Annual Vegetation and Noxious Weed Management Report
Santa Felicia Project
2014 Reporting Period

Santa Felicia Project FERC P-2153

December 31, 2014

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UNITED WATER CONSERVATION DISTRICT

Environmental Planning and Conservation Department

Table of Contents

Abstract
This annual report presents information related to monitoring and control activities conducted between January 1 and December 31, 2014, in accordance with the "Vegetation and Noxious Weed Management Plan" developed to comply with requirements of United Water Conservation District's license issued by the Federal Energy Regulatory Commission. During this reporting period, the Vegetation and Noxious Weed Management Area (Management Area) was surveyed between May 28 and June 26, 2014 to assess the effectiveness of multiple eradication activities implemented during 2013. Data collected indicates the extent of the area available for tamarisk colonization within the Management Area, size and age class of tamarisk plants present in the Management Area, and level of tamarisk infestation, have changed significantly since initiation of the control efforts. Drought conditions have resulted in reducing the wetted perimeter of Lake Piru, and expanding the area available for tamarisk colonization. The mature tamarisk plants identified during the baseline survey in 2011 have been successfully treated. Treatment for many of the small to mid-sized tamarisk plants was only partially successful and many of the treated plants have regrowth sprouting from the cut and treated stalks. Tamarisk infestations within the Management Area have increased substantially with significant recruitment occurring in areas where previously submerged shoreline has become exposed by receding water surface elevations. United has scheduled a consultation meeting with the Los Padres National Forest to request guidance for developing appropriate strategies to address tamarisk infestations within the Management Area.

1.0 Background

United Water Conservation District (United) owns and operates the Santa Felicia Project (Project) on Piru Creek in Ventura County, California. The Federal Energy Regulatory Commission (FERC) issued a new license to United for the operations of the Project on September 12, 2008 (FERC Project No. 2153). Article 405 of the License requires United to file a vegetation and noxious weed management plan for lands within the project boundary that incorporates provisions of United States Forest Service' (USFS) 4(e) Condition 18(b). United filed the "Vegetation and Noxious Weed Management Plan September 2010" (Management Plan), on October 12, 2010 and FERC issued an order modifying and approving the Management Plan on February 14, 2011.

The Management Plan requires United to produce annual technical reports presenting the results of monitoring and control efforts conducted throughout the prior year (reporting period). This report describes monitoring activities performed between January 1, 2014 and December 31, 2014. No control activities were conducted during 2014.

The Management Plan specifically identifies that the report must contain the following components:

1. Summary of target noxious weed populations including existing and new populations in areas tied-to Project actions or effects.
2. Project area map depicting point and polygon data for target noxious weed populations as recorded for the Noxious Weed GIS Data Layer.
3. Description of control areas and treatments used over the past year.
4. Brief evaluation of priority treatment areas.

5. Recommended control measures for each population/treatment area including proposed chemical controls.
6. Description of revegetation efforts conducted during the reporting period.
7. Evaluation of revegetation efforts conducted prior to (within 3-years) and within the reporting period.
8. Summary of proposed revegetation areas.

In addition, on January 29, 2013, FERC issued an order approving and amending a plan to use existing vegetation in Reasoner Canyon Creek to satisfy bank stabilization requirements of Article 407 of the license. The order requires United to include a description of any revegetation activities conducted during the year in Reasoner Canyon Creek for bank stabilization purposes in this annual report.

1.1 Summary of activities presented in prior annual reports

This report serves as the fourth annual report documenting monitoring and control activities conducted in accordance with the Management Plan. Activities described in prior annual reports are summarized in this section.

1.1.1 Reporting period February 14, 2011 through February 28, 2012

United performed a baseline inventory survey of targeted noxious weed species within the Vegetation and Noxious Weed Management Area (Management Area). The inventory survey was conducted in April of 2011. The only targeted noxious weed that was observed during the baseline survey was *Tamarix ramosissima* (tamarisk). The Plan required that United finalize, in consultation with the Los Padres National Forest (LPNF), the priority infestations and treatment methods based on information obtained from the baseline inventory survey. United consulted with the LPNF on February 2, 2012 and presented results of the baseline inventory. Following guidance from the LPNF, United developed a draft "Strategy for Treatment and Eradication of *Tamarix ramosissima"* (Eradication Plan) based on a draft model developed by the LPNF for the purpose of eradicating tamarisk from Piru Creek, Lockwood Creek, Cuyama River, Santa Ynez River, Sisquoc River, and Arroyo Seco River. United provided a draft of the Eradication Plan to LPNF for review.

1.1.2 Reporting period March 1, 2012 through February 28, 2013

Following guidance from LPNF, the Eradication Plan was finalized. United's Board of Directors determined that tamarisk removal activities, as described in the Eradication Plan, are categorically exempt from the California Environmental Quality Act (CEQA) and a Notice of Exemption was filed with the Ventura County Clerk of the Board of Supervisors on December 31, 2012. United consulted with the U.S. Army Corps of Engineers on November 9, 2012, and was informed that the proposed activities would not require a permit under section 404 of the Clean Water Act. United submitted the Eradication Plan along with a streambed alteration notification to the California Department of Fish and Wildlife (CDFW) on December 17, 2012. CDFW responded in a letter dated January 14, 2013, with a determination that the project would not substantially adversely affect any existing fish or wildlife resource, and therefore, a lake or streambed alteration agreement was not required. The activities outlined in the Eradication Plan were implemented between January 30 and February 6, 2013.

1.1.2 Reporting period March 1, 2013 through December 31, 2013

The Management Area was surveyed during June 2013 to determine the effectiveness of eradication activities implemented between January 30 and February 6, 2013. A substantial amount of tamarisk was observed. During preparation for a follow-up eradication treatment, several site reconnaissance visits were conducted. Observations made during field reconnaissance visits in July and August, 2013,

indicated tamarisk infestations in the Management Area had increased since the June 2013 survey. The follow-up eradication treatment was implemented between November 7 and November 18, 2013. The eradication treatment included the "cut and paint" method (which was implemented in the prior eradication effort) for larger more mature tamarisk plants, in combination with foliar spray application of an herbicide for regrowth and new growth populations.

2.0 Vegetation and Noxious Weed Management Activities January 1 to December 31, 2014

2.1 Summary of target noxious weed populations including existing and new populations in areas tied-to Project actions or effects

The Management Area was surveyed between May 28 and June 26, 2014 to determine the effectiveness of eradication activities conducted during prior reporting periods (January/February 2013, and November of 2013). An aerial map of the surveyed area with delineated polygon areas representing tamarisk infestations is presented in Figure 1. Insets shown in Figure 1 are expanded in Figures 2 (Reasoner Canyon Creek) and 3 (Santa Felicia spillway pools and outlet works) to present more detail for the areas where the majority of tamarisk infestations have been identified and where eradication efforts have been focused. A characterization of observations based on quantity of plants observed and percent coverage of tamarisk within each polygon is presented in Table 1. Results from the 2011 baseline survey and the 2013 survey are also included in Table 1.

In summary, the extent of the area available for tamarisk recruitment within the Management Area, size and age class of tamarisk plants present in the Management Area, and level of tamarisk infestation, have changed significantly since initiation of the control efforts. Drought conditions have resulted in reducing the wetted perimeter of Lake Piru, and expanding the area available for tamarisk colonization. The mature tamarisk plants identified during the baseline survey in 2011 have been successfully treated. Treatment for many of the small to mid-sized tamarisk plants (with stalk diameters less than one-half inch) appears to be only partially successful, and many of the treated plants have regrowth sprouting from the cut and treated stalks. A comparison of data collected during surveys indicates that the quantity of individual plants within the Management Area has increased substantially, from slightly less than 100 total plants in 2011, to a minimum of 450 total plants in 2014 (note: not all plants in dense infestations of new growth were counted). The majority of new growth has developed in areas where previously submerged shoreline has recently become exposed by receding water surface elevations. This condition has been observed around Lake Piru and also in the Santa Felicia spillway pools. A total of 53 plants were identified in Reasoner Canyon Creek during the 2011 baseline survey. During the 2014 survey, more than 279 plants were observed in this region. The majority of the new plants in the Reasoner Canyon Creek area are located below the high water mark (Figure 2). A similar situation is present in the Santa Felicia spillway channel (Figure 3) where 111 new plants have colonized the outer areas of receding pools.

2.2 Project area map depicting point and polygon data for target noxious weed populations as recorded for the Noxious Weed GIS Data Layer

Project area maps depicting the spatial extent of identified target noxious weed populations (tamarisk) are presented in Figures 1, 2, and 3.

2.3 Description of control areas and treatments used over the past year

Two eradication treatments were performed during prior reporting periods (the first in January/February 2013, and the most recent in November 2013). Activities conducted during this

reporting period were associated with monitoring. No eradication treatments were conducted in the Management Area during this reporting period.

2.4 Brief evaluation of priority treatment areas

In general, tamarisk infestations in the Management Area are composed of regrowth and new growth that has occurred since initiation of control measures. The mature tamarisk plants identified during the baseline survey in 2011 have been successfully removed from the Management Area. Treatments for many of the small to mid-sized tamarisk plants (with stalk diameters less than one-half inch) appear to be only partially successful, and many of the treated plants have regrowth sprouting from the cut and treated stalks. A substantial amount of new growth has occurred in the Management Area. Most of the new growth has occurred in areas that are temporarily available between the high water mark and wetted perimeter of the Lake and spillway pools.

2.5 Recommended control measures for each population/treatment area including proposed chemical controls

United has scheduled an annual consultation meeting with LPNF on February 2, 2015 and intends to discuss the findings of monitoring activities conducted during this reporting period. For tamarisk infestations in the Management Area that are not located between the wetted perimeter of the reservoir and the high water mark, United intends to propose a combination of control measures similar to those implemented during the eradication treatment conducted during November of 2013. These measures include the "cut and paint" method for tamarisk plants with stalk diameters greater than one-half inch, in combination with foliar spray application of an herbicide for regrowth and new growth populations with stalk diameters less than one-half inch. United will consult with the LPNF to develop an appropriate strategy for addressing infestations located between the wetted perimeter of the reservoir and the high water mark.

2.6 Description of revegetation efforts conducted during the reporting period

No revegetation activities were conducted during the reporting period.

2.7 Evaluation of revegetation efforts conducted prior to (within 3 years) and within the reporting period

No revegetation activities have been conducted within the last 3 years.

2.8 Summary of proposed revegetation areas

United will continue to monitor the treatment areas to determine the effectiveness of the control measures. If appropriate, revegetation activities may be proposed.

3.0 Description of revegetation activities conducted in Reasoner Canyon Creek for bank stabilization purposes

No revegetation activities occurred during 2014 in Reasoner Canyon Creek for bank stabilization purposes.

4.0 USFS Consultation

4.1 Development of strategies to address new colonization and regrowth of tamarisk in the Management Area

United will consult with LPNF on February 2, 2015, to request guidance on developing appropriate strategies to address tamarisk infestations within the Management Area (as discussed in Section 2.5).

4.2 Development of strategies to control and treat additional tamarisk in environmentally sensitive areas

Tamarisk plants that fall within critical habitat and areas where arroyo toads may be expected to breed have been excluded as priority plants for removal under the Eradication Plan. United's Eradication Plan is based on a draft model developed by the LPNF for the purpose of eradicating tamarisk from Piru Creek, Lockwood Creek, Cuyama River, Santa Ynez River, Sisquoc River, and Arroyo Seco River. LPNF's plan, "Los Padres National Forest Tamarisk Removal Project," is under environmental review, and an Environmental Impact Statement (EIS) has been filed with the Federal Registry (LPNF 2012). United will continue to consult with LPNF, U.S. Fish and Wildlife Service (USFWS), and CDFW to determine if United can safely remove these tamarisk plants without affecting arroyo toad or its critical habitat using the approach developed by LPNF. Depending on the outcome of that consultation, United will work with the consulting agencies and FERC to determine how to proceed.

4.3 Annual coordination meeting

USFS' section 4(e) conditions 2 and 18(b) require that United consult annually with the USFS on issues related to conditions of the license and implementation of the Management Plan. United met with LPNF on January 30, 2014, to provide an update to LPNF on license activities and the vegetation and noxious weed management planning process as well as anticipated future management activities. Minutes from the meeting were filed with FERC on April 7, 2014.

5.0 Future Activities

United will consult with LPNF on February 2, 2015, to request guidance on developing appropriate strategies to address tamarisk infestations within the Management Area. United will also continue to consult with LPNF to develop plans to control and treat tamarisk plants that fall within arroyo toad critical habitat or in areas where eradication activities have the potential to affect arroyo toads. Depending on the outcome of that consultation, United will work with the agencies and FERC to determine how to proceed.

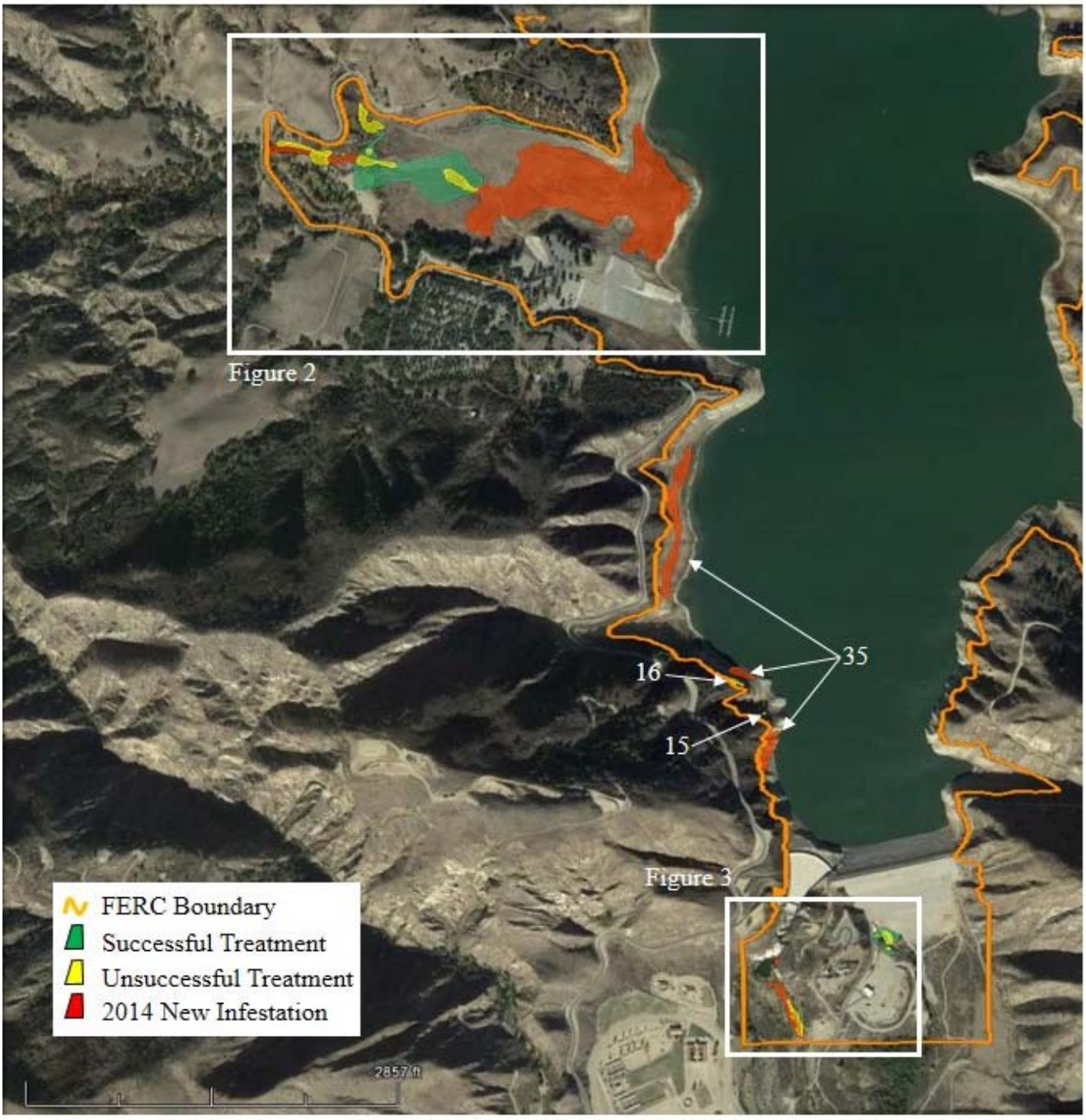

Figure 1 - Noxious Weed Prioritized Management Area

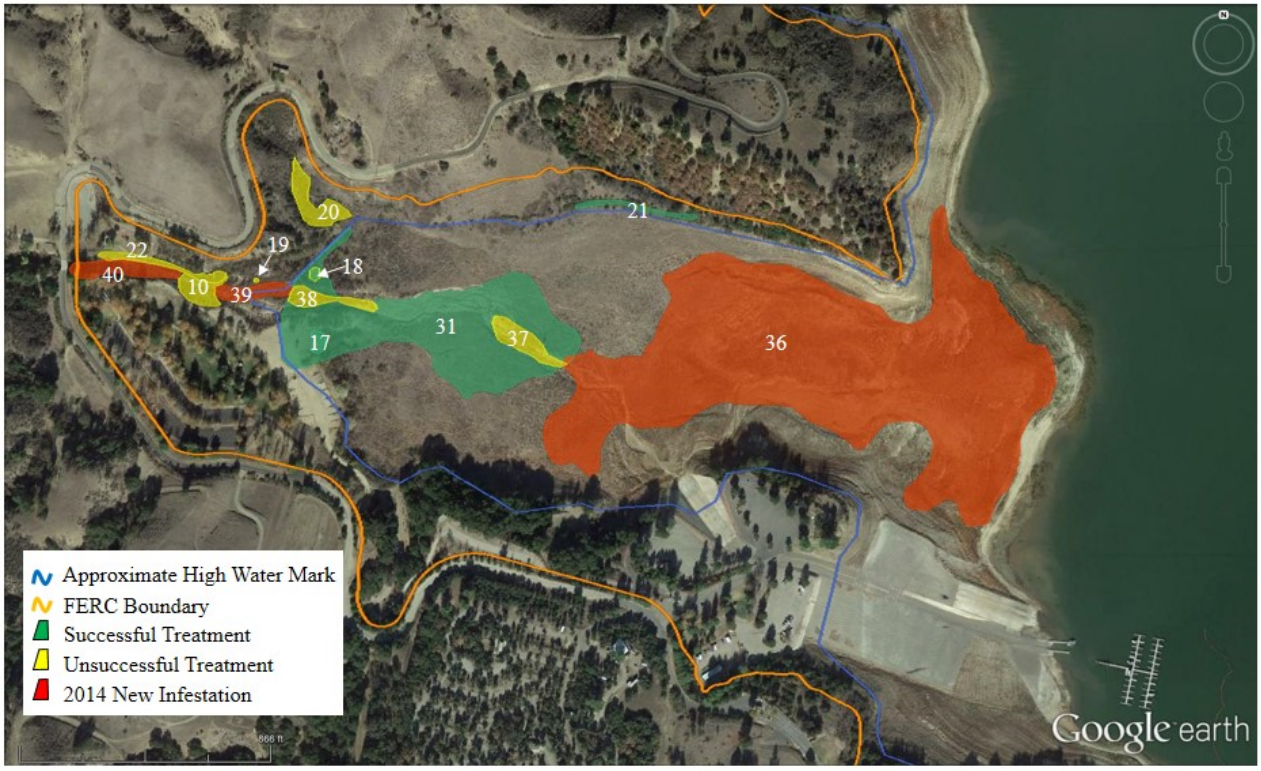

Figure 2 - Reasoner Canyon Creek Detail

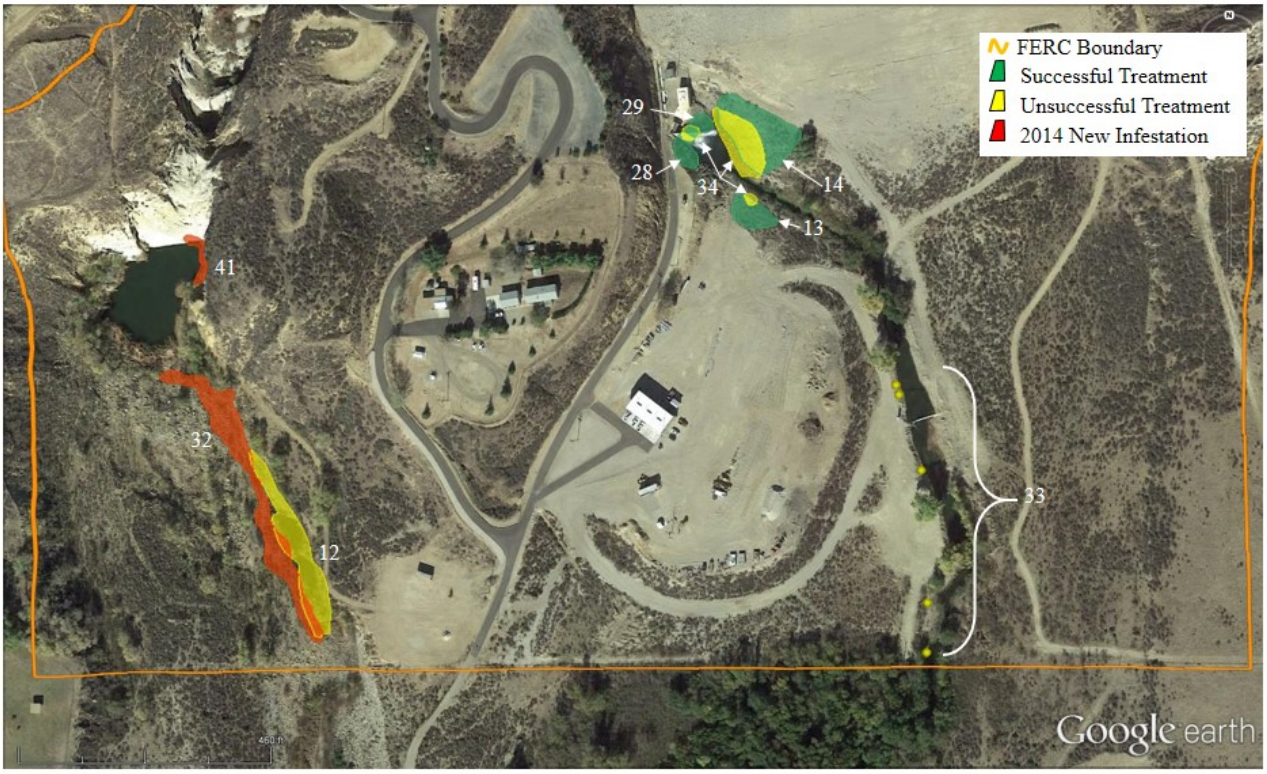

Figure 3 - Santa Felicia Spillway Channel and Outlet Works Detail

Table 1 - 2014 Tamarisk Observational Characteristics

Figure #	Polygon ID	2011 Qty Observed	2011 % Coverage	2013 Qty Observed	2013 % Coverage	2014 Qty Observed	2014 % Coverage	Latitude	Longitude	2011 Plants per Figure	2013 Plants per Figure	2014 Plants per Figure
1	15	1	1	0	0	*UNK	*UNK	34.465101	-118.755754	3	0	*UNK
	16	2	3	0	0	*UNK	*UNK	34.465906	-118.756588			
	35	-	-	-	-	*UNK	*UNK	34.466112	-118.756454			
2	10	10	20	15	20	32	-	34.478981	-118.769098	53	159+	279+
	17	4	3	4	3	0	0	34.478516	-118.767564			
	18	2	1	2	1	2	1	34.479228	-118.767611			
	19	1	1	20	1	10	1	34.479163	-118.768366			
	20	10	8	15	8	16	8	34.47998	-118.767611			
	21	20	10	0	0	0	0	34.479918	-118.763518			
	22	6	5	20	6	25	6	34.479317	-1 18.76955			
	31	-	-	80+	5	0	0	34.47877	-118.766761			
	36	-	-	-	-	150+	4	34.47822	-118.760986			
	37	-	-	-	-	8	3	34.478529	-118.764961			
	38	-	-	-	-	9	3	34.478963	-118.767486			
	39	-	-	-	-	14	3	34.479042	-118.768421			
	40	-	-	-	-	13	4	34.479279	-118.770037			
3	12	25	8	35	9	14	5	34.457353	-118.754869	39	71	167
	13	2	10	3	10	0	0	34.459013	-118.752020			
	14	12	10	25	12	0	0	34.459416	-118.751989			
	28	-	-	5	1	0	0	34.459335	-118.752469			
	29	-	-	3	1	0	0	34.459443	-118.752423			
	32	-	-	-	-	111	5	34.457602	-118.755149			
	33	-	-	-	-	5	1	34.457701	-118.750961			
	34	-	-	-	-	26	2	34.459087	-118.752023			
	41	-	-	-	-	11	40	34.45879	-118.755476			

- (dash): no tamarisk observed in the area during previous surveys
*UNK: Unknown counts but tamarisk observed, observation from boat
Figure 1: Western shoreline of Lake Piru; Figure 2: Reasoner Canyon Creek; Figure 3: Santa Felicia spillway pools and outlet works

References

Los Padres National Forest (LPNF). 2012. *California; Environmental Impact Statement for the Removal of the Noxious Weed Tamarisk on the Los Padres National Forest*. 77 Federal Register 32 (February 16, 2012), pp. 9200-9202.