City Campground on right bank. Lat. 40° 38' 56" N, Long. 122° 57' 13" W, in NW ¼, SW ¼ Sec.12, T.32 N. R. 10 W. (based on 7.5' USGS topographic sheet, Weaverville, CA Quad., scale 1:24,000), Trinity County, 0.7 mi southwest of Douglas City, on right bank, 0.9 mi upstream of Steiner Flat bank rehabilitation site, 1.0 mi downstream of Weaver Creek confluence, 18.2 mi downstream of Lewiston Dam, River Mile 92.8.

The site can be reached by traveling 6.4 miles east from the intersection of Highway 3 and Highway 299 in Weaverville, turn right on the Douglas City Access road. Travel 0.1 miles to stop sign, turn right. Travel Steiner Flat Road 0.5 miles to Douglas City Campground turnoff, turn left. Travel down to the river following campground road. Park at river access in campground (Figure 11.6)

2. Photopoint Description

Photopoint #928DCC1

This photopoint is intended to document bar formation, vegetation growth, and changes to the riparian berm channel morphology. This photo looks downstream through the site (Figure 11.7).

Photopoint #928DCC2

This photopoint is intended to document bar formation, vegetation growth and changes to the channel morphology that evolved resulting from riparian encroachment. This photo looks upstream through the site (Figure 11.8).

Photopoint #928DCC3

This is a site overview, taken from the northeastern hillside, at the downstream most campsite in the Douglas City Campground (Figure 11.9).

3. Establishment and History

McBain and Trush installed photopoints #*928DCC*1 through #*928DCC*3 on January 29, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #928DCC1

Two 5/8" rebar pins were installed on the left bank of the mainstem, just a little way upstream of the staff plates associated with the streamflow gaging station. Each pin was labeled with an aluminum tag, the observation pin was labeled 928DCC1O and the line of sight pin was labeled 928DCC1LS (Figures 11.1 and 11.2).

Photopoint #928DCC2

Two 5/8" rebar pins were installed on the right bank of the mainstem, approximately 500ft downstream of day parking area. Each pin was labeled with an aluminum tag, the observation pin was labeled 928DCC2O and the line of sight pin was labeled 928DCC2LS (Figures 11.3 and 11.4).

Photopoint #928DCC3

One 12" spike with a 1 inch washer was placed on the southeastern side of the river, on the hillside. This point is on the downstream side of the last campsite associated with the campground (Figure 11.5). The 1" washer was marked PPT 928DCC3.

5. Land Ownership

Douglas City Campground is publicly owned and operated by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the Trinity River mainstem resulting from increased flows.

Figure 11.1. Douglas City Campground photopoint #928DCC1 observation point monument.

Figure 11.2. Douglas City Campground photopoint #928DCC1 line of sight point monument.

Figure 11.3. Douglas City Campground photopoint #928DCC2 observation point monument.

Figure 11.4. Douglas City Campground photopoint #928DCC2 line of sight point monument.

Figure 11.5. Douglas City Campground photopoint #928DCC3 observation point monument.

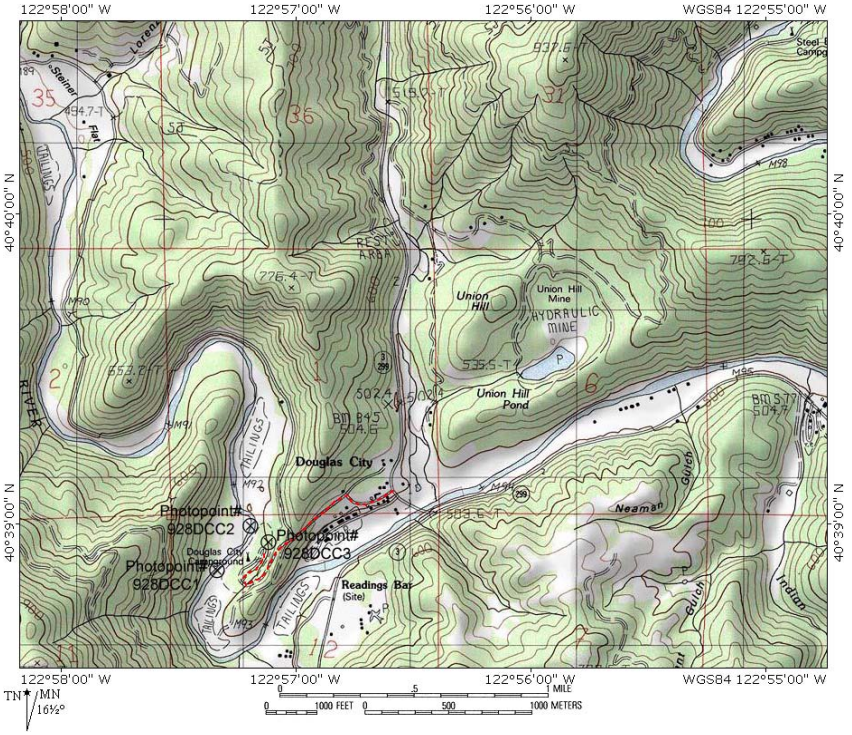

Figure 11.6. Douglas City Campground location and photopoints. Route to the campground is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 11.7 PPT#928DCC1 WY2001 photomonitoring result.

Figure 11.8 PPT#928DCC2 WY2001 photomonitoring result.

Figure 11.9 PPT#928DCC3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Douglas City Campground
PHOTOPOINT NUMBER: PPT# 923 DC03
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 220° °
INCLINATION OF CAMERA AT PHOTOCENTER : -2.0 °

Date: 1-30-01 Time: 02:45

Field Technician(s):

Elevation: ft River bank (circle one): Left Center (Right) - on hillside

Cross section: Streamflow: 2.15 ft cfs

Where was streamflow measured?: Douglas City Campground

Camera (circle one): Nikon CoolPix 990 Other: Film Speed: Auto ISO

Shutter speed: sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T - 100% wide

Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 3.95ft above 12" galv. Nail w/ 1" washer

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to capture changes to the riparian berm channel morphology and riparian corridor evolution. The observation point is monumented with a 12" galvinized nail and a 1" stainless steel washer. This point is located on the northeastern hillside above the river.

Any site changes, photopoint location changes, site/pin disturbances, or significant events

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Douglas City Campground
PHOTOPOINT NUMBER: PPT# 928DCC2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 194 °
INCLINATION OF CAMERA AT PHOTOCENTER : − 5.25° °

Date: 1/30/01 Time: 08:30

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Center (Right)

Cross section: _____ Streamflow: 2.15ft cfs

Where was streamflow measured?: Douglas City Campground

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: _____ ISO

Shutter speed: _____ sec Lens (circle one): W T W T W T 100%
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T T W T

Aperture (Fstop): _____ F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 2.64' above a 5/8" rebar pin

Purpose of photopoint and changes that have occurred since the last monitoring: This photo point is located at the downstream end of a long "bowling alley" reach. Changes in mainstem channel morphology and location of transient alluvial features will be documented. The observation point is monumented with a 5/8" rebar pin labeled with an aluminum tag. The line of sight pin is 25ft upstream consisting of a 5/8" rebar pin labeled with an aluminum tag. This photo looks upstream through the reach.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Douglas City Campground
PHOTOPOINT NUMBER: PPT# 92B DCd3
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 220° °
INCLINATION OF CAMERA AT PHOTOCENTER : -9.0 °

Date: 1-30-01 Time: 08:45

Field Technician(s):

Elevation: ft River bank (circle one): Left Center (Right) on hillside

Cross section: Streamflow: 2.15 ft cfs

Where was streamflow measured?: Douglas City Campground

Camera (circle one): Nikon CoolPix 990 Other: Film Speed: Auto ISO

Shutter speed: sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T (100% wide)

Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 3.95ft above 12" galv. Nail w/1" washer

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to capture changes to the riparian berm channel morphology and riparian corridor evolution. The observation point is monumented with a 12" galvinized nail and a 1" stainless steel washer. This point is located on the northeastern hillside above the river.

Any site changes, photopoint location changes, site/pin disturbances, or significant events

SITE DESCRIPTION OF PHOTOPOINTS #917SF1 THROUGH #917SF4: TRINITY RIVER AT STEINER FLAT BANK REHABILITATION SITE (RM 91.7)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Bank rehabilitation site on right bank, constructed by USBR 1991-93. Lat. 40° 39' 10" N, Long. 122° 57' 15" W, in NW ¼, SW ¼ Sec.1, T.32 N. R. 10 W. (based on 7.5' USGS topographic sheet, Weaverville, CA Quad., scale 1:24,000), Trinity County, 0.6 mi southwest of Douglas City, on right bank, 2.5 mi upstream of Lorenz Gulch confluence, 1.1 mi downstream of Douglas City Campground, 19.3 mi downstream of Lewiston Dam, River Mile 91.7.

The site can be reached by traveling 6.4 miles east from the intersection of Highway 3 and Highway 299 in Weaverville, turn right on the Douglas City Access road. Travel 0.1 miles to stop sign, turn right. Travel Steiner Flat Road 1.1 miles to unnamed dirt road, turn left. Travel road down to the river following dirt road. Park at end of road (Figure 12.6).

2. Photopoint Description

Photopoint #917SF1

This is an overview of a point bar at the upstream end of the site, taken from the northeastern bedrock outcrop (Figure 12.7).

Photopoint #917SF2

This photopoint is intended to document bar formation, changes in channel morphology, vegetation growth and riparian berm evolution. This photo looks downstream through the site (Figure 12.8).

Photopoint #917SF3

This photopoint is intended to document bar formation, changes in channel morphology, vegetation growth and riparian berm evolution. This photo looks upstream through the site (Figure 12.9).

Photopoint #917SF4

This is a site overview, taken from the southwestern hillside across from the site (Figure 12.10).

3. Establishment and History

McBain and Trush installed photopoints *#917SF*1 through *#917SF4* on January 22 and 23, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #917SF1

One 1" washer was epoxied on a boulder. The boulder sits atop a bedrock outcrop at the upstream end of the site (Figure 12.1). The washer is stamped with PPT#917SF1O.

Photopoint #917SF2

Two 5/8" rebar pins were installed on the right bank next to the active channel. The observation point was triangulated to other cross section pins in the vicinity. Each pin was labeled with an aluminum tag, the observation pin was labeled 917SF2O and the line of sight pin was labeled 917SF2LS (Figures 12.2 and 12.3).

Photopoint #917SF3

The observation point was triangulated by using the left bank and right bank pins associated with Steiner Flat cross section 05+68. The observation point is centered on cross section station 50.5 (Figures 12.4).

Photopoint #917SF4

One 12” spike with a 1” washer was placed on the southwestern hillside above the left bank side of the mainstem. The washer was labeled PPT 917SF4 (Figure 12.5).

5. Land Ownership

Steiner Flat bank rehabilitation site is publicly owned by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the bank rehabilitation site resulting from increased flows.

Figure 12.1. Steiner Flat bank rehabilitation site photopoint #917SF1 observation point monument.

Figure 12.2. Steiner Flat bank rehabilitation site photopoint #917SF2 observation point monument.

Figure 12.3. Steiner Flat bank rehabilitation site photopoint #917SF2 line of sight point monument.

Figure 12.4. Steiner Flat bank rehabilitation site photopoint #917SF3 observation point monument.

Figure 12.5. Steiner Flat bank rehabilitation site photopoint #917SF4 observation point monument.

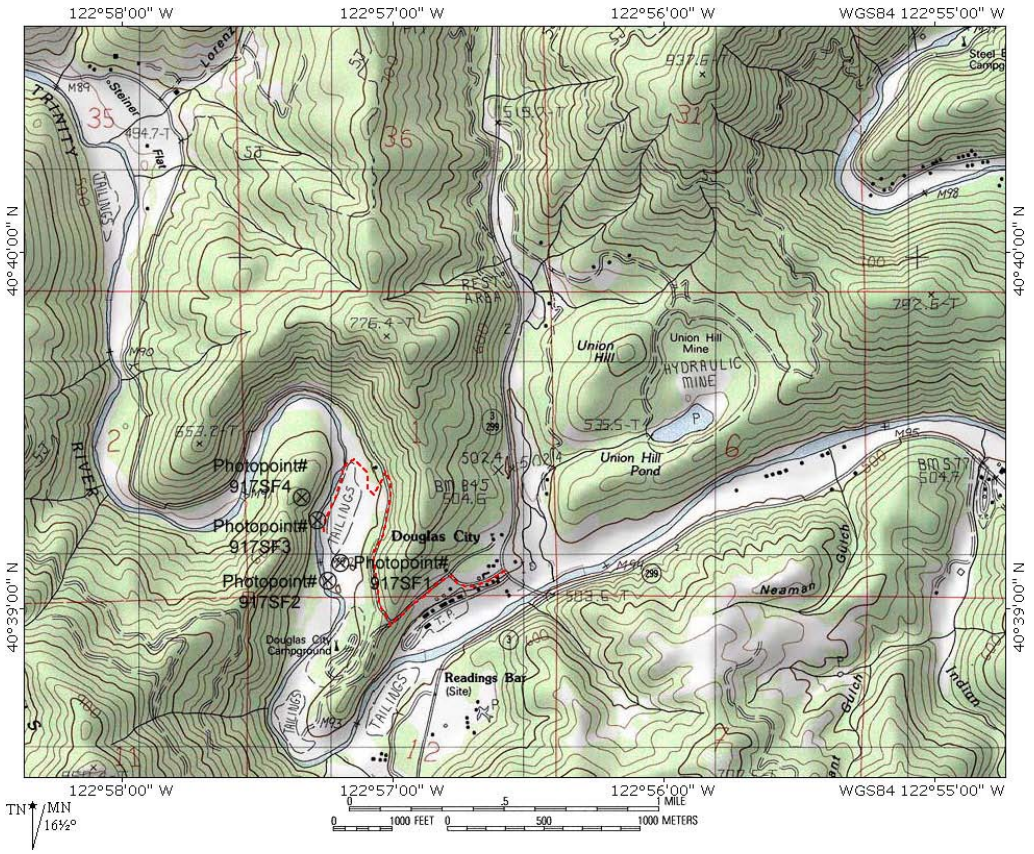

Figure 12.6. Steiner Flat bank rehabilitation site location and photopoints. Route to the bank rehabilitation site is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 12.7. PPT#917SF1 WY2001 photomonitoring result.

Figure 12.8. PPT#917SF2 WY2001 photomonitoring result.

Figure 12.9. PPT#917SF3 WY2001 photomonitoring result.

Figure 12.10. PPT#917SF1 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Steiner Flat Bank Rehab Site
PHOTOPOINT NUMBER: PPT# 917 SF1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 247 °
INCLINATION OF CAMERA AT PHOTOCENTER : 25.5 °

Date: 1-23-01 Time: 10:40 AM

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center Right

Cross section: _____ Streamflow: 2.12 ft @ Douglas City cfs

Where was streamflow measured?: At Douglas City Gage

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.50 ft above a 1" washer epoxied to a boulder

Purpose of photopoint and changes that have occurred since the last monitoring:
This photopoint encompasses an alluvial bar at the upstream end of the site. The bar is susceptable to low water encroachment, so this photopoint focuses on how flows will restrict encroachment, how does bar area and substrate change and does the bar persist in that location.

Any site changes, photopoint location changes, site/pin disturbances, or significant events
A 1" washer was epoxied to a boulder that sits atop the bedrock outcrop at the upstream end of the site

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Steiner Flat Bank Rehab

PHOTOPOINT NUMBER: PPT# 9175F2

LINE OF SITE PIN BEARING FROM OBSERVER PIN: 340 °

INCLINATION OF CAMERA AT PHOTOCENTER : 0.0 °

Date: 1-23-01 Time: 12:00

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Center (Right)

Cross section: _____ Streamflow: _____ cfs

Where was streamflow measured?: _____

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: _____ ISO

Shutter speed: _____ sec Lens (circle one): W T W T W T

(T) Telephoto = 24mm
(W) Wide angle = 8mm

W T W T W T

Aperture (Fstop): _____ F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Camera height above observation pin: 4.57 ft above the gravel bar

Purpose of photopoint and changes that have occurred since the last monitoring: Observation pin triangulated from right bank pin cross section -03+04 (200.ft) and cross sect. -01+69 right bank pin (304ft). 5/8" Observation monument placed close to the water edge. Photo point looks downstream through site

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Steiner Flat Bank Rehab Site
PHOTOPOINT NUMBER: PPT# 917SF3
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 161 °
INCLINATION OF CAMERA AT PHOTOCENTER : 6° °

Date: 1-22-01 Time: _____

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left (Center) Right

Cross section: CS+98 Streamflow: 7.12 ~~cfs~~ ft

Where was streamflow measured?: Douglas City gage

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Camera height above observation pin: 4.90 ft above the channel bed

Purpose of photopoint and changes that have occurred since the last monitoring: The observation was triangulated using cross section CS+98 left and right bank pins. The total tape length was 167.5 ft (Stn 0.0 is on the left bank pin) and the tripod was centered on cross section station 50.5. This photopoint was installed to show changes in bar location, channel morphology and riparian berm evolution. This photo looks upstream.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

Total XS length = 167.5 (starting @ Left bank)
Tripod centered on station 50.5

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Steiner Flat Bank Rehab Site
PHOTOPOINT NUMBER: PPT# 917 SF4
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 160 °
INCLINATION OF CAMERA AT PHOTOCENTER : 10.0 °

Date: 7.22.01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): (Left) Center Right

Cross section: _____ Streamflow: 2.12 ft cfs

Where was streamflow measured?: Douglas City Gage

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Camera height above observation pin: 2.00 ft above a 12" galvinized nail

Purpose of photopoint and changes that have occurred since the last monitoring: The photopoint requires scrambling up the hillside on the left bank. The photopoint was installed to document channel migration, bar formation, and riparian encroachment evolution. The observation point is monumented by a 12" galvinized nail with a labeled 1" stainless steel washer.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

SITE DESCRIPTION OF PHOTOPOINTS #917SF1 THROUGH #917SF4: TRINITY RIVER AT STEINER FLAT BANK REHABILITATION SITE (RM 91.7)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Bank rehabilitation site on right bank, constructed by USBR 1991-93. Lat. 40° 39' 10" N, Long. 122° 57' 15" W, in NW ¼, SW ¼ Sec.1, T.32 N. R. 10 W. (based on 7.5' USGS topographic sheet, Weaverville, CA Quad., scale 1:24,000), Trinity County, 0.6 mi southwest of Douglas City, on right bank, 2.5 mi upstream of Lorenz Gulch confluence, 1.1 mi downstream of Douglas City Campground, 19.3 mi downstream of Lewiston Dam, River Mile 91.7.

The site can be reached by traveling 6.4 miles east from the intersection of Highway 3 and Highway 299 in Weaverville, turn right on the Douglas City Access road. Travel 0.1 miles to stop sign, turn right. Travel Steiner Flat Road 1.1 miles to unnamed dirt road, turn left. Travel road down to the river following dirt road. Park at end of road (Figure 12.6).

2. Photopoint Description

Photopoint #917SF1

This is an overview of a point bar at the upstream end of the site, taken from the northeastern bedrock outcrop (Figure 12.7).

Photopoint #917SF2

This photopoint is intended to document bar formation, changes in channel morphology, vegetation growth and riparian berm evolution. This photo looks downstream through the site (Figure 12.8).

Photopoint #917SF3

This photopoint is intended to document bar formation, changes in channel morphology, vegetation growth and riparian berm evolution. This photo looks upstream through the site (Figure 12.9).

Photopoint #917SF4

This is a site overview, taken from the southwestern hillside across from the site (Figure 12.10).

3. Establishment and History

McBain and Trush installed photopoints *#917SF*1 through *#917SF4* on January 22 and 23, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #917SF1

One 1" washer was epoxied on a boulder. The boulder sits atop a bedrock outcrop at the upstream end of the site (Figure 12.1). The washer is stamped with PPT#917SF1O.

Photopoint #917SF2

Two 5/8" rebar pins were installed on the right bank next to the active channel. The observation point was triangulated to other cross section pins in the vicinity. Each pin was labeled with an aluminum tag, the observation pin was labeled 917SF2O and the line of sight pin was labeled 917SF2LS (Figures 12.2 and 12.3).

Photopoint #917SF3

The observation point was triangulated by using the left bank and right bank pins associated with Steiner Flat cross section 05+68. The observation point is centered on cross section station 50.5 (Figures 12.4).

Photopoint #917SF4

One 12” spike with a 1” washer was placed on the southwestern hillside above the left bank side of the mainstem. The washer was labeled PPT 917SF4 (Figure 12.5).

5. Land Ownership

Steiner Flat bank rehabilitation site is publicly owned by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the bank rehabilitation site resulting from increased flows.

Figure 12.1. Steiner Flat bank rehabilitation site photopoint #917SF1 observation point monument.

Figure 12.2. Steiner Flat bank rehabilitation site photopoint #917SF2 observation point monument.

Figure 12.3. Steiner Flat bank rehabilitation site photopoint #917SF2 line of sight point monument.

Figure 12.4. Steiner Flat bank rehabilitation site photopoint #917SF3 observation point monument.

Figure 12.5. Steiner Flat bank rehabilitation site photopoint #917SF4 observation point monument.

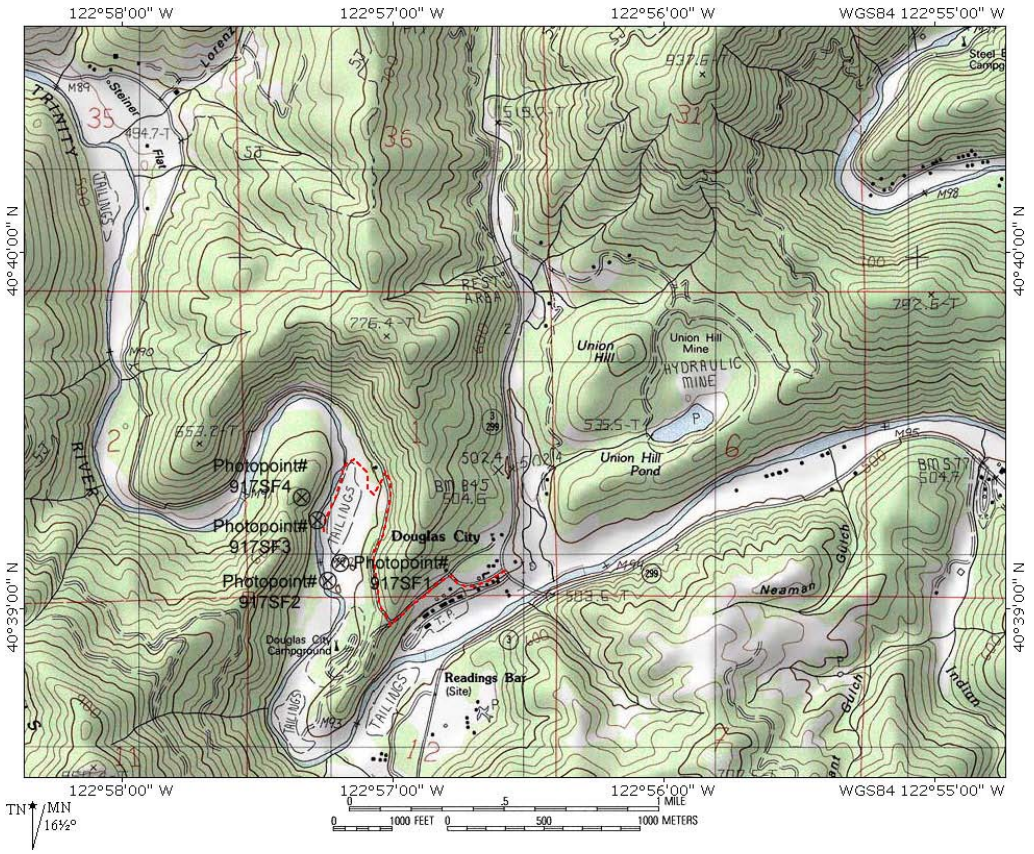

Figure 12.6. Steiner Flat bank rehabilitation site location and photopoints. Route to the bank rehabilitation site is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 12.7. PPT#917SF1 WY2001 photomonitoring result.

Figure 12.8. PPT#917SF2 WY2001 photomonitoring result.

Figure 12.9. PPT#917SF3 WY2001 photomonitoring result.

Figure 12.10. PPT#917SF1 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Steiner Flat Maintenance Flow Study Site
PHOTOPOINT NUMBER: PPT# 97 SFTRA 1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 186 °
INCLINATION OF CAMERA AT PHOTOCENTER : -7.0 °

Date: 1-24-01 Time: 14:30

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center (Right)

Cross section: _____ Streamflow: 2-12 ft _____ cfs

Where was streamflow measured?: Douglas City Campground

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W [redacted] T W [redacted] T W [redacted] T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W [redacted] T W [redacted] T W [redacted] T

Aperture (Fstop): F W [redacted] T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Camera height above observation pin: 4.77 ft above a 1" washer epoxied to a bedrock outcrop

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to show alternate point bar formation, channel migration and long term riparian berm evolution. The observation point is monumented with a 1" washer epoxied to a bedrock outcrop. The photo looks upstream through the site.

100% W + 50% W to see child is back

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Steiner flat Maintenance flow Study Site
PHOTOPOINT NUMBER: PPT# 9/7SFTRA3
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 187 °
INCLINATION OF CAMERA AT PHOTOCENTER : -9.0 °

Date: 1-24-01 Time: 13:00

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center (Right) → Hillside

Cross section: _____ Streamflow: 2.12 ft ~~cfs~~

Where was streamflow measured?: Douglas City Campground

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T

Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Camera height above observation pin: 3.00 ft above a 12" galvinized nail w/ 1" washer as monume

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint is located on the Northern hillside above the Steiner-flat Road. This point was intended to document changes in riparian berm evolution, channel migration and bar formation. The observation point is monumented with a 12" galvinized nail and a 1" washer marked with the photopoint number

Any site changes, photopoint location changes, site/pin disturbances, or significant events Raing

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Stanford Maintenance flow study site
PHOTOPOINT NUMBER: PPT# 917SETRA2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 24° °
INCLINATION OF CAMERA AT PHOTOCENTER : -4.25 °

Date: 1-24-01 Time: 14:00

Field Technician(s): John H. Baer

Elevation: ft River bank (circle one): (Left) Center Right

Cross section: Streamflow: 2.12 ft ~~cfs~~

Where was streamflow measured?: Douglas City

Camera (circle one): (Nikon CoolPix 990) Other: Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W (T) - 100%
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other:

Camera height above observation pin: 2.84ft above a 1" washer epoxied to a bedrock outcrop

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to to show changes in pool volume, point bar formation and lateral channel migration. The observation monument consists of a labeled 1" washer epoxied to a bedrock outcrop on the left bank. The photo looks downstream through the site.

Any site changes, photopoint location changes, site/pin disturbances, or significant events

SITE DESCRIPTION OF PHOTOPOINTS #900LG1 THROUGH #900LG3: TRINITY RIVER NEAR LORENZ GULCH CONFLUENCE (RM 90.0)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Lorenz Gulch flows into the Trinity River mainstem from the right bank, photomonitoring site is upstream of the confluence. Lat. 40° 39' 44" N, Long. 122° 58' 01" W, in NW ¼, SW ¼ Sec.2, T.32 N. R. 10 W. (based on 7.5' USGS topographic sheet, Weaverville, CA Quad., scale 1:24,000), Trinity County, 1.5 mi northeast of Douglas City, on right bank, 6.6 mi upstream of Bell Gulch bank rehabilitation site, 1.7 mi downstream of Steiner Flat bank rehabilitation site, 19.3 mi downstream of Lewiston Dam, River Mile 90.0.

The site can be reached by traveling 6.4 miles west from the intersection of Highway 3 and Highway 299 in Weaverville, turn right on the Douglas City Access road. Travel 0.1 miles to stop sign, turn right. Travel Steiner Flat Road 2.6 miles past the bank rehabilitation site to unnamed dirt road, turn left. Park at turnout at beginning of road (Figure 14.5).

2. Photopoint Description

Photopoint #900LG1

This photopoint is intended to recreate a photopoint that was taken in 1998 to document how the medial bar responds after being rest by 1997 floods and will document bar formation and vegetation growth. This photo looks upstream through the site (Figure 14.6).

Photopoint #900LG2

This photopoint is intended to recreate a photopoint that was taken in 1998 to document how the medial bar responds after being rest by 1997 floods and will document bar formation and vegetation growth. This photo looks downstream through the site (Figure 14.7).

Photopoint #900LG3

This is an overview of the medial bar, taken from the southwestern side of Steiner Flat Road. This photo looks upstream through the site (Figure 14.8).

3. Establishment and History

McBain and Trush installed photopoints #900LG11 through #900LG3 on January 24, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #900LG1

Two 5/8" rebar pins were installed on the right bank near the low water channel. Each pin was labeled with an aluminum tag, the observation pin was labeled 900LG1O and the line of sight pin was labeled 900LG1LS (Figures 14.1 and 14.2).

Photopoint #900LG2

One 5/8" rebar pin was installed on the right bank in the riparian berm across and upstream of the medial bar, hash marks should be evident on a mature alder immediately upstream of the observation monument. The access for this point is best through the BLM campground. The rebar pin was labeled with an aluminum tag marked PPT900LG2 (Figure 14.3).

Photopoint #900LG3

One 12" spike with a 1 inch washer was placed on the southwestern side of Steiner Flat road, just before the Lorenz Gulch access. The 1" washer was labeled with PPT900LG3 (Figure 14.4).

5. Land Ownership

The photomonitoring site near Lorenz Gulch is publicly owned by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the Trinity River mainstem resulting from increased flows.

Figure 14.1. Lorenz Gulch photopoint #900LG1 observation point monument.

NO PHOTO TAKEN OF LINE OF SIGHT MONUMENT

Figure 14.2. Lorenz Gulch photopoint #900LG1 line of sight point monument.

Figure 14.3. Lorenz Gulch photopoint #900LG2 observation point monument.

Figure 14.4. Lorenz Gulch photopoint #900LG3 observation point monument.

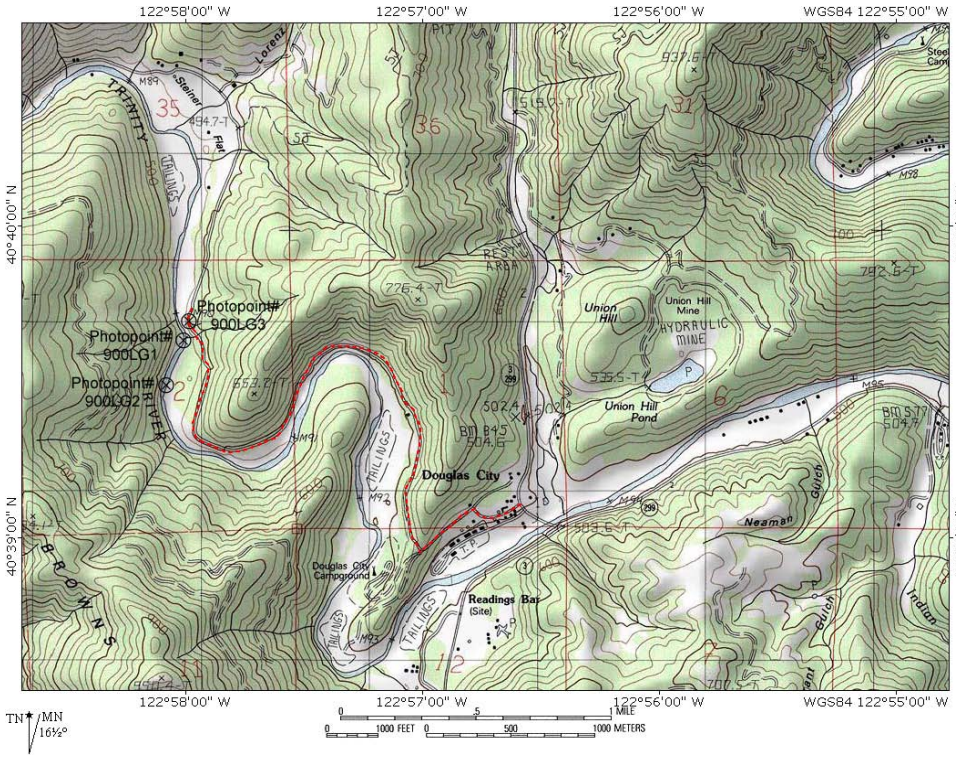

Figure 14.5. Photomonitoring site near Lorenz Gulch location and photopoints. Route to the site is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 14.6. PPT#900LG1 WY2001 photomonitoring result.

Figure 14.7. PPT#900LG2 WY2001 photomonitoring result.

Figure 14.8. PPT#900LG3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Upstream of Lorenz Gulch
PHOTOPOINT NUMBER: PPT# 900CG1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 167 °
INCLINATION OF CAMERA AT PHOTOCENTER: +2.5 °

Date: 1-24-01 Time: 12:00

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Center (Right)

Cross section: _____ Streamflow: 2.12 ft ~~cfs~~

Where was streamflow measured?: Douglas City Campground

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T (W T) W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Camera height above observation pin: 4.76ft above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: To recreate photo taken in 1998 during the bar disturbances mapping this photo point was installed. The photopoint was intended to capture the evolution of a medial bar deposit that was "reset" by 1997 floods. The observation point is monumented with a 5/8" rebar pin labeled w/ an aluminum tag. The line of sight point is 25ft upstream and monumented in a similar fashion.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Upstream of Lorenz Gulch
PHOTOPOINT NUMBER: PPT# 900162
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 344 °
INCLINATION OF CAMERA AT PHOTOCENTER : 9 °

Date: 1-24-01 Time: 11:00 AM

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Center (Right)

Cross section: _____ Streamflow: _____ cfs

Where was streamflow measured?: 2.12 @ Douglas City

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: auto ISO

Shutter speed: 1/250 sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T (W T)
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Camera height above observation pin: 4.17 ft

Purpose of photopoint and changes that have occurred since the last monitoring: No line of sight pin was installed. Observation pin on right bank in the riparian berm. Hash marks were made on a mature alder upstream of the observation monument. This point was intended to capture changes to an alluvial medial bar that was "fresed" by 1997 floods. The observation monument consists of a 5/8" rebar pin, labeled with a 1" aluminum tag.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Upstream of Lorenz Gulch
PHOTOPOINT NUMBER: PPT# 900463
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 181 °
INCLINATION OF CAMERA AT PHOTOCENTER : 6 °

Date: 1-24-01 Time: 11:30

Field Technician(s): John Bair

Elevation: _____ ft River bank (circle one): Left Center Right

Cross section: _____ Streamflow: 2.12 ft ~~cfs~~

Where was streamflow measured?: Douglas City Campground

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: ~~X~~ 100 ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Camera height above observation pin: 4.90 ft above a 12" galvinized nail with Washer

Purpose of photopoint and changes that have occurred since the last monitoring: Galvinized 12" spike w/ 1" washer on Northwestern side of Steiner Flat Road

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

SITE DESCRIPTION OF PHOTOPOINTS #820DG1 THROUGH #820DG3: TRINITY RIVER AT DEEP GULCH BANK REHABILITATION SITE (RM 82.0)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Bank rehabilitation site on left bank, constructed by USBR 1993. Lat. 40° 42' 36" N, Long. 123° 02' 52" W, in NW ¼, SW ¼ Sec.18, T.33 N. R. 10 W. (based on 7.5' USGS topographic sheet, Junction City, CA Quad., scale 1:24,000), Trinity County, 1.2 mi southeast of Junction City, on right bank, 1.1 mi upstream of Oregon Gulch confluence, 2.4 mi downstream of Bell Gulch bank rehabilitation site, 29.0 mi downstream of Lewiston Dam, River Mile 80.0.

The site can be reached by traveling 8.0 miles west from the intersection of Highway 3 and Highway 299 in Weaverville. Turn left onto Dutch Creek road and travel 1.9 miles, turn left into large turnout (or travel 2.1 miles up road to turnout on left hand side for the site overview). Travel down hillside to site, **or** follow directions to the Sheridan Creek bank rehabilitation site, and cross the mainstem to get to the Deep Gulch bank rehabilitation site (Figure 15.6).

2. Photopoint Description

Photopoint #820DG1

This photopoint is intended to document changes in bar formation, vegetation growth, low water encroachment by hardwoods and riparian berm development. This photo is an overview looking from a hillside downstream through the site (and Sheridan Creek bank rehabilitation site too, Figure 15.7).

Photopoint #820DG2

This photopoint is intended to document changes in thalweg location, changes in bank cover related to low water encroachment, bar formation, and vegetation growth; looking downstream through the site (Figure 15.8).

Photopoint #820DG3

This photopoint is intended to document changes in thalweg location, localized bed level fluctuations, bar formation, and vegetation growth; looking downstream through the site. This photo looks upstream through the site (Figure 15.9).

3. Establishment and History

McBain and Trush installed photopoints #820DG1 through #820DG3 on February 2, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #820DG1

One 12" spike with a 1 inch washer was placed on the western hillside above the Deep Gulch site. This photopoint, and result are the same as Sheridan Creek PPT#816SC1. The turnout to park in is accessible by Dutch Creek Road) 2.1 miles up from the intersection of Dutch Creek Road and Highway 299, 8 miles west of Weaverville on Hwy 299 (Figure 15.1), the photopoint is to the east from the turnout.

Photopoint #820DG2

Two 5/8" rebar pins were installed on the right bank upstream of the bank rehabilitation site. Each pin was labeled with an aluminum tag, the observation pin was labeled 820DG2O and the line of sight pin was labeled 820DG2LS (Figures 15.2 and 15.3).

Photopoint #820DG3

The observation point was triangulated by using the left bank and right bank pins associated with Sheridan Creek cross section –00+65/ Deep Gulch cross section 19+85. The observation point is centered on cross section station 160 (zero starts on the left bank and the total cross section length is 271 feet. (Figures 15.4 and 15.5).

5. Land Ownership

Deep Gulch bank rehabilitation site is publicly owned by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the bank rehabilitation site resulting from increased flows.

Figure 15.1. Deep Gulch photopoint #820DG1 observation point monument.

Figure 15.2. Deep Gulch photopoint #820DG2 observation point monument.

Figure 15.3. Deep Gulch photopoint #820DG2 line of sight point monument.

Figure 15.4. Deep Gulch photopoint #820DG3 left bank triangulation monument.

Figure 15.5. Deep Gulch photopoint #820DG3 right bank triangulation pin monument.

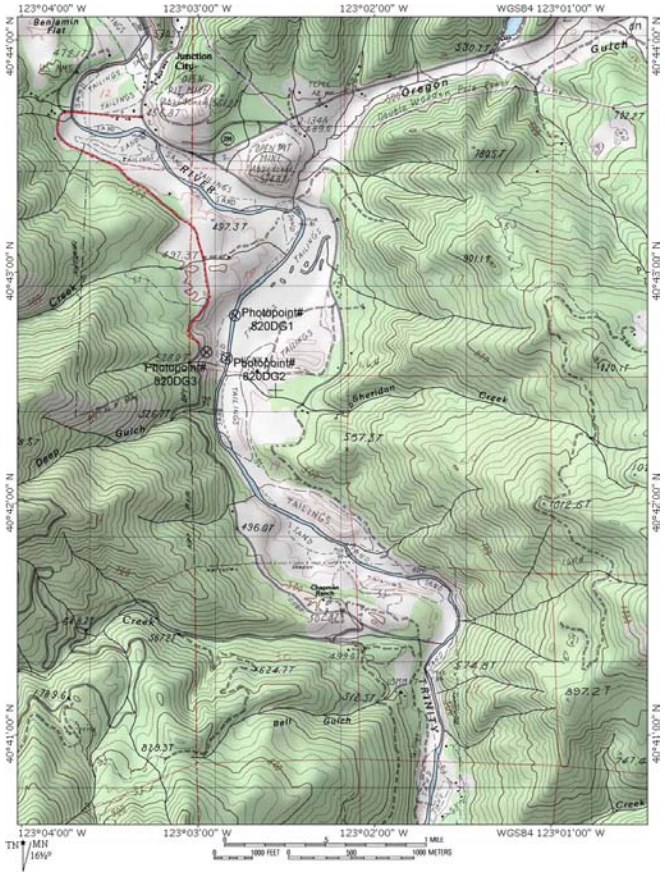

Figure 15.6. Deep Gulch bank rehabilitation site location and photopoints. Route to the confluence is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 15.7 PPT#820DG1 WY2001 photomonitoring result.

Figure 15.8 PPT#820DG2 WY2001 photomonitoring result.

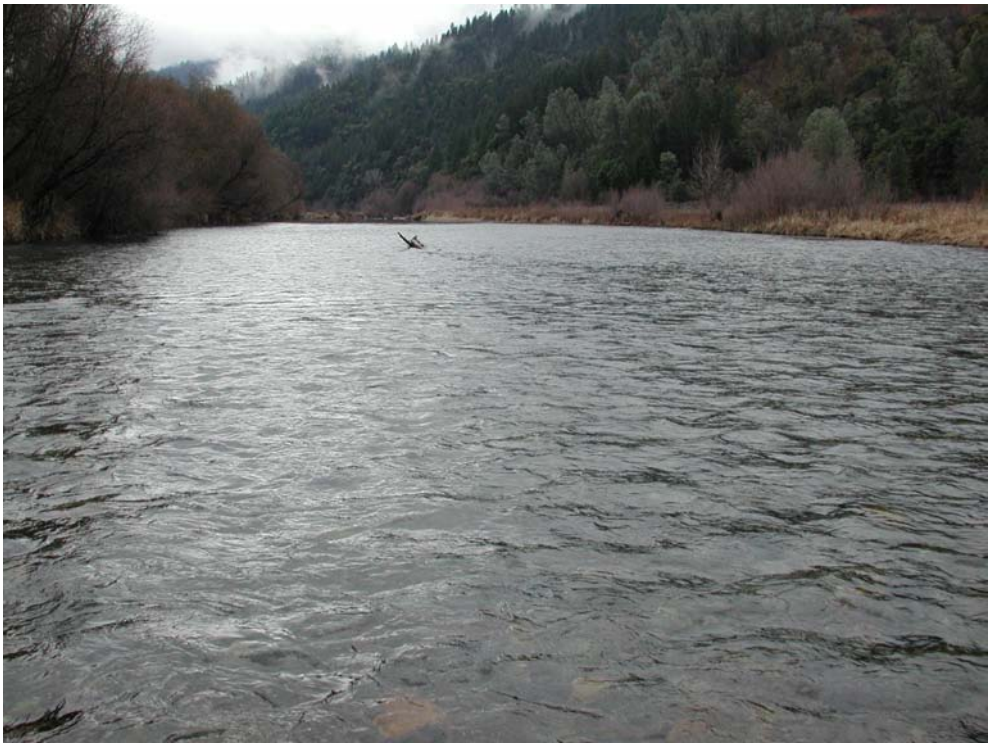
Figure 15.9 PPT#820DG3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Deep Gulch bank rehabilitation site
PHOTOPOINT NUMBER: PPT# 820 DG 2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 347 °
INCLINATION OF CAMERA AT PHOTOCENTER : 0.5° °

Date: February 2, 2001 Time: _____

Field Technician(s): John R. Sa[illegible]

Elevation: _____ ft River bank (circle one): Left Center Right

Cross section: _____ Streamflow: 153 ft @ 09:00 cfs

Where was streamflow measured?: Junction City Gage

Camera (circle one): ~~Nikon CoolPix 990~~ Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T

Aperture (Fstop): F W T Read zoom indicator in viewfinder
~50%

Lens filters (circle all that apply): Polarizing UV Skylight Other: _____

Camera height above observation pin: 1.90 ft above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint is intended to document changes to the riparian berm, vegetation development along the rehabilitated bank and shifts in thalweg channel migration. The observation point is monumented with a 5/8" rebar/pin labeled with an aluminum tag marked with the photopoint number. The line of sight point is 25 ft downstream and is monumented the same way. This photo looks downstream through the site.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Deep Gulch bank rehabilitation site
PHOTOPOINT NUMBER: PPT# 820 DG1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 36 °
INCLINATION OF CAMERA AT PHOTOCENTER : -12.0 °

Date: February 2, 2001 Time: ______

Field Technician(s): John H. Bair

Elevation: ______ ft River bank (circle one): **Left** (circled) Center Right on hillside

Cross section: ______ Streamflow: 1.53 ft cfs

Where was streamflow measured?: ______

Camera (circle one): **Nikon CoolPix 990** (circled) Other: ______ Film Speed: Auto ISO

Shutter speed: ______ sec Lens (circle one): W▓▓▓T W▓▓░T W▓▓░T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W▓░░T W▓░░T W▓░░T — 100% wide (circled)

Aperture (Fstop): ______ F W░░░T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 1.72 above a

Purpose of photopoint and changes that have occurred since the last monitoring: This is a photopoint from a perspective that has been taken several times. This point is intended to show alternate bar-riparian developing bank rehabilitation site revegetation in hardwoods. The observation monument consists of a 12" galvanized steel spike and looks downstream over both Sheridan Creek and Deep Gulch sites.

Any site changes, photopoint location changes, site/pin disturbances, or significant events ______
This photo / photopoint location is coincident w/ 816 SC1

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Deep Gulch Bank Rehabilitation Site
PHOTOPOINT NUMBER: PPT# 820DG3
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 179 °
INCLINATION OF CAMERA AT PHOTOCENTER : -7.25 °

Date: February 7 2001 Time: _____

Field Technician(s): John H Jr

Elevation: _____ ft River bank (circle one): Left (Center) Right

Cross section: _____ Streamflow: 1.53 ft @ 09.00 cfs

Where was streamflow measured?: Junction City Gage

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W [■■■■■] T W [■■■■■] T W [■■■■■] T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W [■■■■] T W [■■■■] T W [■■■] T

Aperture (Fstop): F W [ ] T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.67 ft above the channel

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint is intended to document vegetation development along the rehabilitated bank, and localized shifts in channel bed elevation — The observation point is triangulated using Deep Gulch cross section 19-85 LB and right bank pin — The total cross section length is 271 ft beginning from the left bank pin. The observation point is located at cross section station 160.

Any site changes, photopoint location changes, site/pin disturbances, or significant events 820DG3 and 91SC3 share the same observation point along cross section

SITE DESCRIPTION OF PHOTOPOINTS #816SC1 THROUGH #816SC3: TRINITY RIVER AT SHERIDAN CREEK BANK REHABILITATION SITE (RM 81.6)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Bank rehabilitation site on right bank, constructed by USBR 1993. Lat. 40° 42' 47" N, Long. 123° 02' 46" W, in NW ¼, SW ¼ Sec.18, T.33 N. R. 10 W. (based on 7.5' USGS topographic sheet, Junction City, CA Quad., scale 1:24,000), Trinity County, 1.1 mi southeast of Junction City, on right bank, 1.1 mi upstream of Oregon Gulch confluence, 2.4 mi downstream of Bell Gulch bank rehabilitation site, 29.0 mi downstream of Lewiston Dam, River Mile 81.6.
The site can be reached two ways, by traveling 8.0 miles west from the intersection of Highway 3 and Highway 299 in Weaverville. Turn left onto Dutch Creek road and travel 1.9 miles, turn left into large turnout (or travel 2.1 miles up road to turnout on left hand side for the site overview). Travel down hillside to site, **or** the site can be reached by traveling 7.6 miles west from the intersection of Highway 3 and Highway 299 in Weaverville. Turn left onto Sky Ranch Road and travel 2.1 miles, turn right onto dirt road. Travel down dirt road to gate, park. Walk the unnamed dirt road to the bank rehabilitation site (you must have permission from the landowners to access site from the rightside of the river, Figure 16.6).

2. Photopoint Description

Photopoint #816SC1

This photopoint is intended to document changes in bar formation, vegetation growth, low water encroachment by hardwoods and riparian berm development. This photo is an overview looking from a hillside downstream through the site (and Deep Gulch bank rehabilitation site too, Figure 16.7).

Photopoint #816SC2

This photopoint is intended to document changes in thalweg location, changes in bank cover related to low water encroachment, bar formation, and vegetation growth; looking downstream through the site (Figure 16.8).

Photopoint #816SC3

This photopoint is intended to document changes in thalweg location, localized bed level fluctuations, bar formation, and vegetation growth; looking downstream through the site. This photo looks upstream through the site (Figure 16.9).

3. Establishment and History

McBain and Trush installed photopoints #816SC1 through #816SC3 on February 2, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #816SC1

One 12" spike with a 1 inch washer was placed on the western hillside above the Deep Gulch site. This photopoint, and result are the same as Sheridan Creek PPT#816SC1. The turnout to park in is accessible by Dutch Creek Road) 2.1 miles up from the intersection of Dutch Creek Road and Highway 299, 8 miles west of Weaverville on Hwy 299 (Figure 15.1), the photopoint is to the east from the turnout.

Photopoint #816SC2

Two 5/8" rebar pins were installed on a gravel bar on the left bank downstream of the bank rehabilitation site. Each pin was labeled with an aluminum tag, the observation pin was labeled 816SC2O and the line of sight pin was labeled 816SC2LS (Figures 16.2 and 16.3).

Photopoint #816SC3

The observation point was triangulated by using the left bank and right bank pins associated with Sheridan Creek cross section –00+65/ Deep Gulch cross section 19+85. The observation point is centered on cross section station 160 (zero starts on the left bank and the total cross section length is 271 feet. (Figures 16.4 and 16.5).

5. Land Ownership

Sheridan Creek bank rehabilitation site is publicly owned by the Bureau of Land Management. However all overland access points are privately owned. Access to the site has always been negotiated year to year. The landowner that controls access is: Dave Schuman PO Box 37, Junction City, CA 96048. **DO NOT TRESPASS ON THESE PROPERTIES TO ACCESS SITE WITHOUT PERMISSION!**

6. Purpose of Photopoint(s)

To document changes to the bank rehabilitation site resulting from increased flows.

Figure 16.1. Sheridan Creek photopoint #816SC1 observation point monument.

Figure 16.2. Sheridan Creek photopoint #816SC2 observation point monument.

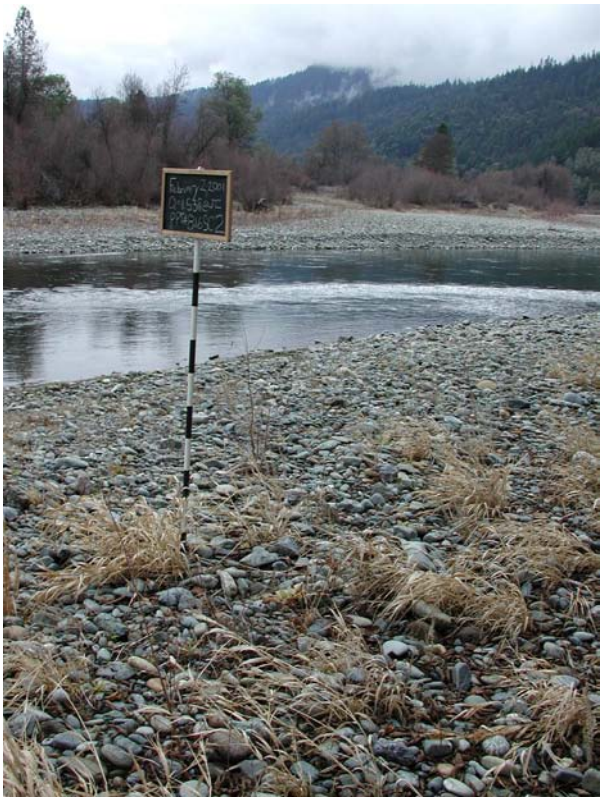

Figure 16.3. Sheridan Creek photopoint #816SC2 line of sight point monument.

Figure 16.4. Sheridan Creek photopoint #816SC3 left bank triangulation monument

Figure 16.5. Sheridan Creek photopoint #816SC3 right bank triangulation monument.

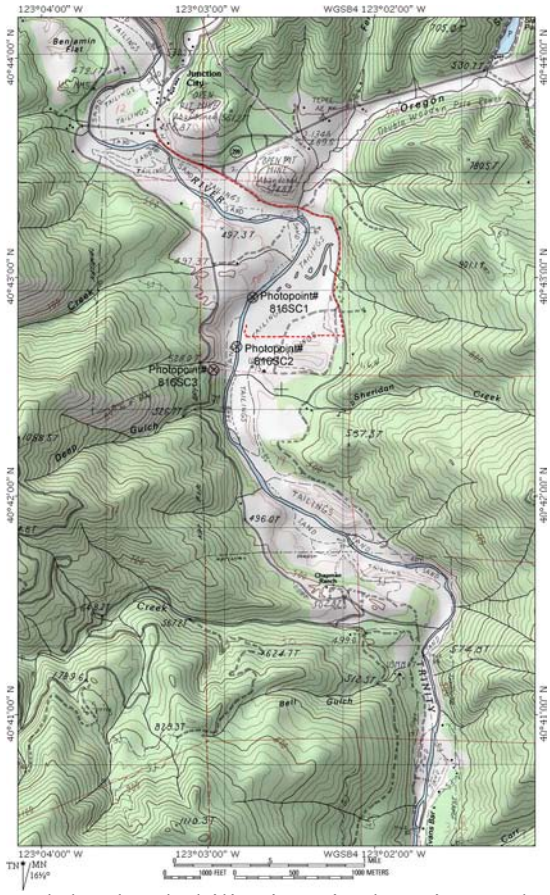

Figure 16.6. Sheridan Creek bank rehabilitation site location and photopoints. Route to the bank rehabilitation site is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 16.7. PPT#816SC1 WY2001 monitoring result.

Figure 16.8. PPT#816SC2 WY2001 monitoring result.

Figure 16.9. PPT#816SC3 WY2001 monitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Sheridan Creek bank rehabilitation site
PHOTOPOINT NUMBER: PPT# 816 SC1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 36 °
INCLINATION OF CAMERA AT PHOTOCENTER : -12.0 °

Date: February 2, 2001 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center Right on hillside

Cross section: _____ Streamflow: 1.53 ~~cfs~~ cfs

Where was streamflow measured?: @ Junction City gage

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T 100% wide

Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 1.72 ft above a 12" galvinized nail w/ 1" washer

Purpose of photopoint and changes that have occurred since the last monitoring: This is a site overview and has been reproduced many times in the past. This point is intended to show alternate bar formation, hardwood recolonization and potentially re-encroachment of the low water channel. The observation monument consists of a 12" galvinized steel nail with a label of 1" washer. This photo faces downstream over both Sheridan Creek and Deer Gulch

Any site changes, photopoint location changes, site/pin disturbances, or significant events
This photopoint is coincident with 820 DG1

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Sheridan Creek bank rehabilitation Site
PHOTOPOINT NUMBER: PPT# 816SC2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 189 °
INCLINATION OF CAMERA AT PHOTOCENTER : +0.5 °

Date: February 2, 2001 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): (Left) Center Right

Cross section: _____ Streamflow: 1.53 cfs ~~cfs~~

Where was streamflow measured?: Junction City Gage

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W [redacted] T W [redacted] T W [redacted] T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W [redacted] T W [redacted] T W [redacted] T 100% wide
Aperture (Fstop): 4.9 F W [redacted] T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.45 ft above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint is intended to document changes to the riparian hardwood colonization and future re-encroachment of the low water channel. The observation point is monumented with a 5/8" rebar pin that is labeled with an aluminum tag. The line of sight pin is 25 ft upstream and is monumented in a similar fashion

Any site changes, photopoint location changes, site/pin disturbances, or significant events 816SC2 and 811 USR1 share the same observation monument but both have different line of sight pins.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Sheridan Creek bank rehabilitation site
PHOTOPOINT NUMBER: PPT# 816SC3
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 10 °
INCLINATION OF CAMERA AT PHOTOCENTER : +7.25 °

Date: February 2, 2001 Time: ____

Field Technician(s): John H. Bair

Elevation: ____ ft River bank (circle one): Left (Center) Right

Cross section: ____ Streamflow: 1.53 ft ~~cfs~~

Where was streamflow measured?: Junction City gage

Camera (circle one): (Nikon CoolPix 990) Other: ____ Film Speed: Auto ISO

Shutter speed: ____ sec Lens (circle one): W[▓▓▓▓]T W[▓▓▓]T W[▓▓]T (circled) 100% wide
(T) Telephoto = 24mm W[▓▓]T W[▓]T W[▓]T
(W) Wide angle = 8mm

Aperture (Fstop): ____ F W[ ]T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.67 ft above the channel bed.

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to document vegetation development along the rehabilitated bank, localized shifts in channel bed elevation and Sheridan Creek's channel confinement relating to the Deep Gulch Delta. The observation point is triangulated using Sheridan Creek cross section - 00+65 right and left bank pins. The total cross section length is 271 ft starting at the left bank pin, with the observation point located at station 152. This photograph looks downstream from the observation point

Any site changes, photopoint location changes, site/pin disturbances, or significant events 820DG3 and 816SC3 share the same observation point along the cross section.

SITE DESCRIPTION OF PHOTOPOINTS #811USR1 THROUGH #811USR3: TRINITY RIVER AT UPPER SKY RANCH TRINITY ASSOCIATES MAINTENANCE FLOW STUDY SITE (RM 81.1)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Maintenance flow study site on right bank, occupied by TRA 1989-93. Lat. 40° 42' 55" N, Long. 123° 02' 43" W, in NW ¼, SW ¼ Sec.18, T.33 N. R. 10 W. (based on 7.5' USGS topographic sheet, Junction City, CA Quad., scale 1:24,000), Trinity County, 1.0 mi southeast of Junction City, on right bank, 0.2 mi upstream of Oregon Gulch confluence, 3.3 mi downstream of Bell Gulch bank rehabilitation site, 29.9 mi downstream of Lewiston Dam, River Mile 81.1.

The site can be reached two ways, by traveling 8.0 miles west from the intersection of Highway 3 and Highway 299 in Weaverville. Turn left onto Dutch Creek road and travel 1.9 miles, turn left into large turnout (or travel 2.1 miles up road to turnout on left hand side for the site overview). Travel down hillside to site, **or** the site can be reached by traveling 7.6 miles west from the intersection of Highway 3 and Highway 299 in Weaverville. Turn left onto Sky Ranch Road and travel 2.1 miles, turn right onto dirt road. Travel down dirt road to gate, park. Walk the unnamed dirt road to the bank rehabilitation site (you must have permission from the landowners to access site from the rightside of the river, Figure 17.6).

2. Photopoint Description

Photopoint #811USR1

This photopoint is intended to document changes in thalweg location, changes in bank cover related to low water encroachment, bar formation, and vegetation growth; looking downstream through the site (Figure 17.7).

Photopoint #811USR2

This photopoint is intended to document changes in thalweg location, changes in bank cover related to low water encroachment, bar formation, and vegetation growth; looking downstream through the site (Figure 17.8).

Photopoint #811USR3

This photopoint is intended to document changes in bar formation, vegetation growth, low water encroachment by hardwoods and riparian berm development. This photo is an overview looking from a bedrock outcrop downstream through the site (Figure 17.9).

3. Establishment and History

McBain and Trush installed photopoints #811USR1 through #811USR3 on February 2, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #811USR1

Two 5/8" rebar pins were installed on a gravel bar on the left bank downstream of the Sheridan Creek bank rehabilitation site. Each pin was labeled with an aluminum tag, the observation pin was labeled 816SC2O and the line of sight pin was labeled 816SC2LS (Figures 17.1 and 17.2).

Photopoint #811USR2

Two 5/8" rebar pins were installed on a the left bank 1000 ft downstream of the Sheridan Creek bank rehabilitation site. Each pin was labeled with an aluminum tag, the observation pin was labeled 816SC2O and the line of sight pin was labeled 816SC2LS (Figures 17.3 and 17.4).

Photopoint #811USR3

A 1” stainless steel washer was affixed to the bedrock out crop at the downstream end of the Sheridan Creek bank rehabilitation site. The washer was labeled PPT811USR1 (Figure17.5).

5. Land Ownership

Upper Sky Ranch TRA maintenance flow site is publicly owned by the Bureau of Land Management. However, all overland access points are privately owned. Access to the site has always been negotiated year to year. The Landowner that controls access to these sites along the right bank is: Dave Schuman PO Box 37, Junction City, CA 96048. **DO NOT TRESPASS ON THESE PROPERTIES TO ACCESS SITE!**

6. Purpose of Photopoint(s)

To document changes to the bank rehabilitation site resulting from increased flows.

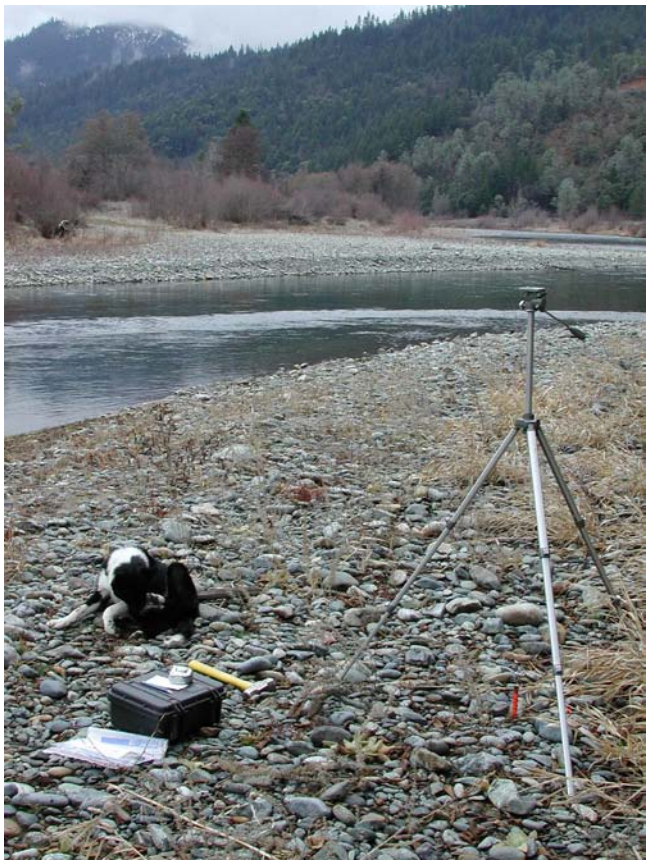

Figure 17.1. Upper Sky Ranch photopoint #811USR1 observation point monument.

Figure 17.2. Upper Sky Ranch photopoint #811USR1 line of sight point monument.

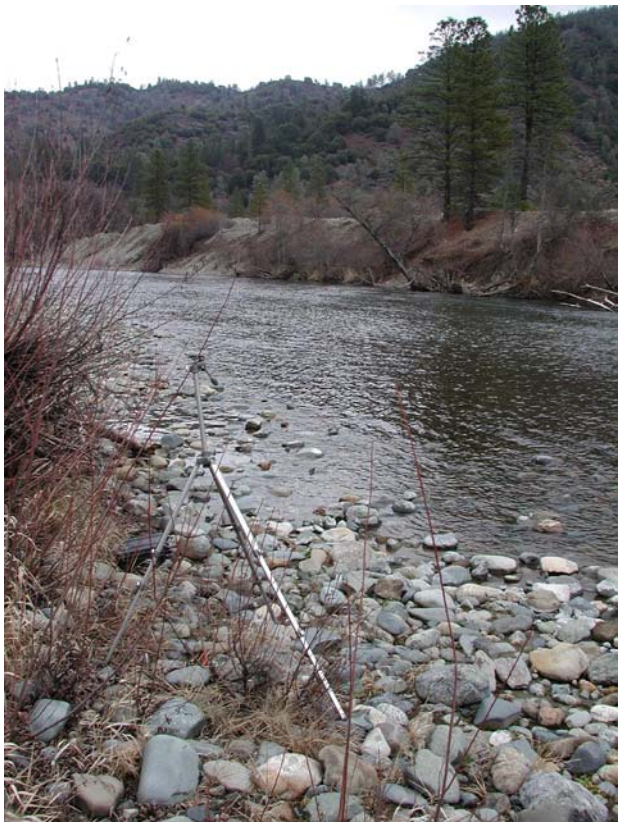

Figure 17.3. Upper Sky Ranch photopoint #811USR2 observation point monument.

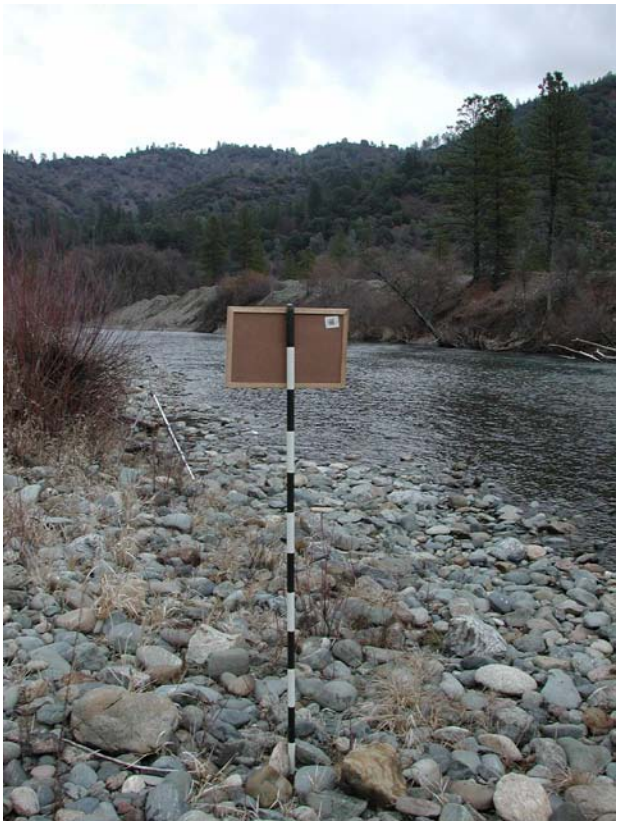

Figure 17.4. Upper Sky Ranch photopoint #811USR2 line of sight point monument.

Figure 17.5. Upper Sky Ranch photopoint #811USR3 observation point monument.

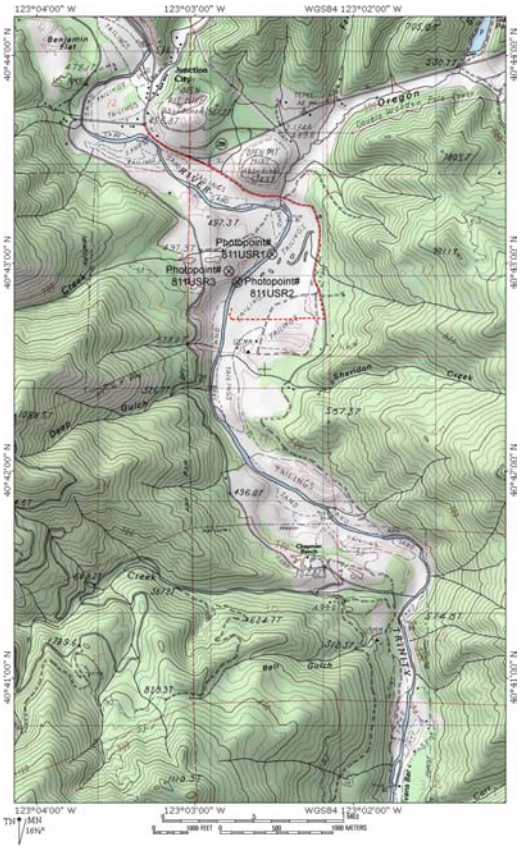

Figure 17.6. Upper Sky Ranch maintenance flow study site location and photopoints. Route to the site is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 17.7. PPT#811USR1 WY2001 photomonitoring result.

Figure 17.8. PPT#811USR2 WY2001 photomonitoring result.

Figure 17.9. PPT#811USR3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Upper Sky Ranch Trinity Site
PHOTOPOINT NUMBER: PPT# 9 (USR 2)
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 214 °
INCLINATION OF CAMERA AT PHOTOCENTER : -1.0 °

Date: February 2, 200 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): (Left) Center Right

Cross section: _____ Streamflow: 1.53 ~~cfs~~

Where was streamflow measured?: Junction City gage

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W [redacted] T W [redacted] T W [redacted] T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W [redacted] T W [redacted] T W [redacted] T 100% wide angle

Aperture (Fstop): F W [redacted] T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.28ft above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to document the formation of a low flow channel migration, riparian vegetation development, riparian berm building and potentially encroachment of the low water channel. The observation point is monumented with a 5/8" rebar pin tagged with an aluminum tag. The line of sight pin is 25ft upstream and is monumented with

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Upper SF Rand. TRA Study Site
PHOTOPOINT NUMBER: PPT# 811.5R3 1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 37 °
INCLINATION OF CAMERA AT PHOTOCENTER : -14.25 °

Date: February 2, 2001 Time: _____

Field Technician(s): JL - Sac

Elevation: _____ ft River bank (circle one): Left Center Right

3rd rock outcrop -

Cross section: _____ Streamflow: 1.53 ft ~~cfs~~

Where was streamflow measured?: Junct. w/ CL Gage

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T

(T) Telephoto = 24mm
(W) Wide angle = 8mm

W T W T W T 100% wide angle

Aperture (Fstop): Auto F W T Read zoom indicator ~~in viewfinder~~

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 1.73ft above a 1" stainless steel washer epoxied to bedrock

Purpose of photopoint and changes that have occurred since the last monitoring: The photopoint is intended to document changes in alternate bar location recolonization of these bars by hardwood species, and potentially, bank encroachment of the low water channel. The observation point is monumented with a 1" stainless steel washer epoxied to the top of a bed rock outcrop on river left -

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Upper Sky Ranch Rehab. Site

PHOTOPOINT NUMBER: PPT# 811 USR 1

LINE OF SITE PIN BEARING FROM OBSERVER PIN: 33° °

INCLINATION OF CAMERA AT PHOTOCENTER : -1.25° °

Date: February 2, 2001 Time: ____

Field Technician(s): John H. Bair

Elevation: ____ ft River bank (circle one): **Left** (circled) Center Right

Cross section: ____ Streamflow: 1.53 ft ~~cfs~~

Where was streamflow measured?: Junction City gage

Camera (circle one): Nikon CoolPix 990 Other: ____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W [ ] T W [ ] T W [ ] T

(T) Telephoto = 24mm
(W) Wide angle = 8mm W [ ] T (circled) W [ ] T W [ ] T

Aperture (Fstop): ____ F 50% W [ ] T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight **Other** (circled) None

Camera height above observation pin: 4.44 ft above a 5/8" rebar pin observation monument.

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to capture changes in alternate bar location, riparian berm evolution and potentially future low water encroachment. The observation point is monumented with a 5/8" rebar pin labeled w/an aluminum cap. The line of sight point is monumented in a similar fashion. This photopoint looks downstream from a gravel bar along the left bank.

Any site changes, photopoint location changes, site/pin disturbances, or significant events 811 USR1 and 811 SC2 share the same observation monument but both have different line of sight monuments.

SITE DESCRIPTION OF PHOTOPOINTS #796DCB1 THROUGH #796DCB3: TRINITY RIVER AT DUTCH CREEK ROAD BRIDGE (PROPOSED) BANK REHABILITATION SITE (RM 79.6)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Proposed bank rehabilitation site on left bank. Lat. 40° 43' 23" N, Long. 123° 03' 20" W, in NW ¼, SW ¼ Sec.12, T.33 N. R. 11 W. (based on 7.5' USGS topographic sheet, Junction City, CA Quad., scale 1:24,000), Trinity County, 0.1 mi northwest of Junction City, on left bank, 0.5 mi upstream of Canyon Creek, 1.3 mi downstream of Oregon Gulch, 31.4 mi downstream of Lewiston Dam, River Mile 79.6.

The site can be reached by traveling 8.0 miles west from the intersection of Highway 3 and Highway 299 in Weaverville. Turn left onto Dutch Creek road and travel 0.4 miles to the west end of the Dutch Creek Road Bridge (Figure 18.5).

2. Photopoint Description

Photopoint #796DCB1

This photopoint is intended to document pre- bank rehabilitation site condition and changes to it with increased flows, and to document bar formation and vegetation growth after bank rehabilitation site construction. The picture looks downstream through the site from on top of the Dutch Creek Bridge (Figure 18.6).

Photopoint #796DCB2

This photopoint is intended to document bar formation and changes to it with increased flows, and to document vegetation growth upstream of the Dutch Creek bridge. The picture looks upstream form the bridge (Figure 18.7).

Photopoint #796DCB3

This photopoint is intended to document pre- bank rehabilitation site condition and changes to it with increased flows, and to document bar formation and vegetation growth

after bank rehabilitation site construction. The picture looks upstream through the site (Figure 18.8).

3. Establishment and History

McBain and Trush installed photopoints #796DCB1through #796DCB3 on February 1, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #796DCB1

One 1" stainless steel washer was epoxied to the sidewalk crossing Dutch Creek road. The washer was labeled 796DCB1 (Figure 18.1).

Photopoint #796DCB2

One 1" stainless steel washer was epoxied to the sidewalk crossing Dutch Creek road. The washer was labeled 796DCB2 (Figure 18.2).

Photopoint #796DCB3

Two 5/8" rebar pins were installed on a gravel bar on the right bank downstream of the bridge. Each pin was labeled with an aluminum tag, the observation pin was labeled 796DCB3O and the line of sight pin was labeled 796DCB3LS (Figures 16.3 and 16.4).

5. Land Ownership

The Dutch Creek county Road Bridge is publicly owned by Trinity County. The Left river bank is owned by the Chagdud Gonpa Foundation, the right bank is publicly owned by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the pre and post rehabilitation site resulting from increased flows and bank rehabilitation site construction.

Figure 18.1. Dutch Creek Bridge (proposed) bank rehabilitation site photopoint #796DCB1 observation point monument.

Figure 18.2. Dutch Creek Bridge (proposed) bank rehabilitation site photopoint #796DCB2 observation point monument.

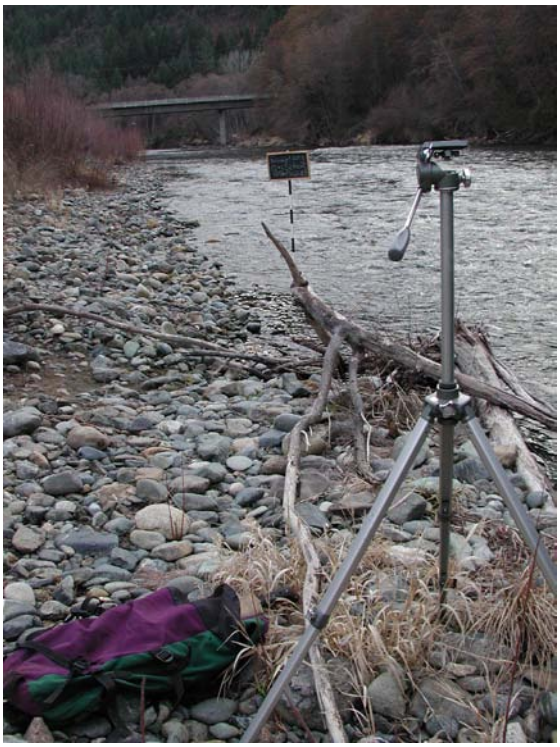

Figure 18.3. Dutch Creek Bridge (proposed) bank rehabilitation site photopoint #796DCB3 observation point monument.

Figure 18.4. Dutch Creek Bridge (proposed) bank rehabilitation site photopoint #796DCB3 line of sight point monument.

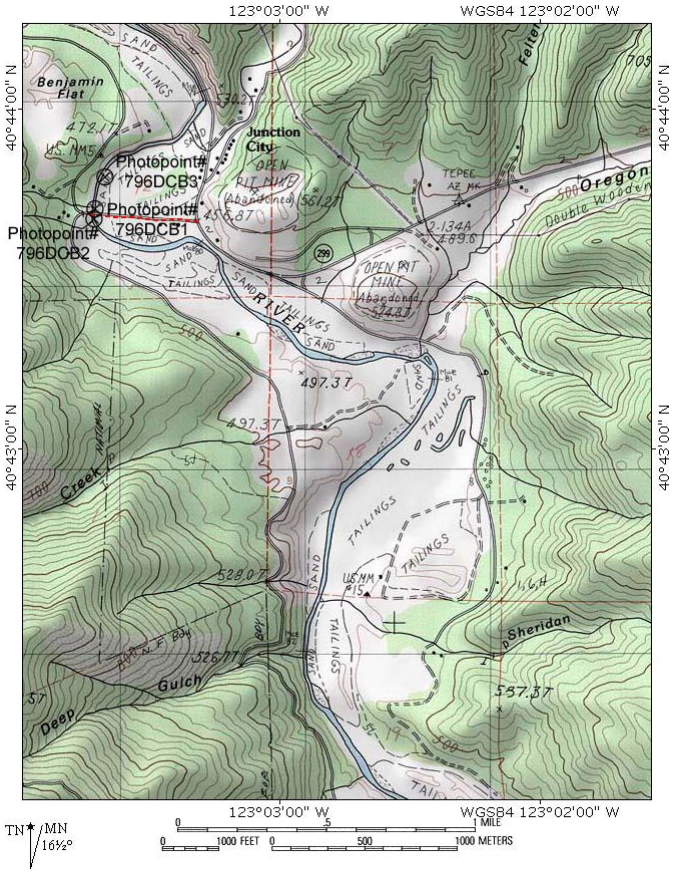

Figure 18.5. Dutch Creek Bridge (proposed) bank rehabilitation site location and photopoints. Route to the bridge location is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 18.6. PPT#796DCB1 WY2001 photomonitoring result.

Figure 18.7. PPT#796DCB2 WY2001 photomonitoring result.

Figure 18.8. PPT#796DCB3 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Dutch Creek Road Bridge, Junction City / proposed BRS
PHOTOPOINT NUMBER: PPT# 796DCB3
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 183 °
INCLINATION OF CAMERA AT PHOTOCENTER : -6.5 °

Date: 2-1-01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center (Right)

Cross section: _____ Streamflow: 1.52 ft ~~cfs~~

Where was streamflow measured?: Junction City Gage

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: _____ sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T (W) T — 100% wide
Aperture (Fstop): _____ F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.23 ft above a 5/8" rebar observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint is intended to document gravel bar formation, vegetation growth and (potential) future encroachment of the low water channel. The observation point is monumented with a 5/8" rebar pin labeled with a marked aluminum tag. The line of sight point is 25 ft upstream and is monumented in a similar fashion

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Dutch Creek Road Bridge, Junction City
PHOTOPOINT NUMBER: PPT# 796DCB2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 177 °
INCLINATION OF CAMERA AT PHOTOCENTER : -12.5 °

Date: 2-1-01 Time: ______

Field Technician(s): John H. Bair

Elevation: ______ ft River bank (circle one): Left (Center) Right on Bridge

Cross section: ______ Streamflow: 1.52 ft cfs

Where was streamflow measured?: Junction City Gage

Camera (circle one): (Nikon CoolPix 990) Other: ______ Film Speed: Auto ISO

Shutter speed: ______ sec Lens (circle one): (T) Telephoto = 24mm (W) Wide angle = 8mm — [circled: second row, third indicator] 90% wide angle

Aperture (Fstop): ______ F Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.90 ft above a 1" washer epoxied to the bridge/road bed

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to document changes to a gravel bar u-stream of the bridge resulting from bank rehabilitation site construction downstream or changes in streamflow management. The observation point is monumented by a 1" stainless steel washer labeled, and epoxied to the road bed on the upstream side of the bridge. This photopoint - [illegible]

Any site changes, photopoint location changes, site/pin disturbances, or significant events ______

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Dutch Creek Bridge, Junction City (proposed BRS)
PHOTOPOINT NUMBER: PPT# 796DCB1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 10 °
INCLINATION OF CAMERA AT PHOTOCENTER : -12.0 °

Date: 2-1-01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left (Center) Right - on Bridge

Cross section: _____ Streamflow: 1.52 ft cfs

Where was streamflow measured?: Junction City Gage

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W [redacted] T W [redacted] T W [redacted] T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W [redacted] T W [redacted] T W [redacted] T — 100% wide angle

Aperture (Fstop): F W [redacted] T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.95 ft above a 1" washer epoxied to the "sidewalk"

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to document changes at this site before and after bank rehabilitation site construction. Changes in alternate bar formation, hardwood recruitment and potentially future re-encroachment of the constructed bank rehabilitation site. The observation point is monumented with a 1" stainless steel washer epoxied to the sidewalk crossing the bridge. This photo looks downstream through the site.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

SITE DESCRIPTION OF PHOTOPOINTS #791CC1 THROUGH #791CC3: TRINITY RIVER AT CANYON CREEK CONFLUENCE (RM 79.1)

Description developed by John H. Bair 1-01 Updated: 1-01 JHB

1. Location

Canyon Creek flows into the Trinity River mainstem from the right bank. Lat. 40° 43' 57" N, Long. 123° 03' 20" W, in NW ¼, SW ¼ Sec.12, T.33 N. R. 11 W. (based on 7.5' USGS topographic sheet, Junction City, CA Quad., scale 1:24,000), Trinity County, 0.3 mi northeast of Junction City, on right bank, 0.6 mi upstream of Jim Smith bank rehabilitation site, 0.5 mi downstream of Dutch Creek County Road Bridge, 31.9 mi downstream of Lewiston Dam, River Mile 79.1.

The Canyon Creek confluence can be reached by 8.2 miles west from the intersection of Highway 3 and Highway 299 in Weaverville, if traveling west, park on left hand side of road (Figure 19.3).

2. Photopoint Description

Photopoint #791CC1

This photopoint is intended to document changes in delta area and confinement of the mainstem, and any changes to this resulting from implementation of increased streamflows. This point looks upstream through the delta and Canyon Creek confluence (Figure 19.4).

Photopoint #791CC2

This photopoint is intended to document changes in delta area and confinement of the mainstem, and any changes to this resulting from implementation of increased streamflows. This point looks downstream through the delta and Canyon Creek confluence (Figure 19.5).

\

3. Establishment and History

McBain and Trush installed photopoints #791CC1 through #791CC3 on February 1 and 2, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #791CC1

One 12" spike with a 1 inch washer was placed on the northeastern side of the Trinity River Mainstem on southwesterly facing turnout along HWY299. The washer was labeled 791CC1 (Figure 19.1).

Photopoint #791CC2

One 12" spike with a 1 inch washer was placed on the northeastern side of Canyon Creek on southwesterly facing turnout just past the Canyon Creek HWY299 bridge. The washer was labeled 791CC2 (Figure 19.2).

5. Land Ownership

The Canyon Creek Confluence is publicly owned by the Bureau of Land Management.

6. Purpose of Photopoint(s)

To document changes to the Canyon Creek delta resulting from increased flows.

Figure 19.1. Canyon Creek photopoint #791CC1 observation point monument.

Figure 19.2. Canyon Creek photopoint #791CC2 observation point monument.

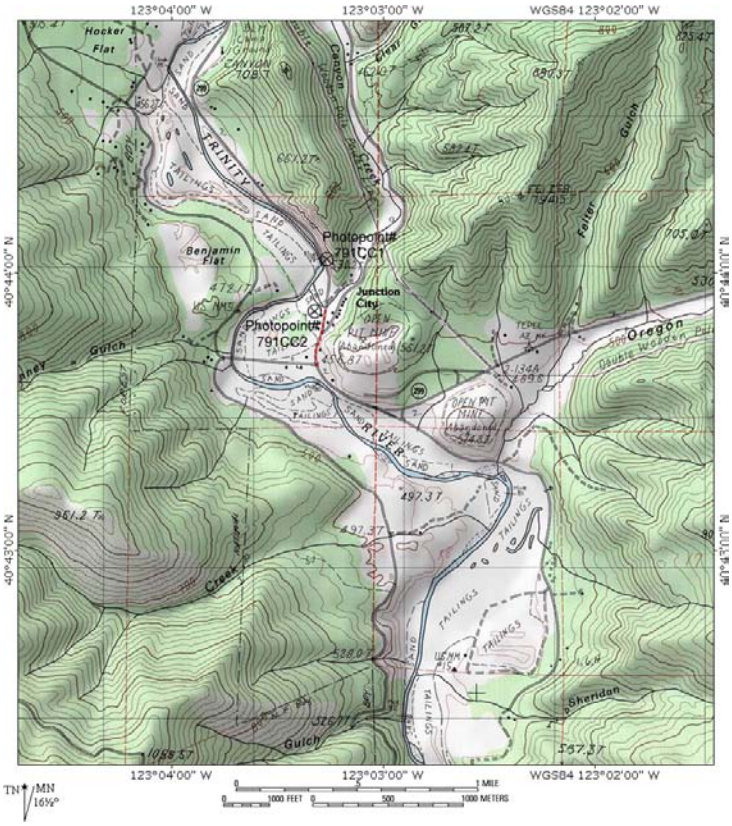

Figure 19.3. Canyon Creek location and photopoints. Route to the confluence is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 19.4. PPT#791CC1 WY2001 photomonitoring result.

Figure 19.5. PPT#791CC2 WY2001 photomonitoring result.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Canon Creek Confluence
PHOTOPOINT NUMBER: PPT# 791 CC 2
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 305 °
INCLINATION OF CAMERA AT PHOTOCENTER : -9.25 °

Date: February 2, 2001 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center Right

Cross section: _____ Streamflow: 1.53 ft ~~cfs~~

Where was streamflow measured?: Junction City Gage

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: Auto ISO

Shutter speed: Auto sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T 100% wide
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight (Other): None

Camera height above observation pin: 4.80 ft above a 12" galvanized nail with 1" washer

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to show changes in delta area, confinement of the mainstem by increases in Delta area, and potentially hardwood colonization. The observation monument consists of a 12" galvanized steel spike and a labeled 1" stainless steel washer. This should index upstream towards the site.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Canyon Creek Confluence
PHOTOPOINT NUMBER: PPT# 791CC1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 183 °
INCLINATION OF CAMERA AT PHOTOCENTER : -11.75 °

Date: 2-1-01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center (Right) next to Hwy 299

Cross section: _____ Streamflow: 1.52 ~~cfs~~

Where was streamflow measured?: Junction City Gage

Camera (circle one): Nikon CoolPix 990 Other: _____ Film Speed: Auto ISO

Shutter speed: _____ sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T 100% wide
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.88 ft above a 12" galvin nail with 1" washer

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to document changes in the Canyon Creek delta confluence location and incision of the delta itself by Canyon Creek. The observation monument consists of a 12" galvinized spike with a marked 1" stainless steel washer.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____

SITE DESCRIPTION OF PHOTOPOINTS #751CB1THROUGH #751CB3: TRINITY RIVER AT COOPERS BAR (PROPOSED) BANK REHABILITATION SITE (RM 75.1)

Description developed by John H. Bair 1-01 Updated: 3-01 JHB

1. Location

Proposed bank rehabilitation site on right and left banks. Lat. 40° 45' 55" N, Long. 123° 05' 34" W, in NW ¼, SW ¼ Sec's.27 and 34, T.34 N. R. 11 W. (based on 7.5' USGS topographic sheet, Dedrick, CA Quad., scale 1:24,000), Trinity County, 3.3 mi northwest of Junction City, on left and right banks, 2.0 mi upstream of Pear Tree bank rehabilitation site, 3.4 mi downstream of Jim Smith bank rehabilitation site, 35.9 mi downstream of Lewiston Dam, River Mile 79.6.

The site can be reached by traveling 12.5 miles west from the intersection of Highway 3 and Highway 299 in Weaverville (Figure 20.2).

2. Photopoint Description

Photopoint #751CB1

This photopoint is intended to document pre- bank rehabilitation site condition and changes to it with increased flows, and to document bar formation and vegetation growth after bank rehabilitation site construction. This is a site overview, taken from the northeastern hillside across from the site. The picture looks upstream through the site (Figure 20.3).

3. Establishment and History

McBain and Trush installed photopoint #751CB1 on February 1, 2001. No additional photopoints have been installed. No disturbances have been noted to the original monuments.

4. Reference Marks (RM)

Photopoint #751CB1

One 12” spike with a 1 inch washer was placed on the northeastern side of the Trinity River Mainstem on southwesterly facing hillside above HWY299. The washer was labeled 751CB3 (Figure 20.1).

5. Land Ownership

The Coopers Bar proposed bank rehabilitation site and access are privately owned **DO NOT TRESPASS WITHOUT PRIOR LANDOWNER ASSOCIATION PERMISSION**.

6. Purpose of Photopoint(s)

To document changes to the pre and post rehabilitation site resulting from increased flows and bank rehabilitation site construction.

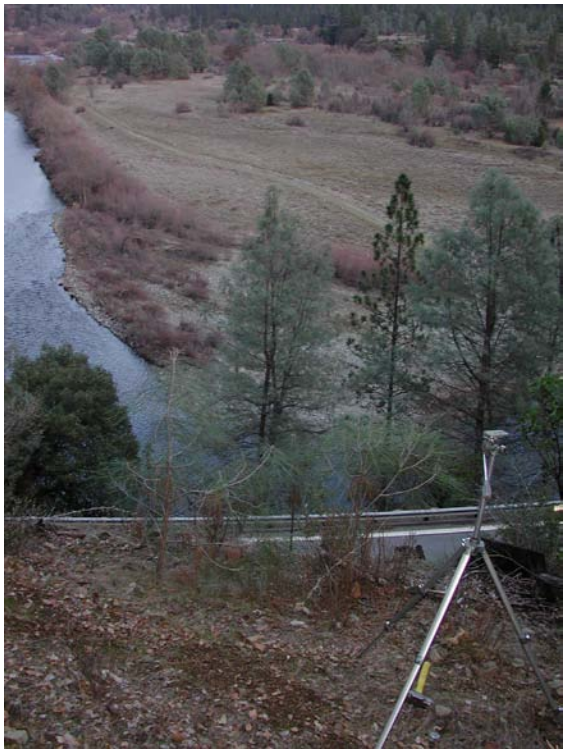

Figure 20.1. Coopers Bar (proposed) bank rehabilitation site photopoint #751CB1 observation point monument.

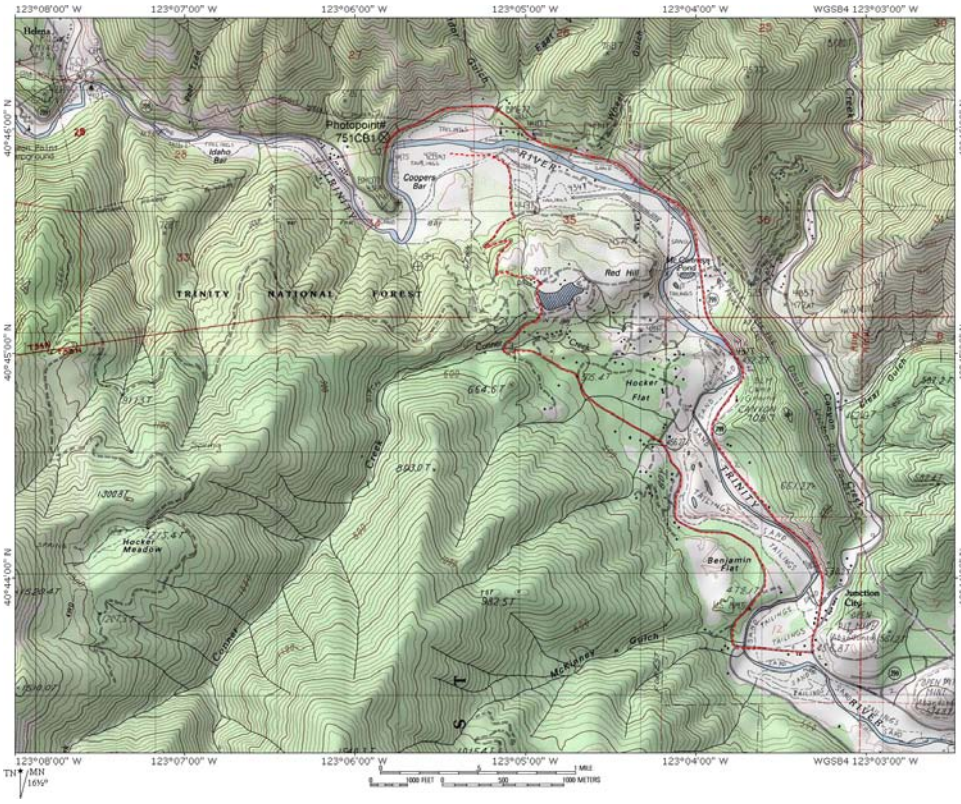

Figure 20.2. Coopers Bar (proposed) bank rehabilitation site location and photopoints. Route to the bridge location is shown in red, and individual photopoints are shown by symbol (⊗).

Figure 20.3. PPT#751CB1 WY2001 photomonitoring results.

TRINITY RIVER PHOTOMONITORING
PHOTOPOINT DATA SHEET

PHOTOMONITORING LOCATION: Cooper's Bar proposed bank rehab site
PHOTOPOINT NUMBER: PPT# 751CB1
LINE OF SITE PIN BEARING FROM OBSERVER PIN: 72 °
INCLINATION OF CAMERA AT PHOTOCENTER : -12.25 °

Date: 2-1-01 Time: _____

Field Technician(s): John H. Bair

Elevation: _____ ft River bank (circle one): Left Center (Right) Northside above Hwy 299

Cross section: _____ Streamflow: 1.52 ft ~~cfs~~

Where was streamflow measured?: Junction City Gage

Camera (circle one): (Nikon CoolPix 990) Other: _____ Film Speed: Auto ISO

Shutter speed: _____ sec Lens (circle one): W T W T W T
(T) Telephoto = 24mm
(W) Wide angle = 8mm W T W T W T 100% wide
Aperture (Fstop): F W T Read zoom indicator in viewfinder

Lens filters (circle all that apply): Polarizing UV Skylight Other: None

Camera height above observation pin: 4.64 ft above a 12" nail w/ 1" washer observation monument

Purpose of photopoint and changes that have occurred since the last monitoring: This photopoint was intended to document a good example of a fully evolved Riparian Berm and to document how this site evolves after the bank rehabilitation site is constructed. The observation point is monumented with a 12" galvanized spike and a labeled 1" stainless steel washer.

Any site changes, photopoint location changes, site/pin disturbances, or significant events _____