

- Final -
2010 Annual Noxious Weed Monitoring Report

El Dorado Hydroelectric Project
FERC Project 184



November 8, 2010

Prepared for:



2890 Mosquito Road
Placerville, CA 95667

Prepared by:



1024 Simon Drive, Suite H
Placerville, CA 95667

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EN2 Resources, Inc.

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1.0 Introduction

This 2010 Noxious Weed Monitoring Report (Report) has been prepared to meet the requirements of El Dorado Irrigation District's (EID) "El Dorado Hydroelectric Project (Federal Energy Regulatory Commission (FERC) No. 184): A Plan for the Prevention and Control of Noxious Weeds" (Plan) (EID 2008a). The Plan was prepared under the U.S. Forest Service 4(e) condition No. 44 of the FERC license and approved by the Eldorado National Forest (ENF) on April 17, 2007 and by FERC on May 1, 2008. Figure 1 in Appendix A shows the regional location of the survey area.

The Plan describes an annual monitoring program to identify new infestations of noxious weeds and evaluate whether existing infestations have been controlled. The monitoring program utilizes ENF standardized monitoring forms and includes Global Positioning System (GPS) mapping of infestations. An annual report that includes the following information is due to ENF by January 15 of each year:

- Follow-up inspections of previously identified noxious weed populations;
- Presence of any new weed populations; and
- Updated Geographic Information System (GIS) base map with the results of on-going monitoring.

The data gathered from the 2008 and 2009 surveys serve as the baseline conditions for the 2010 survey. All of the occurrences documented in 2008 and 2009 were re-visited in 2010 and evaluated in this Report. Any additional occurrences observed along licensee-maintained roads or at project facilities were recorded. Some occurrences from 2008 have been eradicated and datasheets for those areas are no longer necessary. Weed treatments and effectiveness are noted and evaluated in the Report, where applicable. Only limited treatments were performed between the 2008 and 2009 surveys since the details of implementing the Integrated Pest Management Plan (IPMP) were not yet finalized.

The existing facilities covered under the FERC license and subject to noxious weed monitoring include:

- Facilities at the four storage reservoirs (Lake Aloha, Echo Lake, Silver Lake, and Caples Lake),
- Echo Lake Conduit,
- El Dorado Diversion Dam,
- El Dorado Canal (including flumes, tunnels, and pipelines),
- Alder Creek Diversion Dam and Feeder,
- El Dorado Forebay,
- El Dorado Pipeline and Penstock,
- El Dorado Powerhouse, and
- Licensee-maintained access roads (as identified later in this Report in Table 3).

This Report summarizes the noxious weed occurrences located within the Project 184 boundary and along licensee-maintained roads during the 2010 monitoring season and will be filed with FERC by March 1, 2011.

2.0 Methods

Due to the cool, wet spring, field monitoring began on May 21, 2010 (a little later than 2009) at the lower elevation sites and was completed on July 30, 2010 following surveys at Lake Aloha. In accordance with the Plan, digital photos were taken (Appendix B), GPS data was collected, and standardized data forms were completed for each identified infestation (Appendix C). In most instances, GPS locations were captured using a Leica GS20 hand-held, sub-meter-accurate GPS unit with an external antenna. Where conditions did not allow for accurate GPS data capture, locations were approximated using existing maps and aerial photography. Most locations were captured with the GPS and a point or line was sufficient to show the location. Weeds were identified using information from *Weeds of the West*, *Weeds of California and Other Western States* (Volumes 1 and 2), and the *USDA PLANTS Database* (Whitson 1996, DiTomaso and Healy 2007, USDA 2010). Weeds located within the Project area are listed in Table 1.

Access roads covered under the FERC License were monitored by walking each road and scanning areas adjacent to both sides of the road for incidents of target weed species. The Project 184 facilities listed above were also monitored by walking around each facility. In the cases of reservoir surveys, the entire perimeter of each reservoir was not completely surveyed; rather, areas where Project-related activities occur or have occurred were surveyed. Occurrences of both “List A” and “List B” Noxious Weeds, as defined on the ENF List of Noxious Weeds (Appendix D), were recorded on ENF data forms found in the Plan and representative photographs were taken. Tables 2 and 3 provide a summary of the noxious weeds located at each facility and along each road. The approximate size of each infestation was estimated by field staff using pacing and/or measurements from the GPS (for linear occurrences).

All GPS data was post-processed using base station data to correct for inaccuracies inherent in non-processed GPS data. This data was exported into a GIS (ESRI ArcMap version 9.3) in NAD83, California State Plane Zone 2 coordinates and rectified, as needed for mapping purposes. Maps depicting each delineated noxious weed occurrence (as defined above) is included in Appendix A (Figure 2). Digital photos and data sheets are included in Appendix B and C, respectively. The MAP ID label found in Tables 4 and 5 and in the top right corner of each data sheet corresponds to the label of each occurrence on Figure 2. The labeling protocol follows the format: 01-08 for points and L01-09 for linear features; the “L” before the number refers to “linear”. The number following the dash (-08) refers to the year that each occurrence was identified. Digital photos are organized by date and photo number, corresponding to the photo log from each set of data sheets.

Coordinates for each of the point features are included in Table 4, rather than on the data sheets. A description of each occurrence is found on the data sheets along with an update that refers to changes in the occurrence (e.g., reduced density and/or treatment effectiveness) from 2009 to 2010. The data sheets found in the Noxious Weed Plan were adapted to Microsoft Excel spreadsheet format and the data from the field was entered into these sheets for easier reading and archiving.

3.0 Results and Discussion

Detailed data for each infestation is included in the data sheets found in Appendix C of this report. Table 1 summarizes the species of noxious weeds observed during the 2010 survey and whether they are “List A” or “List B” species. There were no new species observed in 2010. List A weeds are species that have been designated as a higher priority for control. Tables 2 and 3 summarize the weeds found at each facility and along the Project 184, EID-maintained roads, respectively. Table 3 also includes a column indicating whether the road was treated and the success of the treatment.

If a single weed or a couple of weeds were observed during the survey, the site was not recorded or mapped. This survey identifies locations of multiple plants forming a unit that can be targeted for control. Some of these weeds are ubiquitous and mapping each individual Klamath weed, for example, would not provide useful data. General observations were recorded if scattered individual weeds were present along a road or near a facility. These observations can serve as a reference for future surveys to determine if these scattered individual weeds are forming groups that need to be controlled.

Table 1. Summary of Noxious Weeds Observed in the 2010 Survey

	Species	Common Name	Abbreviation*	Cal-IPC rating ¹
List A	<i>Aegilops triuncialis</i>	barbed goatgrass	AETR	High
	<i>Bromus tectorum</i>	cheat grass	BRTE	High
	<i>Centaurea solstitialis</i>	yellow starthistle	CESO3	High
	<i>Chondrilla juncea</i>	rush skeletonweed	CHJU	Moderate
	<i>Cytisus scoparius</i>	Scotch broom	CYSC4	High
	<i>Taeniatherum caput-medusae</i>	medusahead grass	TACA8	High
	<i>Bromus diandrus</i>	ripgut brome	BRDID2	Moderate
List B	<i>Cirsium vulgare</i>	bull thistle	CIVU	Moderate
	<i>Hypericum perforatum</i>	Klamath weed	HYPE	Moderate
	<i>Leucanthemum vulgare</i>	ox-eye daisy	LEVU	Moderate
	<i>Lathyrus latifolius</i>	perennial sweet pea	LALA4	No List
	<i>Melilotus officinalis</i> **	yellow sweet clover	MEOF	No List
	<i>Rubus armeniacus</i>	Himalayan blackberry	RUAR9	High
	<i>Torilis arvensis</i>	hedge parsley	TOAR	Moderate
	<i>Verbascum thapsus</i>	wooly mullein	VETH	Limited

*These abbreviations are used in the tables below to indicate which species are present.

** Yellow and white sweet clover are considered the same species, *Melilotus officinalis*, in the USDA PLANTS database

¹California Invasive Plant Council – Rating Definitions

- **High** – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
- **Moderate** – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally

dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

- **Limited** – These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Table 2. Summary of Noxious Weeds Observed at Project 184 Facilities in 2010

Project 184 Facility	Noxious Weeds List A¹	Noxious Weeds List B¹
Lake Aloha	None	None
Echo Lake	None	None
Silver Lake	None	VETH, CIVU
Caples Lake	None	VETH
Alder Creek Diversion Dam and Feeder	BRTE	LALA4, HYPE
Echo Lake Conduit	None	None
El Dorado Diversion Dam	CESO3, BRTE	LALA4, CIVU, VETH, LEVU
El Dorado Forebay	CYSC4	RUAR9, LALA4, VETH, HYPE, CIVU
El Dorado Canal		
<i>Beat 1</i>	CHJU, BRTE	LEVU, HYPE, VETH, LALA4
<i>Beat 2</i>	BRTE	None
<i>Beat 3</i>	None	LALA4, RUAR9, CIVU
<i>Beat 4</i>	None	LEVU, LALA4, HYPE, CIVU, RUAR9
<i>Beat 5</i>	BRTE	LALA4, HYPE, MEOF, CIVU, VETH
<i>El Dorado Tunnel</i>	BRTE	MEOF, HYPE
<i>Lower Penstock</i>	CHJU, BRTE	RUAR9, HYPE, VETH
<i>Upper Penstock</i>	AETR	RUAR9, CIVU, LALA4, HYPE, TOAR

¹A designation of none means none of the ENF noxious weeds were present.

Table 3. Summary of Noxious Weeds Observed Along Licensee-maintained Roads in 2010

Road #	Road Name	Length	Noxious Weeds A ¹	Noxious Weeds B ¹	Control ²
11N05A	Echo North	0.2	None	None	N/A
11N05D	Echo Loop	0.2	None	None	N/A
10N23Y	Caples Aux. Dam	0.11	None	VETH	None
R41	Woods Creek	0.19	None	None	N/A
R42	Caples Main Dam	0.16	None	None	N/A
<i>*R43</i>	<i>Caples House</i>	<i>0.14</i>	<i>None</i>	<i>None</i>	<i>Eradicated</i>
<i>*New</i>	<i>Caples Boat Launch</i>		<i>None</i>	<i>None</i>	<i>N/A</i>
R44	Caples Quonset	0.06	None	None	N/A
R61	30 Milestone Spur	0.01	None	None	N/A
R71	Flume 39/40	0.42	N/A	N/A	N/A
R72	Camp X	0.56	None	None	N/A
R73	Camp 2	0.54	BRTE	BRDID2	None
R74/74A	El Dorado Tunnel	0.66	BRTE, TACA8	MEOF, HYPE, TOAR, LALA4, VETH, BRDID2	Partial
R75/75A	Camp 1	0.53	BRTE	CIVU, MEOF, HYPE, LALA4, BRDID4, TOAR, VETH	Partial
R76	Camp S	0.1	N/A	N/A	N/A
10N08Y	Bull Creek	0.43	None	None	N/A
10N08YA	Camp Two	0.79	None	CIVU, RUAR9	None
11N02Y	El Dorado Ditch Access	0.91	None	RUAR9, HYPE, CIVU	None
10N440G	Highway Cut	1.66	None	RUAR9, LALA4, CIVU, HYPE,	Partial
R81	Flume 47B	0.07	None	None	N/A
R82	Pacific Tunnel	0.24	None	None	N/A
R821	Hazel Creek Tunnel	0.18	None	None	N/A
R83	Spillway 33	0.28	None	RUAR9, VETH, CIVU	None
R84	Old Camp 4	0.28	None	None	N/A
R87	Camp 3	0.21	BRTE	None	Partial
R88	Camp P	1.32	BRTE	TOAR, CIVU, MEOF, HYPE, LALA4, LEVU	Partial
R89	Rock Crusher	1.16	BRTE	VETH, MEOF, HYPE, CIVU	Partial
10N40N	El Dorado Ditch Loop	0.23	None	CIVU	None
12N34H	Powerhouse	2.86	None	RUAR9, LALA4, CIVU, HYPE, MEOF, VETH	Partial
R91	Moon Lane	0.31	None	None	N/A
R92	Moon Lane East	0.2	None	None	N/A
R93	Kodiak Trail	0.21	None	None	Eradicated
R94	Bend Court	0.41	BRTE	None	None
Total		15.63			

¹A designation of "None" means none of the ENF noxious weeds were present.

²Herbicide or other treatment effectiveness: Partial, Eradicated, N/A (not applicable; no weeds along road), None (there was no control observed)

*New road accessing new Caples Boat Launch Facility replaces old Caples House Road.

3.1 Comments from USFS regarding 2009 Report

In May of 2010 EID received comments on the 2009 Noxious Weed Monitoring Report from the USFS. These comments were addressed in an email from EN2 that was sent to Brian Deason at EID on May 24, 2010. Several comments were easily addressed by supplying some clarification and several comments pertained to treatment recommendations that are different from USFS policies and/or requirements under the now completed Project 184 IPMP. Section 3.5, Control Methods has been amended to reflect these changes.

3.2 Priority List

The Plan identifies general prevention and control measures and provides some guidance on prioritizing control efforts to maximize the effectiveness of available resources. The following priorities have been identified in the Plan and are ranked in order:

1. Prevent the introduction of new invaders.
2. Conduct early treatment of new infestations.
3. Contain and control established infestations.

In determining the priority list for this survey, numbers 1 to 3 above have been considered where appropriate. Since the exact locations of previously identified (1999 study), established infestations were not readily available, the 2008 data serves as the baseline for established infestations. No new invaders were identified in 2010 and only a few new infestations were mapped. Several previously identified locations have been eradicated and removed from the list. All of the mapped occurrences have been given a priority rating as described below. The following criteria were considered when assigning priorities:

- ENF List “A” or “B” species status (Appendix D)
- Ability of the species to spread
- California Invasive Plant Council (CalIPC) Ranking
- Size of the occurrence
- Location of the occurrence and potential for spread
- Density of weeds within the occurrence

Each occurrence has been given a ranking of 1 through 3, with 1 being the highest priority for control and 3 being the lowest priority. In general, a ranking of 1 involves a “List A” species. Larger areas were generally given a higher ranking than smaller areas. If the occurrence is a small area of scattered, low-density “List B” species, it received a ranking of 3. Occurrences with a priority ranking of 1 or 2 should be considered as significant targets for eradication. If occurrences appeared to be new infestations, they were given a priority of 1 or 2.

Because Himalayan blackberry is relatively widespread, it was not given a rating of 1 even though the CalIPC scores it “high”, with severe impacts and invasiveness. A ranking of 1 was restricted to other “List A” species with a high CalIPC rating and a high probability to spread. Cheatgrass is also widespread and is listed as highly invasive but control of this species with herbicide is easier than Himalayan blackberry. Cheatgrass occurrences were prioritized as level 1 based on input from Matt Brown, botanist with the ENF (2009).

If an occurrence observed and recorded in 2008 was eradicated in 2009, the priority list in the 2009 report indicates that control of the occurrence was “complete”. If no noxious weeds were observed at these same locations in 2010, then the data sheets were eliminated and the occurrences were removed from the priority list.

All noxious weeds located within the project area are a high priority for control, but the priority list attempts to give some guidance regarding which occurrences have the greatest potential to rapidly invade new areas or significantly alter natural landscapes. The list can serve as a tool for EID’s resource managers to use in allocating limited personnel and equipment. Tables 4 and 5 list each occurrence, along with its assigned priority. In addition, the last column “Control” indicates the level of control achieved by treatments in 2009-2010.

Table 4. Priority List of Point and Area Occurrences

Collection Date	Weeds	MAP ID	X Coord.	Y Coord.	Location	Priority	Control*
5/21/2010	RUAR9, CIVU, LALA4	Area1-08			Forebay	2	No
5/21/2010	RUAR9, CIVU	01-08	6954850.36	2051734.17	12N34H	2	No
5/21/2010	RUAR9	02-08	6954729.4	2051997.43	12N34H	2	No
5/21/2010	RUAR9	03-08	6954366.54	2052317.6	12N34H	2	No
5/21/2010	RUAR9	04-08	6953462.93	2052782.84	12N34H	2	No
5/21/2010	RUAR9, TOAR	06-08	6952678.7	2053048.47	12N34H	2	No
5/21/2010	RUAR9, HYPE, CIVU, TOAR	07-08	6953569.30	2053595.91	12N34H	2	No
5/21/2010	RUAR9, HYPE, LALA4, CIVU	08-08	6954272.46	2054085.68	12N34H	2	No
5/21/2010	RUAR9, HYPE, MEOF, VETH	09-08	6955018.74	2054018.07	Powerhouse	2	No
7/28/2010	RUAR9, VETH, BRTE, HYPE	11-08	6955188.65	2053066.73	L. penstock	1	No
5/21/2010	KW	12-08	6961361.85	2048685.29	R93	3	Complete
5/21/2010	LALA4, RUAR9	13-08	6963202.58	2046813.86	U. penstock	2	Moderate
7/22/2010	BRTE	14-08	6971492.55	2043707.46	Road	1	No
6/4/2010	HB	16-08	6983322.41	2040391.83	11N02Y	2	No
6/10/10	LEVU, LALA4	17-08	6985525.52	2039178.79	Canal - 4	2	Complete
6/4/2010	RUAR9	18-08	6986373.03	2040323.36	10N40G	2	No
6/4/2010	RUAR9	19-08	6986740.71	2040777.22	10N40G	2	No
6/4/2010	RUAR9, LALA4	20-08	6987091.28	2040986.55	10N40G	2	No
6/4/2010	RUAR9	21-08	6987696.98	2040910.37	10N40G	2	No
6/4/2010	RUAR9	22-08	6988102.93	2040756.85	10N40G	2	No
6/4/2010	RUAR9	24-08	6989867.32	2042125.28	10N40G	2	No
6/29/2010	CIVU	25-08	6991666.38	2042720.19	10N40N	2	No
7/1/2010	RUAR9	26-08	6997324.69	2043108.91	Canal - 3	2	Good
7/1/2010	LALA4, RUAR9	27-08	6997474.07	2043534.68	Canal - 3	2	Moderate

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7/1/2010	LALA4, RUAR9	28-08	6997350.2	2043586.03	Canal - 3	2	Good
6/29/2010	MULTIPLE	29-08	6997871.66	2043793.63	R88	1	Good
6/29/2010	TOAR	30-08	6997715.6	2044783.6	R88	2	No
6/29/2010	TOAR	31-08	6998069.87	2045590	R88	2	Moderate
6/29/2010	TOAR, CIVU	32-08	6998807.15	2045932.01	R88	2	No
06/29/2010	LALA4, RUAR9	33-08	6999613.1	2046520.61	Canal - 3	2	Moderate
6/29/2010	HYPE, CIVU	34-08	7000965.97	2044277.99	Road	3	Good
7/8/2010	BRTE, MEOF	36-08	7024182.79	2044078.51	R74	1	Good
7/8/2010	BRDID4, BRTE MEOF	37-08	7024476.75	2044556.35	R75	1	No
7/8/2010	LALA4	38-08	7025143.3	2044421.83	Canal - 1	3	Moderate
7/8/2010	BRTE, MEOF	39-08	7025260.04	2044718.29	R75	1	Moderate
7/8/2010	LEVU, VETH	40-08	7038988.85	2043926.52	Canal - 1	3	Moderate
7/8/2010	LALA4	41-08	7040924.83	2044986.97	Diversion D.	1	Moderate
7/16/2010	CIVU, VETH	44-08	7097977.02	2011316.78	Silver L.	3	No
6/10/2010	LALA4	45-08	6967150.56	2044448.8	Canal - 5	2	Moderate
7/28/2010	LALA4, HYPE	46-08	6965365.41	2045946.49	Forebay	3	No
7/8/2010	MULTIPLE	47-08	7040985.84	2045030.6	Diversion D.	1	Moderate
7/8/2010	LEVU	48-08	7038113.23	2044064.46	Canal - 1	2	Moderate
7/16/2010	VETH	49-08	7113897.88	2023827.66	Caples L.	3	No
7/1/2010	LEVU	50-08	6992607.94	2042172.70	Canal - 4	3	Good
5/21/2010	RUAR9	01-09	6952562.95	2050890.11	Road	3	No
7/28/2010	MEOF	02-09	6957365.66	2051364.58	Surge	3	No
6/4/2010	RUAR9	03-09	6983074.93	2040538.27	11N02Y	3	No
6/4/2010	RUAR9	04-09	6985158.77	2038541.74	11N02Y	3	No
6/10/2010	RUAR9, LEVU	05-09	6992804.44	2042087.23	Canal - 4	3	Good
7/1/2010	CIVU	06-09	7005496.18	2042673.45	Canal - 3	3	No
6/29/2010	BRTE	07-09	7009298.52	2042163.42	R73	1	No
6/29/2010	CIVU, RUAR9	08-09	7010098.66	2039555.01	10N08Y	3	No
7/1/2010	BRTE	09-09	7007523.92	2044300.18	Plum Siphon	1	No
7/8/2010	HYPE	10-09	7035021.59	2043971.73	Canal - 1	3	Good
7/16/2010	VETH	11-09	7097898.36	2010048.13	Silver L.	2	No
6/10/2010	VETH	01-10	6968322.05	2043543.66	Canal - 5	3	No
6/10/2010	BRTE	02-10	6971379.14	2044469.72	Canal - 5	1	No
6/10/2010	BRTE, MEOF	03-10	6973005.33	2044972.35	Canal - 5	1	No
6/10/2010	HYPE, MEOF, CIVU	04-10	6988383.42	2039170.51	Canal - 4	2	No
6/4/2010	VETH, CIVU, RUAR9	05-10	6988457.26	2040717.33	10N40G	2	No
7/8/2010	HYPE	06-10	7031943.32	2043584.48	Canal - 1	3	No

*Values could be: Complete, Good, Moderate or No (no weed control observed).

Table 5. Priority List of Linear Occurrences

Collection Date	Weeds	Length (ft.)	MAP ID	Location	Priority	Control*
5/21/2010	MULTIPLE	221	L01-08	12N34H	2	No
5/21/2010	HYPE, RUAR9	504	L02-08	12N34H	2	No
5/21/2010	RUAR9, LALA4, HYPE, CIVU	79	L03-08	U. penstock	2	Good
5/21/2010	RUAR9, CIVU, LALA4, BRDID4	408	L04-08	U. penstock	2	Moderate
5/21/2010	CIVU, LALA4, AETR, BRDID4	311	L05-08	U. penstock	1	No
7/28/2010	CYSC4	98	L06-08	Forebay	1	No
6/10/2010	CIVU, MEOF	297	L07-08	Canal - 5	2	No
6/10/2010	VETH, CIVU, LALA4, MEOF	367	L08-08	Canal - 5	2	No
6/10/2010	LALA4	133	L09-08	Canal - 5	2	Good
6/4/2010	RUAR9, HYPE, CIVU	1063	L12-08	11N02Y	1	No
6/4/2010	RUAR9, VETH, CIVU	171	L13-08	R83	2	No
6/4/2010	RUAR9, CIVU, LALA4	545	L14-08	10N40G	1	No
6/4/2010	RUAR9, CIVU, LALA4	262	L15-08	10N40G	2	Moderate
6/29/2010	MULTIPLE	940	L17-08	R87	1	Good
7/1/2010	LALA4, RUAR9	144	L18-08	Canal - 3	2	Good
7/1/2010	LALA4, RUAR9	95	L19-08	Canal - 3	2	Good
6/29/2010	RUAR9, BRTE, TOAR, LALA4	308	L20-08	R88	1	Moderate
6/29/2010	MULTIPLE	630	L21-08	R88	1	Good
6/29/2010	MULTIPLE	725	L22-08	R89	1	No
6/29/2010	TOAR, CIVU	20	L23-08	R88	2	Good
6/29/2010	TOAR	64	L24-08	R88	2	Moderate
6/29/2010	CIVU	188	L25-08	10N08YA	3	No
7/8/2010	MULTIPLE	1014	L26-08	R74/74A	1	Moderate
7/8/2010	HYPE, MEOF, BRTE	225	L27-08	Canal - AC	1	Moderate
7/8/2010	MULTIPLE	866	L28-08	R74/74A	1	No
7/8/2010	MULTIPLE	741	L29-08	R75	1	No
7/8/2010	LALA4, BRTE, HYPE, MEOF	340	L30-08	R75	1	No
7/8/2010	BRTE	325	L31-08	Alder crk	1	Moderate
7/8/2010	MEOF, BRTE, VETH	237	L32-08	75A	1	No
7/8/2010	BRTE, VETH, HYPE	155	L33-08	Canal - 1	3	Moderate
7/8/2010	BRTE, VETH	193	L34-08	Canal - 1	1	Moderate
7/8/2010	BRTE, VETH	201	L35-08	Canal - 1	1	Moderate

7/28/2010	RUAR9, VETH, BRTE, CHJU	418	L01-09	L. penstock	1	No
7/28/2010	HYPE, TOAR	2373	L02-09	U. penstock	3	No
5/21/2010	LALA4, RUAR9	141	L03-09	U. penstock	3	Moderate
7/28/2010	MULTIPLE	46	L04-09	Forebay	2	No
7/28/2010	RUAR9, HYPE, LEVU	328	L05-09	Forebay	2	No
6/4/2010	MEOF	167	L06-09	R821	3	No
6/29/2010	BRDID, BRTE	1845	L07-09	R73	1	Moderate
5/21/2010	RUAR9, HYPE, CIVU		¹ L01-10	12N34H	2	No

*Values could be: Complete, Good, Moderate or No (no weed control observed).

¹Previously identified as point occurrence 05-08.

3.3 Project Facilities

A brief summary of what was found at each project facility surveyed in 2010 is presented below. The data sheets in Appendix C, along with the photos in Appendix B (photos are printed as a contact sheet and digital files are provided for better viewing), provide more detailed information about each occurrence.

Lake Aloha

Lake Aloha was surveyed on July 30. The lake is within Desolation Wilderness at approximately 8,000 feet. The areas around the auxiliary dams, the main dam, and other areas where work has occurred as part of Project 184 were all surveyed. No incidences of noxious weeds were observed during the survey.

Echo Lake and Echo Conduit

Echo Lake was surveyed on July 22. The parking lot, dam area, and road down to the store and boat ramp were surveyed. The entire conduit, including the piped and open ditch sections, up to the outlet into the creek, was surveyed. The survey involved walking along the conduit and observing the maintained area immediately adjacent to the conduit for noxious weeds. No incidences of noxious weeds were observed during the survey.

Caples Lake

Caples Lake was surveyed on July 16. Facilities surveyed include both dams, the parking area near the overflow spillway, the area around the Quonset hut, the Woods Creek Fishing Access parking area, and the new boat launch area and access road. A few individual woolly mullein plants were observed near the dam and overflow channel on the west side of the lake. All of the areas surrounding the new boat launch construction were surveyed since new construction has the potential to introduce new noxious weeds. No new infestations were observed this year but next year will be another critical year to see if dormant weed seeds germinate and begin to colonize disturbed ground around the site. At the Woods Creek Fishing Access there are no noxious weeds.

Note: Following this survey, USFS botanist Matt Brown noted and removed several yellow starthistle seedlings in the disturbed area around the new Caples Lake boat launch. This area should be thoroughly surveyed next year to ensure that starthistle or any other noxious weeds are not spreading.

Silver Lake

Silver Lake was also surveyed on July 16. The facilities surveyed include the dam and outlet area, the parking area and land surrounding the new boat launch area, the road and parking area for the Sandy Cove day-use area, and the area surrounding a small structure at the corner of Highway 88 and Kit Carson road leading to the Fergusson point day-use area. The very small occurrence of wooly mullein and bull thistle observed in 2008 near the small structure at the corner of Highway 88 and Kit Carson Road has returned. This area has not been treated and the few weeds here have likely been restricted to this small area of disturbed soil around the structure for many years; appearing in varying numbers from year to year. The wooly mullein along the shore near the recently removed Kay's Resort is still present; however, the sweet clover observed last year has been removed during the construction and restoration of the site.

El Dorado Diversion Dam

The El Dorado Diversion Dam, near Kyburz, was surveyed on July 8. The facilities surveyed at this site include a short access road from Highway 50, the fish ladder and associated structures, and the gate area on the south side of the river. The site has some large areas of historically disturbed soil near the fish ladder, along the north bank of the river. Point 47-08 contains a mixture of sweet pea, yellow starthistle, mustard, cheat grass and wooly mullein covering approximately 50% of 0.25 acre of disturbed ground. Sweet pea is the dominant weed. Just downstream (west) of point 47-08, point 41-08 also contains primarily sweet pea. In 2008, wooly mullein and ox-eye daisy were scattered throughout this area but appear to have been controlled in 2009 by physical and/or chemical means because only a few ox-eye and mullein were observed. Sweet pea covers 5-10% of this 0.25 acre infested area, concentrated around the "Boater Put-in" sign and fish ladder.

Alder Creek Diversion Dam and Feeder

The Alder Creek Diversion Dam and Feeder were surveyed on June 23. This site begins at the Alder Creek Siphon at Camp 1 and continues along the contour toward the diversion dam, up the canyon, approximately 1 mile away. Some brush control and spraying was performed along this pipe in 2009 or early 2010. Only cheat grass was observed this year. Cheat grass is present near the start of the pipe at Camp 1 for approximately 350 feet along the pipe, as it was during the 2008 and 2009 surveys. It is scattered and patchy, comprising 1-5% of the canopy.

El Dorado Forebay

The reservoir was surveyed on May 21 and July 28. The areas surveyed include the dam and dam face; the parking and day-use area; and the grounds around the south side of the reservoir from the point where the canal enters the reservoir to the point where the canal exits the reservoir. The primary occurrence is a large area (Area 1) beginning at the toe of the dam on the north end of the reservoir. There is a significant infestation of Himalayan blackberry with perennial sweet pea interspersed throughout. The overall size of the area infested is approximately 0.25-0.33 acre, with the weeds comprising approximately 35% of the total area. Sweet pea extends up the north side of the dam in patches up to the top of the dam. The use of herbicides near sensitive areas (wetland area) of this infestation is not recommended, but higher up on the dam herbicides could be used.

In the day-use area there is a moderate infestation (5-25% of the cover) of perennial sweet pea between Forebay Road and the parking area and some scattered Klamath weed (46-08). The weed density appears to have slightly increased at this location between 2008 and 2010. Just to

the east of the parking area, between Forebay Road and the reservoir, there is a small group of scotch broom, a "List A" species (L06-08). Several shrubs are present in a patchy distribution, covering about 500-1,000 square feet. Because this species is highly invasive it should be eradicated where observed. This population, observed in the 1999 survey, still remains, so removal efforts should be continued. It has increased slightly in density since 2008, but the overall area of infestation is about the same.

The linear infestations along the northeast shore of the reservoir mapped in 2009, L04-09 and L05-09, are still present. The primary weeds observed here in 2010 were Himalayan blackberry, Klamath weed and ox-eye daisy; however, woolly mullein, bull thistle and sweet pea are scattered throughout these areas as well. The blackberry is very dense in places along the shore. Because of the proximity to the reservoir, these occurrences may best be controlled through physical means. Herbicides may be effective; however, there may be limited opportunity to apply herbicide because of the proximity to the lake.

El Dorado Powerhouse

The powerhouse, located at the terminus of the Penstock along the South Fork American River, was surveyed on May 21 and July 28. There are some Himalayan blackberry, sweet clover, and woolly mullein along the road near the powerhouse (09-08). The overall extent is relatively minor and appears very similar to the extent in 2008 and 2009. Given the proximity to the river and the potential for herbicides to enter a major waterway, special care should be taken when controlling this occurrence. On the west side of the powerhouse, leading up to the penstock trail, there is a dense patch of sweet clover and woolly mullein that has increased in density this year but not overall extent. Just above the powerhouse, along the lower penstock, there is a significant amount of Himalayan blackberry that has been there since 2008.

El Dorado Canal

Beat 1

This portion of the canal was surveyed on July 8. Beat 1 extends from the El Dorado diversion dam down to the Alder Creek Siphon at Camp 1 and includes large areas affected by the Cleveland Fire. Two minor noxious weed occurrences near Carpenter Creek, identified in 2008, include ox-eye daisy and Klamath weed. One of these, point 40-08, appeared eradicated in 2009, but was observed in 2010. The minor occurrence of Klamath weed near an un-named creek just east of 30 Milestone access road (10-09) was nearly controlled. A small new occurrence of Klamath weed was mapped near a short tunnel that the canal passes through. The next two occurrences are in the burned area and include two "List A" species, rush skeletonweed and starthistle scattered in a strip along the canal bench. The "List A" weed density at both of these locations has been significantly reduced as a result of treatments in 2008 and 2009. In fact, the only skeletonweed or yellow starthistle observed at these locations were some scattered individuals outside the fence. Cheat grass is still present, mostly outside the fenced area along the canal. An increase in woolly mullein was also observed in these areas, primarily as dense clumps outside the fence.

El Dorado Tunnel

This short stretch of canal lies between the Alder Creek Siphon and the El Dorado Tunnel. In 2008, there were significant numbers of sweet clover and Klamath weed, especially near the gate. Weed control treatments have significantly reduced the density of weeds along this section in 2009 and 2010.

Beat 2

Beat 2 was surveyed on July 1. This is a very short stretch of canal between the Mill-Bull Tunnel and the Plum Creek Siphon. One incident of cheat grass has been identified around the facilities where the canal enters the Plum Creek Siphon (09-09). This occurrence appeared the same as last year. No other occurrences were identified.

Beat 3

Beat 3 was surveyed on July 1. This section of canal begins at the outlet of the Plum Creek Siphon at Camp X and ends at the outlet of the Esmeralda Creek Tunnel. This section of canal has eight mapped occurrences, most of which are Himalayan blackberry and sweet pea. Two of the occurrences include ox-eye daisy as well. Four occurrences, L18-08, L19-08, 28-08, and 29-08 are all near Ogilby Creek and all are fairly close together and contain the same mixture of blackberry and sweet pea. Herbicide treatments between 2008 and 2010 along the canal have significantly reduced the density of weeds at these locations. Caution should be used when treating these occurrences due to their proximity to the creek. Blackberry at 26-08 has been almost completely eradicated. L16-08, at the west end of Beat 3 was eradicated in 2009 and remains so in 2010.

Beat 4

Beat 4 was surveyed on June 10. This section of canal begins at the outlet of the Esmeralda Creek Tunnel and ends where the canal crosses under Highway 50. Few incidents (5) of noxious weeds were observed in this portion of the canal, and they are all relatively small areas of "List B" species. They include ox-eye daisy, sweet pea, Klamath weed, and bull thistle. The linear occurrences, L10-08 and L11-08, were completely controlled by herbicide treatments along the canal in 2009 and remained eradicated this year. In addition, noxious weeds at point 17-08 have been completely controlled. One minor new occurrence (04-10) was mapped near the terminus of Road 83, consisting of Klamath weed, bull thistle, and sweet clover (each less than <1% cover over 3,000 square feet).

Beat 5

Beat 5 was surveyed on June 10. This section of canal begins where the canal crosses Highway 50 and ends at Forebay Reservoir. Five locations with noxious weeds were mapped in 2008, no additional sites were mapped in 2009, and 3 new locations were mapped in 2010 (01-02-, and 03-10). These occurrences are relatively minor, consisting of some of the following weeds: sweet clover, woolly mullein, and cheat grass. Near Camp 5 there was a large amount of sweet pea along the fences around the yard and extending down to the canal in a few places (L09-08). The weeds along the canal have been greatly reduced but there are still some very dense patches of sweet pea between the canal and the Camp 5 facility. The north bank of the bench remains weed free. Point 15-08 appears to have remained weed free since 2009.

There are two very weedy areas along two separate, recently graded and graveled access roads leading down to the canal. One is near Camp 5 (L8-08) and contains a mixture of sweet clover, woolly mullein, sweet pea, and bull thistle, among a variety of other weeds, primarily along the slope between the road and the canal (20 feet wide by 300-350 feet long). The weeds were reduced in 2009 but are returning, especially sweet pea and woolly mullein. The second, similar occurrence (L07-08) containing bull thistle and sweet clover is located along an access road near the canal just before Bullion Bend and has not been treated. At point 45-08, near the tunnel entrance at the end of Beat 5, there was a large patch of sweet pea in 2008, which was mostly controlled in 2009 but appears to be returning in 2010, mostly along the fence line.

Upper Penstock

The upper penstock, extending from Forebay Reservoir to the surge chamber, was surveyed on May 21 and July 28. A total of six occurrences were mapped along this portion of the penstock. The most significant, high priority area of noxious weeds occurs in the section from the beginning of the penstock at Forebay to the Forebay Road undercrossing. This area contains a heavy infestation of barbed goatgrass, a "List A" species, along with several other noxious weed species. This highly invasive species appears to be thriving in this portion of the managed area along the penstock and has the potential to move into adjacent residential and openspace land nearby.. It was still present this year and should be targeted for control.

Several other areas of sweet pea, Himalayan blackberry, bull thistle, and Klamath weed were documented between Forebay Road and the tunnel. These areas were treated between 2009 and 2010, achieving partial control of the weeds in these areas. Some of the weed infestations extend outside the maintenance responsibility of EID. One new linear occurrence (L03-09) of the same group of weeds was mapped in 2009 and some control was achieved in 2010.

Site L2-09, located west of the tunnel, had not been treated since it was first noted in 2009. This is a long line of very scattered, low density Klamath weed. This year hedge parsley was also observed scattered throughout the same location.

Lower Penstock

The lower penstock, surveyed on July 28, refers to the section of penstock between the surge chamber and the powerhouse. The site is very steep and exposed along a northwest facing slope. A total of three occurrences are mapped along this portion of the penstock. Most weeds are located along the lower third of this section of penstock. It appears some spraying may have occurred this year or late in 2009. Klamath weed, cheatgrass, and rush skeletonweed are scattered throughout the lower third of this section (L1-09), comprising 5-15% of the cover, which is an increase from last year. The blackberry along the pipe was reduced in 2009 but appears to be increasing significantly this year (20% canopy cover). The patch of blackberry at point 11-08 looks unchanged from 2008 but Klamath weed and woolly mullein have increased. Cheat grass is scattered throughout the lower third of this section of Penstock (1-5%). The patch of sweet clover at the surge chamber, included as a new point in 2009 (02-09), remains the same.

3.4 Licensee-maintained roads

Table 3, above, summarizes the noxious weeds observed along the Project 184 licensee-maintained roads. A total of 14 roads had some noxious weeds, but most were relatively minor occurrences. Six roads have “List A” noxious weeds, primarily cheatgrass, but medusa-head grass and star thistle are also present at the El Dorado Tunnel and Camp P roads, respectively. Himalayan blackberry is abundant along some roads, such as the Powerhouse Road and Highway Cut Road. Treatment along these roads significantly reduced the blackberry in places in 2009 but the blackberry is returning and additional treatments are necessary.

Table 3 also includes a summary of the roads treated during the intervening period between 2009 and 2010. The treatments performed along the roads between the surveys were not directed at removing noxious weeds; rather, they were standard vegetation maintenance. Treatments were by mechanical (mastication or weed trimmer) or chemical means. The data sheets and photos in Appendices B and C provide more information about each roadside occurrence.

3.5 Control Methods

Weed control can be accomplished through a variety of methods, but an approach that integrates a variety of techniques usually achieves more complete, longer-lasting control. The Plan outlines general guidelines for control actions and includes *Integrated Weed Management Guidelines* in Appendix D (EID 2008b). In addition, the IPMP for Project 184 provides more detailed guidance on weed control. The methods, with respect to herbicide use, described in the IPMP document must be adhered to for Project 184 to be in compliance with the FERC license. In addition, all herbicide applications must be recommended by a DPR-licensed Pest Control Advisor and supervised by a licensed, Qualified Applicator.

As described in the IPMP, all known locations of rare plants must be flagged with a 100-foot buffer and herbicide treatments must not be made within this zone. Figure 2 displays the locations of rare plants identified in the Project 184 boundary.

The section below describes some additional information about the control of specific weed species. Research has shown that certain treatments are more effective than others. Where information is available and applicable, these techniques are described below. Several keys to an effective integrated weed control program are:

1. Monitor weed populations and success of treatments regularly.
2. Re-seed disturbed areas with a fast growing cover crop or replant native species to out-compete weeds.
3. Allow and encourage native species to re-colonize an area after disturbance (this may conflict with vegetation management goals in some places).
4. Reduce the amount of herbicide used and/or use herbicides with selective modes of action.
5. Apply herbicide treatments at appropriate times to maximize their efficiency.

Barbed goatgrass: Control of this species will require several years of late winter/early spring sprays (there are no selective herbicides for this species). Re-seeding with a fast-growing native ground cover species is beneficial (Davy 2008).

Cheatgrass: Mowing or trimming cheatgrass can reduce seed production if it occurs within one week of flowering. Herbicide applications will control cheatgrass if applied in early spring, when temperatures have warmed sufficiently but before the grass has matured (there are no selective herbicides for this species). If a native perennial species is established shortly after spraying or mowing cheatgrass, control will be improved (Bosard et.al. 2000).

Yellow starthistle: Starthistle can be controlled effectively with a combination of physical and chemical methods. Mowing or trimming should be done when 2-5% of the flowering heads are blooming and may need to be repeated later in the season. Repeated mowing and revegetation with native ground cover species provides good control. Several herbicides are available, but the EPA Reduced Risk herbicide, Milestone (aminopyralid) is selective and provides pre- and post-emergence control at multiple growth stages, especially when applied early in the season (Bosard et.al. 2000).

Scotch broom: Cutting Scotch broom off at the base in September- October reduces re-sprouting and is effective in our region. If cut plants are allowed to dry on-site and burned in place early in the season the fire destroys the shallow seeds and causes other seeds to re-sprout. The seedlings then perish during the summer dry season. Triclopyr applied to basal bark using a wick and low volume is effective for small areas such as the occurrence at Forebay. Because of the extensive seedbank, all treatment needs to be monitored closely and new seedlings destroyed promptly.

Ox-eye daisy: Several herbicides work for this species, but resistance to MCPA, 2,4-D, and dicamba has been observed (Bossard et.at. 2000). If non-chemical methods are desired, mulching heavily (3-4 inches compacted) with rice straw has been shown to be effective. Be sure to use certified weed-free mulch. Early season monitoring is necessary to make sure plants are not growing through the mulch. Aminopyralid also works well for ox-eye daisy.

Klamath weed: Where the Klamath weed leaf beetle, *Chrysolina quadrigemina*, has been introduced, this noxious weed has been prevented from rapidly spreading and invading in most cases. The beetle is present in the project area and is likely keeping Klamath weed under control.

Himalayan blackberry: This weed requires special attention. It is often near water, so herbicide applications may not be possible or need to be done with caution. It vigorously re-sprouts when cut and herbicide applications often will not completely kill the roots, which subsequently re-sprout. Consult with a PCA regarding herbicide use, but in general, applications should be made in late summer – fall when nutrient transport to the roots is occurring. If an area is physically cleared, the new growth should be allowed to reach approximately 18 inches before a follow-up herbicide application. Caution: Excessive moisture stress may reduce herbicide effectiveness. Replanting an area recently treated for blackberry with a fast-growing native species that can shade it out helps prevent re-establishment of this species.

Others: The other weed species encountered can be controlled with standard herbicide use or other standard means as identified in the IPMP and no specific control methods are recommended.

4.0 Summary

Data was collected on a total of 101 weed occurrences throughout the Project 184 facilities and licensee-maintained roads in 2010. There was 1 new linear occurrence (an extension of point 05-08) and 6 new point locations. Three linear occurrences and 5 points were eliminated this year. Overall, there were relatively few significant occurrences of “List A” noxious weed species. “List A” weed species were observed along 7 roads and 9 facilities (Forebay, Diversion Dam, Alder Creek Feeder, and 5 sections of the Canal; Beat 1, Beat 2, Beat 5, El Dorado Tunnel, and the upper and lower sections of penstock). With the exception of Lake Aloha, Echo Lake and Echo Conduit, all listed facilities have some “List A” or “List B” weeds. Overall there doesn’t appear to be major spreading of the noxious weed occurrences or increases in the incidence of new occurrences.

The most common “List A” species within the Project area is cheatgrass, followed by skeleton weed. Cheatgrass is widespread in the region and the apparent increase in the number of occurrences in the 2009 data is primarily due to increased awareness of the species rather than a rapid spread of cheatgrass from 2008 to 2009. Several infestations of starthistle and skeleton weed on the canal have been greatly reduced over the last 2 years, especially along Beat 1 of the canal. The other “List A” species are found only at one or two locations. The Scotch broom along Beat 1 near the Camp 1 house has been eradicated but the Forebay occurrence still exists. The barbed goatgrass along the upper penstock near Forebay Reservoir is still present. This occurrence covers a fairly large area and should be targeted for control and monitored closely.

In 2010, the most common and widespread noxious weeds in the survey area were Himalayan blackberry, perennial sweet pea, and Klamath weed. Himalayan blackberry continues to be the most problematic in terms of spread and effect on native species. It is widespread throughout the region and is very difficult to control. Where it invades riparian areas, it out-competes native species, often forming dense, impenetrable thickets. As described above, a multi-pronged approach with follow-up treatments is often required to control this difficult to manage species. Partial control of this species was noted at the following locations in 2009: powerhouse road, highway cut road, the lower penstock, the upper penstock, and Beat 3 of the Canal. Blackberry at some of these sites increased in 2010. It appears that blackberry could remain in a pattern of spread followed by treatments that partially control the blackberry, which then returns in the subsequent year. This could maintain the blackberry infestations in a relatively static condition, which may be all that is practical.

Interestingly, there was a surge in woolly mullein in several locations this year, particularly along the upper section of the canal and lower penstock. Some large patches were noted along Beat 1 of the Canal, primarily outside the fence. This may be due to the cool, wet spring this year providing favorable conditions for this species, or it could be a result of treatment practices that have reduced other weed species and allowed mullein to increase. Continued monitoring over the next couple of years will be necessary to determine the cause and extent of any spread of this species.

With the continued implementation of the IPMP this year, high priority noxious weed occurrences will be targeted for control. The GIS database and map should be used by pest control managers to easily locate and treat high priority occurrences. By comparing next year’s

(2011) datasheets and photos with the 2008 - 2010 data, treatment programs can be evaluated and EID staff can make changes to the overall weed control strategy. The GIS database will allow resource managers to track the distribution and spread of noxious weeds at Project 184 facilities over time.

Recommendations

Given the effort required to survey the entire Project area and the lack of change detected in many areas, it makes sense to alter or amend the survey protocols so that the entire Project is not surveyed every year. We recommend consulting with the USFS to come to an agreement about what to survey and how often to survey. There are several alternative survey options that could be implemented. Some potential options include:

- Surveying the Project area every two years.
- Surveying only Priority 1 and 2 areas every year along with areas that have a high potential for new occurrences (recently completed construction).
- Surveying the entire Project every year except those areas that have not had any weeds since 2008.
- Some other combination of extended period between surveys and/or targeted areas for surveys.

5.0 References

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APPENDIX A

Figures

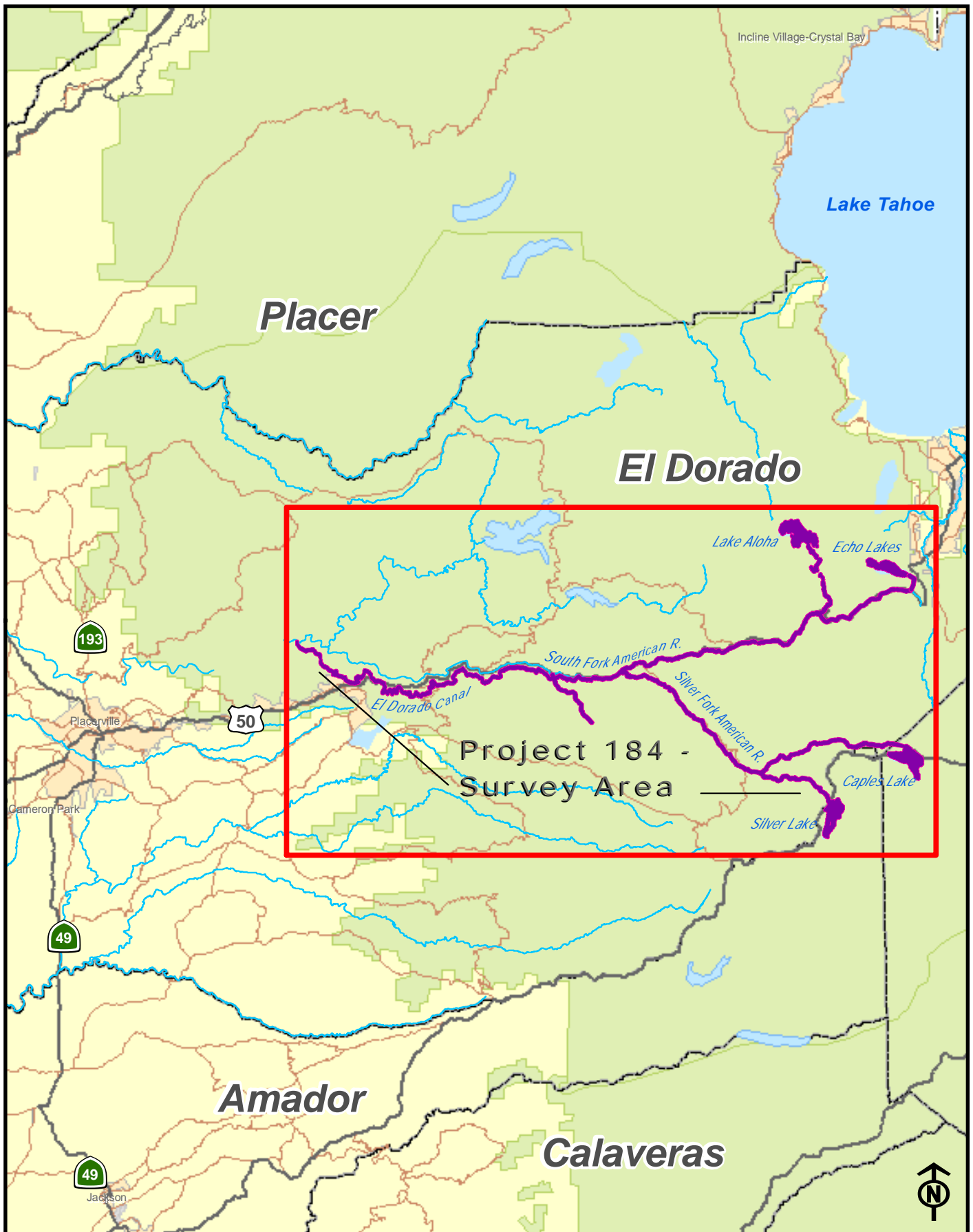
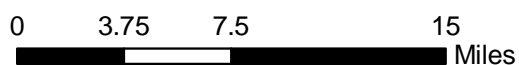


Figure 1. Regional Location and Vicinity

Created By: Ethan Koenigs
Date: 9/3/2010



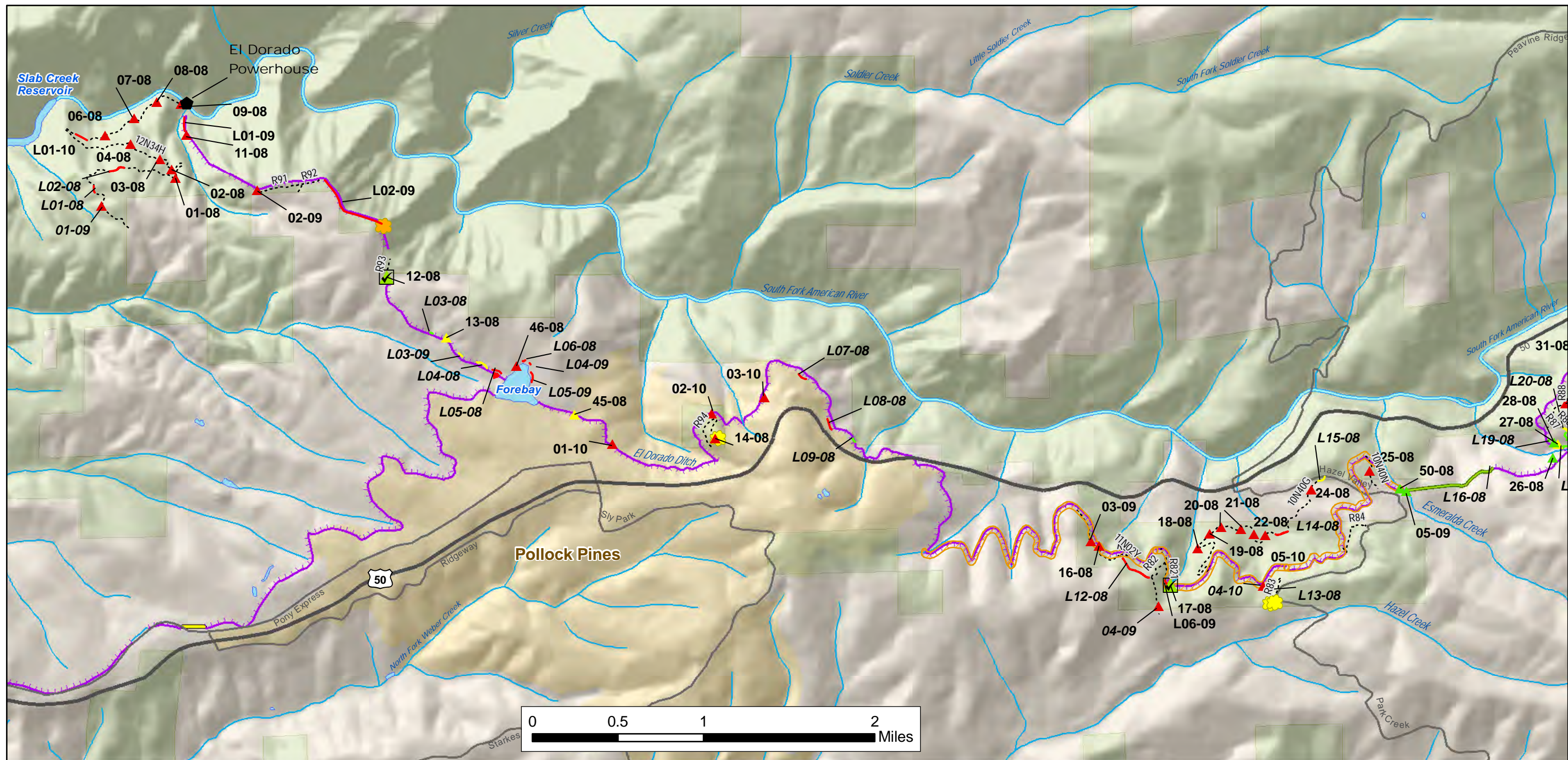


Figure 2. Noxious Weed and Rare Plant Occurrences

2010 Survey - FERC Project 184

Page 1 of 3



Noxious weed points

- Control**
- Complete
 - Good
 - Moderate
 - Poor
 - None

Noxious weed lines

- Control**
- Complete
 - Good
 - Moderate
 - Poor
 - None
 - Noxious weed area

Rare Plants

- Red Hills Soap Lily
- Yellow-burr Navaretia
- Pleasant Valley Mariposa Lily
- Pacific Yew

Administrative Boundaries

- USFS Land
- Communities

Hydrology

- Canal/Ditch
- Connector
- Pipeline
- Stream/River

Roads

- Highway
- Major Road
- Licensee Maint'd Roads
- USFS Roads



Date: 11/4/2010 Created By: Ethan Koenigs

N



1 inch = 3,000 feet
NAD 1983 State Plane California II Feet

Prepared By:



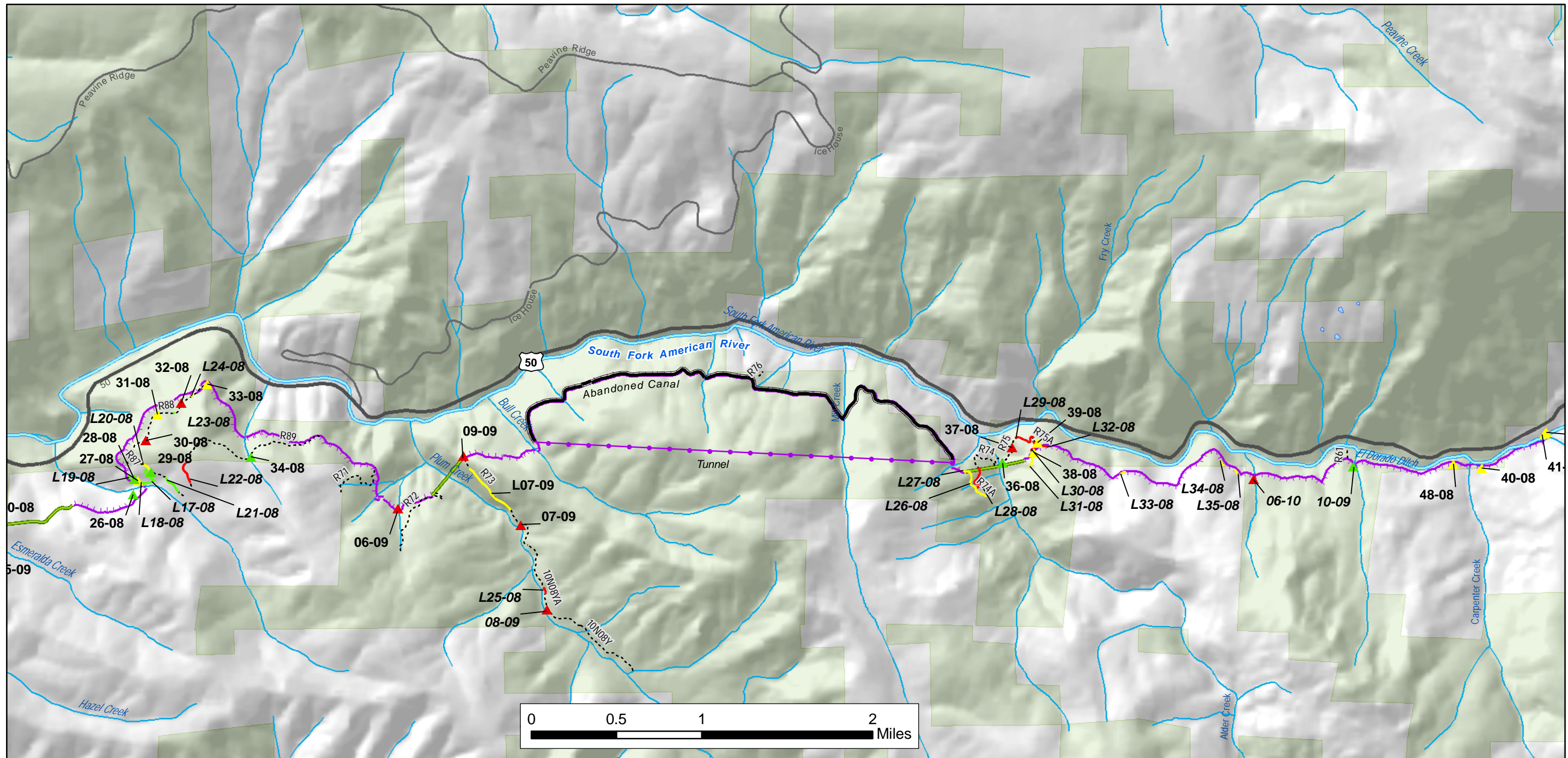


Figure 2. Noxious Weed and Rare Plant Occurrences

2010 Survey - FERC Project 184

Page 2 of 3



Noxious weed points

- Control**
- Complete
 - Good
 - Moderate
 - Poor
 - None

Noxious weed lines

- Control**
- Complete
 - Good
 - Moderate
 - Poor
 - None
 - Noxious weed area

Rare Plants

- Red Hills Soap Lily
- Yellow-burr Navaretia
- Pleasant Valley Mariposa Lily
- Pacific Yew

Administrative Boundaries

- USFS Land
- Communities

Hydrology

- Canal/Ditch
- Connector
- Pipeline
- Stream/River

Roads

- Highway
- Major Road
- Licensee Maint'd Roads
- USFS Roads



Date: 11/4/2010 Created By: Ethan Koenigs



1 inch = 3,000 feet
NAD 1983 State Plane California II Feet

Prepared By:



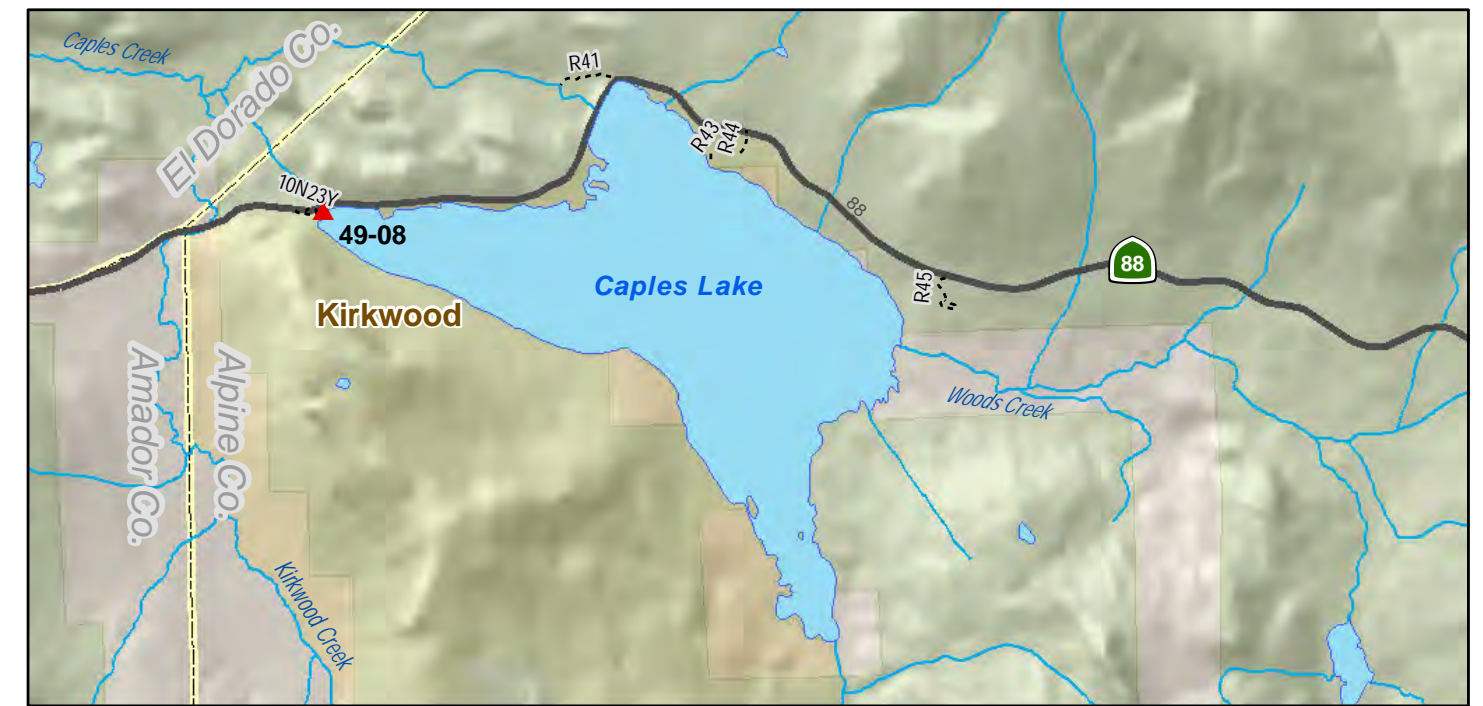
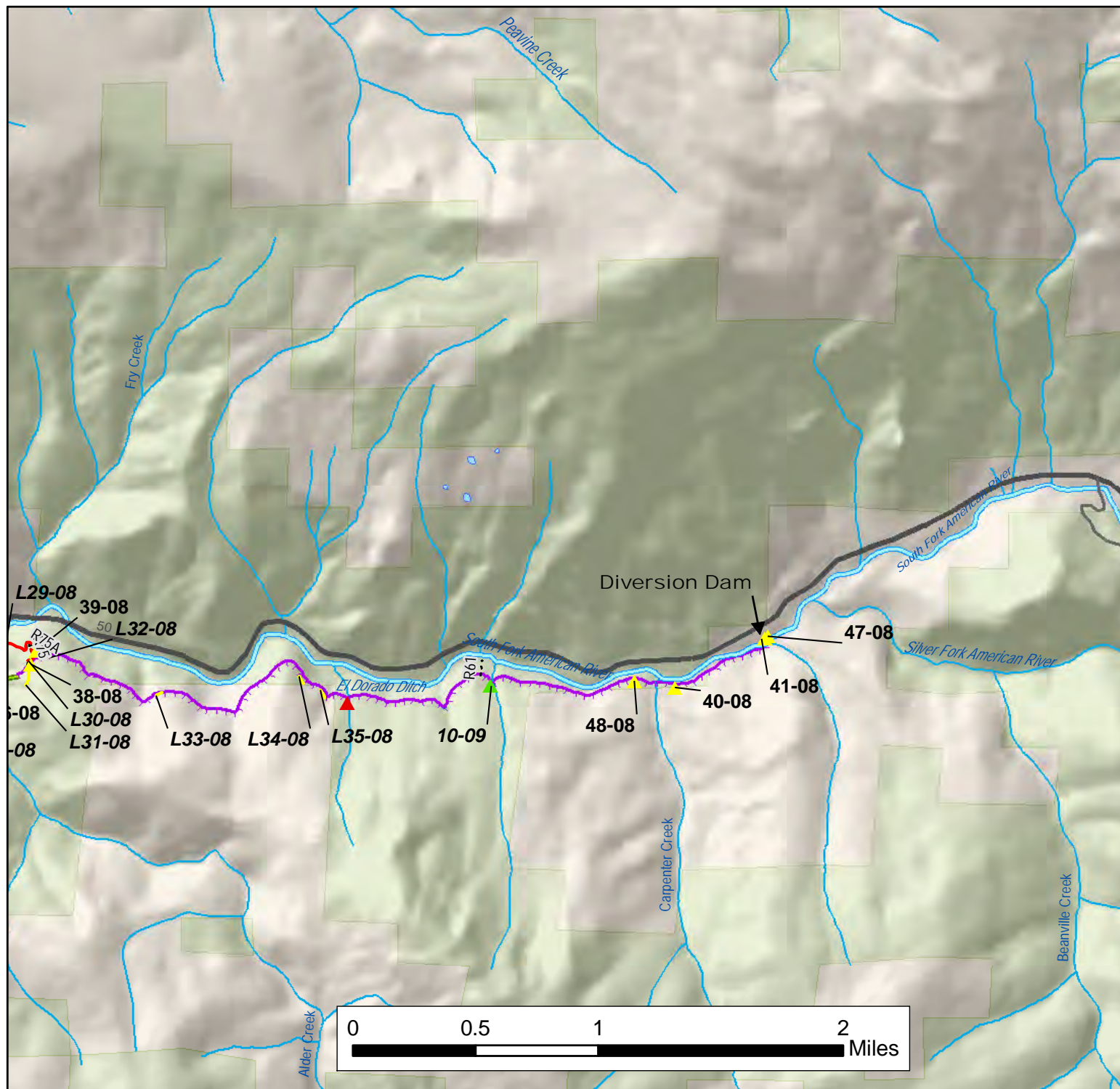


Figure 2. Noxious Weed and Rare Plant Occurrences

2010 Survey - FERC Project 184
Page 3 of 3



Noxious weed points

- Control**
- Complete
 - Good
 - Moderate
 - Poor
 - None

Noxious weed lines

- Control**
- Complete
 - Good
 - Moderate
 - Poor
 - None

Rare Plants

- Red Hills Soap Lily
- Yellow-burr Navaretia
- Pleasant Valley Mariposa Lily
- Pacific Yew

Administrative Boundaries

- USFS Land
- Communities

Hydrology

- Canal/Ditch
- Connector
- Pipeline
- Stream/River

Roads

- Highway
- Major Road
- Licensee Maint'd Roads
- USFS Roads



Date: 11/4/2010 Created By: Ethan Koenigs

N



1 inch = 3,000 feet
NAD 1983 State Plane California II Feet

Prepared By:



APPENDIX B

Noxious Weed Occurrence Photos

May 21, 2010: Upper penstock (partial); Powerhouse Rd., Forebay res., Rd. 93



100_0922



100_0926



100_0927



100_0928



100_0929



100_0930



100_0931



100_0932



100_0936



100_0938



100_0939



100_0940



100_0941



100_0943



100_0945



100_0946



100_0950



100_0951



100_0952



100_0953



100_0954



100_0955



100_0956



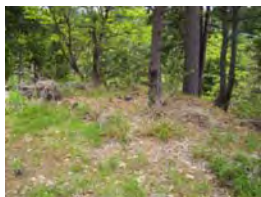
100_0957



100_0958



100_0959



100_0960



100_0961



100_0962



100_0963



100_0972



100_0917



100_0918



100_0919



100_0920



100_0921



P6040041



P6040042



P6040043



P6040044



P6040045



P6040046



P6040047



P6040048



P6040049



P6040050



P6040051



P6040052



P6040053



P6040054



P6040062



P6040063



P6040064



P6040065



P6040066



P6040067



P6040068



P6040071

June 10, 2010: El Dorado Canal Beats 4 and 5



P6100117



P6100118



P6100121



P6100122



P6100123



P6100124



P6100125



P6100126



P6100127



P6100134



P6100135



P6100137



P6290152



P6290153



P6290154



P6290155



P6290156



P6290160



P6290161



P6290162



P6290163



P6290164



P6290165



P6290166



P6290167



P6290168



P6290169



P6290170



P6290171



P6290172



P6290173



P6290174



P6290175



P6290180



P6290181



P6290182



P6290183



P6290184

July 1, 2010: El Dorado Canal Beats 2, 3, and partial 4



P7010188



P7010189



P7010196



P7010197



P7010198



P7010199



P7010202



P7010203



P7010204



P7010206

July 8, 2010: El Dorado Canal Beat 1, Camp 1 rds. (74 and 75), Alder Creek diversion



P7080236



P7080237



P7080238



P7080239



P7080246



P7080247



P7080248



P7080249



P7080250



P7080251



P7080252



P7080253



P7080254



P7080255



P7080256



P7080257



P7080258



P7080259



P7080260



P7080261



P7080262



P7080263



P7080264



P7080265



P7080266



P7080267



P7080268



P7080269



P7080270



P7080271



P7080272



P7080273



P7080274



P7080275



P7080276

July 16, 2010: Caples Lake and Silver Lake



P1000454



P1000455



P1000458



P1000459



P1000461



P1000462



P1000467



P1000468



P7220277



P7220278



P7220279

July 28, 2010: Lower penstock, partial upper penstock, partial Forebay res., Moon Lane



P1000653



P1000654



P1000655



P1000656



P1000657



P1000658



P1000662



P1000663



P1000664



P1000668



P1000669



P1000670



P1000671



P1000672



P1000673



P1000674



P1000675



P1000676

APPENDIX C

Noxious Weed Occurrence Data Sheets

2010 Data Sheet Index

Date	Locations
May 21	Upper penstock (partial); Powerhouse Rd., Forebay res., Rd. 93
June 4	Highway cut Rd. (10N40G), Rds. 81-84, 11N02Y
June 10	El Dorado Canal Beats 4 and 5
June 29	Camp 2 rds., 10N08Y, Rds.87-89
July 1	El Dorado Canal Beats 2, 3 , and partial 4
July 8	El Dorado Canal Beat 1, Camp 1 rds. (74 and 75), Alder Creek diversion
July 16	Caples Lake and Silver Lake
July 22	Bend Court
July 28	Lower penstock, partial upper penstock, partial Forebay res., Moon lane

APPENDIX C**EID Weed Observation and Monitoring Form**

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
917/918	01-09	W/NW	RUAR9 – same, slight increase
919/920	L01-08	SW	Multiple species (BRDID2)
921/922	L02-08	NE/SW	RUAR9/HYPE
926/927	01-08	E	RUAR9 - culvert
928	02-08	SW	Large patch RUAR9 near 15 mph sign – up road from bend at draw
929	02-08	W	At draw – downslope side
930	03-08	W-NW	RUAR9
931/932	04-08	W/W	RUAR9 increasing
936/938	L01-10	E-NE	RUAR9, HYPE, & CIVU – (170) ditch and upslope RUAR9/CIVU
939	06-08	SW	TOAR, RUAR9 – downslope along road
940	06-08	NE	RUAR9 – along shoulder
941/943	07-08	NE/S	RUAR9 / RUAR9 and CIVU in ditch
945	08-08	SW	RUAR9 – along shoulder, downslope
946	09-08	E	Near powerhouse, RUAR9 and MEOF
950/951	09-08	S/S	Near powerhouse, MEOF / MEOF, others
952	Area 1	W	Base of Forebay Reservoir
953	L05-08	E	AETR along upper Penstock
Notes			

Photo Log			
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Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
954-957	L04-08	W-W-SE	RUAR9 and LALA4 – Partial control
958-959	L03-09 (08)?	E	RUAR9 and LALA4 – Partial control
960	13-08	SE	LALA4
961/962	L03-08	E	RUAR9 – good control
963	12-08	NW	Eradicated HYPE – Kodiak Trail
972	L02-09	W/NW	Sparse HYPE

Notes			
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Page 2	Erosion along road between blocks 9-13; waterbars needed.		

General Information		ID: Area1-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Forebay Reservoir		
Site address or other description	Below face of dam.		
Ownership			
Land use type	Water Storage Facility		
Invaded vegetation type	Forest		
Gross Area	0.25	acres	
Disturbances & impacts	Facility Maintenance		
Associated species	Ponderosa Pine, Willow, Alder, Jucus species, Carex species, Grasses, Native Blackberry.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Wetland area		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>	<i>Lathyrus latifolius</i>	<i>Cirsium vulgare</i>
Weed common name(s)	Himalayan Blackberry	Perennial Sweet Pea	Bull Thistle
Presence			
Presence or Absence	Present (all)		
Treated	Not all		
Infested area	0.25	acres	
Canopy Cover	25-50%	5-25%	<1%
Appearance	Germ'g./early growth	New growth	
Distribution pattern	Clumpy	Scattered patchy	
Photo documentation	952, 669 (from 7-28-2010)		
Weed Location			
Geographic location (ID)	Area 1-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	At the base of the dam on the north side there is a wet area and weeds surround this area. Update: LALA4 decreasing on lower side but increasing near top of dam; very little bull thistle.		

General Information		ID: 01-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Powerhouse Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	1/4	acres	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Big-leaf Maple, Canyon Live Oak, California Hazelnut, Giant Chain Fern		
Environmental Conditions (e.g. soil conditions, exposure, etc.)			
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>	<i>Cirsium vulgare</i>	
Weed common name(s)	Himalayan Blackberry	Bull Thistle (5 plants)	
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	10,000	sq. ft.	
Canopy Cover	5-25%	<1%	
Appearance	Germ'g./early growth	New growth	
Distribution pattern	Clumpy	Scattered patchy	
Photo documentation	926/927		
Weed Location			
Geographic location (ID)	01-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	At a curve in the road at a drainage. Update: Still much downslope from road. Slight increase - uphill side. Encroaching on road - downhill side.		

General Information		ID: 02-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Powerhouse Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	10,000 - 15,000	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Big-leaf Maple, Pacific Dogwood.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Shady area along/near a drainage.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>		
Weed common name(s)	Himalayan Blackberry		
Presence			
Presence or Absence	Present (all)		
Treated	Not all		
Infested area	10,000-15,000	sq. ft.	
Canopy Cover	1-5%		
Appearance	New growth		
Distribution pattern	Clumpy	Linear	
Photo documentation	929		
Weed Location			
Geographic location (ID)	02-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	Downslope of 01-08 (road switch back) near same drainage. Update: RUAR9 increasing - 2 locations, separated by about 200'; another patch downslope along road - 200'.		

General Information		ID: 03-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Powerhouse Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	250	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Big-leaf Maple, Pacific Dogwood, California Hazelnut.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)			
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>		
Weed common name(s)	Himalayan Blackberry		
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	250	sq. ft.	
Canopy Cover	5-25%		
Appearance	New growth		
Distribution pattern	Clumpy		
Photo documentation	930		
Weed Location			
Geographic location (ID)	03-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	Downslope side of road. Update: RUAR9 coming back - about same size clump.		

General Information		ID: 04-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Powerhouse		
Site address or other description	Powerhouse Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	500	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Big-leaf Maple, Pacific Dogwood, California Hazelnut.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)			
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus armeniacus</i>	<i>Verbascum thapsus</i>	
Weed common name(s)	Himalayan Blackberry	Woolly Mullein	
Presence			
Presence or Absence	Present (all)		
Treated	Growing Back		
Infested area	750	sq. ft.	2 clumps
Canopy Cover	5-25%	<1%	
Appearance	Germ'g./early growth		
Distribution pattern	Clumpy		
Photo documentation	931/932		
Weed Location			
Geographic location (ID)	04-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	Along road near a spur road fork. Update: RUAR9 coming back; encroaching on road and increasing downslope; uphill location still about same		

General Information		ID: 06-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Powerhouse Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	1,000	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Big-leaf Maple, Buckeye, California Bay Tree.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Shady, N-facing canyon.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>	<i>Torilis arvensis</i>	
Weed common name(s)	Himalayan Blackberry	hedge parsley	
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	500	sq. ft.	
Canopy Cover	25-50%	1-5%	
Appearance	Germ'g./early growth	New growth	
Distribution pattern	Linear	Clumpy	
Photo documentation	939, 940		
Weed Location			
Geographic location (ID)	06-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	Along road on downslope side, at a slight bend in the road near a minor drainage. Update: Increasing infestation. L 01-10 nearly continuous linear stretch of RUAR9 from above first wall down to second wall.; new line 05-08 - 06-08		

General Information		ID: 07-08			
Collection date (mm/dd/yyyy)	5/21/2010				
Observer name(s)	Ethan Koenigs				
Site Information					
Site or facility name	El Dorado Powerhouse				
Site address or other description	Powerhouse Road				
Ownership					
Land use type	Transportation Corridor				
Invaded vegetation type	Forest				
Gross Area	1,000	sq. ft.			
Disturbances & impacts	Roadside maintenance				
Associated species	Douglas Fir, Big-leaf Maple, Pacific Dogwood, Black Oak.				
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Shady, N. facing canyon				
Weed Information					
Weed Identification					
Weed genus and species	<i>Rubus armeniacus</i>	<i>Hypericum perforatum</i>	<i>Cirsium vulgare</i>	<i>Torilis arvensis</i>	
Weed common name(s)	Himalayan Blackberry	Klamath weed	bull thistle	hedge parsley	
Presence					
Presence or Absence	Present (all)				
Treated	No				
Infested area	1,000	sq. ft.			
Canopy Cover	25-50%	<1%	<1%	<1%	
Appearance	Germ'g./early growth	New growth			
Distribution pattern	Clumpy	Scattered patchy			
Photo documentation	941, 943				
Weed Location					
Geographic location (ID)	07-08				
Coordinate system	Ca. State Plane Zone 2				
Datum	NAD83				
Location data accuracy	5-15m				
Location description	Along road near a wide bend along a small drainage extending down the road for a couple hundred feet. Update: Extent appears same as 2009 with slight increase.				

General Information		ID: 08-08			
Collection date (mm/dd/yyyy)	5/21/2010				
Observer name(s)	Ethan Koenigs				
Site Information					
Site or facility name	El Dorado Powerhouse				
Site address or other description	Powerhouse Road				
Ownership					
Land use type	Transportation Corridor				
Invaded vegetation type	Forest				
Gross Area	4,000	sq. ft.			
Disturbances & impacts	Roadside maintenance				
Associated species	Douglas Fir, Canyon Live Oak, Black Oak, California Grape.				
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Shady, N. facing canyon				
Weed Information					
Weed Identification					
Weed genus and species	<i>Rubus discolor</i>	<i>Hypericum perforatum</i>	<i>Lathyrus latifolius</i>	<i>Cirsium vulgare</i>	
Weed common name(s)	Himalayan Blackberry	Klamath Weed	Perennial Sweet Pea	bull thistle	
Presence					
Presence or Absence	Present (all)	Extends down road 200' - RUAR9 downslope			
Treated	No				
Infested area	500	sq. ft.			
Canopy Cover	5-25%	<1%	<1%	<1%	
Appearance	New growth	New growth			
Distribution pattern	Clumpy				
Photo documentation	945				
Weed Location					
Geographic location (ID)	08-08				
Coordinate system	Ca. State Plane Zone 2				
Datum	NAD83				
Location data accuracy	5-15m				
Location description	Along road on downslope side; SMUD powerhouse visible. LALA4 & HYPE canopy cover is <1%. Update: Extent of occurrence is about the same; upslope side +100'; RUAR9 extends down rd. 200'; CIVU in ditch uphill side.				

General Information		ID: 09-08			
Collection date (mm/dd/yyyy)	5/21/2010				
Observer name(s)	Ethan Koenigs				
Site Information					
Site or facility name	El Dorado Powerhouse				
Site address or other description	Powerhouse Road				
Ownership	EID				
Land use type	Transportation Corridor Powerhouse				
Invaded vegetation type	Forest				
Gross Area	1/4 acres				
Disturbances & impacts	Roadside maintenance		Facility Maintenance		
Associated species	Douglas Fir, Ponderosa Pine.				
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Very exposed sunny area; many weeds among rip rap below road.				
Weed Information					
Weed Identification					
Weed genus and species	<i>Rubus discolor</i>	<i>Melilotus alba</i>	<i>Verbascum thapsus</i>	Hypericum perforatum	
Weed common name(s)	Himalayan Blackberry	White Sweet Clover	Woolly mullwin	Klamath Weed	
Presence					
Presence or Absence	Present (all)				
Treated	No				
Infested area	400-600 sq. ft.				
Canopy Cover	1-5%	1-5%	<1%	<1%	
Appearance	New growth				
Distribution pattern	Clumpy		Scattered patchy		
Photo documentation	50, 951, 653 (from 7-28-2010)				
Weed Location					
Geographic location (ID)	09-08				
Coordinate system	Ca. State Plane Zone 2				
Datum	NAD83				
Location data accuracy	5-15m				
Location description	Along road and slope leading down to the river. Update: River is likely to close for chemical treatment. Extent of occurrence is about the same as 2009. Near Powerhouse - W. side patch of S.C. (183); Sweet clover is expanding to uphill side along reinforced hillside;				

General Information		ID: 12-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Penstock, Kodiak Trail access road.		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	250	sq. ft.	
Disturbances & impacts	Pipe Maintenance	Roadside maintenance	
Associated species	Ponderosa pine, incense cedar, mountain misery		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	partly sunny,		
Weed Information			
Weed Identification			
Weed genus and species	<i>Hypericum perforatum</i>		
Weed common name(s)	Klamath Weed		
Presence			
Presence or Absence	Present (all)	controlled	
Treated	Yes		
Infested area	250	sq. ft.	
Canopy Cover			
Appearance	New growth		
Distribution pattern	Clumpy		
Photo documentation	963		
Weed Location			
Geographic location (ID)	12-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	On south side of Kodiak Trail near split in road; minor occurrence. Update: appears eradicated		

General Information		ID: 13-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	EID Penstock		
Site address or other description	Between forebay reservoir and tunnel		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	700	sq. ft.	
Disturbances & impacts	Pipe Maintenance		
Associated species	Ponderosa Pine, mountain misery (<i>Chameobatia foliolosa</i>).		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Roadside shoulder - gravelly soil -sunny		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>	<i>Lathyrus latifolius</i>	
Weed common name(s)	Himalayan Blackberry	Perennial Sweet Pea	
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	500	sq. ft.	
Canopy Cover	5-25%		
Appearance	Germ'g./early growth	New growth	
Distribution pattern	Clumpy		
Photo documentation	960		
Weed Location			
Geographic location (ID)	13-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Isolated clump along Penstock road (southside). Update: Slight reduction in area but early in season.		

General Information		ID: L01-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Powerhouse Road	Section of road beneath transmission lines.	
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	4,400	sq. ft.	
Disturbances & impacts	Roadside maintenance	Other man-made disturbance	Transmission Corridor Maintena
Associated species	Douglas Fir, Sugar Pine, Manzanita, Rose Clover, Blue Wild-rye.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Full west facing exposure.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i> , <i>Rubus discolor</i> , <i>Hypericum perforatum</i> , <i>Lathyrus latifolius</i> , <i>Melilotus officinalis</i> ; <i>Bromus a</i>		
Weed common name(s)	Bull Thistle, Himalayan Black Klamath Weed, Perennial Sweet Pea, Sweet Clover		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	4,400	sq. ft.	
Canopy Cover	25-50%		
Appearance	New growth	Germ'g./early growth	Flowering
Distribution pattern	Clumpy	Scattered patchy	Scattered even
Photo documentation	919/920		
Weed Location			
Geographic location (ID)	L01-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Along road primarily on downslope side below transmission lines. Update: Appears similar to 2009; Increasing sweet clover in ditch - uphill side (E) of rd.		

General Information		ID: L01-10	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Powerhouse		
Site address or other description	Powerhouse Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	2500	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Big-leaf Maple, Pacific Dogwood, California Hazelnut.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Shady, N-facing slope, gravel road		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>	<i>Hypericum perforatum</i>	<i>Cirsium vulgare</i>
Weed common name(s)	Himalayan Blackberry	Klamath weed	bull thistle
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	2,500	sq. ft.	(including downslope and upslope)
Canopy Cover	5-25%	<1%	<1%
Appearance	Germ'g./early growth	New growth	New growth
Distribution pattern	Clumpy		
Photo documentation	936,938		
Weed Location			
Geographic location (ID)	L01-10 (previously 05-08)		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	Near rock/fence retaining wall; downslope side also has a small linear stretch of RUAR9 up the road from retaining wall(50'). Update: Increasing RUAR9 - encroaching on road up from wall. HYPE and CIVU in turnout. CIVU also in ditch on uphill side. Changed to a line feature for this occurrence.		

General Information		ID: L02-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Powerhouse Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	5000	sq. ft.	
Disturbances & impacts	Roadside maintenance	Other man-made disturbance	
Associated species	Douglas Fir, Canyon Live Oak, Black Oak, Big-leaf Maple, California Hazelnut, Poison Oak.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Northeast exposure - full sun		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus armeniacus</i>	<i>Hypericum perforatum</i>	
Weed common name(s)	Himalayan Blackberry	Klamath Weed (very light)	
Presence			
Presence or Absence	Present (all)		
Treated	Growing Back		
Infested area	5,000	sq. ft.	
Canopy Cover	1-5%		
Appearance	Germ'g./early growth		
Distribution pattern	Scattered patchy	Linear	Clumpy
Photo documentation	921/922		
Weed Location			
Geographic location (ID)	L02-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Below power lines. Update: Similar to 2009; slight decrease in HYPE; RUAR9 is mostly in 2 clumps		

General Information		ID: L03-08	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	EID Penstock		
Site address or other description	Between forebay reservoir and tunnel		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	0.1	acres	
Disturbances & impacts	Pipe Maintenance		
Associated species	Douglas Fir, Ponderosa Pine, Black Oak, Manzanita.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)			
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>	<i>Lathyrus latifolius</i>	
Weed common name(s)	Himalayan Blackberry	Perennial Sweet Pea	
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	0	acres	
Canopy Cover	1-5%	<1%	
Appearance	New growth		
Distribution pattern	Clumpy		
Photo documentation	961/962		
Weed Location			
Geographic location (ID)	L03-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Edge of Penstock road on downslope, south side of road; continues into a ravine (most weeds in ravine). Update: Great control of most everything. Blackberry still present down in ravine.		

General Information		ID: L04-08			
Collection date (mm/dd/yyyy)	5/21/2010				
Observer name(s)	Ethan Koenigs				
Site Information					
Site or facility name	EID Penstock				
Site address or other description	Between Forebay reservoir and tunnel				
Ownership					
Land use type	Water Transport Facility				
Invaded vegetation type	Forest				
Gross Area	0.5	acres			
Disturbances & impacts	Pipe Maintenance	Other man-made disturbance		tree removal	
Associated species	Ponderosa Pine, Black Oak.				
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Very exposed.				
Weed Information					
Weed Identification					
Weed genus and species	<i>Cirsium vulgare</i>	<i>Rubus discolor</i>	<i>Lathyrus latifolius</i>	<i>Bromus diandrus</i>	
Weed common name(s)	Bull Thistle	Himalayan Blackberry	Perennial Sweet Pea	rippgut	
Presence					
Presence or Absence	Present (all)				
Treated	Not all				
Infested area	0.5	acres			
Canopy Cover	50-75%	all			
Appearance	Germ'g./early growth	New growth			
Distribution pattern	Clumpy	Linear			
Photo documentation	954-957				
Weed Location					
Geographic location (ID)	L04-08				
Coordinate system	Ca. State Plane Zone 2				
Datum	NAD83				
Location data accuracy	< 1m				
Location description	Much of the HBB is downslope from the Penstock road in a disturbed area. Update: LALA4 patchy near gate, downslope. RUAR9 still heavy south of penstock, may have been treated - partial control; vinca major upslope side of new road				

General Information		ID: L05-08			
Collection date (mm/dd/yyyy)	5/21/2010				
Observer name(s)	Ethan Koenigs				
Site Information					
Site or facility name	EID Penstock				
Site address or other description	Between outlet of Forebay Reservoir and Tunnel.				
Ownership					
Land use type	Water Transport Facility				
Invaded vegetation type	Forest				
Gross Area	0.1	acres			
Disturbances & impacts	Pipe Maintenance				
Associated species	Ponderosa Pine, Annual Grasses, other weedy species, incense cedar.				
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Open area, fairly level.				
Weed Information					
Weed Identification					
Weed genus and species	<i>Aegilops triuncialis</i>	<i>Cirsium vulgare</i>	<i>Lathyrus latifolius</i>	<i>Bromus diandrus</i>	
Weed common name(s)	Barbed goatgrass	Bull Thistle	Perennial Sweet Pea	ripgut	
Presence					
Presence or Absence	Present (all)				
Treated	No				
Infested area	0.1	acres			
Canopy Cover	25-50%	<1%	1-5%	1-5%	
Appearance	New growth	New growth	New growth		
Distribution pattern	Scattered patchy	Linear	Scattered even		
Photo documentation	953				
Weed Location					
Geographic location (ID)	L05-08				
Coordinate system	Ca. State Plane Zone 2				
Datum	NAD83				
Location data accuracy	< 1m				
Location description	Between Penstock and access road to base of forebay. BGG is along Penstock fairly evenly; SP and BT are patchy. Update: Patch of LALA4 near road where penstock crosses; couple of VETH; AETR appears same				

General Information		ID: L03-09	
Collection date (mm/dd/yyyy)	5/21/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	EID Penstock		
Site address or other description	Between Forebay reservoir and Tunnel.		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	1500	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Ponderosa Pine, Mountain misery.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	open, exposed, gentle slope		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>	<i>Lathyrus latifolius</i>	
Weed common name(s)	Himalayan Blackberry	Perennial Sweet Pea	
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	1500	sq. ft.	
Canopy Cover	5-25%		
Appearance	New growth		
Distribution pattern	Clumpy	Linear	
Photo documentation	958, 959		
Weed Location			
Geographic location (ID)	L01-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Just west of L04-08; South side of road. Update: Partial control of RUAR9		

APPENDIX C**EID Weed Observation and Monitoring Form**

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
41/42	L15-08	SW	RUAR9 on shoulder Highway Cut Road
43	24-08	SW	RUAR9 coming back along N shoulder
44	L14-08	SW	RUAR9/LALA4 increasing
45	L14-08	SW	RUAR9/CIVU growing out to road
47	01-10	W	RUAR9/CIVU/VETH in turnout – N side
48	22-08	S	RUAR9 along road shoulder – low density
49	21-08	SW	RUAR9 NW side of road – 1 st
50	21-08	SW	RUAR9 NW side of road – 2 nd
51	21-08	SW	RUAR9 NW side of road – 3 rd patch
52	20-08	NW	RUAR9 coming back after treatment
53	19-08	NW	RUAR9 coming back
54	18-08	S	RUAR9 sparse but coming back
62/63	L13-08		R-83 access road – RUAR9/CIVU
064	04-09	N-NW	RUAR9 on E side of road
065	L12-08	NW	RUAR9 on NE side of road
Notes			
New camera			
0046 - CIVU			

General Information		ID: 04-09	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Road from Hazel Creek Road to Hazel Tunnel		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	300	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Ponderosa Pine, Incense Cedar, Big-leaf Maple, California Rose.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Gravel along Road		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>		
Weed common name(s)	Himalayan Blackberry		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	300	sq. ft.	
Canopy Cover	25-50%		
Appearance	New growth		
Distribution pattern	Clumpy		
Photo documentation	41/42		
Weed Location			
Geographic location (ID)	04-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Approx. 150' from gate at start of road. Minor occurrence. Slight increase from 2009.		

General Information		ID: 05-10	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Highway Cut Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	250-500	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer and Hardwood		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Disturbed area in a turnout along the road		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus armeniacus</i>	<i>Verbascum thapsus</i>	<i>Cirsium vulgare</i>
Weed common name(s)	Himalayan Blackberry	wooly mullein	bull thistle
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	300	sq. ft.	
Canopy Cover	50-75%		
Appearance	New growth		
Distribution pattern	Clumpy		
Photo documentation	47		
Weed Location			
Geographic location (ID)	05-10		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Along edge of road between L14-08 and 22-08 - Dense RUAR9		

General Information		ID: 16-08 & 03-09	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	El Dorado Ditch Rd.		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	800	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Ponderosa Pine, Dogwood, Big-leaf Maple, Thimble Berry, Native blackberry.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Shady near drainage.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>		
Weed common name(s)	Himalayan Blackberry		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	800	sq. ft.	
Canopy Cover	5-25%		
Appearance	Germ'g./early growth		
Distribution pattern	Clumpy		
Photo documentation	67/68		
Weed Location			
Geographic location (ID)	16-08, 03-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	2 pts, first occurrence at an outer bend in road (16-08); second occurrence at an interior bend in road at a draw - 300' down road, just above the canal (03-09); Update: modest increase in RUAR9.		

General Information		ID: 18-08	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Highway Cut Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	500	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer and Hardwood; some riparian associates.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)			
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>		
Weed common name(s)	Himalayan Blackberry		
Presence			
Presence or Absence (If P & A list Absence next to drop list)	Present (all)		
Treated	Growing Back		
Infested area	500	sq. ft.	
Canopy Cover	1-5%		
Appearance	New growth		
Distribution pattern	Clumpy	Linear	
Photo documentation	54		
Weed Location			
Geographic location (ID)	18-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	At sharp hairpin turn where road incline increases, on downhill side of road. Update: No LALA4; RUAR9 starting to return from edge of road.		

General Information		ID: 19-08	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Highway Cut Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	250-500	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer and Hardwood		
Environmental Conditions (e.g. soil conditions, exposure, etc.)			
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus armeniacus</i>		
Weed common name(s)	Himalayan Blackberry		
Presence			
Presence or Absence	Present (all)		
Treated	Growing Back		
Infested area	250	sq. ft.	
Canopy Cover	5-25%		
Appearance	New growth		
Distribution pattern	Clumpy	Linear	
Photo documentation	53		
Weed Location			
Geographic location (ID)	19-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Along edge of road. Update: RUAR9 coming back, esp. near stump.		

General Information		ID: 20-08	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Highway Cut Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	2,000	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer and Hardwood		
Environmental Conditions (e.g. soil conditions, exposure, etc.)			
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus armeniacus</i>	<i>Lathyrus latifolius</i>	
Weed common name(s)	Himalayan Blackberry	Perennial Sweet Pea	
Presence			
Presence or Absence	Present (not all species)	Perennial Sweet Pea absent	
Treated	Growing Back		
Infested area	2,000	sq. ft.	
Canopy Cover	25-50%	1-5%	
Appearance	New growth		
Distribution pattern	Clumpy		
Photo documentation	52	see log	
Weed Location			
Geographic location (ID)	20-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	At a wide shallow bend in the road. Update: Good control; no LALA4 ; RUAR9 controlled along shoulder in 2009 but coming back.		

General Information		ID: 21-08	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Highway Cut Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	1,250	sq. ft.	
Disturbances & impacts	Roadside maintenance	Other man-made disturbance	
Associated species	Mixed Conifer and Hardwood		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	shady, gentle slope		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>	<i>Rubus armeniacus</i>	
Weed common name(s)	Bull Thistle	Himalayan Blackberry	
Presence			
Presence or Absence	Present (not all species)		
Treated	Unknown		
Infested area	1,250	sq. ft.	
Canopy Cover	<1%	1-5%	
Appearance	New growth		
Distribution pattern	Scattered patchy		
Photo documentation	49-51		
Weed Location			
Geographic location (ID)	21-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	At a landing and a broad curve; 3 sep. Patches; 1st patch at the landing near slash pile; 2nd +100'; 3rd + 100'. Update: 1st - RUAR9 on NW side of road - small patch mixed w/native berry 100 sq. ft.; 2nd and 3rd - very sparse RUAR9.		

General Information		ID: 22-08	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Highway Cut Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	1250	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer and Hardwood		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	near small drainage, mostly shaded		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus armeniacus</i>		
Weed common name(s)	Himalayan Blackberry		
Presence			
Presence or Absence	Present (all)		
Treated	Growing Back		
Infested area	1250	sq. ft.	
Canopy Cover	5-25%		
Appearance	New growth		
Distribution pattern	Scattered patchy		
Photo documentation	48		
Weed Location			
Geographic location (ID)	22-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	2 patches about 300' apart; 1st patch is RUAR9 at a deep and wide bend in the road on S Side; 2nd is 300' up (west). Update: RUAR9 returning; near Pacific Yew.		

General Information		ID: 24-08	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Highway Cut Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	500	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer and Hardwood		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Northwest exposure; gentle slope		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus armeniacus</i>		
Weed common name(s)	Himalayan Blackberry		
Presence			
Presence or Absence	Present (all)		
Treated	Growing Back		
Infested area	250	sq. ft.	
Canopy Cover	1-5%		
Appearance	New growth		
Distribution pattern	Clumpy	Linear	
Photo documentation	43		
Weed Location			
Geographic location (ID)	24-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	1/8 to 1/4 mile from intersection with Hazel Vally Road. Update: About 90% reduction from 2008 to 2009, but coming back in 2010.		

General Information		ID: L06-09	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Hazel Creek Tunnel Road		
Ownership			
Land use type	Transportation Corridor	Water Transport Facility	
Invaded vegetation type	Forest		
Gross Area	2600	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Ponderosa Pine, Incense Cedar, Cinquefoil, Deer Brush, Annual Grasses.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Exposed; very rocky, volcanic soil		
Weed Information			
Weed Identification			
Weed genus and species	<i>Melilotus officinalis</i>		
Weed common name(s)	White Sweet Clover		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	1000	sq. ft.	
Canopy Cover	5-25%		
Appearance	New growth		
Distribution pattern	Clumpy	Scattered patchy	Linear
Photo documentation	71		
Weed Location			
Geographic location (ID)	L06-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	At the terminus of Hazel tunnel road (last 150') large clump of MEOF at end of road. Updat: Patchy along upper end of line, then large dense clump of MEOF.		

General Information		ID: L12-08	
Collection date (mm/dd/yyyy)	4-Jun		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	El Dorado Ditch		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	15,000	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Ponderosa Pine, Dogwood, Big-leaf Maple, Thimble Berry, native blackberry.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Mostly NW - NE exposer		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>	<i>Rubus armeniacus</i>	<i>Hypericum perforatum</i>
Weed common name(s)	Bull Thistle	Himalayan Blackberry	Klamath Weed
Presence			
Presence or Absence	Present (all)	75% in places along shoulder	
Treated	No		
Infested area	15,000	sq. ft.	
Canopy Cover	<1%	50-75%	<1%
Appearance	New growth		
Distribution pattern	Clumpy	Scattered even	
Photo documentation	65/66		
Weed Location			
Geographic location (ID)	L12-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Begins near intersection with Hazel Tunnel Road spur and extends down to next spur road to North. Update: RUAR9 very thick along E side of road; HYPE and CIVU scattered and light		

General Information		ID: L13-08	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Spillway 33/ Rd. 83		
Ownership			
Land use type	Water Transport Facility	Transportation Corridor	
Invaded vegetation type	Forest		
Gross Area	1,000	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, Ponderosa Pine, Incense Cedar, Thimble Berry, Annual Grasses.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	north slope, shady		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>	<i>Rubus armeniacus</i>	<i>Verbascum thapsus</i>
Weed common name(s)	Bull Thistle	Himalayan Blackberry	Wooly Mullein
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	500	sq. ft.	
Canopy Cover	<1%	25-50%	<1%
Appearance	Germ'g./early growth	New growth	
Distribution pattern	Clumpy	Linear	
Photo documentation	62/63		
Weed Location			
Geographic location (ID)	L13-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	Along road on downslope side. Update: RUAR9 increasing, moving into road.		

General Information		ID: L14-08	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Highway Cut Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	4500	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer and Hardwood		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	near a drainage,		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>	<i>Rubus armeniacus</i>	<i>Lathyrus latifolius</i>
Weed common name(s)	Bull Thistle (<1%)	Himalayan Blackberry	Perennial Sweet Pea
Presence			
Presence or Absence	Present (all)		
Treated	Growing Back		
Infested area	4,500	sq. ft.	
Canopy Cover	<1%	25-50%	5-25%
Appearance	New growth	New growth	
Distribution pattern	Clumpy	Scattered even	
Photo documentation	44,45	see photo log	
Weed Location			
Geographic location (ID)	L14-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Between 2 small drainages, main creek is just downslope (North). Update: Weeds still persist beyond limit of treated area. Increasing RUAR9 and LALA4.		

General Information		ID: L15-08	
Collection date (mm/dd/yyyy)	6/4/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Highway Cut Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	3000	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Douglas Fir, White Fir, Incense Cedar, Ponderosa Pine, Dogwood, Black Oak, Deer Brush		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NW facing slope, gentle slope, shady		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus armeniacus</i>	<i>Cirsium vulgare</i>	<i>Lathyrus latifolius</i>
Weed common name(s)	Himalayan Blackberry	Bull Thistle	Perennial Sweet Pea
Presence			
Presence or Absence	Present (all)		
Treated	Growing Back	partial	
Infested area	3000	sq. ft.	
Canopy Cover	25-50%	<1%	<1%
Appearance	New growth		
Distribution pattern	Clumpy	Linear	
Photo documentation	41/42		
Weed Location			
Geographic location (ID)	L15-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Along both shoulders from intersection w/ Hazel Valley Rd. RUAR9 very heavy in places especially on North-side of road. Update: Similar to 2009, RUAR9 growing bac;. Very little LALA4 or CIVU (<1%).		

APPENDIX C

EID Weed Observation and Monitoring Form

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
117	04-10	SE	Bridge, weed patch –MEOF, CIVU – in grassy area
118	17-08	N/W	LALA4 eradicated at Hazel Creek Tunnel
122	45-08	S/E	LALA4 eradicated
121	L09-08	S	LALA4 at Camp 5 (Building)
124	01-10	W/NW	VETH
125	02-10	N/NE	BRTE
126	02-10	S/SW	BRTE
127	03-10	E/NE	MEOF, BRTE near bridge
134	L07-08	E	CIVU and other weeds
135	L07-08	W	CIVU
137	L08-08	N/NW	MEOF, CIVU
Notes			

General Information		ID: 01-10	
Collection date (mm/dd/yyyy)	6/10/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 5		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	100	sq. ft.	
Disturbances & impacts	Canal Maintenance	Other man-made disturbance	
Associated species	White fir, Douglas Fir, black oak, Dogwood, Incense Cedar, other weedy species.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Exposed opening in tree cover/ NE-facing slope.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Verbascum thapsus</i>		
Weed common name(s)	wooly mullein		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	50	sq. ft.	
Canopy Cover	<1%		
	New growth		
Distribution pattern	Scattered patchy		
Photo documentation	124		
Weed Location			
Geographic location (ID)	01-10		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	N. side of canal, downslope - very minor occurrence ~ 15 plants		

General Information		ID: 02-10	
Collection date (mm/dd/yyyy)	6/10/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 5		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	1000	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	black oak, canyon live oak, buckbrush, white leaf manzanita, Sierra coffeeberry, mixed grasses		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Exposed, rocky area, volcanic soil		
Weed Information			
Weed Identification			
Weed genus and species	<i>Bromus tectorum</i>		
Weed common name(s)	cheat grass		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	1000	sq. ft.	
Canopy Cover	1-5%		
Seeding			
Distribution pattern	Scattered even	Linear	
Photo documentation	125		
Weed Location			
Geographic location (ID)	02-10		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m	No GPS	
Location description	NW. side of canal, near alarm 23		

General Information		ID: 03-10	
Collection date (mm/dd/yyyy)	6/10/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 5		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	1000	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Ponderosa pine, white fir, incense cedar, big-leaf maple, willow		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Exposed, disturbed area		
Weed Information			
Weed Identification			
Weed genus and species	<i>Bromus tectorum</i>	<i>melilotus officinalis</i>	
Weed common name(s)	cheat grass	sweet clover	
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	1000	sq. ft.	
Canopy Cover	1-5%		
	Seeding		
Distribution pattern	Scattered even	Linear	
Photo documentation	125		
Weed Location			
Geographic location (ID)	03-10		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	S. side of canal in a clearing at the end of a gravel road near a wood bridge across the canal.		

General Information		ID: 04-10	
Collection date (mm/dd/yyyy)	6/10/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 4		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	3000	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	white fir, ponderosa pine, douglas fir, incense cedar, big leaf maple		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NE - facing slope, a little wet - use Caution when treating.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Hypericum perforatum</i>	<i>Cirsium vulgare</i>	<i>Melilotus officinalis</i>
Weed common name(s)	Klamath weed	bull thistle,	sweet clover
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	300	sq. ft.	
Canopy Cover	1-5%		
	New growth		
Distribution pattern	Scattered patchy		
Photo documentation	117		
Weed Location			
Geographic location (ID)	04-10		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m	No GPS	
Location description	S. side of canal, near end of rd. 83, near bridge		

General Information		ID: 17-08	
Collection date (mm/dd/yyyy)	6/10/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 4		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	250	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Ponderosa Pine, Douglas Fir, Black Oak, Mountain Misery, Deer Brush		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Northwest facing slope		
Weed Information			
Weed Identification			
Weed genus and species	<i>Leucanthemum vulgare</i>	<i>Lathyrus latifolius</i>	
Weed common name(s)	Ox-eye Daisy	Perennial Sweet Pea present	
Presence			
Presence or Absence	Absent		
Treated	Yes		
Infested area		sq. ft.	
Canopy Cover	<1%		
Distribution pattern			
Photo documentation	118		
Weed Location			
Geographic location (ID)	17-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Along canal near Hazel Crk tunnel. Update: LALA4 and LEVU eradicated.		

General Information		ID: 45-08	
Collection date (mm/dd/yyyy)	6/10/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 5		
Ownership	EID		
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	1000	sq. ft.	
Disturbances & impacts	Canal Maintenance	Roadside maintenance	
Associated species	Ponderosa Pine, Douglas Fir, White Fir, other weedy species.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Moderately shaded, N-facing slope		
Weed Information			
Weed Identification			
Weed genus and species	<i>Lathyrus latifolius</i>		
Weed common name(s)	Perennial Sweet Pea		
Presence			
Presence or Absence	Present (all)		
Treated	Most but not all		
Infested area	400	sq. ft.	
Canopy Cover	25-50%		
	New growth		
Distribution pattern	Scattered even		
Photo documentation	122		
Weed Location			
Geographic location (ID)	45-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	West end of Beat 5 near access gate and tunnel to Forebay on north bank. Update: Fairly heavy along fence., N bank - eradicated ~20' from canal, slight increase from 2009. Some LALA4 outside gate.		

General Information		ID: L09-08	
Collection date (mm/dd/yyyy)	6/10/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 5		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	1000	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Ponderosa Pine, Douglas Fir, Black Oak, Big-leaf Maple, Deer Brush		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	northwest exposure, partly shaded		
Weed Information			
Weed Identification			
Weed genus and species	<i>Lathyrus latifolius</i>		
Weed common name(s)	Perennial Sweet Pea		
Presence			
Presence or Absence	Present (not all species)		
Treated	Yes		
Infested area	1000	sq. ft.	
Canopy Cover	50-75%		
Appearance	New growth		
Distribution pattern	Clumpy	Scattered patchy	
Photo documentation	121		
Weed Location			
Geographic location (ID)	L09-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Just below Camp 5. Update: LALA4 up to fence on up-slope (south)side, 50-75% cover. North bank bench clear.		

General Information		ID: L07-08	
Collection date (mm/dd/yyyy)	6/10/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 5		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	2000	sq. ft.	
Disturbances & impacts	Canal Maintenance	Roadside maintenance	
Associated species	Ponderosa pine, Douglas Fir, black oak, Dogwood, Incense Cedar, other weedy species.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Gravel road/ NE-facing slope		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>	<i>Melilotus officinalis</i>	
Weed common name(s)	bull thistle	sweet clover	
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	2000	sq. ft.	
Canopy Cover	5-25%		
	New growth		
Distribution pattern	Scattered patchy		
Photo documentation	134-136		
Weed Location			
Geographic location (ID)	L07-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	Along gravel rd. near canal. Update: Appears similar to 2009, slight increase.		

General Information		ID: L08-08	
Collection date (mm/dd/yyyy)	6/10/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 5		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	0.3	acres	
Disturbances & impacts	Roadside maintenance		
Associated species	Incense Cedar, White Fir, Douglas Fir, Big-leaf Maple, Other weeds		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Gravel/Graded area		
Weed Information			
Weed Identification			
Weed genus and species	<i>Verbascum thapsus</i>	<i>Cirsium vulgare</i>	<i>Lathyrus latifolius</i>
Weed common name(s)	Woolly Mullein	Bull Thistle	Perennial Sweet Pea
			<i>Melilotis officinalis</i>
			Yellow Sweet Clover
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	5000-7000	sq. ft.	
Canopy Cover	1-5%	all	
Appearance	New growth		
Distribution pattern	Scattered patchy	Linear	
Photo documentation	137		
Weed Location			
Geographic location (ID)	L08-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Near camp 5; along road between canal and road on downslope bank. Overall weeds 1-5%, slight increase. Update: MEOF appearing in patches; CIVU on slope to canal; LALA4 returning. Doesn't appear treated in 2009; VETH in road.		

APPENDIX C**EID Weed Observation and Monitoring Form**

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
152	08-09	S	CIVU and RUAR9 in turnout W side of road
153	L25-08	S	CIVU on E side of road
154	07-09	SE	BRTE
155	L07-09	N	BRTE and BRDID2 along road
156	L07-09	S	BRTE and BRDID2 along road
160	L22-08	W/SW	MEOF on side of road
161	34-08	NE	HYPE controlled/treated – some still present
162	33-08	SE	LALA4 – whole area – Canal Beat 3
163	33-08	SE	LALA4 – Canal Beat 3
164	33-08	NW	TOAR – Canal Beat 3
165	L24-08	NE	TOAR – Camp P Road
166/167	32-08	SW/NE	CIVU – Camp P Road
168	L23-08	E	Good control – Camp P Road
169	31-08	E	TOAR – very minor – Camp P Road
170	30-08	E	TOAR – mixed with other vegetation – Camp P Road
Notes			

Photo Log

Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
171	L20-08	SE	RUAR9 and LALA4 on upslope side of road
172	L17-08	W	Treated area at top of road near gate
173	L17-08	W	Treated portion of road – LALA4 still dense along edges
174/175	L17-08	NW/SE	Treated edge of road – some LALA4 still remains
180/181	29-08	SE/W	BRDID2 and LEVU – many other weeds
182/183	L21-08	SE/NW	Good control along road – mechanical and chemical
184	25-08	S	CIVU in clearing

Notes

Page 2

General Information		ID: 07-09	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp 2 Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	150	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Canyon Live Oak, Doug Fir, Incense Cedar, Deer Brush		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	West-facing slope, rocky soil.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Bromus tectorum</i>		
Weed common name(s)	Cheat grass		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	150	sq. ft.	
Canopy Cover	5-25%		
Appearance	Seeding		
Distribution pattern	Clumpy		
Photo documentation	154		
Weed Location			
Geographic location (ID)	07-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Approximately 250 ft. from second gate, on west side of the road. Update: Appears same as 2009.		

General Information		ID: 08-09	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp 2 Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	1000	sq. ft.	
Disturbances & impacts	Roadside maintenance	clearing next to road	
Associated species	Douglas Fir, Incense Cedar, Dogwood, various weedy species.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Disturbed area		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>	<i>Rubus armeniacus</i>	<i>Verbascum thapsus</i>
Weed common name(s)	Bull Thistle	Himalayan Blackberry	Wooly Mullein
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	1000	sq. ft.	
Canopy Cover	<1%		
Appearance	New growth	New growth	
Distribution pattern	Scattered even	Clumpy	
Photo documentation	152		
Weed Location			
Geographic location (ID)	08-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Large clearing on west side of road. Update: Not treated. RUAR9 new this year (1 plant); VETH (2 plants).		

General Information		ID: 25-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Spur Road north of 10N40N, just past old Camp 4 bridge.		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	1,200	sq. ft.	
Disturbances & impacts	Roadside maintenance	Other man-made disturbance	Large landing adjacent
Associated species	Ponderosa Pine, Sugar Pine, Black Oak, Douglas Fir, Grasses		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Flat area in a forest clearing		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>		
Weed common name(s)	Bull Thistle		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	1,200	sq. ft.	
Canopy Cover	5-25%		
Appearance	New growth		
Distribution pattern	Scattered patchy		
Photo documentation	184		
Weed Location			
Geographic location (ID)	25-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Update: Appears same as 2008/2009. Most are located within the clearing to the west of the road. Slight increase in CIVU density.		

General Information		ID: 29-08			
Collection date (mm/dd/yyyy)	6/29/2010				
Observer name(s)	Ethan Koenigs				
Site Information					
Site or facility name	Access Road				
Site address or other description	Camp P Road: Near intersection with Camp 3 Road				
Ownership					
Land use type	Transportation Corridor				
Invaded vegetation type	Forest				
Gross Area	5000	sq. ft.			
Disturbances & impacts	Roadside maintenance		Clearing on road and SPI Plantation		
Associated species	Mixed Conifer; Deer Brush, multiple weed sp.				
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Mostly Gravel within landing/clearing; full sun; flat				
Weed Information					
Weed Identification					
Weed genus and species	<i>Bromus tectorum</i>	<i>Leucanthemum vulgare</i>	<i>Bromus diandrus</i>	<i>Rubus armeniacus</i>	
Weed common name(s)	Cheat grass (scattered, 5%)	Ox-eye Daisy (<1%)	Ripgut Brome (5-10%)	Himalyan Blackberry (1 clump)	
Presence					
Presence or Absence	Present (not all species)				
Treated	Yes				
Infested area	2,500	sq. ft.			
Canopy Cover	5-25%	<1%	5-25%	<1%	
Appearance	Flowering	New growth	Seeding	Flowering	
Distribution pattern	Scattered patchy	Linear	Scattered patchy	Clumpy	
Photo documentation	180/181				
Weed Location					
Geographic location (ID)	29-08				
Coordinate system	Ca. State Plane Zone 2				
Datum	NAD83				
Location data accuracy	< 1m				
Location description	At large clearing just before intersection of Camp P Road and Camp 3 Road. Update: Area has been treated. No CESO3 or HYPE observed; patchy BRDID2 and BRTE;				

General Information		ID: 30-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp P Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	250	sq. ft.	
Disturbances & impacts	Roadside maintenance	Other man-made disturbance	
Associated species	Mixed Conifer; Big-leaf Maple, Dog Wood, California Blackberry.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NW exposure, mostly shade		
Weed Information			
Weed Identification			
Weed genus and species	<i>Torilis arvensis</i>		
Weed common name(s)	Hedge Parsley		
Presence			
Presence or Absence	Present (all)		
Treated	Unknown		
Infested area	200	sq. ft.	
Canopy Cover	1-5%		
Appearance	Flowering		
Distribution pattern	Scattered even		
Photo documentation	170		
Weed Location			
Geographic location (ID)	30-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	At a gentle bend in the road; upslope side (primarily) near a stump & slash pile. Update: Overall area appears about the same; density is reduced.		

General Information		ID: 31-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp P road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	100	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer; Big-leaf Maple, Dog Wood		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	N - NW exposure		
Weed Information			
Weed Identification			
Weed genus and species	<i>Torilis arvensis</i>		
Weed common name(s)	Hedge Parsley		
Presence			
Presence or Absence	Present (all)		
Treated	Not all	(partial along shoulder)	
Infested area	100	sq. ft.	
Canopy Cover	1-5%		
	New growth		
Distribution pattern	Scattered even		
Photo documentation	169		
Weed Location			
Geographic location (ID)	31-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	On shoulder of road (north side); very minor occurrence. Update: Same as 2008-2009, partial control along road, very minor occurrence.		

General Information		ID: 32-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp P Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	750	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer, Big-leaf Maple		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NW exposure; relatively recent disturbance;		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>	<i>Torilis arvensis</i>	
Weed common name(s)	Bull Thistle	Hedge Parsley	
Presence			
Presence or Absence	Present (all)		
Treated	Not all		
Infested area	750	sq. ft.	
Canopy Cover	1-5%		
	New growth	Flowering	
Distribution pattern	Scattered patchy	Clumpy	
Photo documentation	166/167		
Weed Location			
Geographic location (ID)	32-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Down slope in an area that was recently graded, straw still remains from erosion control. Update: partially treated near upper end; CIVU - 12-18 plants		

General Information		ID: 33-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 3		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	1,500	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Mixed Conifer; Ponderosa Pine, Douglas Fir, Incense Cedar, Canyon Live Oak, other weedy species.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)			
Weed Information			
Weed Identification			
Weed genus and species	<i>Lathyrus latifolius</i>	<i>Rubus armeniacus</i>	<i>Torilis arvensis</i>
Weed common name(s)	Perennial Sweet Pea	Himalayan Blackberry	Hedge Parsley
Presence			
Presence or Absence	Present (all)	(RUAR9 nearly gone)	
Treated	Unknown		
Infested area	1500	sq. ft.	
Canopy Cover	1-5%		
	New growth	Flowering	Flowering
Distribution pattern	Scattered patchy		
Photo documentation	162, 163, 164		
Weed Location			
Geographic location (ID)	33-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	South bank of the canal; near access road terminus. Update: Same as 2009; RUAR9 almost gone.		

General Information		ID: 34-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Rock Crusher Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	250	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer; cinquefoil, tarweed		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Gently sloping, north-facing exposure in a clearing.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>	<i>Hypericum perforatum</i>	
Weed common name(s)	Bull Thistle	Klamath Weed	
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	25	sq. ft.	
Canopy Cover	1-5%		
Appearance	Flowering	New growth	
Distribution pattern	Clumpy		
Photo documentation	161		
Weed Location			
Geographic location (ID)	34-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Small clearing on southeast side of road. Update: Largely controlled.		

General Information		ID: L07-09	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp 2 Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	0.4	acres	
Disturbances & impacts	Roadside maintenance		
Associated species	Canyon Live Oak, Manzanita, Douglas Fir; various other grasses and forbes.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	West-facing slope; very exposed, rocky soil.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Bromus tectorum</i>	<i>Bromus diandrus</i>	
Weed common name(s)	Cheat grass	Ripgut Brome	
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	0.4	acres	
Canopy Cover	25-50%		
Appearance	Senesc.	Seeding	
Distribution pattern	Clumpy	Linear	Scattered patchy
Photo documentation	155	154	
Weed Location			
Geographic location (ID)	L07-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Beginning past second gate, near rock outcrops & extending to 250' before tender's house; along road shoulders. Variable weed density. Update: Same as 2009.		

General Information		ID: L17-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp 3 Road		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	14,000-15,000	sq. ft.	
Disturbances & impacts	Roadside maintenance	Turnouts	
Associated species	Mixed Conifer & Hardwood - many weedy species on shoulder.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Road is near Ogilby Creek at terminus.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i> , <i>Bromus tectorum</i> <i>Torilis arvensis</i> , <i>Rubus discolor</i> <i>Hypericum perforatum</i> <i>Lathyrus latifolius</i>		
Weed common name(s)	Bull Thistle, Cheat grass	Hedge Parsley, Himalayan Blackberry	Klamath Weed Perennial Sweet Pea
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	14,000-15,000	sq. ft.	
Canopy Cover	1-5%		
	Flowering	New growth	Seeding
Distribution pattern	Clumpy	Linear	Scattered patchy
Photo documentation	172-175		
Weed Location			
Geographic location (ID)	L17-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	From gate on Camp P to canal. Update: Moderate control - LALA4 and RUAR9 still heavy on edge of road. Moderate to good control of HYPE and BRTE on upper section of road. Good control on edge of road - 2-3' from edge. LALA4 controlled about 65% - still remains on edge of road.		

General Information		ID: L21-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs,		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp P road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	12,000	sq. ft.	
Disturbances & impacts	Roadside maintenance	SPI Plantation to North-east side of road	
Associated species	Mixed Conifer; Deer Brush, Maple		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Gravel road and shoulder.		
Weed Information			
Weed Identification			
Weed genus and species	<i>B. tectorum</i>	<i>H.perforatum,</i>	<i>L. latifolius</i> <i>Rubus armeniacus</i>
Weed common name(s)	Cheat grass	Klamath Weed	Perennial Sweet Pea (minor) Himalayan Blackberry (few)
Presence			
Presence or Absence	Present (not all species)		
Treated	Yes	(chemical and mechanical)	
Infested area	12,000	sq. ft.	
Canopy Cover	<1%		
Appearance	New growth		
Distribution pattern	Clumpy	Linear	
Photo documentation	182/183		
Weed Location			
Geographic location (ID)	L21-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Along beginning of Camp P road, near intersection with 10N40N; extends for about 600'(ft) along road. Update: Partial control with mechanical and chemical means. No CIVU, TOAR, or VETH observed this year; minor RUAR9; other weeds also very low density		

General Information		ID: L22-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Rock Crusher road		
Ownership	USFS/SPI		
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	0.5	acres	
Disturbances & impacts	Roadside maintenance	SPI plantation	
Associated species	Mixed Conifer, Deer Brush, weedy species along road.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Full sun; western exposure		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i> , <i>H. perforatum</i>	<i>Bromus tectorum</i>	<i>Melilotus alba</i> <i>Verbascum thapsus</i>
Weed common name(s)	Bull Thistle, Klamath Weed	Cheat Grass	White Sweet Clover Woolly Mullein
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	11,000	sq. ft.	
Canopy Cover	1-5%	<1%	
	Flowering	New growth	Seeding
Distribution pattern	Scattered patchy		
Photo documentation	160		
Weed Location			
Geographic location (ID)	L22-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Linear stretch from gate all along SPI plantation to top of hill and FS boundary. Update: Most weeds are on SPI side of road (west). Slight increase in VETH and BRTE (1-5%) but overall good control, others <1% canopy.		

General Information		ID: L23-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp P Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	500	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Mixed Conifer; Big-leaf Maple; grasses & forbs		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NW exposure		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>	<i>Torilis arvensis</i>	
Weed common name(s)	Bull Thistle	Hedge Parsley	
Presence			
Presence or Absence	Absent		
Treated	Yes		
Infested area	500	sq. ft.	
Canopy Cover	<1%		
	Flowering		
Distribution pattern	Clumpy		
Photo documentation	168		
Weed Location			
Geographic location (ID)	L23-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	Just before bend in the road (heading downslope) small turnout on north side; minor occurrence. Update: Good control - no weeds.		

General Information		ID: L24-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp P Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	200	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer; Big-Leaf Maple, Dogwood		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Shady, NW exposure		
Weed Information			
Weed Identification			
Weed genus and species	<i>Torilis arvensis</i>		
Weed common name(s)	Hedge Parsley		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	200	sq. ft.	
Canopy Cover	5-25%		
	New growth		
Distribution pattern	Linear		
Photo documentation	165		
Weed Location			
Geographic location (ID)	L24-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Near end of road; 500' to gate. Update: No CIVU observed; TOAR appears about the same density.		

General Information		ID: L25-08	
Collection date (mm/dd/yyyy)	6/29/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp 2 Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	900	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Mixed Conifer		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Gravel shoulder along road - moderately dense forest - flat.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>		
Weed common name(s)	Bull Thistle		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	900	sq. ft.	
Canopy Cover	<1%		
Appearance	New growth		
Distribution pattern	Scattered patchy	Linear	
Photo documentation	153		
Weed Location			
Geographic location (ID)	L25-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Primarily east side of road near small drainage. Update: Appears the same as 2009 - very minor occurrence.		

APPENDIX C

EID Weed Observation and Monitoring Form

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
188/189	06-09	S/SW	CIVU near canal
196	L19-08	SE	Control of LALA4
197	L18-08	SE	Control of LALA4/RUAR9
198	28-08	SE	Minor amount of LALA4
199	29-08	SE	Access road terminus at spillway (Camp P) – LALA4
202	26-08	SW	Controlled – RUAR9
203	05-09	S	Good control – RUAR9 and LEVU
204	50-08	W	LEVU near Alarm 15
206	09-09	E	BRTE near Plum Siphon
Notes			

General Information		ID: 05-09	
Collection date (mm/dd/yyyy)	7/1/2010		
Observer name(s)	Ethan Koenigs,		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 4 at Esmerelda Crk. Flume over canal		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	1000	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Mixed Conifer and Montane Riparian; bracken fern, native blackberry, mixed grasses & forbs.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Riparian area		
Weed Information			
Weed Identification			
Weed genus and species	<i>Leucanthemum vulgare</i>		
Weed common name(s)	Ox-eye Daisy		
Presence			
Presence or Absence	Present (not all species)		
Treated	Yes		
Infested area	1000	sq. ft.	
Canopy Cover	<1%		
Appearance	New growth	Flowering	
Distribution pattern	Scattered patchy		
Photo documentation	203/204		
Weed Location			
Geographic location (ID)	05-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	Near propane tank & creek flume at tunnel exit. Only a few LEVU near flume; good control; no RUAR9.		

General Information		ID: 06-09	
Collection date (mm/dd/yyyy)	7/1/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 3		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	800	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Mixed Conifer-hardwoods; Douglas Fir, Incense Cedar, Black Oak, Dogwood, yarrow, mixed annual grasses.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Shady, north-facing slope.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i>		
Weed common name(s)	Bull Thistle		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	800	sq. ft.	
Canopy Cover	1-5%		
Appearance	New growth		
Distribution pattern	Scattered patchy		
Photo documentation	188, 189		
Weed Location			
Geographic location (ID)	06-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	On bench north of canal, near rock pile and just downstream of spillway. Very minor occurrence. Update: Same as 2009. Approximately 25 plants.		

General Information		ID: 09-09	
Collection date (mm/dd/yyyy)	7/1/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 2, Plum Creek siphon entrance		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	1500	sq. ft.	
Disturbances & impacts	Canal Maintenance	Maintained area around spillway and siphon entrance	
Associated species	Mixed Conifer - other weedy species		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Open & exposed-disturbed gravelly soil.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Bromus tectorum</i>		
Weed common name(s)	Cheat grass		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	1,500	sq. ft.	
Canopy Cover	1-5%		
Appearance	Senesc.	Seeding	
Distribution pattern			
Photo documentation	206		
Weed Location			
Geographic location (ID)	09-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Along canal, between spillway and entrance to siphon. Update: Same as 2009.		

General Information		ID: 26-08	
Collection date (mm/dd/yyyy)	7/1/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 3		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	500	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Big leaf maple, Thimbleberry, Canyon Live Oak, Douglas Fir, Incense Cedar		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Very exposed, northwest facing slope, rocky soil.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus armeniacus</i>		
Weed common name(s)	Himalayan Blackberry		
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	50	sq. ft.	
Canopy Cover	<1%		
Appearance	New growth		
Distribution pattern	Clumpy		
Photo documentation	202		
Weed Location			
Geographic location (ID)	26-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Clump of Himalayan blackberry below flume; steep slope. Update: Good control. Small amount remaining far downslope.		

General Information		ID: 50-08	
Collection date (mm/dd/yyyy)	7/1/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 4 near Esmerelda Tunnel		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	750	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Mixed Conifer, Montane Riparian; native blackberry; other weedy species		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Disturbed		
Weed Information			
Weed Identification			
Weed genus and species	<i>Leucanthemum vulgare</i>		
Weed common name(s)	Ox-eye Daisy		
Presence			
Presence or Absence	Present (all)		
Treated	Unknown		
Infested area	750	sq. ft.	
Canopy Cover	1-5%		
Flowering			
Distribution pattern	Scattered even		
Photo documentation	202		
Weed Location			
Geographic location (ID)	50-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	On the north side of canal near spillway 30 (Esmerelda Creek). Update: Sparse LEVU remaining.		

General Information		ID: L18, 19-08; 27-08, 28-08	
Collection date (mm/dd/yyyy)	7/1/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 3		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	0.25	acres	
Disturbances & impacts	Canal Maintenance	Other man-made disturbance	
Associated species	Mixed Conifer & Hardwood - Incense Cedar, Canyon Live Oak, Thimbleberry, Black Oak; Montane riparian as well.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	West facing slope near Ogilby Creek.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Lathyrus latifolius</i>	<i>Rubus armeniacus</i>	
Weed common name(s)	Perennial Sweet Pea	Himalayan Blackberry	
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	0.25	acres	
Canopy Cover	1-5%		
	New growth		
Distribution pattern	Clumpy	Linear	
Photo documentation	96-99		
Weed Location			
Geographic location (ID)	L18-08, L19-08, 27-08, 28-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Linear stretch on downslope side of flume up to the end of access road near alarm station on Ogilby Creek. Update: Good control - a few patches of LALA4, very little RUAR9; LALA4 patch near Spillway Access Road still present/treated but not controlled		

APPENDIX C**EID Weed Observation and Monitoring Form – Roads Near Camp 1**

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
236	41-08	W	Weed control near canal intake/some LALA4
237	41-08	W	LALA4 along river near intake
238	47-08	E	Multiple weeds to east of intake facility
239	47-08	NE	LALA4 above (N) intake facility
246/247	40-08	W/SW	LEVU and VETH along flume
248	48-08	E	Few LEVU
249	10-09	NW	Good control of HYPE, one small patch along fence
250	7-8-10-001	E	New point - HYPE
251/252	L35-08	SW/NE	Large patch of VETH and BRTE near flume – east side of L35-08
253	L35-08	NW	Good control, weedy outside fence
254	L34-08	NW	Good control, weedy outside fence (VETH)
255	L33-08	SE	VETH outside fence
256	L33-08	NW	HYPE and VETH outside fence
257	L33-08	E	VETH – mostly outside fence
258	L33-08	E	Good control along canal
Notes			

Photo Log

Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
259	38-08	N	LALA4 still heavy; no CYSC4
260	L32-08	W	Tall MEOF along Camp 1 canal access road
261	39-08	NW	Clearing surrounded by weeds
262	L29-08	E	MEOF in turnout
263	L29-08	W	MEOF, HYPE, and BRTE
264/265	L29-08	W	MEOF and BRTE along road
266	37-08	SW	BRDID2, MEOF on road shoulder
267	L30-08	S	LALA4 near house
268	L30-08	N	BRTE and LALA4 along road
269	36-08	S	Good control – no noxious weeds
270	L28-08	NW	Weedy road – MEOF visible
271	L28-08	NW	Upper end - MEOF
272	L26-08	S	Good control along “old” section of road
273	L26-08	N-NW	No MEOF, dense BRDID2 and BRTE on down slope
274	L27-08	NW	Minor BRTE and other weeds

Notes

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General Information		ID: 06-10	
Collection date (mm/dd/yyyy)	7/8/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 1		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	300	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Sierran Mixed conifer; big leaf maple, grasses		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NW Exposure, rocky soil, near a small drainage		
Weed Information			
Weed Identification			
Weed genus and species	<i>Hypericum perforatum</i>		
Weed common name(s)	Klamath weed		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	300	sq. ft.	
Canopy Cover	5-25%		
Appearance	Flowering		
Distribution pattern	Clumpy		
Photo documentation	250		
Weed Location			
Geographic location (ID)	06-10		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	Near a mini tunnel that canal passes through; next to a small drainage; minor occurrence		

General Information		ID: 10-09	
Collection date (mm/dd/yyyy)	7/8/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 1		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	2,000	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Big leaf maple, black oak, ponderosa pine, annual grasses		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Near a small drainage		
Weed Information			
Weed Identification			
Weed genus and species	<i>Hypericum perforatum</i>		
Weed common name(s)	Klamath Weed		
Present (not all species)			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	25	sq. ft.	
Canopy Cover	<1%		
Appearance	Flowering		
Distribution pattern	Clumpy		
Photo documentation	249		
Weed Location			
Geographic location (ID)	36-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	W. side of small bridge over drainage; Update: Almost eradicated.		

General Information		ID: 36-08	
Collection date (mm/dd/yyyy)	7/8/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	El Dorado Tunnel Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	400	sq. ft.	
Disturbances & impacts	Roadside maintenance	Turnout in road	
Associated species	Ponderosa Pine, Douglas Fir, Blue Wild Rye, Alder, Big Leaf Maple, Willows		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Flat area, near Alder Creek		
Weed Information			
Weed Identification			
Weed genus and species	<i>Melilotus officinalis</i>	<i>Bromus tectorum</i>	
Weed common name(s)	White Sweet Clover	Cheat grass	
Present (not all species)			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	0	sq. ft.	
Canopy Cover	<1%		
Appearance	New growth	Seeding	
Distribution pattern	Scattered even		
Photo documentation	269		
Weed Location			
Geographic location (ID)	36-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	El Dorado Tunnel road, 100' from gate & near siphon; within 100' of Alder Crk. Update: Good Control, Minimal weeds.		

General Information		ID: 37-08	
Collection date (mm/dd/yyyy)	7/8/2010		
Observer name(s)	Ethan Koenigs,	Logan McCarthy	
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp 1 road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	250	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Black Oak, Douglas fir, Incense Cedar, Deer Brush, Yarrow		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	gravel road		
Weed Information			
Weed Identification			
Weed genus and species	<i>Bromus tectorum</i>	<i>Melilotus officinalis</i>	<i>Bromus diandrus</i>
Weed common name(s)	Cheat grass	White Sweet Clover	Ripgut Brome
Weed Description			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	250	sq. ft.	
Canopy Cover	1-5%		
Appearance	New growth	Seeding	Senesc.
Distribution pattern	Clumpy	Linear	
Photo documentation	266		
Weed Location			
Geographic location (ID)	37-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	West side of road, half-way up. Sweet clover very minimal, mostly ripgut and cheat grass. Update: small occurrence, no change since 2009.		

General Information		ID: 38-08	
Collection date (mm/dd/yyyy)	7/8/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Beat 1		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	300	sq. ft.	
Disturbances & impacts	Canal Maintenance	Other man-made disturbance	
Associated species	Mixed conifer; Bracken Fern		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NW Exposure		
Weed Information			
Weed Identification			
Weed genus and species	<i>Lathyrus latifolius</i>	<i>Cytisus scoparius</i>	
Weed common name(s)	Perennial Sweet Pea	Scotch Broom	
Presence			
Presence or Absence	Present (all)	(CYSC4 Eradicated)	
Treated	Yes		
Infested area	300	sq. ft.	
Canopy Cover	1-5%		
Appearance	Flowering		
Distribution pattern	Clumpy		
Photo documentation	259		
Weed Location			
Geographic location (ID)	38-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	Near Camp 1 at entrance to Alder Creek Siphon; mostly on north side of canal along fence line; small area on south side of canal; UPDATE: LALA4 still present - mostly outside fence but some on S. side still present; CYSC4 removed		

General Information		ID: 39-08	
Collection date (mm/dd/yyyy)	7/8/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp 1 road (East fork of road)		
Ownership			
Land use type	Transportation Corridor	Water Transport Facility	
Invaded vegetation type	Forest		
Gross Area	3500	sq. ft.	
Disturbances & impacts	Roadside maintenance	Other man-made disturbance	
Associated species	Ponderosa Pine, Douglas Fir, Black Oak, Deer Brush, Blue Wild Rye, Curly Dock		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Northwest-facing slope, rocky soil, very exposed		
Weed Information			
Weed Identification			
Weed genus and species	<i>Melilotus officinalis</i>	<i>Bromus tectorum</i>	
Weed common name(s)	Sweet Clover	Cheat Grass	
Present (not all species)			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	1000	sq. ft.	
Canopy Cover	1-5%	1-5%	
Appearance	New growth	Senesc.	
Distribution pattern	Clumpy	Scattered patchy	
Photo documentation	261		
Weed Location			
Geographic location (ID)	39-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Large clearing; weeds primarily around the margin. Update: Very little MEOF. BRTE around edge as last year.		

General Information		ID: 40-08		
Collection date (mm/dd/yyyy)	7/8/2010			
Observer name(s)	Ethan Koenigs			
Site Information				
Site or facility name	El Dorado Canal			
Site address or other description	Beat 1			
Ownership				
Land use type	Water Transport Facility			
Invaded vegetation type	Forest			
Gross Area	500 sq. ft.			
Disturbances & impacts	Canal Maintenance			
Associated species	Montane Riparian; Mixed Conifer			
Environmental Conditions (e.g. soil conditions, exposure, etc.)	sandy soil			
Weed Information				
Weed Identification				
Weed genus and species	<i>Leucanthemum vulgare</i>	<i>Verbascum thapsus</i>		
Weed common name(s)	Ox-eye Daisy	Wooly Mullein (dozen plants)		
Presence				
Presence or Absence	Present (all)			
Treated	Needs Additional Treatment			
Infested area	500 sq. ft.			
Canopy Cover	1-5%	<1%		
Appearance	Flowering	Flowering		
Distribution pattern	Scattered even	Scattered even		
Photo documentation	246/247			
Weed Location				
Geographic location (ID)	40-08			
Coordinate system	Ca. State Plane Zone 2			
Datum	NAD83			
Location data accuracy	1-5m			
Location description	Near Flume 1. UPDATE: LEVU and VETH both returning. LEVU on both sides of canal.			

General Information		ID: 41-08		
Collection date (mm/dd/yyyy)	7/8/2010			
Observer name(s)	Ethan Koenigs			
Site Information				
Site or facility name	Diversion Dam			
Site address or other description	Northwest side of facility			
Ownership				
Land use type	Water Transport Facility			
Invaded vegetation type	Forest			
Gross Area	5,000 sq. ft.			
Disturbances & impacts	Facility Maintenance			
Associated species	Mixed Confier, Black Oak, Black Cottonwood			
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Rocky, exposed			
Weed Information				
Weed Identification				
Weed genus and species	<i>Lathyrus latifolius</i>	<i>Verbascum thapsus</i>	<i>Leucanthemum vulgare</i>	
Weed common name(s)	Sweet Pea	Wooly Mullein	Ox-eye Daisy	
Present (not all species)				
Presence or Absence	Present (not all species)			
Treated	Yes	(physical removal - weed trimmer)		
Infested area	2,000 sq. ft.			
Canopy Cover	5-25%	<1%	<1%	
Appearance	Flowering			
Distribution pattern	Scattered patchy			
Photo documentation	236/237			
Weed Location				
Geographic location (ID)	41-08			
Coordinate system	Ca. State Plane Zone 2			
Datum	NAD83			
Location data accuracy	1-5m			
Location description	Disturbed area adjacent to Diversion Dam and river; also along road. UPDATE: Overall area reduced; LALA4 concentrated in rocks between "Boater Put-In" sign and fish ladder.			

General Information		ID: 47-08		
Collection date (mm/dd/yyyy)	7/8/2010			
Observer name(s)	Ethan Koenigs			
Site Information				
Site or facility name	Diversion Dam			
Site address or other description	Northeast side of facility			
Ownership				
Land use type	Water Transport Facility			
Invaded vegetation type	Forest			
Gross Area	0.25 acres			
Disturbances & impacts	Facility Maintenance			
Associated species	Mixed Conifer, Black Oak			
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Very exposed, sunny.			
Weed Information				
Weed Identification				
Weed genus and species	<i>Lathyrus latifolius</i>	<i>Verbascum thapsus</i>	<i>Centaurea solstitialis</i>	<i>Bromus tectorum</i>
Weed common name(s)	Sweet Pea (50%)	Woolly Mullein (<1%)	Star Thistle (<1%)	Cheat Grass (10%)
Present (not all species)				
Presence or Absence	Present (not all species)	(No CIVU or MEOF)		
Treated	Unknown			
Infested area	10,000 sq. ft.			
Canopy Cover	50-75%	<1%	<1%	5-25%
Appearance	Flowering			Seeding
Distribution pattern	Clumpy			Scattered patchy
Photo documentation	238/239			
Weed Location				
Geographic location (ID)	47-08			
Coordinate system	Ca. State Plane Zone 2			
Datum	NAD83			
Location data accuracy	1-5m			
Location description	Area adjacent to gravel turn around, near large boulders; mostly Sweet Pea; UPDATE: Some weed trimming at edge of gravel turn-around. Heavy LALA4; Overall about same as 2009 - needs addl. treatment.			

General Information		ID: 48-08		
Collection date (mm/dd/yyyy)	7/8/2010			
Observer name(s)	Ethan Koenigs			
Site Information				
Site or facility name	El Dorado Canal			
Site address or other description	Beat 1			
Ownership				
Land use type	Water Transport Facility			
Invaded vegetation type	Forest			
Gross Area	3750 sq. ft.			
Disturbances & impacts	Canal Maintenance			
Associated species	Black Oak, Ponderosa pine, Incense cedar, cinquefoil			
Environmental Conditions (e.g. soil conditions, exposure, etc.)	shady			
Weed Information				
Weed Identification				
Weed genus and species	<i>Leucanthemum vulgare</i>			
Weed common name(s)	Ox-eye Daisy			
Present (not all species)				
Presence or Absence	Present (all)			
Treated	Unknown			
Infested area	3,750 sq. ft.			
Canopy Cover	<1%			
Appearance	Flowering			
Distribution pattern	Scattered even			
Photo documentation	248			
Weed Location				
Geographic location (ID)	48-08			
Coordinate system	Ca. State Plane Zone 2			
Datum	NAD83			
Location data accuracy	1-5m			
Location description	South side of canal at bridge 27d; near access road; UPDATE: Even less LEVU in 2010 than in 2009 - just a few plants.			

General Information		ID: L26-08		
Collection date (mm/dd/yyyy)	7/8/2010			
Observer name(s)	Ethan Koenigs			
Site Information				
Site or facility name	Access Road			
Site address or other description	The El Dorado Tunnel road			
Ownership				
Land use type	Transportation Corridor			
Invaded vegetation type	Forest			
Gross Area	3000	sq. ft.		
Disturbances & impacts	Roadside maintenance	Tunnel Constuction		
Associated species	Deer Brush, Black Oak, Big Leaf Maple, other weedy species			
Environmental Conditions (e.g. soil conditions, exposure, etc.)	East-facing slope; very exposed			
Weed Information				
Weed Identification				
Weed genus and species	<i>Melilotus officinalis</i>	<i>Hypericum perforatum</i>	<i>Bromus tectorum</i>	<i>Bromus diandrus</i>
Weed common name(s)	Sweet Clover	Klamath Weed	Cheat grass	Ripgut Brome
Present (not all species)				
Presence or Absence	Present (all)			
Treated	Yes	Needs Additional Treatment		some mechanical
Infested area	3000	sq. ft.		
Canopy Cover	<1%	<1%	5-25%	5-25%
Appearance	Flowering	Flowering	Seeding	Senesc.
Distribution pattern	Clumpy	Scattered even	Linear	Scattered even
Photo documentation	272/273			
Weed Location				
Geographic location (ID)	L26-08			
Coordinate system	Ca. State Plane Zone 2			
Datum	NAD83			
Location data accuracy	< 1m			
Location description	Upper Section of road from siphon exit to old canal bench. Update: MEOF still under control. Heavy BRDID2 and BRTE.			

General Information		ID: L27-08	
Collection date (mm/dd/yyyy)	7/8/2010		
Observer name(s)	Ethan Koenigs,		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Short Section just before El Dorado Tunnel		
Ownership	EID		
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	750	sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Ponderosa Pine, Douglas fir, Black Oak, Deer Brush, Big Leaf Maple, other weedy species.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	North facing slope no tree canopy.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Hypericum perforatum</i>	<i>Melilotus officinalis</i>	<i>Bromus tectorum</i>
Weed common name(s)	Klamath Weed	White Sweet Clover	Cheat grass
Weed Description			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	750	sq. ft.	
Canopy Cover	<1%	<1%	1-5%
Appearance	Flowering		
Distribution pattern	Scattered patchy	Linear	
Photo documentation	274		
Weed Location			
Geographic location (ID)	L27-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Short section of canal from fence to flume. Update: Same as 2009		

General Information		ID: L28-08			
Collection date (mm/dd/yyyy)	7/8/2010				
Observer name(s)	Ethan Koenigs				
Site Information					
Site or facility name	Access Road				
Site address or other description	El Dorado tunnel road				
Ownership					
Land use type	Transportation Corridor				
Invaded vegetation type	Forest				
Gross Area	0.6	acres			
Disturbances & impacts	Roadside maintenance				Tunnel Construction
Associated species	Deer Brush, Black Oak, Big Leaf Maple, other weedy species				
Environmental Conditions (e.g. soil conditions, exposure, etc.)	East-facing slope				
Weed Information					
Weed Identification					
Weed genus and species	<i>M. officinalis</i> , <i>T. arvensis</i>	<i>H. perforatum</i> , <i>B. tectorum</i>	<i>Bromus diandrus</i>	<i>Taienatherum caput-medusae</i>	
Weed common name(s)	White Sweet Clover, Hedge	Klamath Weed, Cheat grass	Ripgut Brome	Medusahead Grass	
Present (not all species)					
Presence or Absence	Present (all)				
Treated	Yes				
Infested area	0.25	acres			
Canopy Cover	50-75%				
Appearance	Flowering	New growth	Seeding	Senesc.	
Distribution pattern	Clumpy	Linear	Scattered even		
Photo documentation	270/271				
Weed Location					
Geographic location (ID)	L28-08				
Coordinate system	Ca. State Plane Zone 2				
Datum	NAD83				
Location data accuracy	< 1m				
Location description	Lower section of road starting from L26-08 to near bridge over Alder Creek. Update: Lower section of road from Alder bridge to switchback has increased weeds from 2009 (low density MEOF, HYPE, TOAR); weed density and species variable along rd.				

General Information		ID: L29-08	
Collection date (mm/dd/yyyy)	7/8/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp 1 Road		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	8,800	sq. ft.	
Disturbances & impacts	Roadside maintenance	Other man-made disturbance	
Associated species	Ponderosa pine, black oak, deer brush		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	rocky soil, northwest-facing slope		
Weed Information			
Weed Identification			
Weed genus and species	<i>Torilis arvensis</i> ,	<i>Melilotus officinalis</i>	<i>Hypericum perforatum</i> <i>Bromus tectorum</i>
Weed common name(s)	Sweet Pea, Hedge Parsly,	Sweet Clover	Klamath Weed Cheat Grass
Present (not all species)			
Presence or Absence	Present (not all species)	Sweet Pea (absent)	
Treated	No		
Infested area	8800	sq. ft.	
Canopy Cover	<1%	<1%	<1% 1-5%
Appearance	New growth	Flowering	Seeding Senesc.
Distribution pattern	Scattered patchy	Linear	
Photo documentation	262-265		
Weed Location			
Geographic location (ID)	L29-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Upper half of Camp 1 road, primarily on down-slope side. Update: Large patch of MEOF and BRTE near fork in Camp 1 Road. Mostly along road shoulder.		

General Information		ID: L30-08			
Collection date (mm/dd/yyyy)	7/8/2010				
Observer name(s)	Ethan Koenigs,				
Site Information					
Site or facility name	Access Road				
Site address or other description	Camp 1 road West fork				
Ownership					
Land use type	Transportation Corridor				
Invaded vegetation type	Forest				
Gross Area	2500	sq. ft.			
Disturbances & impacts	Roadside maintenance				
Associated species	Ponderosa Pine, Black Oak, Deer Brush				
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Northwest-facing slope, partly shaded				
Weed Information					
Weed Identification					
Weed genus and species	<i>Bromus tectorum</i>	<i>Melilotus officinalis</i>	<i>Lathyrus latifolius</i>	<i>Hypericum perforatum</i>	
Weed common name(s)	Cheat grass	White Sweet Clover	Perennial Sweet Pea	Klamath Weed	
Present (not all species)					
Presence or Absence	Present (all)				
Treated	No				
Infested area	2500	sq. ft.			
Canopy Cover	1-5%	<1%	<1%	<1%	
Appearance	Seeding	Flowering	Flowering	Flowering	
Distribution pattern	Linear	Scattered even	Clumpy		
Photo documentation	267/268				
Weed Location					
Geographic location (ID)	L30-08				
Datum	NAD83				
Location data accuracy	< 1m				
Location description	From fork in the road to the house. Update: Patch of LALA4 up by house on both sides of rd. ~ 500 sqft.; others mostly low density along shoulder.				

General Information		ID: L31-08		
Collection date (mm/dd/yyyy)	7/8/2010			
Observer name(s)	Ethan Koenigs			
Site Information				
Site or facility name	Alder Creek Diversion & Pipeline			
Site address or other description	near siphon entrance			
Ownership				
Land use type	Water Transport Facility			
Invaded vegetation type	Forest			
Gross Area	7,000	sq. ft.		
Disturbances & impacts	Pipe Maintenance			
Associated species	P. Pine, Black Oak, Douglas Fir, Deer brush, Paint brush			
Environmental Conditions (e.g. soil conditions, exposure, etc.)	west-facing exposure; very sunny; rocky soil			
Weed Information				
Weed Identification				
Weed genus and species	<i>Bromus tectorum</i>			
Weed common name(s)	Cheat Grass			
Present (not all species)				
Presence or Absence	Present (all)			
Treated	Yes			
Infested area	3,500	sq. ft.		
Canopy Cover	1-5%			
Appearance	Seeding	Senesc.		
Distribution pattern	Scattered patchy			
Photo documentation	275/276			
Weed Location				
Geographic location (ID)	L31-08			
Coordinate system	Ca. State Plane Zone 2			
Datum	NAD83			
Location data accuracy	1-5m			
Location description	Alder diversion pipe; beginning at siphon entrance & extending for about 350' ; UPDATE: Good brush control; BRTE approximately the same as 2009.			

General Information		ID: L32-08	
Collection date (mm/dd/yyyy)	7/8/2010		
Observer name(s)	Ethan Koenigs,		
Site Information			
Site or facility name	Access Road		
Site address or other description	Camp 1 road, 75A		
Ownership	EID		
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	2,500	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Ponderosa Pine, Douglas Fir, Bracken Fern, Black Oak, Deer Brush, other weedy species.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Northwest-facing slope, rocky soil, very exposed		
Weed Information			
Weed Identification			
Weed genus and species	<i>Melilotus officinalis</i>	<i>Bromus tectorum</i>	<i>Verbascum thapsus</i>
Weed common name(s)	White Sweet Clover	Cheat grass	Woolly Mullein
Present (not all species)			
Presence or Absence	Present (not all species)	NO CIVU	
Treated	No		
Infested area	2000	sq. ft.	
Canopy Cover	1-5%	1-5%	<1%
Appearance	Flowering	Seeding	Flowering
Distribution pattern	Clumpy	Linear	Clumpy
Photo documentation	260		
Weed Location			
Geographic location (ID)	L32-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	East fork of Camp 1 road, from clearing to gate at canal, on both sides of road. Update: not treated; MEOF increasing, BRTE same, VETH same - no CIVU		

General Information		ID: L33-08		
Collection date (mm/dd/yyyy)	7/8/2010			
Observer name(s)	Ethan Koenigs			
Site Information				
Site or facility name	El Dorado Canal			
Site address or other description	Beat 1			
Ownership				
Land use type	Water Transport Facility			
Invaded vegetation type	Forest			
Gross Area	16,000	sq. ft.		
Disturbances & impacts	Canal Maintenance	Historic Fire		
Associated species	Douglas Fir, Incense cedar, Bracken Fern, horsetail			
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NW exposure; mesic site; potential wet area or riparian zone			
Weed Information				
Weed Identification				
Weed genus and species	<i>Hypericum perforatum</i>	<i>Verbascum thapsus</i>	<i>Bromus tectorum</i>	
Weed common name(s)	Klamath weed	Wooly Mullein	Cheat Grass	
Present (not all species)				
Presence or Absence	Present (all)		(BRTE present throughout burn area mostly	
Treatment	Yes		outside fence)	
Infested area	1,000	sq. ft.		
Canopy Cover	<1%	1-5%		
Appearance	Flowering	Flowering		
Distribution pattern	Scattered even	Clumpy		
Photo documentation	256, 257, 258			
Weed Location				
Geographic location (ID)	L33-08			
Coordinate system	Ca. State Plane Zone 2			
Datum	NAD83			
Location data accuracy	1-5m			
Location description	North side of canal & north side of fence near solar powered monitoring station 3; UPDATE: Extend line back (E.) along canal approx. 200' - VETH present. VETH increasing mostly on N. side of fence but some on S. side.			

General Information		ID: L34-08		
Collection date (mm/dd/yyyy)	7/8/2010			
Observer name(s)	Ethan Koenigs			
Site Information				
Site or facility name	El Dorado Canal			
Site address or other description	Beat 1			
Ownership				
Land use type	Water Transport Facility			
Invaded vegetation type	Forest			
Gross Area	3,000	sq. ft.		
Disturbances & impacts	Canal Maintenance	Historic Fire		
Associated species	Bracken Fern, Thimbleberry			
Environmental Conditions (e.g. soil conditions, exposure, etc.)	very exposed, northeast facing slope			
Weed Information				
Weed Identification				
Weed genus and species	<i>Bromus tectorum</i>	<i>Verbascum thapsus</i>		
Weed common name(s)	Cheat grass	Woolly Mullein		
Present (not all species)				
Presence or Absence	Present (not all species)	No CHJU or CESO		
Treatment	Yes			
Infested area	3,000	sq. ft.		
Canopy Cover	1-5%	1-5%		
Appearance	Senesc.	Flowering		
Distribution pattern	Linear	Clumpy		
Photo documentation	254/255			
Weed Location				
Geographic location (ID)	L34-08			
Coordinate system	Ca. State Plane Zone 2			
Datum	NAD83			
Location data accuracy	1-5m			
Location description	Along canal bench north side; UPDATE: Most VETH and BRTE outside fence. Significant increase in VETH in 2010.			

General Information		ID: L35-08		
Collection date (mm/dd/yyyy)	7/8/2010			
Observer name(s)	Ethan Koenigs,			
Site Information				
Site or facility name	El Dorado Canal			
Site address or other description	Beat 1			
Ownership				
Land use type	Water Transport Facility			
Invaded vegetation type	Forest			
Gross Area	3,000	sq. ft.		
Disturbances & impacts	Canal Maintenance	Historic Fire		
Associated species	Deer Brush, Big Leaf Maple, Black Oak, various weeds			
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NE exposure; very exposed			
Weed Information				
Weed Identification				
Weed genus and species	<i>Chondrilla juncea</i>	<i>Bromus tectorum</i>	<i>Verbascum thapsus</i>	
Weed common name(s)	Rush Skeleton weed	Cheat Grass	wooly mullein	
Present (not all species)				
Presence or Absence	Present (all)			
Treatment	Yes			
Infested area	3,000	sq. ft.		
Canopy Cover	<1%	25-50%		
Appearance	Flowering	Seeding	Flowering	
Distribution pattern	Linear	Scattered patchy	Clumpy	
Photo documentation	251-253			
Weed Location				
Geographic location (ID)	L35-08			
Coordinate system	Other (specify):	State Plane		
Datum	NAD83			
Location data accuracy	1-5m			
Location description	Beginning just west of flume on north side of canal for approximately 200'; UPDATE: Partial control of weeds; Beginning at flume - large patch of VETH below flume (N. side) along with BRTE - Outside fence heavy BRTE, and scattered VETH and CHJU			

APPENDIX C

EID Weed Observation and Monitoring Form – Silver/Caples Area

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
454/455	11-09	SW	Silver Lake - VETH at day use boat ramp
458/459	11-09	E	Silver Lake - VETH at day use boat ramp
461	44-08	NW	Silver Lake – near Kit Carson Lodge - Road to Ferguson Pt.
462	44-08	SE	Silver Lake – near Kit Carson Lodge - Road to Ferguson Pt.
467/468	49-08	W-SW	VETH along face of dam
Notes			

General Information		ID: 11-09	
Collection date (mm/dd/yyyy)	7/16/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Silver Lake		
Site address or other description	Kays Resort		
Ownership			
Land use type	Water Storage Facility		
Invaded vegetation type	Forest		
Gross Area	10,000	sq. ft.	
Disturbances & impacts	Canal Maintenance	Graded gravel area SW of resort	
Associated species	Lodgepole Pine, Red Fir, Willow, Sedges		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Close to lake (50ft).		
Weed Information			
Weed Identification			
Weed genus and species	<i>Verbascum thapsus</i>		
Weed common name(s)	Woolly Mullein		
Present (not all species)			
Presence or Absence	Present (not all species)	No sweet clover	
Treated	No		
Infested area	5,000	sq. ft.	
Canopy Cover	<1%		
Appearance	Germ'g./early growth	New growth	
Distribution pattern	Clumpy	Scattered patchy	
Photo documentation	454/455, 458/459		
Weed Location			
Geographic location (ID)	11-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	New boat launch facility/day use area. Update: overall size of occurrence reduced due to new construction at site; VETH still present along shoreline, S. side of facility. Use caution if treating near lake.		

General Information		ID: 44-08	
Collection date (mm/dd/yyyy)	7/16/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Silver Lake		
Site address or other description	Adjacent to dam		
Ownership			
Land use type	Water Storage Facility		
Invaded vegetation type	Forest		
Gross Area	250	sq. ft.	
Disturbances & impacts	Roadside maintenance	Facility Maintenance	
Associated species	Lodgepole Pine, Red Fir, Pennyroyal, Mountain White Thorn		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Flat area near lake; very little canopy cover.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Verbascum thapsus</i>	<i>Cirsium vulgare</i>	
Weed common name(s)	Woolly Mullein	Bull Thistle	
Present (not all species)			
Presence or Absence	Present (not all species)		
Treated	No		
Infested area	50	sq. ft.	
Canopy Cover	<1%		
Appearance	New growth		
Distribution pattern	Scattered patchy		
Photo documentation	461/462		
Weed Location			
Geographic location (ID)	44-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	Northwest side of dam at intersection to Ferguson Point. Update: Only s small VETH plants and few CIVU		

General Information

ID: 49-08

Collection date (mm/dd/yyyy)	7/16/2010		
Observer name(s)	Ethan Koenigs		

Site Information

Site or facility name	Caples Lake		
Site address or other description	Auxillary Dam		
Ownership			
Land use type	Water Storage Facility		
Invaded vegetation type	growing from rip rap		
Gross Area	1000	sq. ft.	
Disturbances & impacts	Facility Maintenance	Dam	
Associated species	Sage brush, Rabbit brush, Phlox		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Fully exposed gravelly, rocky soil.		

Weed Information

Weed Identification

Weed genus and species	<i>Verbascum thapsus</i>		
Weed common name(s)	Woolly Mullein		

Present (not all species)

Presence or Absence	Present (all)			
Treated	No			
Infested area	1000	sq. ft.		
Canopy Cover	<1%			
Appearance	New growth			
Distribution pattern	Scattered even	Linear		
Photo documentation	467/468			

Weed Location

Geographic location (ID)	49-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	1-5m		
Location description	Along inside face of dam, very minor occurrence. Update: Same as 2008/2009 - Just a few plants.		

General Information		ID: 14-08	
Collection date (mm/dd/yyyy)	7/22/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Access Road		
Site address or other description	Bend Court	Near top of road	
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	1,200	sq. ft.	
Disturbances & impacts	Roadside maintenance		
Associated species	Ponderosa Pine, Black Oak, Deer Brush, Annual Grasses, and Forbes.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Open and sunny, Volcanic caprock, West facing.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Bromus tectorum</i>		
Weed common name(s)	Cheat grass		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	1,200	sq. ft.	
Canopy Cover	1-5%		
Appearance	New growth		
Distribution pattern	Scattered even		
Photo documentation	277, 278		
Weed Location			
Geographic location (ID)	14-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Area at top of hill in a clearing and along roadway. Update: Rare Plant-Yellow bur navarretia is present throughout area. No Treatment; yellow bur navarretia also exists farther down the road in another, exposed and rocky outcropping; cheat grass still present.		

APPENDIX C**EID Weed Observation and Monitoring Form – Lower Penstock**

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
653	09-08	N	Powerhouse – dense MEOF and VETH
654	L01-09	W	RUAR9 along pathway up penstock
655	L01-09	S	RUAR9 in foreground and significant VETH along penstock
656	L01-09	S	VETH along penstock
657	11-08	W	RUAR9 adjacent to penstock and structure
658	11-08	S	VETH scattered here as well and 150' up from point.
662	02-09	N-NE	MEOF near surge chamber
663	L2-09	E	HYPE near penstock
664	L2-09	E	HYPE near penstock
669	Area 01	SW	LALA4 upper NW corner of dam at Forebay
670	46-08	NE	LALA4 – parking lot of Forebay
671/672	L06-08	E	CYSC4 at Forebay
673/674	L04-09	NW	CIVU, LEVU, HYPE along lake shore
675/676	L05-09	N/S	HYPE and LEVU along shore/heavy RUAR9 along lake
Notes			

General Information		ID: 02-09	
Collection date (mm/dd/yyyy)	7/28/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	EID Penstock		
Site address or other description	Surge Chamber		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	250	sq. ft.	
Disturbances & impacts	Pipe Maintenance	Roadside maintenance	
Associated species	Manzanita, Ponderosa Pine		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Gravel road at dead end.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Melilotus officinalis</i>		
Weed common name(s)	White Sweet Clover		
Weed Description			
Presence or Absence	Present (all)		
Treatment	No		
Infested area	250	sq. ft.	
Canopy Cover	5-25%		
	Flowering		
Distribution pattern	Clumpy		
Photo documentation	662		
Weed Location			
Geographic location (ID)	02-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Small patch of sweet clover at surge chamber. Same as 2009.		

General Information

ID: 11-08

Collection date (mm/dd/yyyy)	7/28/2010		
Observer name(s)	Ethan Koenigs		

Site Information

Site or facility name	EID Penstock		
Site address or other description	Lower penstock (steep portion)		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	0.25	acres	
Disturbances & impacts	Canal Maintenance	Trail Maintenance	
Associated species	Douglas fir , Canyon Live Oak, Deer Brush, Toyon		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Exposed, northwest-facing slope		

Weed Information

Weed Identification

Weed genus and species	<i>Rubus armeniacus</i>	<i>Verbascum thapsus</i>	<i>Bromus tectorum</i>	<i>Hypericum perforatum</i>
Weed common name(s)	Himalayan blackberry	Woolly Mullein	Cheat grass	Klamath weed

Weed Description

Presence or Absence	Present (all)			
Treatment	Unknown			
Infested area	2,000	sq. ft.		
Canopy Cover	5-25%	1-5%	1-5%	<1%
Appearance	Seeding	Seeding	Senesc.	Seeding
Distribution pattern	Clumpy	Clumpy	Scattered patchy	Clumpy
Photo documentation	657/658			

Weed Location

Geographic location (ID)	11-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Clump of RUAR9 near water tank in lower section of Penstock and scattered clumps of VETH and HYPE. RUAR9 same as 2009; VETH and HYPE increasing; BRTE slight increase.		

General Information		ID: 46-08	
Collection date (mm/dd/yyyy)	7/28/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Forebay Reservoir		
Site address or other description	Day use area parking		
Ownership	EID		
Land use type	Water Storage Facility		
Invaded vegetation type	Forest		
Gross Area	0.25	acres	
Disturbances & impacts	Facility Maintenance	Roadside maintenance	
Associated species	Ponderosa Pine, Incense Cedar, Deer Brush, Black Oak		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	High impact site; thick layer of pine needle litter.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Hypericum perforatum</i>	<i>Lathyrus latifolius</i>	
Weed common name(s)	Klamath Weed	Perennial Sweet Pea	
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	5000	sq. ft.	
Canopy Cover	<1%	5-25%	
Appearance	Flowering	Seeding	
Distribution pattern	Scattered even		
Photo documentation	670		
Weed Location			
Geographic location (ID)	46-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Area between day use parking and Forebay road. Update: same as 2009, very little HYPE		

General Information

ID: L01-09

Collection date (mm/dd/yyyy)	7/28/2010		
Observer name(s)	Ethan Koenigs		

Site Information

Site or facility name	Penstock		
Site address or other description	Lower section, Near Powerhouse		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	1	acres	
Disturbances & impacts	Canal Maintenance	Trail Maitenance	
Associated species	Douglas fir , Canyon Live Oak, Deer Brush, Toyon		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Exposed, northwest-facing slope		

Weed Information

Weed Identification

Weed genus and species	<i>Rubus armeniacus</i>	<i>Chondrilla juncea</i>	<i>Bromus tectorum</i>	<i>Verbascum thapsus</i>
Weed common name(s)	Himalayan blackberry	Rush Skeletonweed	Cheat grass	Wooly mullien

Weed Description

Presence or Absence	Present (all)			
Treated	Unknown			
Infested area	5000	sq. ft.		
Canopy Cover	5-25%	<1%	1-5%	1-5%
	Seeding	Flowering	Seeding	Fruiting
Distribution pattern	Scattered patchy	Linear		
Photo documentation	654-656			

Weed Location

Geographic location (ID)	L01-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Trail from Powerhouse up to Penstock; scattered along trail and Penstock approx. 300ft. Update: RUAR9 is still growing back/spreading significantly. VETH is heavy (1-5%).		

General Information

ID: L02-09

Collection date (mm/dd/yyyy)	7/28/2010		
Observer name(s)	Ethan Koenigs		

Site Information

Site or facility name	EID Penstock		
Site address or other description	Between Surge Chamber and		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area	1	acres	
Disturbances & impacts	Pipe Maintenance		
Associated species	Mixed Conifer - Ponderosa Pine, Douglas fir , Big Leaf Maple, Manzanita		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Steep East facing canyon slope. Dry and rocky soil.		

Weed Information

Weed Identification

Weed genus and species	<i>Hypericum perforatum</i>	<i>Torilis arvensis</i>		
Weed common name(s)	Klamath Weed	hedge parsley		

Weed Description

Presence or Absence	Present (all)			
Treatment	No			
Infested area	0.2	acres		
Canopy Cover	<1%	<1%		
Appearance	Flowering	Seeding		
Distribution pattern	Scattered even	Scattered patchy	Linear	
Photo documentation	663/664			

Weed Location

Geographic location (ID)	L02-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Primarily on north side of pipe, along <i>both</i> sides of access road, from end of Moon Lane East, east toward tunnel.		

General Information		ID: L04-09	
Collection date (mm/dd/yyyy)	7/28/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Forebay Reservoir		
Site address or other description	Along lake shore, northeast side.		
Ownership			
Land use type	Water Storage Facility		
Invaded vegetation type	Forest		
Gross Area	0.3	acres	
Disturbances & impacts	Other man-made disturbance		Lake fluctuation
Associated species	Ponderosa Pine, Incense Cedar, Black Oak, Alder, Native Blackberry.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Sunny, exposed, west-facing, along lake shore		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cirsium vulgare</i> , <i>Hypericum perforatum</i> , <i>Leucanthemum vulgare</i> , <i>Lathyrus latifolius</i> , <i>Verbascum thapsus</i>		
Weed common name(s)	Bull Thistle, Klamath Weed Ox-eye Daisy Perennial Sweet Pea, wooly mullein		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	4000	sq. ft.	
Canopy Cover	<1%	1-5%	<1%
	Flowering	Seeding	
Distribution pattern	Clumpy	Linear	Scattered even
Photo documentation	673/674		
Weed Location			
Geographic location (ID)	L04-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Northeast side of lake along shore. Very close to edge of water. Update: Same group of weeds along high water mark.		

General Information		ID: L05-09	
Collection date (mm/dd/yyyy)	7/28/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Forebay Reservoir		
Site address or other description	northeast side of reservoir		
Ownership			
Land use type	Water Storage Facility		
Invaded vegetation type	Forest		
Gross Area	0.35	acres	
Disturbances & impacts	Other man-made disturbance		Lake fluctuations
Associated species	Ponderosa Pine, Native Blackberry, Cherry Tree, Alder, Willow		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Sunny, west facing, in clearing.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Rubus discolor</i>	<i>Leucanthemum vulgare</i>	<i>Hypericum perforatum</i>
Weed common name(s)	Himalayan Blackberry	Ox-eye Daisy	Klamath weed
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	0.3	acres	
Canopy Cover	50-75%	1-5%	5-25%
Appearance	Seeding	Flowering	Flowering
Distribution pattern	Linear	Scattered patchy	Scattered even
Photo documentation	675/676		
Weed Location			
Geographic location (ID)	L05-09		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Lake shore, RUAR9 forms a dense band along the shore; approximately 50'. Update: LEVU and HYPE scattered along edge; RUAR9 about same as 2009		

General Information		ID: L06-08	
Collection date (mm/dd/yyyy)	7/28/2010		
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	Forebay Reservoir		
Site address or other description	Trail on North side of reservio		
Ownership			
Land use type	Water Storage Facility		
Invaded vegetation type	Forest		
Gross Area	2000	sq. ft.	
Disturbances & impacts	Trail Maintenance	Other man-made disturbance	
Associated species	Ponderosa Pine, Incense Cedar, Deer Brush, Black Oak		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Heavy pine needle litter/ partly shaded		
Weed Information			
Weed Identification			
Weed genus and species	<i>Cytisus scoparius</i>		
Weed common name(s)	Scotch Broom		
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	2000	sq. ft.	
Canopy Cover	5-25%		
Appearance	Seeding		
Distribution pattern	Clumpy		
Photo documentation	671/672		
Weed Location			
Geographic location (ID)	L06-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Approximately 50' from day-use area entrance. Update: Slight increase in density since 2009 (overall area still same). New seedlings emerging.		

General Information		ID: L27-08	
Collection date (mm/dd/yyyy)		7/28/2010 (surveyed on different day in July - same as Beat 1 and Alder)	
Observer name(s)	Ethan Koenigs		
Site Information			
Site or facility name	El Dorado Canal		
Site address or other description	Short Section just before El Dc		
Ownership			
Land use type	Water Transport Facility		
Invaded vegetation type	Forest		
Gross Area		sq. ft.	
Disturbances & impacts	Canal Maintenance		
Associated species	Ponderosa Pine, Douglas fir, Black Oak, Deer Brush, Big Leaf Maple, other weedy species.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	North facing slope no tree canopy.		
Weed Information			
Weed Identification			
Weed genus and species	<i>Hypericum perforatum</i>	<i>Melilotus alba</i>	<i>Bromus tectorum</i>
Weed common name(s)	Klamath Weed	White Sweet Clover	Cheat grass
Weed Description			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area		sq. ft.	
Canopy Cover	<1%	<1%	1-5%
Appearance	Flowering		
Distribution pattern	Scattered patchy	Linear	
Photo documentation	1077		
Weed Location			
Geographic location (ID)	L27-08		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	< 1m		
Location description	Short section of canal from fence to flume. Update: Good control of SC and CW. About the same as 2009.		

APPENDIX D
Eldorado National Forest Noxious Weeds List

Eldorado National Forest Noxious Weed List

List A. Highly invasive weed species known or suspected (*) to occur on the Eldorado National Forest

<i>Aegilops triuncialis</i>	barbed goatgrass
<i>Bromus tectorum</i>	cheat grass
<i>Cardus nutans*</i>	musk thistle
<i>Carduus pycnocephalus</i>	Italian thistle
<i>Centaurea maculata</i>	spotted knapweed
<i>Centaurea solstitialis</i>	yellow starthistle
<i>Cirsium arvense*</i>	Canada thistle
<i>Chondrilla juncea</i>	rush skeletonweed
<i>Cytisus scoparius</i>	Scotch broom
<i>Genistia monspellensis</i>	French broom
<i>Lepidium latifolium</i>	tall whitetop /perennial pepperweed
<i>Linaria genistifolia ssp. dalmatica*</i>	dalmation toadflax
<i>Lythrum salicaria</i> (added 12/26/07)	purple loosestrife
<i>Spartium junceum</i>	Spanish broom
<i>Taienatherum caput-medusae</i>	medusahead grass

List B. A list of other exotic or noxious weeds that may occur on the Eldorado National Forest that currently are not believed to be as aggressive as those in list A

<i>Acroptilon repens (Centaurea repens)</i>	Russian knapweed
<i>Ailanthus altissima</i>	Chinese tree of heaven
<i>Bromus diandrus</i>	riggut brome
<i>Cardaria chalapense</i>	small (lens podded) whitetop
<i>Cardaria draba</i>	heart podded whitetop
<i>Centaurea diffusa</i>	diffuse (white) knapweed
<i>Centaurea melitonensis</i>	totalote
<i>Cirsium vulgare</i>	bull thistle
<i>Conium maculatum</i>	poison hemlock
<i>Euphorbia esula *</i>	leafy spurge
<i>Euphorbia oblongata</i>	oblong spurge
<i>Festuca arundinaceae</i>	tall fescue
<i>Foeniculum vulgare</i>	fennel
<i>Hirschfeldia incana</i> (added 7/03)	mustard
<i>Hypericum perforatum</i>	Klamathweed
<i>Leucanthemum vulgare</i>	ox-eye daisy
<i>Lathyrus latifolius</i>	perennial sweet pea
<i>Lychinus coronaria</i>	rose campion / mullein pink
<i>Melilotus alba</i>	white sweet clover
<i>Melilotus officinalis</i>	yellow sweet clover
<i>Onopordum acanthium</i> (added 8/16/04)	Scotch thistle
<i>Rubus discolor</i>	Himalayan blackberry
<i>Salsola tragus</i>	Russian thistle / tumbleweed
<i>Silybum marianum</i> (added 9/25/03)	milk thistle
<i>Sisymbrium altissimum</i> (added 12/26/03)	Jim Hill or tumble mustard
<i>Tamarix chinensis *</i>	tamarisk / salt cedar
<i>Torilis arvensis</i> (added 7/2/03)	hedge parsley
<i>Verbascum thapsus</i>	woolly mullein