

2011 Annual Noxious Weed Monitoring Report

El Dorado Hydroelectric Project FERC Project 184



January 2012

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El Dorado Hydroelectric Project



El Dorado Irrigation District

January 16, 2012

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1.0 Introduction

This 2011 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 pursuant to 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 occurrences of noxious weeds and evaluate whether existing occurrences have been controlled. The monitoring program utilizes ENF standardized monitoring forms and includes Global Positioning System (GPS) mapping of occurrences. 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.

Baseline data was collected in 2008 during the initial survey following the protocols of the Plan. All of the occurrences documented in surveys from 2008 through 2010 were re-visited in 2011 and evaluated in this Report. Any new occurrences observed along licensee-maintained roads or at project facilities were also recorded. Weed treatments and effectiveness are noted and evaluated in the Report, where applicable. Treatments were made in accordance with the Project No. 184 Integrated Pest Management Plan, which addresses pesticide use at EID facilities under the jurisdiction of the USFS.

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 2011 monitoring season and will be filed with FERC by March 1, 2012.

2.0 Methods

Due to the unusually cool and wet spring of 2011, field monitoring began on June 22, 2011, at the lower elevation sites and was completed on August 25, 2011 following surveys along the Echo Conduit. 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 or a Trimble Nomad with 1-3 meter accuracy. 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), *USDA PLANTS Database* and *CalFlora* (Whitson 1996, DiTomaso and Healy 2007, USDA 2011). 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 in Section 1 were surveyed by walking the extent of each facility. At each reservoir, 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 10.0) 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) are 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. 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 2010 to 2011. 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.

This survey identifies locations of multiple plants forming a unit that can be targeted for control. 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.

Mapping High Priority Species

Based on input from the USFS and EID, EN2 created maps showing 2010 occurrences of USFS, List A noxious weed species (excluding ripgut brome and cheatgrass) and two list B species (Himalayan blackberry and sweet clover) at a scale similar to the EID Canal Atlas to enable EID to plan treatments in 2011. EN2 has prepared a similar map for the 2011 occurrences for EID to use in planning 2012 treatments.

3.0 Results and Discussion

Detailed data for each occurrence is included in the data sheets found in Appendix C of this report. Table 1 summarizes the species of noxious weeds observed during the 2011 survey and whether they are “List A” or “List B” species. There were no new species observed in 2011. 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. The details of the occurrences are summarized in Section 3.1 and 3.2.

Table 1. Summary of Noxious Weeds Observed in the 2011 Survey

	Species	Common Name	Abbreviation*	Cal-IPC rating¹
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
List B	<i>Bromus diandrus</i>	ripgut brome	BRDID2	Moderate
	<i>Cirsium vulgare</i>	bull thistle	CIVU	Moderate
	<i>Hirschfeldia incana</i>	short pod mustard	HIIN3	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

¹**California 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.

3.1 Project Facilities

A summary of noxious weed occurrences observed at each Project 184 facility surveyed in 2011 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.

Table 2. Summary of Noxious Weeds Observed at Project 184 Facilities in 2011

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, MEOF, HYPE
Alder Creek Diversion Dam and Feeder	BRTE	None
Echo Lake Conduit	None	None
El Dorado Diversion Dam	CESO3, BRTE,	LALA4, CIVU, VETH, LEVU, HIIN3
El Dorado Forebay	CYSC4	RUAR9, LALA4, VETH, HYPE, CIVU
El Dorado Canal		
<i>Beat 1</i>	CHJU, BRTE, CESO3,	LEVU, HYPE, VETH, LALA4, BRDID2
<i>Beat 2</i>	BRTE	CIVU, RUAR9
<i>Beat 3</i>	None	LALA4, RUAR9, CIVU, TOAR
<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, CESO3	RUAR9, CIVU, LALA4, HYPE, TOAR

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

Lake Aloha

Lake Aloha was surveyed on August 18, 2011. 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 2011 survey and no occurrences have been observed since surveys began in 2008.

Echo Lake and Echo Conduit

Echo Lake and the Echo Conduit were surveyed on August 25, 2011. The parking lot, dam area, and road down to the store and boat ramp were surveyed on foot. 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 and no occurrences have been observed since surveys began in 2008.

Caples Lake

Caples Lake was surveyed on August 10, 2011. 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. As in prior years, a few individual woolly mullein plants were observed near the dam and overflow channel on the west side of the lake; however, these plants appeared to have been recently sprayed and were dying. This year we observed Klamath weed scattered across the face of the main dam, in low density <1%. It would not make sense to try and eradicate it, given the low density and presence of a wide variety of native plants mixed among the weeds.

At the Caples Spillway parking area we noted a small cluster of sweet clover within the vegetated strip between Highway 88 and the parking area. The vegetation here is riparian/wetland due to the small drainage running along the edge of the parking lot.

Since new construction has the potential to introduce new noxious weeds, the access road, day use and parking area for the new boat launch construction were given special attention. Sweet clover and woolly mullein were observed at several locations, primarily in the planting areas within and adjacent to the parking lot. These consisted of only a handful of plants in a few discrete locations within the day-use area (Points 04-11a-d), most of which appeared to have been recently sprayed. No noxious weeds were observed at the Woods Creek Fishing Access.

USFS botanist Matt Brown noted and removed several yellow starthistle plants in the area around the Caples Lake boat launch in mid-October this year. Brown requested that these facilities be checked and treated next year.

Silver Lake

Silver Lake was also surveyed on August 10, 2011. 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 woolly mullein and bull thistle observed in 2008 near the small structure at the corner of Highway 88 and Kit Carson Road has been treated and the few weeds there were dying. The woolly mullein along the shore near the recently removed Kay's Resort is still present

and appears to be expanding slightly. There are scattered plants along the south side of the parking lot and a few patches adjacent to the lake with many first year plants. There were no weeds observed at the Sandy Cove day-use area or access road.

El Dorado Diversion Dam

The El Dorado Diversion Dam, near Kyburz, was surveyed on July 21, 2011. 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 exposed soil and large rip rap near the fish ladder, along the north bank of the river. The two mapped occurrences at the Diversion Dam appear to have increasing weed density in 2011. While the control efforts in previous years have helped reduce the density and temporarily slowed the spread, it appears that a more concerted effort will be required at this site to eradicate the weeds.

Points 47-08 and 41-08 contain a mixture of sweet pea, yellow starthistle, mustard, cheat grass woolly mullein and ox-eye daisy, spread out primarily around the margins of the disturbed ground around the facility. Sweet pea is still the dominant weed. The weeds extend right up to the edge of the fish ladder, adjacent to the river.

Alder Creek Diversion Dam and Feeder

The Alder Creek Diversion Dam and Feeder were surveyed on July 29, 2011. 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. The site had recently been sprayed along the first several hundred feet, where the weeds are located. The cheat grass was still present and had already set seed by the time sprays were completed. It is scattered and patchy, comprising 1-5% of the herbaceous cover.

El Dorado Forebay

The reservoir was surveyed on July 14, 2011. 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. A large occurrence, Area 1, begins 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 and has increased since last year.

This year, because of some recent ground disturbing work near the dam, starthistle has been introduced and barbed goatgrass has spread up the gravel/dirt access road that leads from the top of the dam down the north side of the dam to the penstock exit. Black mustard was also noted in abundance along 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 still a small infestation (1-5% of the cover) of perennial sweet pea between Forebay Road and the parking area and the Klamath weed (46-08) that was there last year is gone. The weed density has been reduced since last year due to targeted control efforts. 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). This occurrence was targeted this year with

physical methods and possibly herbicides resulting in good control. There were still a few small seedlings; these seedlings and the cut shrubs will have to be monitored and treated again.

The linear infestations along the northeast shore of the reservoir, L04-09 and L05-09, are still present but treatments this year have reduced the density. However, a new line was added to the shoreline to reflect the spread of weeds along the shoreline. The primary weeds observed here in 2011 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 and is mixed with native blackberry. We noted that much of the northern shoreline contained scattered ox-eye and it was visible across the reservoir along the south 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 June 22, 2011. There are occurrences of 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 21, 2011. 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. Overall, it appears that many occurrences in this section are rebounding following a couple of good control years. 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 has since returned, although it has not spread significantly. The minor occurrence of Klamath weed near an un-named creek just east of 30-Milestone access road (10-09) was nearly controlled and only a few plants remain. A small new occurrence of Klamath weed was mapped in 2010 (06-10) near a short tunnel that the canal passes through. It has not been treated and appeared about the same but slightly denser in 2011.

The next two occurrences are in the burned area and have included 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 had been significantly reduced as a result of treatments since 2008; however, both starthistle and rush skeleton weed are coming back along the canal. Cheat grass is still present, within the canal bench and outside the fenced area along the canal. A trend of increased woolly mullein density continues this year, with heavy infestations outside the fence, especially along L35-08, L34-08 and L33-08; L33-08 was extended approximately 300 feet east due to weed spread in 2010 and 2011. One new occurrence of woolly mullein was recorded along Beat 1 (L10-11).

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. We noted that the area did not appear to be treated in 2011. Weed density was still low but woolly mullein and cheat grass were increasing.

Beat 2

Beat 2 was surveyed on July 7, 2011. 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. In 2011 a new occurrence of Himalayan blackberry was recorded below the recently rebuilt flume. This is a small patch, which should be targeted next year to catch it before it spreads too much (02-11).

Beat 3

Beat 3 was surveyed on July 7, 2011. 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 previously had 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. These 4 occurrences were combined into 1 linear occurrence because of their proximity and similar weed make-up (L06-11). Herbicide treatments between 2008 and 2011 along the canal have significantly reduced the density of weeds at these locations but the weeds are returning in some places, overall good control was observed. Caution should be used when treating these occurrences due to their proximity to the creek.

Blackberry at 26-08 has been almost completely eradicated. A new linear occurrence of hedge parsley along the canal bench (L05-11) was recorded this year. This is a minor occurrence but it should be noted that *Torilis arvensis* appears to be spreading throughout the project where it has been observed in the past. It should also be noted that we have observed an increase in this weed throughout the El Dorado County region.

Beat 4

Beat 4 was surveyed on June 29, 2011. This section of canal begins at the outlet of the Esmeralda Creek Tunnel and ends where the canal crosses under Highway 50. Few active occurrences of noxious weeds were present in this portion of the canal. Near Esmeralda tunnel and there are a couple of locations that include ox-eye daisy, Klamath weed, bull thistle and blackberry. Several occurrences, L10-08, L11-08, and 17-08 have been completely controlled by herbicide treatments along the canal since 2009 and remained eradicated in 2011.

Beat 5

Beat 5 was surveyed on June 29, 2011. 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, 3 new locations were mapped in 2010 (01-02-, and 03-10) and 2 new locations were recorded in 2011 (01-11 and L04-11). The new locations

include a small patch of sweet pea and bull thistle near spillway 44 and low density sweet pea and sweet clover along the bench of the recently repaired area near Flume 51.

Near Camp 5 there remains 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 since 2009, but there are still some very dense patches of sweet pea between the canal and the Camp 5 facility.

There are two very weedy areas along two separate 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. The weeds have increased significantly here along the entire road. 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; this occurrence has been treated and only a small amount of bull thistle remains. At point 03-10 a small patch of barbed goatgrass, a List A species, was observed in 2011.

Upper Penstock

The upper penstock, extending from Forebay Reservoir to the surge chamber, was surveyed on June 22, 2011. A total of six occurrences were mapped along this portion of the penstock. The most significant, high priority area of noxious weeds identified near the beginning of the penstock at Forebay to the Forebay Road undercrossing was treated and most of the barbed goatgrass was dead. There were still other weeds in the area to the south of the penstock between the 2 access roads.

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; however, the weeds were still present, especially sweet pea, which was abundant. Some of the weed infestations along the penstock (south side) extend outside the maintenance responsibility of EID.

Site L2-09, located west of the tunnel, is a low priority site that has 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.

Two new areas were recorded this year, one small area of ox-eye and another area that included starthistle and a few barbed goatgrass. The second site was near the big dip in the penstock where the road has recently been repaired.

Lower Penstock

The lower penstock, surveyed on July 14, 2011 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. The lower quarter of the lower penstock was sprayed in 2011, reducing the density of weeds. Klamath weed, cheatgrass, rush skeletonweed, blackberry and woolly mullein are scattered throughout of this section (L1-09), increasing up slope. The blackberry has been significantly reduced; however, near the upper portion of this line all the other weeds are increasing, especially skeletonweed.

The patch of blackberry at point 11-08 has also been treated and is 90% gone. A new linear occurrence (L07-11) was mapped this year, extending from 11-08 up slope to the 2nd penstock foundation block. Of primary concern is the increasing skeletonweed.

3.2 Licensee-maintained roads

A summary of noxious weed occurrences observed along Project 184 licensee-maintained roads surveyed in 2011 is provided 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.

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. Summary of Noxious Weeds Observed Along Licensee-maintained Roads in 2011

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, MEOF	None
R41	Woods Creek	0.19	None	None	N/A
R42	Caples Main Dam	0.16	None	HYPE (noted in 2011)	None
*New	Caples Boat Launch		None	MEOF, VETH	Partial
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	MEOF	None
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	TOAR, LALA4, RUAR9	Partial
R88	Camp P	1.32	BRTE	TOAR, CIVU, MEOF, HYPE, LALA4, VETH	Partial
R89	Rock Crusher	1.16	BRTE	MEOF, 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	HYPE	None
R94	Bend Court	0.41	BRTE	HYPE, TOAR, RUAR9, LEVU	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.

** Flume 39/40 road was "re-opened" this year for upcoming construction and should be surveyed next year.

*** Camp 3 road appears to be incorrectly mapped in EID's TSMP GIS data.

3.3 Priority List for Future Treatments

This section provides a priority list to help inform future treatment efforts. 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 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:

- Prevent the introduction of new invaders
- Conduct early treatment of new infestations
- Contain and control established infestations

In addition to the criteria described above, all occurrences have been given a priority ranking of 1 through 3, with 1 being the highest priority for control and 3 being the lowest priority. The following criteria were considered when assigning priorities:

- List A noxious weed species (excluding ripgut brome and cheatgrass) and List B species (Himalayan blackberry and sweet clover) (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

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 previous treatments.

Table 4. Priority List of Point and Area Occurrences

Collection Date	Weeds	MAP ID	X Coord.	Y Coord.	Location	Priority	Control*
6/22/2011	RUAR9, CIVU, LALA4, AETR	Area1-08			Forebay	2	No
6/22/2011	RUAR9, CIVU	01-08	6954850.36	2051734.17	12N34H	2	Moderate
6/22/2011	RUAR9	02-08	6954729.4	2051997.43	12N34H	2	Good
6/22/2011	RUAR9	03-08	6954366.54	2052317.6	12N34H	2	Good
6/22/2011	RUAR9	04-08	6953462.93	2052782.84	12N34H	2	Good
6/22/2011	RUAR9, TOAR	06-08	6952678.7	2053048.47	12N34H	2	Moderate
6/22/2011	RUAR9, HYPE, CIVU, TOAR	07-08	6953569.30	2053595.91	12N34H	2	Moderate
6/22/2011	RUAR9, HYPE, LALA4, CIVU	08-08	6954272.46	2054085.68	12N34H	2	Good
6/22/2011	RUAR9, HYPE, MEOF, VETH	09-08	6955018.74	2054018.07	Powerhouse	2	Good
7/14/2011	RUAR9, VETH, BRTE, HYPE	11-08	6955188.65	2053066.73	L. penstock	1	Moderate
6/22/2011	KW	12-08	6961361.85	2048685.29	R93	3	No
6/22/2011	LALA4, RUAR9	13-08	6963202.58	2046813.86	U. penstock	2	Moderate
7/14/2011	BRTE	14-08	6971492.55	2043707.46	Bend Ct.	2	No
6/29/2011	LEVU, LALA4	17-08	6985525.52	2039178.79	Canal - 4	2	Complete
6/23/2011	RUAR9	18-08	6986373.03	2040323.36	10N40G	2	No
6/23/2011	RUAR9	19-08	6986740.71	2040777.22	10N40G	2	No
6/23/2011	RUAR9, LALA4	20-08	6987091.28	2040986.55	10N40G	2	No
6/23/2011	RUAR9	21-08	6987696.98	2040910.37	10N40G	2	Poor
6/23/2011	RUAR9	22-08	6988102.93	2040756.85	10N40G	2	Poor
6/23/2011	RUAR9	24-08	6989867.32	2042125.28	10N40G	2	No
7/7/2011	CIVU	25-08	6991666.38	2042720.19	10N40N	2	Good
7/7/2011	RUAR9	26-08	6997324.69	2043108.91	Canal - 3	2	Good
7/1/2011	MULTIPLE	29-08	6997871.66	2043793.63	R88	1	Good
7/1/2011	TOAR	30-08	6997715.6	2044783.6	R88	2	Moderate
7/1/2011	TOAR	31-08	6998069.87	2045590	R88	2	Good
7/1/2011	TOAR, CIVU	32-08	6998807.15	2045932.01	R88	2	Good
7/1/2011	LALA4, RUAR9	33-08	6999613.1	2046520.61	Canal - 3	2	Good
7/1/2011	HYPE, CIVU	34-08	7000965.97	2044277.99	Road	3	Good
7/21/2011	BRTE, MEOF	36-08	7024182.79	2044078.51	R74	2	Complete
7/21/2011	BRDID4, BRTE MEOF	37-08	7024476.75	2044556.35	R75	2	Moderate
7/21/2011	LALA4	38-08	7025143.3	2044421.83	Canal - 1	3	No
7/21/2011	BRTE, MEOF	39-08	7025260.04	2044718.29	R75	2	Good
7/21/2011	LEVU, VETH	40-08	7038988.85	2043926.52	Canal - 1	3	No
7/21/2011	LALA4	41-08	7040924.83	2044986.97	Diversion D.	1	No

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8/10/2011	CIVU, VETH	44-08	7097977.02	2011316.78	Silver L.	3	Good
6/29/2011	LALA4	45-08	6967150.56	2044448.8	Canal - 5	2	Good
7/14/2011	LALA4, HYPE	46-08	6965365.41	2045946.49	Forebay	3	Good
7/21/2011	MULTIPLE	47-08	7040985.84	2045030.6	Diversion D.	1	No
7/21/2011	LEVU	48-08	7038113.23	2044064.46	Canal - 1	2	No
8/10/2011	VETH	49-08	7113897.88	2023827.66	Caples L.	3	Good
7/7/2011	LEVU	50-08	6992607.94	2042172.70	Canal - 4	3	No
6/22/2011	RUAR9	01-09	6952562.95	2050890.11	Road	3	Good
7/14/2011	MEOF	02-09	6957365.66	2051364.58	Surge	3	Good
6/23/2011	RUAR9	04-09	6985158.77	2038541.74	11N02Y	3	No
7/7/2011	RUAR9, LEVU	05-09	6992804.44	2042087.23	Canal - 4	3	Good
7/7/2011	CIVU	06-09	7005496.18	2042673.45	Canal - 3	3	No
7/1/2011	BRTE	07-09	7009298.52	2042163.42	R73	2	No
7/1/2011	CIVU, RUAR9	08-09	7010098.66	2039555.01	10N08Y	3	No
7/7/2011	BRTE	09-09	7007523.92	2044300.18	Plum Siphon	2	Moderate
7/21/2011	HYPE	10-09	7035021.59	2043971.73	Canal - 1	3	Good
8/10/2011	VETH	11-09	7097898.36	2010048.13	Silver L.	2	No
6/29/2011	VETH	01-10	6968322.05	2043543.66	Canal - 5	3	Good
6/29/2011	BRTE	02-10	6971379.14	2044469.72	Canal - 5	2	Moderate
6/29/2011	BRTE, MEOF, AETR	03-10	6973005.33	2044972.35	Canal - 5	1	No
6/29/2011	HYPE, MEOF, CIVU	04-10	6988383.42	2039170.51	Canal - 4	2	No
6/23/2011	VETH, CIVU, RUAR9	05-10	6988457.26	2040717.33	10N40G	2	No
7/21/2011	HYPE	06-10	7031943.32	2043584.48	Canal - 1	3	No
6/29/2011	LALA4, CIVU	01-11	6974408.58	2045422.55	Canal -5	3	No
7/7/2011	RUAR9	02-11	7008652.83	2044409.19	Canal-2	3	No
8/10/2011	MEOF	03-11	7113510.72	2023811.33	Caples L.	3	No
8/10/2011	MEOF	04-11a	7120177.39	2024772.45	Caples L.	2	Good
8/10/2011	MEOF	04-11b	7120044.62	2024630.86	Caples L.	2	Good
8/10/2011	MEOF/VETH	04-11c	7119938.93	2024752.34	Caples L.	2	Good
8/10/2011	VETH	04-11d	7119984.54	2024563.12	Caples L.	2	Good

*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*
6/22/2011	MULTIPLE	221	L01-08	12N34H	2	Moderate
6/22/2011	HYPE, RUAR9	504	L02-08	12N34H	2	Good
6/22/2011	RUAR9, LALA4, HYPE, CIVU	79	L03-08	U. penstock	2	Moderate
6/22/2011	RUAR9, CIVU, LALA4, BRDID4	408	L04-08	U. penstock	2	Good
6/22/2011	CIVU, LALA4, AETR, BRDID4	311	L05-08	U. penstock	1	Moderate
7/14/2011	CYSC4	98	L06-08	Forebay	1	Good
6/29/2011	CIVU, MEOF	297	L07-08	Canal - 5	2	Good
6/29/2011	VETH, CIVU, LALA4, MEOF	367	L08-08	Canal - 5	2	No
6/29/2011	LALA4	133	L09-08	Canal - 5	2	No
6/23/2011	RUAR9, HYPE, CIVU	1063	L12-08	11N02Y	1	No
6/23/2011	RUAR9, VETH, CIVU	171	L13-08	R83	2	No
6/23/2011	RUAR9, CIVU, LALA4	545	L14-08	10N40G	1	No
6/23/2011	RUAR9, CIVU, LALA4	262	L15-08	10N40G	2	Moderate
7/1/2011	MULTIPLE	940	L17-08	R87	1	Moderate
7/1/2011	RUAR9, BRTE, TOAR, LALA4	308	L20-08	R88	1	Good
7/1/2011	MULTIPLE	630	L21-08	R88	1	Good
7/1/2011	MULTIPLE	725	L22-08	R89	1	Good
7/1/2011	TOAR, CIVU	20	L23-08	R88	2	Good
7/1/2011	TOAR	64	L24-08	R88	2	Good
7/1/2011	CIVU	188	L25-08	10N08YA	3	Poor
7/21/2011	MULTIPLE	1014	L26-08	R74/74A	1	Moderate
7/29/2011	HYPE, MEOF, BRTE	225	L27-08	Canal - AC	1	No
7/21/2011	MULTIPLE	866	L28-08	R74/74A	1	Moderate
7/21/2011	MULTIPLE	741	L29-08	R75	1	Moderate
7/21/2011	LALA4, BRTE, HYPE, MEOF	340	L30-08	R75	2	Good
7/29/2011	BRTE	325	L31-08	Alder Crk	2	Moderate
7/21/2011	MEOF, BRTE, VETH	237	L32-08	75A	2	Good
7/21/2011	BRTE, VETH, HYPE	155	L33-08	Canal - 1	3	No
7/21/2011	BRTE, VETH	193	L34-08	Canal - 1	2	No
7/21/2011	BRTE, VETH	201	L35-08	Canal - 1	2	No
7/14/2011	RUAR9, VETH, BRTE, CHJU	418	L01-09	L. penstock	1	Moderate
7/14/2011	HYPE, TOAR	2373	L02-09	U. penstock	3	No
6/22/11	LALA4, RUAR9	141	L03-09	U. penstock	3	Good
7/14/2011	MULTIPLE	46	L04-09	Forebay	2	Moderate
7/14/2011	RUAR9, HYPE, LEVU	328	L05-09	Forebay	2	No
6/23/2011	MEOF	167	L06-09	R821	3	No

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7/1/2011	BRDID, BRTE	1845	L07-09	R73	2	Moderate
6/22/2011	RUAR9, HYPE, CIVU		¹ L01-10	12N34H	2	No
6/22/2011	AETR, CESO3	85	L01-11	U.Penstock	1	No
6/22/2011	LEVU	204	L02-11	U.Penstock	3	No
6/23/2011	RUAR9	337	² L03-11	11N02Y	1	No
6/29/2011	MEOF, LALA4	284	L04-11	Canal - 5	3	No
7/7/2011	TOAR	138	L05-11	Canal - 5	3	No
7/7/2011	LALA4, RUAR9	545	³ L06-11	Canal - 5	2	Moderate
7/14/2011	CHJU, HYPE, RUAR9, BRTE	560	L07-11	L. Penstock	1	No
7/14/2011	HYPE, LEVU	281	L08-11	Forebay	3	No
7/14/2011	RUAR9, TOAR, HYPE, LALA4	890	L09-11	Bend Ct.	2	No
7/21/2011	VETH	65	L10-11	Canal - 1	3	No

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

¹Previously identified as point occurrence 05-08. ²Previously identified as point occurrences 16-08 and 03-09.

³Previously identified as occurrences L18-08, L19-08, 27-08 and 28-08.

4.0 Summary

Data was collected on a total of 112 weed occurrences throughout the Project 184 facilities and licensee-maintained roads in 2011. There were 10 new linear occurrences (2 of those lines were created to consolidate 6 previous occurrences) and 4 new point locations (point 04-11 is actually 4 sub-points). Due to control efforts, approximately 55% (62 of the 112 sites) of the occurrences had good or moderate control. Overall, there continues to be relatively few significant occurrences of "List A" noxious weed species.

As in 2010, "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). Several areas, however, experienced a spread of "List A" weeds. Increased starthistle and skeletonweed along Beat 1; increased skeleton weed and cheat grass along the lower penstock; two new spots of barbed goatgrass along the upper penstock and Beat 5; and Lake Aloha, Echo Lake and Echo Conduit remained free of listed 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 still cheat grass, followed by skeletonweed. The occurrences of starthistle and skeletonweed on Beat 1 of the canal have shown signs of increase this year. The Scotch broom at Forebay was targeted with 95% success; this site should be treated again soon to increase the effectiveness of the control. The barbed goatgrass along the upper penstock near Forebay Reservoir was also aggressively treated and mostly eliminated; however, a few new small patches of this species were observed this year (near Forebay dam, along the upper penstock and a small patch on Beat 5 between spillway 44 and 45) and will need to be monitored closely next year for signs of spread.

The most common and widespread noxious weeds in the survey area continue to be Himalayan blackberry, perennial sweet pea, sweet clover and Klamath weed.

As noted last year, woolly mullein seems to be increasing, especially along Beat 1 of the canal. 2011 was another wet and cool year so this weather pattern may be contributing to the spread of woolly mullein. Also, with the large number of plants outside the fence and therefore outside the typical treatment zone, there continues to be a large source of seed to re-inoculate the canal bench. Hedge parsley also seemed to be more prevalent this year, within the project and throughout the region as well.

Based on input from the USFS and EID, EN2 created maps showing 2010 occurrences of USFS, List A noxious weed species (excluding ripgut brome and cheatgrass) and two list B species (Himalayan blackberry and sweet clover) at a scale similar to the EID Canal Atlas to enable EID to plan treatments in 2011. EN2 has prepared a similar map for the 2011 occurrences for EID to use in planning 2012 treatments.

5.0 Recommendations

In 2011, the USFS and EID agreed to focus the survey on List A noxious weed species (excluding ripgut brome and cheatgrass) and two list B species (Himalayan blackberry and sweet clover). This strategy did increase the efficiency of the survey; however, this approach did not significantly reduce the area required to be surveyed each year. Therefore, EID proposes to consult with the USFS to determine if an alternate monitoring schedule can be implemented. Some potential options for consideration include:

- Survey the Project area every two years
- Divide the Project area into sections that can be surveyed in separate years

6.0 References

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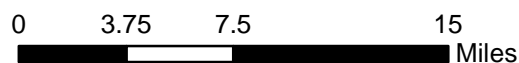
APPENDIX A

Figures



Figure 1. Regional Location and Vicinity

Created By: Ethan Koenigs
Date: 10/13/11



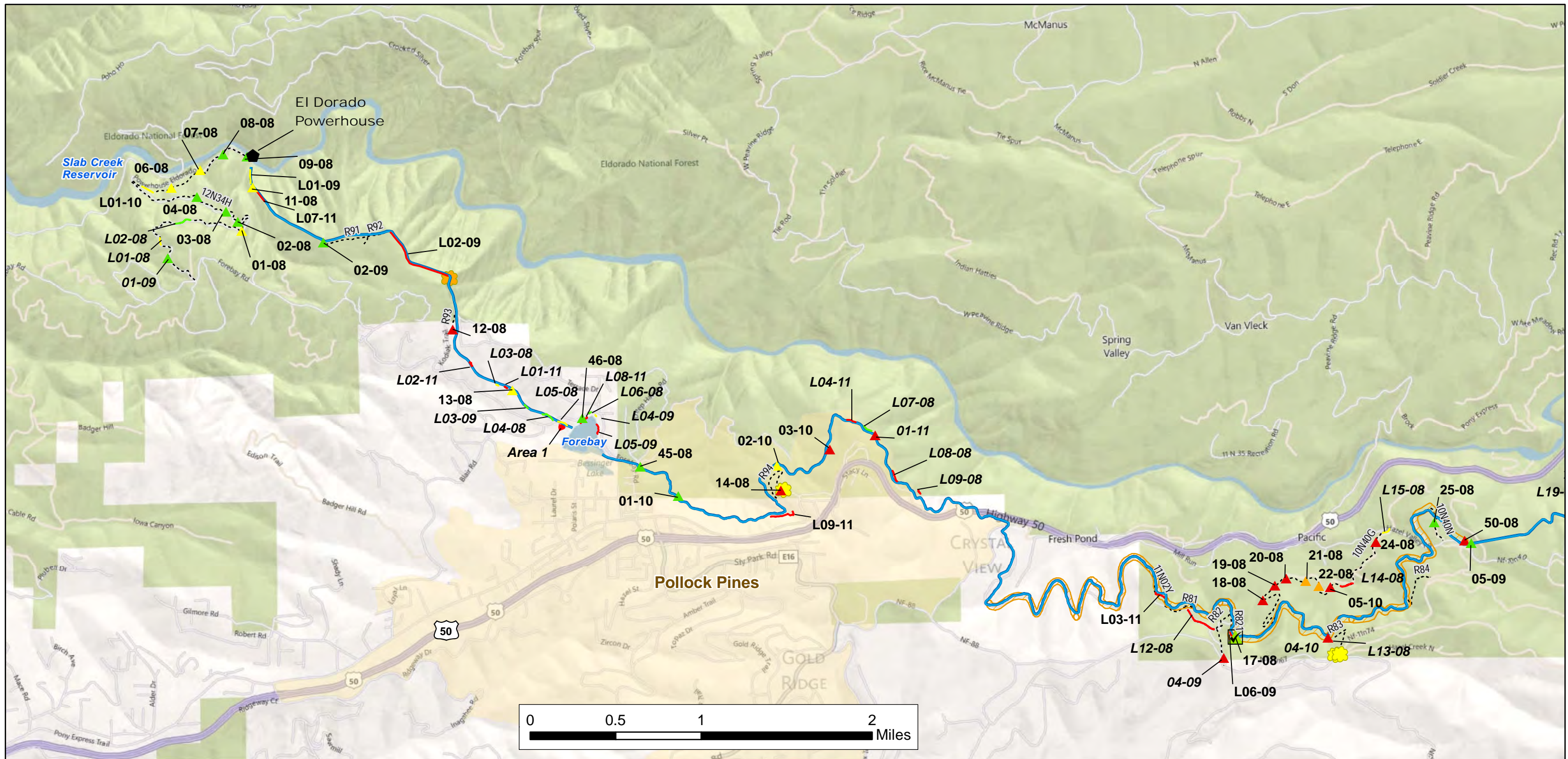


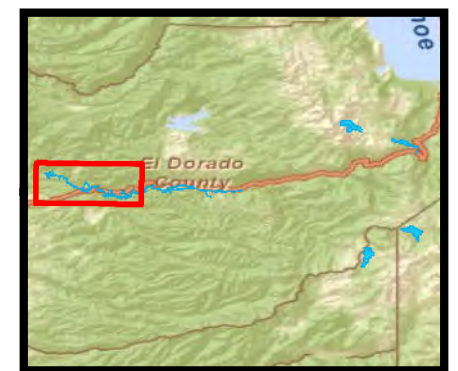
Figure 2. Noxious Weed and Rare Plant Occurrences

2011 Survey - FERC Project 184

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Legend	
Point Occurrences	Rare Plants
Treatment Success	Red Hills Soap Lily
Complete	Yellow-burr Navaretia
Good	Pleasant Valley Mariposa Lily
Moderate	Pacific Yew
Poor	
None	
Linear Occurrences	Roads
Treatment Success	Highway
Complete	Major Road
Good	Licensee Maint'd Roads
Moderate	USFS Roads
Poor	Administrative Boundaries
None	USFS Land
Noxious weed area	Communities



N

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



Date: 10/13/2011 Created By: Ethan Koenigs

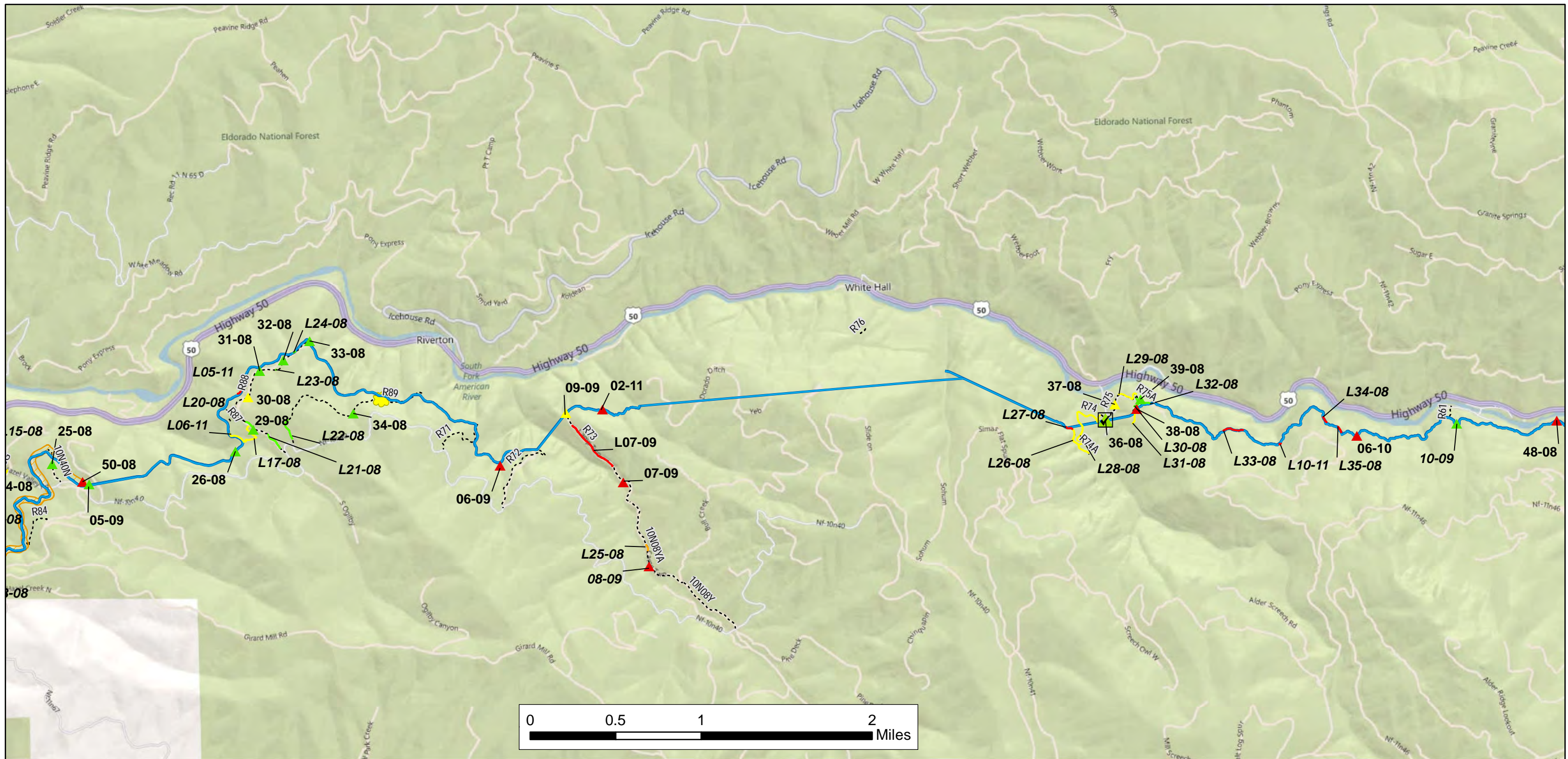


Figure 2. Noxious Weed and Rare Plant Occurrences

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Point Occurrences		Linear Occurrences		Rare Plants		Roads	
Treatment Success		Treatment Success					
	Complete		Complete		Red Hills Soap Lily		Highway
	Good		Good		Yellow-burr Navaretia		Major Road
	Moderate		Moderate		Pleasant Valley Mariposa Lily		Licensee Maint'd Roads
	Poor		Poor		Pacific Yew		USFS Roads
	None		None				USFS Land
			Noxious weed area				Communities



Date: 10/13/2011 Created By: Ethan Koenigs

N

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

Prepared By:

Water and Energy
Consulting Services

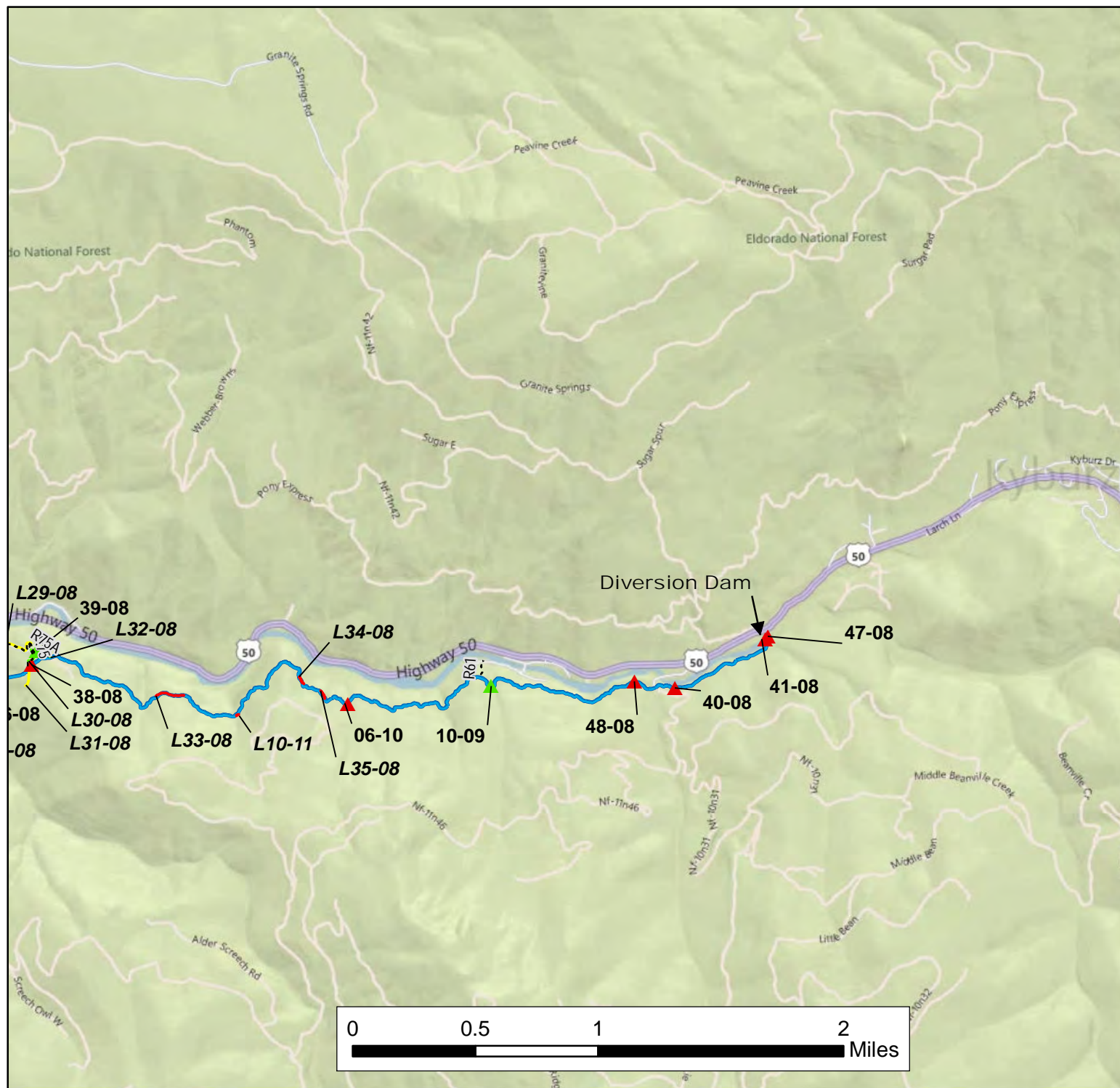


Figure 2. Noxious Weed and Rare Plant Occurrences

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Page 3 of 3



Point Occurrences

Treatment Success

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

Linear Occurrences

Treatment Success

- Complete
- Good
- Moderate
- Poor
- None

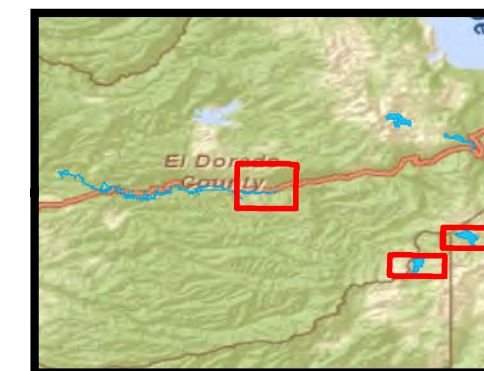
Legend

Rare Plants

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

Roads

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



Date: 10/05/11 Created By: Ethan Koenigs



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

Prepared By:



APPENDIX B

Noxious Weed Occurrence Photos



P6220621



P6220624



P6220625



P6220626



P6220627



P6220628



P6220629



P6220630



P6220631



P6220632



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P6230676



P6230677



P6230678



P6230679



P6230680



P6230681



P6230682



P6230683



P6230684



P6230685

June 29, 2011: El Dorado Canal Beats 4 and 5



P6290687



P6290689



P6290690



P6290691



P6290692



P6290693



P6290694



P6290695



P6290696



P6290697



P6290698



P6290699



P6290700



P6290701



P6290702



P6290703



P6290686

July 1, 2011: Camp 2 and 3 roads, 10N08Y, Rds.87-89



P7010710



P7010711



P7010712



P7010713



P7010714



P7010715



P7010716



P7010717



P7010718



P7010719



P7010720



P7010721



P7010722



P7010723



P7010724



P7010725



P7010726



P7010727



P7010728



P7010729



P7010730



P7010704



P7010705



P7010706



P7010707



P7010708



P7010709

July 7, 2011: El Dorado Canal Beats 2, 3 and partial 4



P7070576



P7070577



P7070578



P7070579



P7070580



P7070581



P7070582



P7070583



P7070584



P7070585



P7070586



P7070587



P7070588



P7070589

July 14, 2011: Lower penstock, partial upper penstock, partial Forebay Res., Moon Lane, Bend Court



P7140597



P7140598



P7140599



P7140600



P7140601



P7140602



P7140604



P7140605



P7140606



P7140607



P7140608



P7140609



P7140610



P7140611



P7140612



P7140613



P7140614



P7140615



P7140616



P7140617



P7140590



P7140591



P7140592



P7140593



P7140594



P7140596

July 21, 2011: El Dorado Canal Beat 1, Camp 1 rds. (74 and 75)



P7210628



P7210629



P7210630



P7210631



P7210632



P7210633



P7210634



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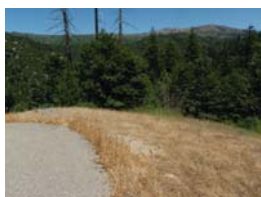
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P7210627

August 10, 2011: Caples Lake and Silver Lake



P8100728



P8100729



P8100730



P8100731



P8100732



P8100733



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P8100737



P8100738



P8100739



P8100743



P8100744



P8100745

APPENDIX C

Noxious Weed Occurrence Data Sheets

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

Powerhouse access road, Upper Penstock and other access roads

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
614	09-08	S	Good control of weeds near powerhouse; very little MEOF
615	09-08	W	Good control of MEOF and HYPE along road near powerhouse
616	09-08	W	Downslope side of road - good weed control - RUAR9 near water
617	09-08	E	Good control of RUAR9
618	08-08	W	Good control of weeds
619	07-08	SW	RUAR9
620	07-08	SW	Good control along ditch; some RUAR9 adjacent to ditch
621	07-08	W	RUAR9 - partial control
624	06-08	NE	RUAR9 - below road
625	06-08	W	Good control along road shoulder - RUAR9 just outside spray zone, below road
626	L01-10	NE	CIVU in ditch
627	L01-10	E	RUAR9 encroaching on road
628	04-08	W	Good control along road
629	04-08	W	Good control along road, RUAR9 outside of spray zone
630	03-08	NW	Good control along road
631	02-08	W	Partial control of RUAR9
Notes			

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
632	02-08	NW	Dead RUAR9
633	01-08	E	RUAR9 downslope of road
634	01-08	E	Good control of weeds along ditch
635	L02-08	W	Good control of weeds
636	L02-08	E	Very few HYPE along road; good control
637	L01-08	S	MEOF in dtich
638	L01-08	S	BRTE - along west side of road - few other weeds.
639	L01-08	N	A few MEOF with BRTE
640	01-09	W	Dead RUAR9
641	Area 01-08	SW	LALA4 and LEVU - RUAR9 in background
642	Area 01-08	S	Recent disturbance - RUAR9 clumpy
643	L05-08	W	Penstock near outlet - good control of AETR
644	L05-08	E	Patchy weeds on berm - LALA4, BRTE, LEVU
645	L05-08	W	Patchy weeds on South side berm - LALA4, BRTE, LEVU, CIVU
646	L04-08	W	Weeds along road shoulder LALA4 - good control in ROW
647	L04-08	E	Dense LALA4; RUAR9 in low area
648	L04-08	SW	Partial control - dense RUAR9
649	L03-09	SW	LALA4/ RUAR9
650	L03-09	E	LALA4
651	L03-09	S	LALA4
Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
652	13-08	S	Clump of LALA4
653	L01-11	E	Scattered LALA4, BRTE

654	L03-08	SE	RUAR9 - returning
655	L03-08	w	RUAR9 - returning
656	L02-11	SE	LEVU
657	12-08	W	Small, scattered HYPE
658	12-08	NW	Small, scattered HYPE - near gat at Kodiak trail

Notes

Page 3

General Information

Collection date (mm/dd/yyyy)	6/22/2011
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.)	Shady, N. facing slope

Weed Information

Weed Identification	
Weed genus and species	<i>Rubus discolor</i>
Weed common name(s)	Himalayan Blackberry
	<i>Cirsium vulgare</i>
	Bull Thistle (5 plants)
Presence	
Presence or Absence	Present (all)
Treated	No
Infested area	10,000 sq. ft.
Canopy Cover	5-25%
Appearance	New growth
Distribution pattern	Clumpy
Photo documentation	633, 634

Weed Location

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. 2011 Update: Good control up/downslope. Still abundant further downslope.

General Information

ID: 02-08

Collection date (mm/dd/yyyy)	6/22/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Access Road	
Site address or other description	Powerhouse Road	
Ownership	Transportation Corridor	
Land use type	Forest	
Invaded vegetation type	10, 000 - 15,000 sq. ft.	
Gross Area	Roadside maintenance	
Disturbances & impacts	Douglas Fir, Big-leaf Maple, Pacific Dogwood.	
Associated species	Shady area along/near a drainage.	
Environmental Conditions (e.g. soil conditions, exposure, etc.)		

Weed Information

Weed genus and species	<i>Rubus discolor</i>	
Weed common name(s)	Himalayan Blackberry	

	Presence
Presence or Absence	Present (all)
Treated	Yes
Infested area	10,000-15,000 sq. ft.
Canopy Cover	1-5%
Appearance	New growth
Distribution pattern	Clumpy
Photo documentation	631, 632

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; 2 locations, separated by about 200'; another patch downslope along road - 200'. 2011 Update: Good control but still growing off the road shoulder.	

General Information

ID: 03-08

Collection date (mm/dd/yyyy)	6/22/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Access Road	
Site address or other description	Powerhouse Road	
Ownership	Transportation Corridor	
Land use type	Forest	
Invaded vegetation type		
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	<1%	
Appearance	Dead	
Distribution pattern	Clumpy	
Photo documentation	630	

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. 2011 Update: Good control.	

General Information

ID: 04-08

Collection date (mm/dd/yyyy)	6/22/2011	
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	750 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	

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 (not all species)	No VETH
Treated	Yes	
Infested area	750 sq. ft.	
Canopy Cover	1-5%	
Appearance	New growth	
Distribution pattern	Clumpy	Linear
Photo documentation	628, 629	

Weed Location

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. 2011 Update: Good control on both weeds.	

General Information

ID: 06-08

Collection date (mm/dd/yyyy)	6/22/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	
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>Torilis arvensis</i>
Weed common name(s)	Himalayan Blackberry Hedge Parsley

Presence

Presence or Absence	Present (all)
Treated	Yes
Infested area	500 sq. ft.
Canopy Cover	1-5%
Appearance	Germ'g./early growth
Distribution pattern	Linear
Photo documentation	624, 625

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. 2011 Update: Low portion moderately controlled on downslope side. Still extensive downslope.

General Information

ID: 07-08

Collection date (mm/dd/yyyy)	6/22/2011
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 discolor</i>
Weed common name(s)	Himalayan Blackberry
	<i>Hypericum perforatum</i>
	Klamath weed
	<i>Cirsium vulgare</i>
	Bull Thistle
	<i>Torilis arvensis</i>
	Hedge Parsley
Presence	
Presence or Absence	Present (all)
Treated	No
Infested area	1,000 sq. ft.
Canopy Cover	5-25%
Appearance	New growth
Distribution pattern	Clumpy
Photo documentation	619, 620, 621, 622

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. 2010 Update: Extent appears same as 2009 with slight increase. 2011 Update: Partial control of RUAR9(sprayed). Upper occurrence has moderate control but is extensive downslope.

General Information

ID: 08-08

Collection date (mm/dd/yyyy)	6/22/2011	
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 Identification

Weed Identification		
Weed genus and species	<i>Rubus discolor</i>	<i>Hypericum perforatum</i>
Weed common name(s)	Himalayan Blackberry	Klamath Weed
		<i>Lathyrus latifolius</i>
		<i>Cirsium vulgare</i>
		Perennial Sweet Pea
		Bull Thistle

Presence

Presence or Absence	No LALA4 or CIVU		Extends down road 200' - RUAR9 downslope
Treated	Yes		
Infested area	500 sq. ft.		
Canopy Cover	<1%		
Appearance	New growth	Dead	Dead
Distribution pattern	Clumpy		
Photo documentation	618		

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; Extends down road 200' - RUAR9 downslope. 2011 Update: Still present downslope but overall good control.		

General Information

ID: 09-08

Collection date (mm/dd/yyyy)	6/22/2011	
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	
Invaded vegetation type	Powerhouse	
Gross Area	7500 sq. ft.	
Disturbances & impacts	Roadside 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>
Weed common name(s)	Himalayan Blackberry	White Sweet Clover
Presence		
Presence or Absence	No MEOF, VETH or HYPE	
Treated	No	
Infested area	400-600 sq. ft.	
Canopy Cover	<1%	
Appearance	New growth	Dead
Distribution pattern	Clumpy	Scattered patchy
Photo documentation	614, 615, 616, 617	

Weed Location

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. 2011 Update: Overall good control, no MEOF, VETH, or HYPE.	

General Information

ID: 12-08

Collection date (mm/dd/yyyy)	6/22/2011	
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	Roadside maintenance	
Associated species	Ponderosa pine, incense cedar, mountain misery	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Open pine forest, southeast exposure	

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	Yes	
Infested area	250 sq. ft.	
Canopy Cover	<1%	
Appearance	New growth	
Distribution pattern	Clumpy	
Photo documentation	657,658	

Weed Location

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. 2011 Update: Small amount of HYPE coming back; few plants near gate as well.	

General Information

ID: 13-08

Collection date (mm/dd/yyyy)	6/22/2011
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>
Weed common name(s)	Himalayan Blackberry Perennial Sweet Pea

Presence	
Presence or Absence	Present (all)
Treated	Yes
Infested area	500 sq. ft.
Canopy Cover	<1%
Appearance	Germ'g./early growth
Distribution pattern	Clumpy
Photo documentation	652

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). 2011 Update: In general LALA4 scattered on shoulder of road from gate near Forebay Rd. to the point 13-08. Good control on RUAR9, LALA4 looks the same.

General Information

Collection date (mm/dd/yyyy)	6/22/2011 & 07/14/2011	
Observer name(s)	Ethan Koenigs & Chad Johnson	
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	0.33 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	

Site Information

Weed Information

		Weed Identification	
Weed genus and species	<i>Rubus discolor</i>	<i>Lathyrus latifolius</i>	<i>Leucanthemum vulgare</i>
Weed common name(s)	Himalayan Blackberry	Perennial Sweet Pea	Ox Eye Daisy barbed goatgras:black mustard Starthistle
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	0.33 acres		
Canopy Cover	25-50%	5-25%	<1%
Appearance	Germ'g./early growth	New growth	Flowering
Distribution pattern	Clumpy	Scattered patchy	Flowering Scattered patch Scattered even
Photo documentation	612, 613, 641, 642		

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. 2011 Update: Resent ground disturbance; AETR, CESO along access road leading from parking area down to Penstock; HIIN extends along top of dam; Sweet pea expanding to 25-50%.	

General Information

ID: L01-08

Collection date (mm/dd/yyyy)	6/22/2011
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	Transportation Corridor
Land use type	Forest
Invaded vegetation type	
Gross Area	4,400 sq. ft.
Disturbances & impacts	Roadside maintenance Other man-made disturbance Transmission Corridor Maintenance
Associated species	Douglas Fir, Sugar Pine, Manzanita, Rose Clover, Blue Wild-rye.
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Full west facing exposure, sunny and open.

Weed Information

Weed Identification	
Weed genus and species	<i>Melilotus officinalis</i>
Weed common name(s)	Sweet Clover <i>Bromus diandrus</i> Ripgut brome

Presence or Absence	Not - LALA4, HYPE, CIVU, RUAR9	
Treated	Yes	
Infested area	4,400 sq. ft.	
Canopy Cover	1-5%	5-25%
Appearance	New growth	Seeding
Distribution pattern	Linear	Scattered patchy Scattered even
Photo documentation	637, 638, 639	

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. 2011 Update: Good control of some weeds. No CIVU, RUAR9, HYPE, or LALA4 observed.

General Information

ID: L01-10

Collection date (mm/dd/yyyy)	6/22/2011
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	2,500 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.)	Shady, N-facing slope, gravel road

Weed Information

Weed Identification	
Weed genus and species	<i>Rubus discolor</i>
Weed common name(s)	Himalayan Blackberry
	<i>Hypericum perforatum</i>
	Klamath weed
	<i>Cirsium vulgare</i>
	Bull Thistle
Presence	
Presence or Absence	Present (not all species)
Treated	Yes
Infested area	2,500 sq. ft. (including downslope and upslope)
Canopy Cover	5-25%
Appearance	Germ'g./early growth
Distribution pattern	Clumpy
Photo documentation	626, 627

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'). Changed to a line feature for this occurrence (prev 05-08). 2011 Update: Coming back, moderate control on roadside.

General Information		ID: L01-11	
Collection date (mm/dd/yyyy)		6/22/2011	New Line
Observer name(s)	Ethan Koenigs	Logan McCarthy	
Site Information			
Site or facility name	EID Penstock		
Site address or other description	Between forebay reservoir and tunnel		
Ownership			
Land use type	Transportation Corridor		
Invaded vegetation type	Forest		
Gross Area	1000	sq. ft.	
Disturbances & impacts	Roadside maintenance Other man-made disturbance		
Associated species	Black Oak, Manseneda, Mountain Misery.		
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Full sun plus gravel soil.		
Weed Identification			
Weed genus and species	<i>Centaurea solstitialis</i>	<i>Lathyrus latifolius</i>	<i>Bromus diandrus</i>
Weed common name(s)	Star Thistle	Sweet Pea	Ripgut
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	500	sq. ft.	(including downslope and upslope)
Canopy Cover	<1%	1-5%	1-5%
Appearance	Germ'g./early growth	New growth	Flowering
Distribution pattern	Scattered even		
Photo documentation	653		
Weed Location			
Geographic location (ID)	Line 01 6/22/11		
Coordinate system	Ca. State Plane Zone 2		
Datum	NAD83		
Location data accuracy	5-15m		
Location description	In turn out East of big dip/ravine.		

General Information

ID: L02-08

Collection date (mm/dd/yyyy)	6/22/2011
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	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>Hypericum perforatum</i>
Weed common name(s)	Himalayan Blackberry Klamath Weed

Presence or Absence	No - HYPE
Treated	Growing Back
Infested area	5,000 sq. ft.
Canopy Cover	<1%
Appearance	Germ'g./early growth
Distribution pattern	Linear
Photo documentation	635, 636

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. 2011 Update: Good control greatly reduced RUAR9.

General Information

ID: L02-11

Collection date (mm/dd/yyyy)	6/22/2011
Observer name(s)	Ethan Koenigs Logan McCarthy
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	2000 sq. ft.
Disturbances & impacts	Roadside maintenance Trail Maintenance
Associated species	Cedar, Ponderosa Pine, White Pine, Mountain Misery.
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Partly Shaded

Weed Information

Weed genus and species	<i>Leucanthemum vulgare</i>	Weed Identification	<i>Hypericum perforatum</i>
Weed common name(s)	Ox Eye		Klamath Weed

Presence or Absence	Present (all)	Presence
Treated	No	
Infested area	250 sq. ft.	
Canopy Cover	<1%	
Appearance	Flowering	
Distribution pattern	Clumpy	
Photo documentation	656	

Weed Location

Geographic location (ID)	
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	1-5m
Location description	Penstock access road, west of Kodiak trail; weeds continue downslope along an old skid road.

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	
Associated species	Douglas Fir, Ponderosa Pine, Black Oak, Manzanita.
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Exposed, open, 15 - 25% slopes

Weed Information

Weed genus and species	<i>Rubus discolor</i>	<i>Lathyrus latifolius</i>	<i>Leucanthemum vulgare</i>	<i>Aegilops triuncialis</i>	<i>Hypericum perforatum</i>
Weed common name(s)	Himalayan Blackberry	Perennial Sweet Pea	Ox Eye	Barbed goat grass	Klamath Weed

Presence or Absence	Present (all)				
Treated	Yes				
Infested area	4,350 sq. ft.				
Canopy Cover	<1%	<1%	<1%	<1%	<1%
Appearance	New growth	New growth	New growth	New growth	New growth
Distribution pattern	Scattered patchy				
Photo documentation	654, 655				

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). 2011 Update RUAR9 present and returning. few AETR on up-hill slope (west side).

General Information

ID: L03-09

Collection date (mm/dd/yyyy)	6/22/2011
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>
Weed common name(s)	Himalayan Blackberry
	<i>Lathyrus latifolius</i>
	Perennial Sweet Pea
	<i>Leucanthemum vulgare</i>
	Ox Eye Daisy
	Presence

Presence or Absence	Present (all)
Treated	Yes
Infested area	1500 sq. ft.
Canopy Cover	5-25%
Appearance	New growth
Distribution pattern	Clumpy
Photo documentation	649, 650, 651
	Weed Location

Weed Location	
Geographic location (ID)	L03-09
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	< 1m
Location description	Just west of L04-08; South side of road. 2011 Update: good control along Penstock, similar to 2010; weeds present outside ROW.

General Information		ID: L04-08	
Collection date (mm/dd/yyyy)	6/22/2011		
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	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> , Bull Thistle,	<i>Rubus discolor</i> Himalayan Blackberry	<i>Leucanthemum vulgare</i> Ox Eye Daisy
Weed common name(s)		Perennial Sweet Pea	Ripgut
Presence			
Presence or Absence	Present (all)		
Treated	Not all		
Infested area	0.5 acres		
Canopy Cover	<1%	25-50%	<1%
Appearance	New growth	New growth	New growth
Distribution pattern	Scattered even	Linear	
Photo documentation	646, 647, 648		
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 outside the project boundary. 2011 Update: Good control, most weeds on slope below and near Penstock and access road.		

General Information

ID: L05-08

Collection date (mm/dd/yyyy)	6/22/2011
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>Lathyrus latifolius</i>
Weed common name(s)	Barbed goatgrass	Perennial Sweet Pea
		Ox Eye Daisy
		<i>Bromus diandrus</i>
		Ripgut
Presence or Absence	Presence	
Treated	Not all - No CIVU	
Infested area	0.1 acres	
Canopy Cover	<1%	<1%
Appearance	New growth	Flowering
Distribution pattern	Scattered even	
Photo documentation	643, 644, 645	

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. 2011 Update: Photo 645 is of berm between Penstock and access road. Good control of AETR; Scattered other weed species, especially along berm between penstock and dirt road to south.

APPENDIX C

**EID Weed Observation and Monitoring Form - Highway Cut Road and Other Canal
Access Roads Along Beat 4**

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
659/660	L15-08	SW	RUAR9 on shoulder near gate; appears recently sprayed, Highway Cut Road
661	24-08	SW	RUAR9 along shoulder
662/663	L14-08	SW	RUAR9/LALA4 increasing - very dense
664	L14-08	SW	RUAR9 - very lush growth
665	05-10	W	Increasing - RUAR9/CIVU/VETH - growing into road
666/667	22-08	W/NW	RUAR9 along road shoulder – low density
668	21-08	SW	Very active RUAR9 on side of road – 1 st
669	21-08	NW	RUAR9 NW side of road – 2 nd
670	21-08	NW	Small patch of RUAR9 NW side of road – 3 rd patch
671	20-08	NW	RUAR9 coming back after treatment
672	19-08	NW	RUAR9 coming back near stump
673	18-08	SW	RUAR9 coming back
674	L13-08	NE	R-83 access road – RUAR9
675/676	L13-08	NW/SE	Dense RUAR9 along N side of road
677	04-09	N-NW	RUAR9 on E side of road near large P.pine
678	L06-09	E	MEOF at end of road
679	L12-08	NW	Dense RUAR9 - on n shoulder of El Dorado Ditch road
Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
680	L12-08	NW	RUAR9 in road

681	L12-08	NW	RUAR9 in clearing toward w. end of occurrence
683	L03-11*	SE	RUAR9 S. side of road
684	L03-11*	E	RUAR9 N. side of road - patchy
685	L03-11*	NW	RUAR9

Notes

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* Formerly 2 points, 16-08 and 03-09

General Information

ID: 04-09

Collection date (mm/dd/yyyy)	6/23/2011
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	500 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	500 sq. ft.
Canopy Cover	25-50%
Appearance	New growth
Distribution pattern	Clumpy
Photo documentation	677

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 near large Ponderosa pine. Minor occurrence. 2011: Occurrence is slowly spreading. Also noted very sparse, scattered HYPE along road.

General Information

ID: 05-10

Collection date (mm/dd/yyyy)	6/23/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	Access Road
Site address or other description	Highway Cut Road
Ownership	Transportation Corridor
Land use type	Forest
Invaded vegetation type	
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>Verbascum thapsus</i>
Weed common name(s)	Woolly Mullein
	<i>Cirsium vulgare</i>
	Bull Thistle
Presence	
Presence or Absence	Present (all)
Treated	Unknown
Infested area	500 sq. ft.
Canopy Cover	<1%
Appearance	New growth
Distribution pattern	Clumpy
Photo documentation	665

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. 2011 Update: Growing back vigorously.

General Information

ID: 18-08

Collection date (mm/dd/yyyy)	6/23/2011
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.)	Shady, slight slope to NW

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	Present (all)
Absence next to drop list)	Growing Back
Treated	500 sq. ft.
Infested area	1-5%
Canopy Cover	New growth
Appearance	Clumpy
Distribution pattern	Linear
Photo documentation	673

Weed Location

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. 2011 Update: RUAR9 growing back mixed with thimbleberry.

General Information

ID: 19-08

Collection date (mm/dd/yyyy)	6/23/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	Access Road
Site address or other description	Highway Cut Road
Ownership	Transportation Corridor
Land use type	Forest
Invaded vegetation type	250-500 sq. ft.
Gross Area	Roadside maintenance
Disturbances & impacts	Mixed Conifer and Hardwood
Associated species	
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
Photo documentation	672

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. 2010 Update: RUAR9 coming back, esp. near stump. 2011 Update: Still continuing to grow same as 2010.

General Information

ID: 20-08

Collection date (mm/dd/yyyy)	6/23/2011
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.)	Shady, moist soil

Weed Information

Weed Identification	
Weed genus and species	<i>Rubus discolor</i>
Weed common name(s)	Himalayan Blackberry
Presence	
Presence or Absence	Present (not all species)
Treated	Growing Back
Infested area	2,000 sq. ft.
Canopy Cover	25-50%
Appearance	New growth
Distribution pattern	Linear
Photo documentation	671

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. 2010 Update: Good control; no LALA4 ; RUAR9 controlled along shoulder in 2009 but coming back. 2011 Update: Vigorously returning. No apparent treatment this year

General Information

ID: 21-08

Collection date (mm/dd/yyyy)	6/23/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	Access Road
Site address or other description	Highway Cut Road
Ownership	Transportation Corridor
Land use type	Forest
Invaded vegetation type	1,250 sq. ft.
Gross Area	Other man-made disturbance
Disturbances & impacts	Mixed Conifer and Hardwood
Associated species	shady, gentle slope
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	No CIVU
Treated	Unknown
Infested area	1,250 sq. ft.
Canopy Cover	5-25%
Appearance	New growth
Distribution pattern	Scattered patchy
Photo documentation	Linear 668, 669, 670

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'. 2011 Update: 1st patch 500sq. ft. growing back and larger, mostly on SE side of pile. No BT at 1st. 3rd patch 600sq. ft. growing vigorously since last year.

General Information

ID: 22-08

Collection date (mm/dd/yyyy)	6/23/2011
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 discolor</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	666, 667

Weed Location

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). 2011 Update: First patch continues to grow into road. Second patch is small scattered patches on both sides of the road. 1st patch 5-25%, 2nd - 1-5%

General Information

ID: 24-08

Collection date (mm/dd/yyyy)	6/23/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	Access Road
Site address or other description	Highway Cut Road
Ownership	Transportation Corridor
Land use type	Forest
Invaded vegetation type	
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 discolor</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
Photo documentation	661

Weed Location

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. 2011 Update: Continuing to grow back.

General Information

ID: L03-11

Collection date (mm/dd/yyyy)	6/23/2011
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 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	683-685

Weed Location

Geographic location (ID)	L03-11 (formerly points 16-08, 03-09)
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	< 1m
Location description	Combined points due to proximity and patchy RUAR9 between them; 2011 Update: Increasing presence of RUAR9

General Information

ID: L06-09

Collection date (mm/dd/yyyy)	6/23/2011	
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
Photo documentation	678	

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'). 2011 Update: Appears same as in years past, patchy & clumpy MEOF.	

General Information

ID: L12-08

Collection date (mm/dd/yyyy)	6/23/2011	
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>
Weed common name(s)	Bull Thistle	Himalayan Blackberry
		Klamath Weed

Presence

Presence or Absence	Present (all)	
Treated	No	
Infested area	15,000 sq. ft.	
Canopy Cover	<1%	<1%
Appearance	New growth	New growth
Distribution pattern	Clumpy	Linear
Photo documentation	679-681	

Weed Location

Weed Location		
Geographic location (ID)	L12-08	
Coordinate system	Ca. State Plane Zone 2	
Datum	NAD83	
Location data accuracy	< 1 m	
Location description	Begins near intersection with Hazel Tunnel Road spur and extends down to next spur road to North. 2011 Update: RUAR9 very dense; mostly on S. side of road but also on N. side, less dense.	

General Information

ID: L13-08

Collection date (mm/dd/yyyy)	6/23/2011	
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	
Invaded vegetation type	Transportation Corridor	
Gross Area	1,000 sq. ft.	
Disturbances & impacts	Roadside maintenance	
Associated species	Douglas Fir, Ponderosa Pine, Incense Cedar, Thimbleberry, 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>
Weed common name(s)	Bull Thistle	Himalayan Blackberry
		<i>Verbasicum thapsus</i>
		Woolly Mullein
		Presence

Presence or Absence	Present (not all species)	No VETH
Treated	No	
Infested area	500 sq. ft.	
Canopy Cover	<1%	25-50%
Appearance	Germ'g./early growth	New growth
Distribution pattern	Clumpy	Linear
Photo documentation	674-676	

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. 2011 Update: RUAR9 increasing	

General Information

ID: L14-08

Collection date (mm/dd/yyyy)	6/23/2011
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 discolor</i>	<i>Lathyrus latifolius</i>
Weed common name(s)	Bull Thistle	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%	25-50%
Appearance	New growth	New growth	New growth
Distribution pattern	Clumpy	Scattered even	Linear
Photo documentation	662, 663, 664		

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). 2011 Update: Occurrence Rapidly increasing in size, fairly continuous between drainages.

General Information

ID: L15-08

Collection date (mm/dd/yyyy)	6/23/2011
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 (not all species)	No CIVU or LALA4	
Treated	Unknown		
Infested area	3000	sq. ft.	
Canopy Cover	5-25%		
Appearance	New growth	Dead	
Distribution pattern	Scattered even	Linear	
Photo documentation	659, 660		
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. 9, RUAR9 growing bac;. 2011 Update: RUAR9 Same as 2010 but no other weed species observed.		

APPENDIX C

EID Weed Observation and Monitoring Form

Canal Beats 4 & 5

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
686, 687	04-10	SE	Bridge over canal, weed patch –MEOF, CIVU – in grassy area
689	17-08	SW	LALA4 eradicated at Hazel Creek Tunnel
690, 691	L09-08	S	LALA4 at Camp 5 (Building)
692	L08-08	SE	Large clump of CIVU; others
693	L08-08	NW	Access road w/ multiple weeds CIVU, HIIN3, MEOF
694	L08-08	NW	Clump of VETH; HIIN3 scattered
695	L08-08	SE	Dense MEOF on shoulder to south/ SW side of road
696	01-11	NE down	Large clump of LALA4
697	L07-08	E	Decent control of CIVU
698	L04-11	E	New flume; scattered MEOF and LALA4; mostly grasses
699	03-10	E/NE	AETR, MEOF, BRTE near bridge
700	02-10	N/NE	Sparse BRTE, VETH
701	01-10	W/NW	Few small VETH
702/703	45-08	NE/SW	LALA4 eradicated
Notes:			

General Information

ID:01-11

Collection date (mm/dd/yyyy)
Observer name(s)

6/29/2011

Ethan Koenigs

Site Information

Site or facility name
Site address or other description
Ownership
Land use type
Invaded vegetation type
Gross Area
Disturbances & impacts
Associated species
Environmental Conditions (e.g. soil conditions, exposure, etc.)

El Dorado Canal

Beat 5

EID

Water Transport Facility

Forest

300 sq. ft.

Canal Maintenance

Weed Information

Weed Identification

Weed genus and species
Weed common name(s)

Lathyrus latifolia
Perennial Sweet Pea

Cirsium vulgare
Bull Thistle

Presence

Presence or Absence

Present (all)

No

100 sq. ft.

<1%

Flowering

Clumpy

696

Geographic location (ID)
Coordinate system
Datum
Location data accuracy

01-11

Ca. State Plane Zone 2

NAD83

1-5m

Near auto spillway; one small patch of LALA4 on east side of spill; few CIVU and LALA4 on west side of spillway.

Location description

General Information

ID: 01-10

Collection date (mm/dd/yyyy)	6/29/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	El Dorado Canal	
Site address or other description	Beat 5	
Ownership	Water Transport Facility	
Land use type	Forest	
Invaded vegetation type	100 sq. ft.	
Gross Area	Other man-made disturbance	
Disturbances & impacts	Canal Maintenance	
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 genus and species	<i>Verbascum thapsus</i>	
Weed common name(s)	wooly mullein	
Weed Identification		
Presence		

Presence or Absence	Present (all)	
Treated	Yes	
Infested area	100 sq. ft.	
Canopy Cover	1-5%	
Distribution pattern	New growth	
Photo documentation	Clumpy	
	701	
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. 2011 Update: 11 plants.	

General Information

ID: 02-10

Collection date (mm/dd/yyyy)	6/29/2011
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 genus and species	<i>Bromus tectorum</i>	Weed Identification	<i>Verbascum thapsus</i>
Weed common name(s)	cheat grass		wooly mullein

Presence or Absence	Present (all)	Presence
Treated	No	
Infested area	1000 sq. ft.	
Canopy Cover	<1%	
Distribution pattern	Seeding	
Photo documentation	Scattered even	Linear
		700

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. 2011 Update: Recently worked on canal berm. Light cover on downslope side of berm. Few VETH plants.

General Information

ID: 03-10

Collection date (mm/dd/yyyy)	6/23/2011
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 Identification

Weed genus and species	<i>Bromus tectorum</i>	<i>melilotus officinalis</i>	<i>Aegilops triuncialis</i>
Weed common name(s)	cheat grass	sweet clover	Barbed goat grass

Presence

Presence or Absence	Present (all)	
Treated	No	
Infested area	1000 sq. ft.	
Canopy Cover	<1%	
Distribution pattern	Seeding	New growth
	Scattered even	Linear
Photo documentation	699	

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. 2011 Update: New AETR patch. All weeds sparse.	

General Information

ID: 04-10

Collection date (mm/dd/yyyy)	6/29/2011
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, thimbleberry, <i>Juncus sp.</i> , <i>Elymus glaucus</i>
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NE - facing slope, a little wet (potential wetland seep) - use Caution when treating.

Weed Information

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%
Distribution pattern	New growth
	Scattered patchy
Photo documentation	Scattered patchy
	686, 687

Weed Location

Geographic location (ID)	04-10
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	5-15m
Location description	No GPS
	S. side of canal, near end of rd. 83, near bridge. 2011 Update: Similar to last year; more grass this year; very little weed spread.

General Information

ID: 17-08

Collection date (mm/dd/yyyy)	6/29/2011
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	Presence
Weed genus and species	<i>Leucanthemum vulgare</i>	
Weed common name(s)	Ox-eye Daisy	
	<i>Lathyrus latifolius</i>	
	Perennial Sweet Pea	

Presence or Absence	Absent
Treated	Yes
Infested area	sq. ft.
Canopy Cover	
Distribution pattern	
Photo documentation	689

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. 2011 Update: LALA4 and LEVU remain eradicated.

General Information

ID: 45-08

Collection date (mm/dd/yyyy)	6/29/2011	
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	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	0 sq. ft.
Canopy Cover	<1%
Distribution pattern	New growth
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. 2011 Update: Treated and controlled very well; appears eradicated.

General Information

ID: L04-11

Collection date (mm/dd/yyyy)	6/29/2011
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	5500 sq. ft.
Disturbances & impacts	Facility Maintenance
Associated species	Incense cedar, ponderosa pine, big leaf maple, grasses
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Recently repaired flume and ground disturbance; strawed; N. facing slope

Weed Information

Weed Identification	
Weed genus and species	<i>Lathyrus latifolia</i>
Weed common name(s)	Perennial Sweet Pea <i>Melilotus officinalis</i> sweet clover
Presence	
Presence or Absence	Present (all)
Treated	No
Infested area	5500 sq. ft.
Canopy Cover	<1%
Distribution pattern	New growth
Photo documentation	Scattered patchy Linear 698

Weed Location

Weed Location	
Geographic location (ID)	L04-11
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	1-5m Recently repaired flume; northeast side. Scattered low density weeds.
Location description	

General Information

ID: L07-08

Collection date (mm/dd/yyyy)	6/29/2011
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	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 Identification

	Weed Identification
Weed genus and species	<i>Cirsium vulgare</i>
Weed common name(s)	bull thistle
	<i>Melilotus officinalis</i>
	sweet clover

	Presence
Presence or Absence	Present (not all species)
Treated	No
Infested area	2000 sq. ft.
Canopy Cover	<1%
Distribution pattern	New growth
Photo documentation	Scattered patchy
	Linear
	697

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. 2011 Update: Good control; needs additional treatment; few BT observed.

General Information

ID: L08-08

Collection date (mm/dd/yyyy)	6/29/2011
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, mountain alder, thimbleberry, Other weeds
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Gravel/Graded area

Weed Information

Weed Identification		Presence	
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>Meililotis officinalis</i>
			Yellow Sweet Clover
			<i>Hirschfeldia incana</i>
			Shortpod Mustard
Presence or Absence	Present (all)		
Treated	No		
Infested area	5000-7000 sq. ft.		
Canopy Cover	1-5%	1-5%	1-5%
Appearance	New growth	New growth	New growth
Distribution pattern	Scattered patchy	Scattered patchy	Scattered even
Photo documentation	(NW) 692-695		

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. 2011 Update: Extend the line from canal to gate. Significant increase in most weeds along entire road, especially CIVU. HIIN3 new this year. Scattered VETH and LALA4; MEOF and CIVU on north side of canal along drainage.

General Information

ID: L09-08

Collection date (mm/dd/yyyy)	6/29/2011
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 genus and species	<i>Lathyrus latifolius</i>
Weed common name(s)	Perennial Sweet Pea

Presence

Presence or Absence	Present (all)
Treated	No
Infested area	1000 sq. ft.
Canopy Cover	50-75%
Appearance	New growth
Distribution pattern	Clumpy
Photo documentation	690, 691

Weed Location

Geographic location (ID)	L09-08
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	< 1m

Just below Camp 5. 2011 Update: North bank bench clear. Mostly concentrated around shed structure, extending east along south bank to bridge; may require targeted treatment using physical removal and sprays.

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

Canal Beat 3, Access roads: Camp P, Rockcrusher, Camp X, Camp 2

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
704	08-09	S	turnout on W side of road; patch of RUAR9, few CIVU
705, 706	L25-08	S	CIVU on E side of road
707	07-09	SE	BRTE
708, 709	L07-09	S	BRTE and BRDID2 along road
710	L22-08	W/SW	MEOF on side of Rock Crusher road; sprayed
711	34-08	NE	HYPE controlled/treated – some still present
712	33-08	SE	Patchy LALA4 – Canal Beat 3
713	33-08	SE	LALA4, scattered TOAR – Canal Beat 3
714, 715	L24-08	NE	Sparse, scattered TOAR – Camp P Road
716	32-08	SW/NE	CIVU sprayed – Camp P Road
717	L23-08	E	Good control of TOAR– Camp P Road
718	31-08	E	Sparse TOAR – very minor – Camp P Road
719, 720	30-08	E	TOAR – mixed with other vegetation (native berry) – Camp P Road/ CIVU sprayed

Photo Log

Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
721	L20-08	SE	Good control of weeds along road
722	L20-08	N	Dense RUAR9 on SPI land
723	L17-08	W	Treated area at top of road near gate; spotty BRTE
724	L17-08	W	Treated spur road; RUAR9 and LALA4 dying on road, but growing on margins
725	L17-08	NW/SE	Recently sprayed LALA4
726	L17-08	NW	Heavy LALA4 at bottom of road
727, 728	29-08	SE/NW	Treated area - good control/ dying weeds
729, 730	L21-08	SE/NW	Treated weeds; MEOF; Good control along road

Notes

Page 2

General Information

ID: 07-09

Collection date (mm/dd/yyyy)	7/1/2011
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	Linear
Photo documentation	707

Weed Location

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. 2011 Update: Appears same as 2010.

General Information

ID: 08-09

Collection date (mm/dd/yyyy)	7/1/2011	
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>
Weed common name(s)	Bull Thistle	Himalayan Blackberry
		Woolly Mullein

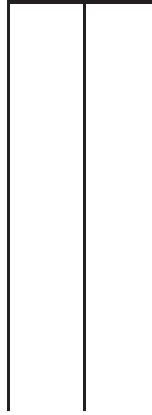
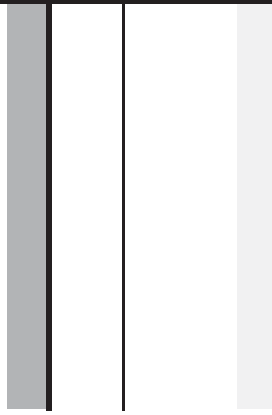
	Presence	
Presence or Absence	Present (not all species)	
Treated	No	
Infested area	500 sq. ft.	Woolly Mullein (absent)
Canopy Cover	<1%	
Appearance	New growth	
Distribution pattern	Clumpy	
Photo documentation	704	

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. 2011 Update: Starting new road work; RUAR9 plant still here; approx 6 CIVU.	

General Information	
Collection date (mm/dd/yyyy)	7/1/2011
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
Associated species	Clearing on road and SPI Plantation
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Mixed Conifer; Deer Brush, multiple weed sp. Mostly Gravel within landing/clearing; full sun; flat
Weed Information	
Weed genus and species	<i>Bromus tectorum</i>
Weed common name(s)	Cheat grass
	<i>Leucanthemum vulgare</i>
	Ox-eye Daisy
	<i>Bromus diandrus</i>
	Ripgut Brome
	<i>Lathyrus latifolia</i>
	sweet pea
	Presence
Presence or Absence	Present (not all species)
Treated	Yes
Infested area	2,500 sq. ft.
Canopy Cover	<1%
Appearance	Seeding
Distribution pattern	Scattered patchy
Photo documentation	727, 728
	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. 2011 Update: Good treatment (spray) RL BRDID3; few patches of LALA4; overall good control.

ID: 29-08



Rubus armeniacus

Himalyan Blackberry



<1%

Dead

Scattered patchy



JAR9 looks to be dying; very little

General Information

ID: 30-08

Collection date (mm/dd/yyyy)	7/1/2011	
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 Bull Thistle	

Presence		
Presence or Absence	Present (all)	
Treated	Partial	
Infested area	200 sq. ft.	
Canopy Cover	<1%	
Appearance	Flowering	
Distribution pattern	Scattered even	
Photo documentation	719, 720	

Weed Location

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. 2011 Update: More CIVU this year; TOAR is scattered on both sides of road; Partial control of weeds.	

General Information

ID: 31-08

Collection date (mm/dd/yyyy)	7/1/2011
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	120 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	Yes
Infested area	100 sq. ft.
Canopy Cover	<1%
Distribution pattern	Flowering
Photo documentation	Scattered even
	Linear
	718

Weed Location

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. 2011 Update: Very little TOAR remaining; small amount of spread to S. side of road.

General Information

ID: 32-08

Collection date (mm/dd/yyyy)	7/1/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	Access Road
Site address or other description	Camp P Road
Ownership	Transportation Corridor
Land use type	Forest
Invaded vegetation type	
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>
Weed common name(s)	Bull Thistle
	<i>Torilis arvensis</i>
	Hedge Parsley

Presence	
Presence or Absence	Present (all)
Treated	Not all
Infested area	750 sq. ft.
Canopy Cover	<1%
	New growth
Distribution pattern	Scattered patchy
Photo documentation	716

Weed Location

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. 2011 Update: Good control, weeds are wilting.

General Information

ID: 33-08

Collection date (mm/dd/yyyy)	7/1/2011
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, mugwort, 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 (not all species) RUAR9 (absent)
Treated	Yes
Infested area	500 sq. ft.
Canopy Cover	<1%
Distribution pattern	New growth Dead Flowering
Photo documentation	Scattered patchy
	712, 713

Weed Location

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. 2011 Update: LALA4 on uphill side slope; few patches of LALA4 scattered; TOAR very sparse; mostly controlled next to canal.

General Information

ID: 34-08

Collection date (mm/dd/yyyy)	7/1/2011
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>Hypericum perforatum</i>
Weed common name(s)	Klamath Weed Bull Thistle

Presence	
Presence or Absence	Present (not all species)
Treated	Yes
Infested area	25 sq. ft.
Canopy Cover	1-5%
Appearance	Dead
Distribution pattern	Clumpy
Photo documentation	711

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. 2011 Update: Recently sprayed; looks to be mostly controlled.

General Information

ID: L07-09

Collection date (mm/dd/yyyy)	7/1/2011
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 or Absence	Present (all)	Presence
Treated	No	
Infested area	0.4 acres	
Canopy Cover	5-25%	
Appearance	Senesc. Seeding	
Distribution pattern	Scattered patchy	Linear
Photo documentation	708, 709	

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. 2011 Update: Same as 2010 but more BRTE than BRDID2.

General Information

Collection date (mm/dd/yyyy)	7/1/2011
Observer name(s)	Ethan Koenigs
Site or facility name	Access Road
Site address or other description	Camp 3 Road
Ownership	Water Transport Facility
Land use type	Forest
Invaded vegetation type	
Gross Area	14,000-15,000 sq. ft.
Disturbances & impacts	Turnouts
Associated species	Mixed Conifer & Hardwood - many weedy species on shoulder.
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Road terminates near Ogilby Creek. W-facing slope - shaded to open.

Site Information

Weed Information

Weed genus and species Weed common name(s)	Weed Identification		
	<i>Cirsium vulgare</i> Bull Thistle	<i>Rubus discolor</i> Himalayan Blackberry	<i>Hypericum perforatum</i> Klamath Weed
Present (not all species)	Bull Thistle & Klamath weed absent		
Treated	Yes		
Infested area	14,000-15,000 sq. ft.		
Canopy Cover	<1%	<1%	5-25%
Distribution pattern	Seeding	Flowering	New growth
Photo documentation	Clumpy	Clumpy	Scattered patchy
	723, 724, 725, 726		

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. 2011 Update: Good control on spur road to NW, heavy LALAA4 and RUAR9 just outside sprayed area; lower road w/significant LALAA4; BRTE only near top of road; TOAR spreading on edge of road (upper portion).

General Information

ID: L20-08

Collection date (mm/dd/yyyy)	7/1/2011	
Observer name(s)	Ethan Koenigs,	
Site Information		
Site or facility name	Access Road	
Site address or other description	Camp P Road - At gate near intersection w/ Camp 3 Road	
Ownership		
Land use type	Water Transport Facility	
Invaded vegetation type	Forest	
Gross Area	1500 sq. ft.	
Disturbances & impacts	Roadside maintenance SPI plantation to northeast	
Associated species	Mixed Conifer; Deer Brush, Sulfer Pea	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NW exposure, open; gravelly soil	

Weed Information

Weed Identification		
Weed genus and species	<i>Bromus tectorum</i>	<i>Torilis arvensis</i>
Weed common name(s)	Cheat grass	Hedge Parsley
		<i>Rubus armeniacus</i>
		Himalayan Blackberry

Presence		
Presence or Absence	Present (all)	
Treated	Yes	
Infested area	1500 sq. ft.	
Canopy Cover	<1%	<1%
Appearance	Dead	New growth
Distribution pattern	Clumpy	
Photo documentation	721, 722	

Weed Location

Geographic location (ID)	L20-08	
Coordinate system	Ca. State Plane Zone 2	
Datum	NAD83	
Location data accuracy	< 1m	
Location description	Beginning at gate and extending down road for about 250ft. 2011 Update: Good control of RUAR9; large, dense patch of RUAR9 on adjacent SPI land	

General Information

ID: L21-08

Collection date (mm/dd/yyyy)	7/1/2011	
Observer name(s)	Ethan Koenigs,	
Site Information		
Site or facility name	Access Road	
Site address or other description	Camp P road	
Ownership	Transportation Corridor	
Land use type	Forest	
Invaded vegetation type	12,000 sq. ft.	
Gross Area	Roadside maintenance	
Disturbances & impacts	SPL 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>H. perforatum</i> , Klamath Weed	<i>L. latifolius</i> Perennial Sweet Pea (minor)	<i>Cirsium vulgare</i> Bull Thistle	<i>Verbascum thapsus</i> Woolly Mullein	<i>Rubus armeniacus</i> Himalayan Blackberry (few)
Presence or Absence	Present (all)					
Treated	Yes	(chemical and mechanical)				
Infested area	12,000 sq. ft.					
Canopy Cover	<1%	<1%	<1%	<1%	<1%	<1%
Appearance	New growth					
Distribution pattern	Scattered patchy					
Photo documentation	724, 730					

		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. 2011 Update: Very good control all species <1%; VETH coming back but treated; actively growing patches of LALA4 on adj. SPL land.	

General Information

ID: L22-08

Collection date (mm/dd/yyyy)	7/1/2011	
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 Identification

	Weed Identification	
Weed genus and species	<i>Cirsium vulgare, H. perforatum</i>	<i>Melilotus alba</i>
Weed common name(s)	Bull Thistle, Klamath Weed	White Sweet Clover
	<i>Bromus tectorum</i>	<i>Verbascum thapsus</i>
	Cheat Grass	Woolly Mullain

	Presence	
Presence or Absence	No VETH or HYPE	
Treated	Yes	
Infested area	11,000 sq. ft.	
Canopy Cover	<1%	<1%
	New growth	New growth
Distribution pattern	Scattered patchy	Linear
Photo documentation	710	

Weed Location

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. 2011 Update: Recent treatment.	

General Information

ID: L23-08

Collection date (mm/dd/yyyy)	7/1/2011
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>
Weed common name(s)	Bull Thistle
	<i>Torilis arvensis</i>
	Hedge Parsley

Presence or Absence	Present (all)
Treated	Yes
Infested area	500 sq. ft.
Canopy Cover	<1%
Distribution pattern	New growth
Photo documentation	Clumpy
	717

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. 2011 Update: CIVU and TOAR appear to be coming back from 2010, but sprayed this year.

General Information

ID: L24-08

Collection date (mm/dd/yyyy)	7/1/2011	
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	Yes
Infested area	200 sq. ft.
Canopy Cover	1-5%
Distribution pattern	Flowering
Photo documentation	Scattered patchy
	714, 715

Weed Location

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; immediately after graded area, scattered TOAR extends to larger Doug fir past bend in road.

General Information

ID: L25-08

Collection date (mm/dd/yyyy)	7/1/2011	
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 genus and species	<i>Cirsium vulgare</i>	
Weed common name(s)	Bull Thistle	
Weed Identification		
Presence		

Presence or Absence	Present (all)	
Treated	No	
Infested area	900 sq. ft.	
Canopy Cover	<1%	
Appearance	New growth	
Distribution pattern	Scattered patchy	
Photo documentation	705-706	
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. very minor occurrence. 2011 Update: Slightly fewer CIVU.	

APPENDIX C

EID Weed Observation and Monitoring Form

Canal Beats 2, 3 & small section of Beat 4

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
576, 577	06-09	S/SW	CIVU near canal; RUAR9 below flume spillway
578	L05-11	SW	Patch of TOAR near canal, Beat 3
579	L06-11	SW	Good control of LALA4 below flume
580	L06-11	SE	LALA4 returning in places below flume
581/583	L06-11	SE	Good control of RUAR9 / LALA4 returning
582	L06-11	SE	Access road terminus at spillway (Camp P) – partial control of LALA4
584	26-08	SW	Good control of RUAR9 here
585	05-09	S	Esmeralda Flume; scattered HYPE, CIVU - recently sprayed
586	50-08	W	LEVU near Alarm 15
587	25-08	W	Recently sprayed CIVU - good control
588	09-09	E	BRTE near Plum Siphon, on Beat 2
589	02-11	W	Small patch of RUAR9 below new flume on Beat 2
Notes			

General Information

ID: 02-11

Collection date (mm/dd/yyyy)	7/7/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	El Dorado Canal
Site address or other description	Beat 2
Ownership	
Land use type	Water Transport Facility
Invaded vegetation type	Forest
Gross Area	2,500 sq. ft.
Disturbances & impacts	Canal Maintenance
Associated species	Doug fir, Dogwood, Cedar, Maple, var. grasses
Environmental Conditions (e.g. soil conditions, exposure, etc.)	In swale, north facing slope; recently disturbed/graded

Weed Information

Weed Identification	
Weed genus and species	<i>Cirsium vulgare</i>
Weed common name(s)	Himalayan blackberry Bull thistle

Presence or Absence	Present (all)		Presence
	No		
	Infested area	150 sq. ft.	
	Canopy Cover	<1%	
	Appearance	New growth	
	Distribution pattern	Clumpy	
	Photo documentation	589	

Weed Location

Geographic location (ID)	02-11
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	1-5m
Location description	Below new flume section; two CIVU plants on opposite side of new flume; small patch of RUAR9 growing through geo-textile fabric.

General Information

ID: 05-09

Collection date (mm/dd/yyyy)	7/7/2011
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
	<i>Hypericum perforatum</i>
	Klamath weed
	<i>Cirsium vulgare</i>
	Bull thistle

Presence	
Presence or Absence	Present (all)
Treated	Yes
Infested area	1000 sq. ft.
Canopy Cover	<1%
Appearance	Flowering
Distribution pattern	Scattered patchy
Photo documentation	585

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. 2011 Update: Recently sprayed; small patch of Ox-eye on east side of concrete drainage ditch; plants are dying, appears to be good control (sprayed).

General Information

ID: 06-09

Collection date (mm/dd/yyyy)	7/7/2011
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> <i>Rubus armeniacus</i>
Weed common name(s)	Bull Thistle Himalayan Blackberry

Presence or Absence	Present (all)
Treated	No
Infested area	200 sq. ft.
Canopy Cover	1-5%
Appearance	New growth
Distribution pattern	Clumpy
Photo documentation	576, 577

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. 2011 Update: About Six CIVU; a few CIVU and RUAR9 under spillway along drainage.

General Information

Collection date (mm/dd/yyyy)	7/7/2011	
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	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	Yes	
Infested area	500 sq. ft.	
Canopy Cover	<1%	
Appearance	Seeding	
Distribution pattern	Linear	
Photo documentation	588	

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. 2011 Update: Partial control, maybe from treatment last fall; mostly gone along fence and canal; very minor occurrence.	

General Information

ID: 25-08

Collection date (mm/dd/yyyy)	7/7/2011	
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
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	Yes	
Infested area	1,200 sq. ft.	
Canopy Cover	<1%	
Appearance	New growth	Dead
Distribution pattern	Scattered patchy	
Photo documentation	587	

Weed Location		
Geographic location (ID)	25-08	
Coordinate system	Ca. State Plane Zone 2	
Datum	NAD83	
Location data accuracy	< 1m	
Location description	Spur road off of Hazel Valley Road - large clearing next to road. 2011 Update: Recently treated; good targeting of CIVU; very few CIVU actively growing.	

General Information

ID: 26-08

Collection date (mm/dd/yyyy)	7/7/2011
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	584

Weed Location

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. 2011 Update: Same as 2010 - area treated, small patch remaining

General Information

ID: 50-08

Collection date (mm/dd/yyyy)	7/7/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	El Dorado Canal
Site address or other description	Beat 4 near Esmeralda 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	No
Infested area	750 sq. ft.
Canopy Cover	1-5%
Distribution pattern	Flowering
Photo documentation	Scattered even
	Linear
	586

Weed Location

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 (Esmeralda Creek). 2011 Update: LEVU Coming back between spillway and Esmeralda .

General Information

ID: L05-11

Collection date (mm/dd/yyyy)	7/7/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	El Dorado Canal
Site address or other description	Canal Beat 3
Ownership	
Land use type	Water Transport Facility
Invaded vegetation type	Forest
Gross Area	2,500 sq. ft.
Disturbances & impacts	Canal Maintenance
Associated species	Mixed Conifer-hardwoods; Douglas Fir, Incense Cedar, Black Oak, Dogwood, big leaf maple, mixed annual grasses.
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Near riparian zone

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	2,500 sq. ft.
Canopy Cover	5-25%
Appearance	Flowering
Distribution pattern	Scattered even
Photo documentation	578

Weed Location

Weed Location	
Geographic location (ID)	L05-11
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	1-5m
Location description	Near a small drainage along Beat 3. Minor occurrence of TOAR -in riparian no spray zone.

General Information

ID: L06-11

Collection date (mm/dd/yyyy)	7/7/2011	Previously Identified	L18-08, L19-08, 27-08, 28-08
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	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>Rubus armeniacus</i>		
Weed common name(s)	Perennial Sweet Pea	Himalayan Blackberry	
Presence			
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	0.15 acres		
Canopy Cover	<1%		
Distribution pattern	Flowering	New growth	
Photo documentation	Clumpy	Linear	
	579, 580, 581, 582, 583		
Weed Location			
Geographic location (ID)	L06-11	previously included the following occurrences: 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. 2011 Update: Partial control; LALA4 returning; RUAR9 under control, but a few plants remain in riparian zone; recently sprayed near access road; five clumps of RUAR9 on West side of spillway building.

APPENDIX C

EID Weed Observation and Monitoring Form – Lower Penstock, portion of Upper
Penstock, Forebay, Bend Court access road

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
590	L01-09	W	RUAR9 along pathway up penstock, good control
591	L01-09	S	Good control of RUAR9 along penstock
592,593	L01-09	S	VETH, CIVU, and HYPE along w. side of penstock
594, 596	11-08	W	Treated area; RUAR9 and HYPE adjacent to penstock and structure
597	L07-11	N	Treated area above 11-08; RUAR9, HYPE
598	L07-11	N	CHJU scattered along penstock, near tracks
599	02-09	N-NE	MEOF near surge chamber - sprayed and dying
600	L2-09	E	HYPE near penstock
601	46-08	NE	Few scattered LALA4 – parking lot of Forebay
602	L08-11	E	HYPE and LEVU along shore at Forebay
604, 605	L06-08	E/W	CYSC4 at Forebay - good control - a few seedlings remain
606, 607	L04-09	SE/SE	CIVU, LEVU, HYPE along lake shore; recent removal of blackberry
609, 610, 611	L05-09	S/E/SE	HYPE and LEVU along shore/heavy RUAR9 along lake
612, 613	*Area 1	S/SW	Mustard along Dam; LALA 4 in background along road down to penstock
614, 615	14-08	S/N	Scattered BRTE at top of hill;
616	L09-11	SW	Blackberry near creek at end of Bend Ct. road
617	L09-11	NE	Scattered TOAR and other weeds along end of Bend Ct. road
Notes			
* Area 1 data sheet included in 6/22/11 folder			

General Information

ID: 02-09

Collection date (mm/dd/yyyy)	7/14/2011	
Observer name(s)	Ethan Koenigs	Chad Johnson
Site Information		
Site or facility name	EID Penstock	
Site address or other description	Surge Chamber	
Ownership	Water Transport Facility	
Land use type	Forest	
Invaded vegetation type	250 sq. ft.	
Gross Area	Roadside maintenance	
Disturbances & impacts	Manzanita, Ponderosa Pine	
Associated species	Gravel road at dead end.	
Environmental Conditions (e.g. soil conditions, exposure, etc.)		

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	Yes	
Infested area	250 sq. ft.	
Canopy Cover	5-25%	
Distribution pattern	Dead	
Photo documentation	Clumpy	
	599	

Weed Location

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. 2011 Update: Recently sprayed; good control.	

General Information

ID: 11-08

Collection date (mm/dd/yyyy)	7/14/2011
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	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 genus and species Weed common name(s)	<i>Rubus armeniacus</i> Himalayan blackberry	<i>Verbascum thapsus</i> Woolly Mullein	<i>Bromus tectorum</i> Cheat grass	<i>Hypericum perforatum</i> Klamath weed	<i>Chondrilla juncea</i> Skeleton Weed
	Presence or Absence Treatment	Present (all) Yes			
Infested area	2,000 sq. ft.				
Canopy Cover	5-25%	<1%	5-25%	<1%	5-25%
Appearance	Flowering	Flowering	Senesc.	Flowering	New growth
Distribution pattern	Clumpy	Clumpy	Scattered patchy	Clumpy	Scattered even
Photo documentation	594, 596, 597				

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. 2011 Update: Knocked-back RUAR9; BRTE & CHIU increasing.

General Information

ID: 14-08

Collection date (mm/dd/yyyy)	7/14/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	
Site address or other description	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	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Ponderosa Pine, Black Oak, Deer Brush, Annual Grasses, and Forbes (yellow bur navarretia). Open and sunny, Volcanic caprock, West facing.

Weed Information

Weed genus and species	<i>Bromus tectorum</i>
Weed common name(s)	Cheat grass

Presence or Absence	Present (all)	
	Treated	No
	Infested area	1,200 sq. ft.
	Canopy Cover	5-25%
	Appearance	New growth
	Distribution pattern	Scattered even
Photo documentation	614,615	

Weed Location

Geographic location (ID)	14-08
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	< 1m

Area at top of hill in a clearing and along roadway. **Rare Plant-Yellow bur navarretia is present throughout area. No**
Treatment; 2011: cheat grass still present.

General Information

ID: 46-08

Collection date (mm/dd/yyyy)	7/14/2011	
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	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>Lathyrus latifolius</i>	
Weed common name(s)	Klamath Weed Perennial Sweet Pea	

Presence		
Presence or Absence	Klamath Weed (absent)	
Treated		
Infested area	5000 sq. ft.	
Canopy Cover	<1%	1-5%
Appearance	New growth	
Distribution pattern	Scattered even	
Photo documentation	601	

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. 2011 Update: Sweet pea diminished; Klamath weed absent;	

General Information

ID: L01-09

Collection date (mm/dd/yyyy)	7/14/2011
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	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>Chondrilla juncea</i>
Weed common name(s)	Himalayan blackberry	Rush Skeletonweed
		<i>Verbascum thapsus</i>
		Cheat grass
		Woolly mullien
		<i>Hypericum perforatum</i>
		Klamath weed
Presence or Absence	Present (all)	
Treated	Yes	
Infested area	5000 sq. ft.	
Canopy Cover	5-25%	5-25%
Distribution pattern	Seeding	Seeding
Photo documentation	Scattered patchy	Linear
	590, 591, 592, 593	

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. 2011 Update: Good control on lower half; top half weeds are repopulating, especially skeleton weed; lesser woolly mullien; Klamath weed and cheat grass are scattered; blackberry encroaching from periphery of control.

General Information

ID: L02-09

Collection date (mm/dd/yyyy)	7/14/2011	
Observer name(s)	Ethan Koenigs	C. Johnson
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	1-5%	<1%
Appearance	Flowering	Seeding
Distribution pattern	Scattered even	Scattered patchy
Photo documentation	600	

Weed Location

		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. 2011 Update: Increasing Klamath weed; large patches in middle of line segment.	

General Information

ID: L04-09

Collection date (mm/dd/yyyy)	7/14/2011	
Observer name(s)	Ethan Koenigs	C. Johnson
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	
Associated species	Lake fluctuation	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Ponderosa Pine, Incense Cedar, Black Oak, Alder, Native Blackberry. Sunny, exposed, west-facing, along lake shore	

Site Information

Weed Information

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, woolly mullein

Weed Identification

		Presence	
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	4000 sq. ft.		
Canopy Cover	<1%	1-5%	<1%
Distribution pattern	Flowering	Flowering	Flowering
	Clumpy	Linear	Scattered even
Photo documentation	606, 607, 608		

Weed Location

Geographic location (ID)	L04-09	
Coordinate system	Ca. State Plane Zone 2	
Datum	NAD83	
Location data accuracy	< 1m	
Location description & Comments	Northeast side of lake along shore. Very close to edge of water. 2011 Update: Last 1/10 NW portion of line not effectively treated; the rest looks good.	

General Information

ID: L05-09

Collection date (mm/dd/yyyy)	7/14/2011	
Observer name(s)	Ethan Koenigs	C. Johnson
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	
Associated species	Lake fluctuations	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Ponderosa Pine, Native Blackberry, Cherry Tree, Alder, Willow	
	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	25-50%	5-25%	1-5%
Appearance	Flowering	Flowering	Flowering
Distribution pattern	Linear	Scattered patchy	Scattered even
Photo documentation	609, 610, 611		
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'. 2011 Update: RUAR9 interspersed with native blackberry; similar to last year; scattered patchy RUAR9 and scattered even daisy along shoreline into Forebay inlet (see Photo 611). ox eye continues around shoreline on south side of reservoir

General Information

ID: L06-08

Collection date (mm/dd/yyyy)	7/14/2011	
Observer name(s)	Ethan Koenigs	C. Johnson
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	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 (not all species)	No sweet pea
Treated	Yes	
Infested area	200 sq. ft.	
Canopy Cover	<1%	
Appearance	New growth	
Distribution pattern	Clumpy	
Photo documentation	604, 605	

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. 2011 Update: Aggressive, recent control appears to be effective.	

General Information

L07-11

Collection date (mm/dd/yyyy)	7/14/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	EID Penstock
Site address or other description	Lower penstock bottom edge of line above 11-08; top edge at second penstock foundation block.
Ownership	
Land use type	Water Transport Facility
Invaded vegetation type	Forest
Gross Area	0.5 acres
Disturbances & impacts	Canal 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 genus and species Weed common name(s)	Weed Identification		
	<i>Rubus armeniacus</i> Himalayan blackberry	<i>Verbascum thapsus</i> Woolly Mullein	<i>Hypericum perforatum</i> Klamath weed
Presence or Absence	Present (all)		
Treatment	Yes		
Infested area	20,000 sq. ft.		
Canopy Cover	<1%	1-5%	5-25%
Appearance	Flowering	Senesc.	Flowering
Distribution pattern	Clumpy	Scattered even	Clumpy
Photo documentation	597, 598		

Weed Location	
Geographic location (ID)	L07-11
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	1-5m
Location description	West side of penstock, CHIU and RUAR9 increasing; overall occurrences are increasing.

General Information

L08-11

Collection date (mm/dd/yyyy)	7/14/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	Forebay Reservoir
Site address or other description	Beach near day-use parking
Ownership	EID
Land use type	Water Storage Facility
Invaded vegetation type	Forest
Gross Area	5500 sq. ft.
Disturbances & impacts	Other man-made disturbance
Associated species	black oak, ponderosa pine, incense cedar, weeds
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Exposed south-facing shoreline of reservoir; bare soil

Weed Information

Weed genus and species	<i>Hypericum perforatum</i>
Weed common name(s)	Klamath weed
Weed genus and species	<i>Leucanthemum vulgare</i>
Weed common name(s)	Ox-eye daisy
Presence or Absence	Present (all)
Treatment	Yes
Infested area	3,000 sq. ft.
Canopy Cover	1-5%
Appearance	Flowering
Distribution pattern	Scattered patchy
Photo documentation	602

Weed Location

Geographic location (ID)	L08-11
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	1-5m
Location description	Area along shore at Forebay, just below picnic area. Weeds along high water mark extending to day-use parking in thickest infestation area.

General Information

L09-11

Collection date (mm/dd/yyyy)	7/14/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Access Road	
Site address or other description	Bend Ct (between landing and stream crossing at end)	
Ownership	Transportation Corridor	
Land use type	Forest	
Invaded vegetation type		
Gross Area	13,500 sq. ft.	
Disturbances & impacts	Roadside maintenance	
Associated species	Cedar, maple, ponderosa, doug fir, black oak, yarrow, tincture plant, soap lily, clarkia sp., grasses	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	dirt road, recently graded	

Weed Information

Weed genus and species	<i>Hypericum perforatum</i>	<i>Torilis arvensis</i>	<i>Rubus armeniacus</i>	<i>Leucanthemum vulgare</i>
Weed common name(s)	Klamath weed	Hedge Parsley	Blackberry	ox-eye daisy
Presence or Absence	Present (all)			
Treatment	Yes			
Infested area	7,500 sq. ft.			
Canopy Cover	1-5%			
Appearance	Flowering			
Distribution pattern	Scattered patchy			
Photo documentation	616, 617			
Weed Location				
Geographic location (ID)	L09-11			
Coordinate system	Ca. State Plane Zone 2			
Datum	NAD83			
Location data accuracy	1-5m			
Location description	Lower portion of Bend Court access road near canal and small perennial drainage; line extends beyond small drainage, beyond mapped access road.			

APPENDIX C**EID Weed Observation and Monitoring Form****Diversion Dam, Canal-Beat 1, Roads near Camp 1**

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
622, 623	47-08	NE/W	Multiple weeds to east of intake facility / LALA4 abundant
624	47-08	E	Multiple weeds to east of intake facility
625, 626	41-08	W	Weed control near canal intake/some LALA4
627, 628	41-08	W	Weeds in rip rap near fish ladder
629, 630	40-08	W/SW	LEVU and VETH along flume
631	48-08	E	Few LEVU
632	10-09	NW	Good control of HYPE, one small patch along fence
633	06-10	SE	Patch of dense HYPE
634,635,	L35-08	W/W	Large patch of VETH below flume/ abundant mugwort mixed in
636, 637	L35-08	W/SE	Weedy; CHJU, BRTE
638, 639, 640	L34-08	NW	Star thistle here**, VETH, BRTE, CIVU; Esp. weedy outside fence (VETH)
645	L10-11	SE	Clump of VETH along canal
646,	L33-08	SE	VETH and BRTE on east end of line
647, 648	L33-08	NW	HYPE & VETH along canal and outside fence
649, 650	38-08	W/SW	LALA4 along canal
651, 652	L29-08	W/E	Good control - mostly BRTE along rd.
653	37-08	SW	Patch of BRDID2 and BRTE on road shoulder
654	L29-08	W	MEOF in turnout area/ edge sprayed & dying

Photo Log

Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
655	39-08	NW	Clearing surrounded by dead, sprayed weeds - good control
656	L32-08	W	Weeds sprayed along shoulder of upper Camp 1 canal access road;
657	L30-08	S	LALA4 below drive leading to Camp 1 house; edge of rd. sprayed
658	L30-08	N	Very minor BRTE along road; recently sprayed
659	36-08	S	Good control – no noxious weeds
660	L28-08	NE	MEOF along road, Alder crk. bridge - recently sprayed, dying
661	L28-08	N	Dying weeds along shoulder, mostly MEOF
662, 663	L28-08	NW/NE	Upper end - MEOF dying; good control along edge of road
664, 665	L26-08	S / N	Good control along “old” section of road to S / good control in large turnout
666, 667	L26-08	N-NW	dense BRDID2 and BRTE on down slope and around margin at road end
668	L27-08	NW	Minor BRTE, VETH, MEOF, HYPE and other weeds

Notes

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General Information

ID: 06-10

Collection date (mm/dd/yyyy)	7/21/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	El Dorado Canal
Site address or other description	Beat 1
Ownership	Water Transport Facility
Land use type	Forest
Invaded vegetation type	
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	633

Weed Location

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. 2011 Update: Same as 2010.

General Information

ID: 10-09

Collection date (mm/dd/yyyy)	7/21/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	El Dorado Canal
Site address or other description	Beat 1
Ownership	Water Transport Facility
Land use type	Forest
Invaded vegetation type	
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	632

Weed Location

Weed Location	
Geographic location (ID)	9-Oct
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	1-5m
Location description	W. side of small bridge over drainage; 2011 Update: Same as last year; few more HYPE coming in, but overall very light occurrence

General Information

ID: 36-08

Collection date (mm/dd/yyyy)	7/21/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Access Road	
Site address or other description	El Dorado Tunnel Road	
Ownership	Transportation Corridor	
Land use type	Forest	
Invaded vegetation type		
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 Identification

		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	Absent	
Treated	Yes	
Infested area	<1%	0 sq. ft.
Canopy Cover	New growth	Seeding
Appearance	Scattered even	
Distribution pattern		
Photo documentation	659	

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. 2011 Update: No weeds observed.	

General Information

ID: 37-08

Collection date (mm/dd/yyyy)	7/21/2011	
Observer name(s)	Ethan Koenigs,	Logan McCarthy
Site Information		
Site or facility name	Access Road	
Site address or other description	Camp 1 road	
Ownership	Transportation Corridor	
Land use type	Forest	
Invaded vegetation type		
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>
Weed common name(s)	Cheat grass	White Sweet Clover
		<i>Bromus diandrus</i>
		Ripgut Brome

Weed Description		
Presence or Absence	Present (not all species)	MEOF (absent)
Treated	Yes	
Infested area	250 sq. ft.	
Canopy Cover	1-5%	1-5%
Appearance	New growth	Senesc.
Distribution pattern	Clumpy	
Photo documentation	653	

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. 2011 Update: Same as 2010 except no MEOF.	

General Information

ID: 38-08

Collection date (mm/dd/yyyy)	7/21/2011
Observer name(s)	Ethan Koenigs
Site Information	
Site or facility name	El Dorado Canal
Site address or other description	Beat 1
Ownership	Water Transport Facility
Land use type	Forest
Invaded vegetation type	
Gross Area	300 sq. ft.
Disturbances & impacts	Other man-made disturbance
Associated species	Mixed conifer; Bracken Fern
Environmental Conditions (e.g. soil conditions, exposure, etc.)	NW Exposure

Weed Identification

		Weed Identification	Presence
Weed genus and species	<i>Lathyrus latifolius</i>	<i>Cytisus scoparius</i>	
Weed common name(s)	Perennial Sweet Pea	Scotch Broom	
Presence or Absence	Present (not all species)	(CYSC4 absent)	
Treated	No		
Infested area	300 sq. ft.		
Canopy Cover	1-5%		
Appearance	Flowering		
Distribution pattern	Clumpy		
Photo documentation	649, 650		

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. 2011 Update: Same as 2010

General Information

ID: 39-08

Collection date (mm/dd/yyyy)	7/21/2011	
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	Transportation Corridor	
Land use type	Water Transport Facility	
Invaded vegetation type	Forest	
Gross Area	3500	sq. ft.
Disturbances & impacts	Roadside maintenance	
Associated species	Other man-made disturbance	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Ponderosa Pine, Douglas Fir, Black Oak, Deer Brush, Blue Wild Rye, Curly Dock 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

Presence or Absence	Present (all)	
Treated	Yes	
Infested area	1000	sq. ft.
Canopy Cover	1-5%	
Appearance	New growth	
Distribution pattern	Clumpy	
Photo documentation	655	

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. 2011 Update: Good control of MEOF, dying.	

General Information

ID: 40-08

Collection date (mm/dd/yyyy)	7/21/2011	
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	1000 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>	<i>Hypericum perforatum</i>
Weed common name(s)	Ox-eye Daisy	Woolly Mullein	Klamath Weed
Presence			
Presence or Absence	Present (all)		
Treated	No		
Infested area	700 sq. ft.		
Canopy Cover	<1%		
Appearance	Flowering		
Distribution pattern	Scattered even		
Photo documentation	629, 630		

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. LEVU on both sides of canal. 2011 Update: Same as 2010; HYPE on south side of canal; LEVU increased, especially on south side of canal; VETH static.	

General Information

ID: 41-08

Collection date (mm/dd/yyyy)	7/21/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Diversion Dam	
Site address or other description	Northwest side of facility	
Ownership	EID	
Land use type	Water Transport Facility	
Invaded vegetation type	Forest	
Gross Area	5,000 sq. ft.	
Disturbances & impacts	Facility Maintenance	
Associated species	Mixed Conifer, Black Oak, Black Cottonwood	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Rocky, exposed	

Weed Information

Weed genus and species Weed common name(s)	Weed Identification		
	<i>Verbascum thapsus</i> Woolly Mullein	<i>Cirsium vulgare</i> Bull Thistle	<i>Hypericum perforatum</i> Klamath Weed
<i>Lathyrus latifolius</i> Sweet Pea			<i>Bromus tectorum</i> Cheat grass
Present (not all species)	Present (not all species)		
Treated	No (physical removal - weed trimmer)		
Infested area	3,000 sq. ft.		
Canopy Cover	1-5%	<1%	1-5%
Appearance	Flowering	Flowering	Flowering
Distribution pattern	Scattered patchy		
Photo documentation	625, 626, 627, 628		

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. 2011 Update: Overall increase; concentrated in boulder rip-rap; all the area up to edge of fish ladder.

General Information

ID: 47-08

Collection date (mm/dd/yyyy)	7/21/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Diversion Dam	
Site address or other description	Northeast side of facility	
Ownership	EID	
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 genus and species Weed common name(s)	Weed Identification			
	<i>Verbascum thapsus</i> Woolly Mullain (<1%)	<i>Centaurea solstitialis</i> Star Thistle (<1%)	<i>Cirsium vulgare</i> Bull Thistle	<i>Hirschfeldia incan</i> <i>Melilotus officinalis</i> Mustard Sweet Clover
Presence or Absence	Present (all)			
Treated	No			
Infested area	10,000 sq. ft.			
Canopy Cover	<1%	<1%	<1%	<1%
Appearance	Flowering	New growth	New growth	Flowering
Distribution pattern	Clumpy	Scattered patchy	Clumpy	Scattered patchy
Photo documentation	622, 623, 624			

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. 2011 Update: Mostly sweet pea; needs hand work and reveg probably; few plants of CIVU and MEOF.

General Information

ID: 48-08

Collection date (mm/dd/yyyy)	7/21/2011
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	No
Infested area	3,750 sq. ft.
Canopy Cover	1-5%
Appearance	Flowering
Distribution pattern	Scattered even
Photo documentation	631

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; 2011 Update: Slight increase in LEVU; overall size of occurrence in three years static.

General Information

L10-11

Collection date (mm/dd/yyyy)	7/21/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	El Dorado Canal	
Site address or other description	Near spillway - Flume 9	
Ownership		
Land use type	Water Transport Facility	
Invaded vegetation type	Forest	
Gross Area	1,000 sq. ft.	
Disturbances & impacts	Canal Maintenance	
Associated species	Douglas fir, Bracken fern, deer brush, incense cedar	
Environmental Conditions (e.g. soil conditions, exposure, etc.)		

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		Yes
Infested area	250 sq. ft.	
Canopy Cover	1-5%	
Appearance	Flowering	Senesc.
Distribution pattern	Linear	
Photo documentation	645	
Weed Location		
Geographic location (ID)	L10-11	
Coordinate system	Ca. State Plane Zone 2	
Datum	NAD83	
Location data accuracy	1-5m	
Location description	West of Flume 9 before next spill.	

General Information

ID: L26-08

Collection date (mm/dd/yyyy)	7/21/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Access Road	
Site address or other description	The El Dorado Tunnel road	
Ownership	Transportation Corridor	
Land use type	Forest	
Invaded vegetation type	3000 sq. ft.	
Gross Area	Tunnel Constuction	
Disturbances & impacts	Deer Brush, Black Oak, Big Leaf Maple, other weedy species	
Associated species	East-facing slope; very exposed	
Environmental Conditions (e.g. soil conditions, exposure, etc.)		

Weed Identification

Weed Identification		
Weed genus and species	<i>Melilotus officinalis</i>	<i>Hypericum perforatum</i>
Weed common name(s)	Sweet Clover	Klamath Weed
		<i>Bromus tectorum</i>
		Cheat grass
		<i>Bromus diandrus</i>
		Ripgut Brome
Present (not all species)		
Presence or Absence	Present (not all species)	HYPE (absent)
Treated	Yes	Needs Additional Treatment
Infested area	3000	sq. ft.
Canopy Cover	<1%	5-25%
Appearance	Flowering	Seeding
Distribution pattern	Clumpy	Linear
Photo documentation	664, 665, 666, 667	

Weed Location

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. 2011 Update: Good control of MEOF; some MEOF still present near rocks and spring; BRDID2 and BRTI fairly heavy along shoulder.

General Information

ID: L28-08

Collection date (mm/dd/yyyy)	7/21/2011	
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>
Weed common name(s)	Sweet Clover, Hedge Parsly	<i>Bromus diandrus</i> Ripgut Brome
Present (not all species)		
Presence or Absence	Present (all)	
Treated	Yes	
Infested area	0.25 acres	
Canopy Cover	<1%	<1%
Appearance	Flowering	Seeding
Distribution pattern	Clumpy	Scattered even
Photo documentation	660, 661, 662, 663	

Weed Location

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. 2011 Update: Sprayed roadside; good control of MEOF - dying; TOAR is flowering, increasing abundance, scattered even along shoulder of rd., there are also some dense patches. HYPE about same as 2010

General Information

ID: L29-08

Collection date (mm/dd/yyyy)	7/21/2011
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	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>
Weed common name(s)	Sweet Pea, Hedge Parsly, Sweet Clover
	<i>Melilotus officinalis</i>
	<i>Hypericum perforatum</i>
	<i>Bromus diandrus</i>
	<i>Bromus tectorum</i>
	Klamath Weed
	Ripgut Brome
	Cheat Grass
Present (not all species)	
Presence or Absence	Sweet Pea (absent)
Treated	No
Infested area	8800 sq. ft.
Canopy Cover	<1%
Appearance	Flowering
Distribution pattern	Scattered patchy
Photo documentation	651, 652, 654

Weed Location

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. 2011 Update: Moderate control along road; MEOF and BRDI at turnout near fork; few HYPE plants at turnout.

General Information

ID: L30-08

Collection date (mm/dd/yyyy)	7/21/2011	
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>
Weed common name(s)	Cheat grass	White Sweet Clover
	<i>Hypericum perforatum</i>	<i>Hypericum perforatum</i>
		Klamath Weed

Present (not all species)

	Present (not all species)	
Presence or Absence	MEOF (absent)	
Treated	No	
Infested area	2500 sq. ft.	
Canopy Cover	<1%	<1%
Appearance	Seeding	Flowering
Distribution pattern	Linear	Clumpy
Photo documentation	657, 658	

Weed Location

Weed Location	
Geographic location (ID)	L30-08
Datum	NAD83
Location data accuracy	< 1m
Location description	From fork in the road to the house. 2011 Update: Good control, especially on road shoulder; very little BRTE; pretty good control of clump of LALA4; just a few HYPE down slope.

General Information

ID: L32-08

Collection date (mm/dd/yyyy)	7/21/2011	
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 Klamath Weed
Present (not all species)			
Presence or Absence	Present (not all species)	MEOF absent	
Treated	Yes		
Infested area	2000	sq. ft.	
Canopy Cover	1-5%	1-5%	<1%
Appearance	Flowering	Seeding	Flowering
Distribution pattern	Clumpy	Linear	Clumpy Scattered even
Photo documentation	656		

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. 2011 Update: Good control of MEOF; few VETH up near gate; treated after BRTE set seed; need to treat beyond end of road along fence/gate.	

General Information

ID: L33-08

Collection date (mm/dd/yyyy)	7/21/2011	
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	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>Verbascum thapsus</i>	<i>Bromus tectorum</i>
Weed common name(s)	Woolly Mulllein	Cheat Grass
Present (not all species)		
Presence or Absence	Present (all)	
Treatment	No	
Infested area	1,000	sq. ft.
Canopy Cover	1-5%	5-25%
Appearance	Flowering	Seeding
Distribution pattern	Scattered even	Scattered even
Photo documentation	646, 647, 648	
Weed Location		
(B RTE present throughout burn area mostly outside fence)		
<1%		
Clumpy		
Clumpy		
Clumpy		

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, Extend line back (E.) along canal approx. 300'. 2011 Update: HYPE is about the same; many new first year VETH; BRTE is increasing along canal within fence; one clump of CHIU.	

General Information

ID: L34-08

Collection date (mm/dd/yyyy)	7/21/2011	
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	10,000 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>	<i>Centaurea solstitialis</i>
Weed common name(s)	Cheat grass	Woolly Mullen	Yellow Starthistle
Present (not all species)			
Presence or Absence	Present (not all species)	No CHJU or CESO	
Treatment		No	
Infested area	10,000 sq. ft.		
Canopy Cover	5-25%	5-25%	<1%
Appearance	Senesc.	New growth	Flowering
Distribution pattern	Linear	Clumpy	Flowering
Photo documentation	638, 639		

Weed Location

Geographic location (ID)	
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. 2011 Update: Similar to 2010; all increasing; Starthistle returning; numerous new occurrences of multiple weeds; concentrated on east end of mapped line; consider not spraying but use hand treatment and re-seed outside fence to compete with weeds; CIVU and VETH primarily outside fence.

General Information

ID: L35-08

Collection date (mm/dd/yyyy)	7/21/2011
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	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>
Weed common name(s)	Rush Skeleton weed
	<i>Bromus tectorum</i>
	Cheat Grass
	<i>Verbascum thapsus</i>
	wooly mullein

Present (not all species)	
Presence or Absence	Present (all)
Treatment	No
Infested area	3,000 sq. ft.
Canopy Cover	25-50%
Appearance	Flowering
Distribution pattern	Scattered patchy
Photo documentation	635, 636, 637

Weed Location	
Geographic location (ID)	L35-08
Coordinate system	State Plane
Datum	NAD83
Location data accuracy	1-5m

Location description
 Beginning just west of flume on north side of canal for approximately 200'. 2011 Update: Same as 2010; starting to get colonized by natives; avoid spray treatment; slight increase in CHJU and VETH; consider revegetation.

APPENDIX C

EID Weed Observation and Monitoring Form – Alder Diversion, Mill to Bull Tunnel Entrance

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
668	L27-08	NW	Minor BRTE and other weeds
GPS photo L31-08	L31-08		
Notes			

General Information

ID: L27-08

Collection date (mm/dd/yyyy)	7/29/2011	
Observer name(s)	Ethan Koenigs,	Logan McCarthy
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 Identification

Weed Identification		
Weed genus and species	<i>Hypericum perforatum</i>	<i>Melilotus officinalis</i>
Weed common name(s)	Klamath Weed	White Sweet Clover
		<i>Bromus tectorum</i>
		Cheat grass
		<i>Verbascum thapsus</i>
		Woolly Mullein

Weed Description		
Presence or Absence	Present (all)	
Treated	Yes	
Infested area	750 sq. ft.	
Canopy Cover	<1%	1-5%
Appearance	Flowering	Seeding
Distribution pattern	Scattered patchy	Linear
Photo documentation	668	

Weed Location

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. 2011 Update: Mostly cheat grass on edge of canal; many first year VETH plants.

General Information

ID: L31-08

Collection date (mm/dd/yyyy)	7/29/2011	
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 Sprayed
Infested area		3,500 sq. ft.
Canopy Cover		1-5%
Appearance		Seeding Senesc.
Distribution pattern		Scattered even
Photo documentation		GPS photo L31-08

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'. 2011 Update: About the same as 2010; treatment too late for cheat grass.	

APPENDIX C**EID Weed Observation and Monitoring Form – Silver Lake /Caples Lake Area**

Photo Log			
Photo #	GPS Waypoint or feature #	Bearing or Direction	Feature/Notes
728/729	11-09	SE/S	Silver Lake - VETH at S. side of day-use boat ramp parking area
730-732	11-09	SW/SW	Silver Lake - close-up of VETH patch near lake
733	44-08	N	Silver Lake –Road to Ferguson Pt. - good weed control
734/735	44-08	NW/SW	Silver Lake –Road to Ferguson Pt. - dying VETH and CIVU
736	03-11	E	MEOF - near highway 88 & Caples Spillway
737	49-08	SW	Caples lake, near spillway; good control of weeds along shore
738/739	A01-11	S-SW	HYPE along face of Caples main dam; low density scattered
743	04-11	S	Dying MEOF in planter; Caples day-use boat launch
744	04-11	W	Scattered MEOF ; some dying in Day-use planter
745	04-11	SE	VETH adjacent to w. side of parking lot in Day-use picnic area
Notes			

General Information

ID: 03-11

Collection date (mm/dd/yyyy)	8/10/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Caples Lake	
Site address or other description	Highway 88 and Caples spillway parking area	
Ownership	Caltrans / EID	
Land use type	Transportation Corridor	
Invaded vegetation type	riparian	
Gross Area	200	sq. ft.
Disturbances & impacts	Roadside maintenance	
Associated species	lodgepole, yellow willow, associated herbaceous riparian	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	roadside riparian/ very open, no tree canopy	

Weed Information

Weed genus and species	<i>Melilotus alba</i>	
Weed common name(s)	Sweet clover	
Weed Identification		

	Present (not all species)	
Presence or Absence	Present (all)	
Treated	No	
Infested area	200 sq. ft.	
Canopy Cover	1-5%	
Appearance	Flowering	
Distribution pattern	Clumpy	
Photo documentation	736	

Weed Location

Geographic location (ID)	03-11	
Coordinate system	Ca. State Plane Zone 2	
Datum	NAD83	
Location data accuracy	1-5m	
Location description	Caples Lake parking area at Spillway, west end of lot near highway - may be with Cal Trans ROW. Small patch of MEOF	

General Information

ID: 04-11

Collection date (mm/dd/yyyy)	8/10/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Caples Lake	
Site address or other description	Caples Boat Launch and day use area	
Ownership	EID	
Land use type	Water Storage Facility	
Invaded vegetation type	Forest	
Gross Area	3350 sq. ft.	
Disturbances & impacts	Recently planted with native vegetation	
Associated species	lodgepole, aspen, juniper, red fir	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	Recently constructed / landscaped day-use facility	

Weed Information

		Weed Identification	Present (not all species)
Weed genus and species	<i>Melilotus alba</i>	<i>Verbascum thapsus</i>	
Weed common name(s)	Sweet clover	Woolly Mullein	
Presence or Absence	Present (all)		
Treated	Yes		
Infested area	3350 sq. ft.		
Canopy Cover	<1%		
Appearance	New growth		
Distribution pattern	Scattered patchy		
Photo documentation	743 - 745		

Weed Location

Geographic location (ID)	4 points within 04-11	
Coordinate system	Ca. State Plane Zone 2	
Datum	NAD83	
Location data accuracy	1-5m	
Location description	Weeds are located at several locations within the Day-use area; primarily within the landscape "islands", but also with within the picnic area between the shore and parking area. A few woolly mullein at Highway ROW and entrance. Weeds mostly in planted areas. 80-90% of weeds spraved recently.	

General Information

ID: 11-09

Collection date (mm/dd/yyyy)	8/10/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Silver Lake	
Site address or other description	Kays Resort	
Ownership	Water Storage Facility	
Land use type	Forest	
Invaded vegetation type	10,000 sq. ft.	
Gross Area	Graded gravel area SW of resort	
Disturbances & impacts	Lodgepole Pine, Red Fir, Willow, Sedges	
Associated species	Close to lake (50ft).	
Environmental Conditions (e.g. soil conditions, exposure, etc.)		

Weed Identification

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

Present (not all species)

Presence or Absence	Yes	
Treated	No	
Infested area	5,000 sq. ft.	
Canopy Cover	1-5%	
Appearance	New growth	Flowering
Distribution pattern	Scattered patchy	
Photo documentation	728 - 732	

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 at Silver Lake. 2011 update: Increasing Woolly Mullein, lots of first year plants, more around parking lot edge. Recommend hand treatment.	

General Information

ID: 44-08

Collection date (mm/dd/yyyy)	8/10/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Silver Lake	
Site address or other description	Adjacent to dam	
Ownership	Water Storage Facility	
Land use type	Forest	
Invaded vegetation type		
Gross Area	250 sq. ft.	
Disturbances & impacts	Roadside 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	Yes	
Treated	Yes	
Infested area	50 sq. ft.	
Canopy Cover	<1%	
Appearance	New growth	Flowering
Distribution pattern	Scattered patchy	Scattered patchy
Photo documentation	733 - 735	

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 with Hwy. 88 and road to Ferguson Point. Treated with herbicide. Effective control.	

General Information

ID: 49-08

Collection date (mm/dd/yyyy)	8/10/2011	
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	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	Yes	
Infested area	1000 sq. ft.	
Canopy Cover	<1%	
Appearance	Dying	
Distribution pattern	Scattered even	
Photo documentation	737	

Weed Location

Weed Location	
Geographic location (ID)	49-08
Coordinate system	Ca. State Plane Zone 2
Datum	NAD83
Location data accuracy	1-5m
Location description	Along interior face of dam, near water. Very minor occ. Effectively spot treated with herbicide; including several other scattered plants nearby.

General Information

ID: A01-11

Collection date (mm/dd/yyyy)	8/10/2011	
Observer name(s)	Ethan Koenigs	
Site Information		
Site or facility name	Caples Lake	Caples Dam
Site address or other description		
Ownership	EID	
Land use type	Water Storage Facility	Ruderal
Invaded vegetation type		
Gross Area	2.5	acres
Disturbances & impacts	Facility Maintenance	
Associated species	sagebrush, penstemon, yarrow, currants, aster	
Environmental Conditions (e.g. soil conditions, exposure, etc.)	dam fill	

Weed Information

Weed genus and species	<i>Hypericum perforatum</i>	
Weed common name(s)	Klamath weed	

Weed Identification

	Present (all)	Present (not all species)
Presence or Absence	Present (all)	
Treated	No	
Infested area	2.5	acres
Canopy Cover	1-5%	
Appearance	New growth	
Distribution pattern	Scattered even	
Photo documentation	738, 739 from E of dam looking west	

Weed Location

Geographic location (ID)	A01-11	
Coordinate system	Ca. State Plane Zone 2	
Datum	NAD83	
Location data accuracy	1-5m	
Location description	Scattered along face of dam. Because of low density and diverse local vegetation, hand pulling or no treatment recommended --weed is naturalized.	

2011 Data Sheet Index

Date	Locations
June 22	Upper penstock (partial); Powerhouse Rd., Forebay Res., Rd. 93
June 23	Highway Cut Rd. (10N40G), Rds. 81-84, 11N02Y
June 29	El Dorado Canal Beats 4 and 5
July 1	Camp 2 and 3 roads, 10N08Y, Rds.87-89
July 7	El Dorado Canal Beats 2, 3 and partial 4
July 14	Lower penstock, partial upper penstock, partial Forebay Res., Moon Lane, Bend Court
July 21	El Dorado Canal Beat 1, Camp 1 rds. (74 and 75),
July 29	Alder Creek diversion, Mill to Bull tunnel entrance
August 10	Caples Lake and Silver Lake

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