

**FERC Project No. 2426**  
**South SWP Hydropower**  
***Non-Native Invasive Plants Study***

**FIELD RESULTS AND DATA SUMMARY**

*August 21, 2019*

Consistent with Section 5.0 of the South SWP Hydropower Revised Study Plan and as approved in the Federal Energy Regulatory Commission (FERC) Study Plan Determination dated June 14, 2017, the California Department of Water Resources and Los Angeles Department of Water and Power (Licensees) provide the following Field Results and Data Summary for Study 4.1.6 *Non-Native Invasive Plants Study* (Study), which includes work completed to date, key findings, associated data files, variances, and remaining work. The Licensees consider these data to be public.

***Completed Work to Date:***

The Study is complete. The Licensees completed Step 1 (Gather Data and Prepare for Field Effort) and Step 2 (Conduct Field Surveys) of the Study.

***Key Accomplishments/Summary of Findings to Date:***

The completed work referenced above resulted in the following:

- The Study Area for this effort is the same as for the Botanical Resources Study (see Associated Data Files section, below).
- The Study Area was evaluated for the presence of non-native invasive plants (NNIP) between March 26, 2018 and September 13, 2018, and between April 1, 2019 and May 23, 2019. A complete early season survey, apart from Primary Project Roads, was conducted between March 26, 2018 and April 19, 2018. A complete late season survey was conducted between May 29, 2018 and September 13, 2018. Additionally, between April 1, 2019 and May 23, 2019, the Licensees conducted a follow-up comprehensive early season botanical inventory on unsurveyed portions of Primary Project Roads in the Study Area. Some areas of steep terrain could not be surveyed on foot, but were visually evaluated with binoculars (see Associated Data Files section, below).
- On April 2, 2019, while conducting early season botanical comprehensive surveys on Primary Project Roads adjacent to the Castaic Transmission Line, five California condors (*Gymnogyps californianus*) were observed. The California condor is a State and federally listed special-status wildlife species. No other federally listed, State listed, or California Species of Special Concern special-status wildlife incidental observations were observed during the Study. A comprehensive list of incidental wildlife observations is provided in the Associated Data Files section, below.
- NNIP surveys were conducted in conjunction with the Botanical Resources Study field surveys. NNIP general data forms were completed for any California Department of Food and Agriculture (CDFA)-rated species occurrences observed. In addition, U.S. Department of Agriculture, Forest Service (USFS) Invasive Species Infestation Record Forms were completed for any occurrences of the CDFA-rated target species on

National Forest System (NFS) lands. The USFS form was also completed for non-CDFA-rated plants identified by USFS as species of interest.

- Field forms were completed for all target NNIP in the Study Area (see Completed Work above). A total of 947 occurrences of 27 NNIP species were observed during field surveys. These occurrences are summarized in Table 1 and depicted on maps (see Associated Data Files).

**Table 1. NNIP Target Species Occurrences in the Study Area Documented During 2018 and 2019 Field Surveys**

Scientific Name	Common Name	CDFA Rating <sup>1</sup>	National Forest Land Occurrences	Number of Occurrences in the Study Area
** <i>Acacia</i> sp.	Acacia	B	No	3
** <i>Ailanthus altissima</i>	Tree of heaven	C	Yes	2
** <i>Arundo donax</i>	Giant reed grass	B	Yes	11
* <i>Atriplex semibaccata</i>	Saltbush	--	Yes	9
* <i>Brassica tournefortii</i>	African mustard	--	No	1
** <i>Cardaria (Lepidium) draba/pubescens</i>	Hoary cress/Whitetop	B	Yes	2
** <i>Carduus pycnocephalus</i>	Italian thistle	C	Yes	17
** <i>Centaurea melitensis</i>	Tocalote	C	Yes	227
** <i>Centaurea solstitialis</i>	Yellow star thistle	C	Yes	73
** <i>Cirsium arvense</i>	Canada thistle	B	Yes	6
** <i>Cirsium vulgare</i>	Bull thistle	C	Yes	55
** <i>Cortaderia jubata/selloana</i>	Pampas grass	B	Yes	9
* <i>Foeniculum vulgare</i>	Fennel	--	Yes	1
** <i>Halogeton glomeratus</i>	Halogeton	A	No	1
** <i>Lepidium latifolium</i>	Perennial pepperweed	B	Yes	7
* <i>Marrubium vulgare</i>	horehound	--	Yes	20
* <i>Nicotiana glauca</i>	Tree tobacco	--	Yes	9
* <i>Prunus cerasifera</i>	Cherry plum	--	No	1
* <i>Ricinus communis</i>	Castorbean	--	No	1
* <i>Robinia pseudoacacia</i>	Black locust	--	Yes	9
* <i>Rosmarinus officianalis</i>	Rosemary	--	No	2
** <i>Salsola tragus</i>	Russian thistle	C	Yes	206
* <i>Schinus molle</i>	Peruvian pepper tree	--	Yes	11
** <i>Spartium junceum</i>	Spanish broom	C	Yes	102
* <i>Stipa miliacea</i> var. <i>miliacea</i>	Smilo grass	--	Yes	10

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<b>**Tamarix ramosissima</b>	Saltcedar	B	Yes	147
<b>**Tribulus terrestris</b>	Puncture vine	C	Yes	5
<b>Total:</b>				<b>947</b>

Source:

<sup>1</sup>CDFA 2018.

CDFA Ratings:

A - An organism of known economic importance subject to State (or commissioner when acting as a State agent) enforced action involving: eradication, quarantine regulation, containment, rejection, or other holding action.

B - An organism of known economic importance subject to: eradication, containment, control or other holding action at the discretion of the individual county agricultural commissioner. Or an organism of known economic importance subject to State endorsed holding action and eradication only when found in a nursery.

C - An organism subject to no State enforced action outside of nurseries except to retard spread. At the discretion of the county agricultural commissioner. Or an organism subject to no State enforced action except to provide for pest cleanliness in nurseries.

All occurrences are species on the Angeles National Forest and Los Padres National Forest invasive non-native plant species list. Where occurrences did not fall on NFS land (as indicated by a "No" in this column), USFS datasheets were not completed.

Notes:

\*Full-datasets collected only on NFS land

\*\*Occurrence mapped wherever found

Key:

CDFA = California Department of Food and Agriculture

USFS = U.S. Department of Agriculture, Forest Service

**Associated Data Files** (All associated data can be found in the folder with this summary form. Note: Confidential CEII/Privileged information will not be posted publicly):

File Name	Data Description	File Type	File Location
Various. Naming convention is date (year, month, day)_SSWP_NNIP_dataforms	NNIP compiled daily datasheets	PDF	Project website
Various. Naming convention is date (year, month, day)_SSWP_Invasive_Species_dataforms_USFS	NNIP Invasive Species Infestation Record USFS Field Forms	PDF	Project website
Various. Naming convention is SSWP_NNIP_11x17_Landsc_20190730_Figure #	Maps depicting NNIP occurrences in the study area	PDF and JPG	Project website
NNIP_Shapefile_Data_20190730	2018 and 2019 NNIP point and polygon GIS Shapefiles	GIS Shapefile	Project website
20190626_p2426_sswp_botanical_inventory_fnl	List of all plant species observed during 2018 and 2019 botanical field surveys	PDF	Project website
20181211_p2426_sswp_incidental_observations	Incidental wildlife observations during 2018 and 2019 botanical surveys	Excel	Project website

File Name	Data Description	File Type	File Location
SSWP_Botanical_Resources_Study_Area_8x11_20190807	Map depicting the Botanical Resources Study Area	PDF and JPG	Project website
SSWP_Inaccessible_Visual_Surveys_8x11_Portrat_0190813	Map depicting inaccessible access in the Study Area	PDF and JPG	Project website

*Key:*  
 GIS = Geographic Information System  
 NNIP = non-native invasive plants  
 SSWP = South SWP Hydropower Relicensing  
 USFS = U.S. Department of Agriculture, Forest Service

***Variations from Study Methods, Schedule, or Approach and Abnormalities in Expected Field Conditions:***

There was one variance from the FERC-approved Study. The Study was scheduled to be completed by December 2018. However, due to ongoing fieldwork the Study was not completed until July 2019. This variance affected the Study schedule, but did not affect the overall Study because the same Study approach and methodology were utilized, as outlined in the Non-Native Invasive Species Study Plan. The information collected by July 2019 was not provided in the Updated Study Report, but final field results, with accompanying Geographic Information System figures, will be provided in the Draft License Application.

***Remaining Work:***

The Study is complete.

***References Cited:***

California Department of Food and Agriculture. 2018. Plant Health and Pest Prevention Services. Encyclopedias: Weed Ratings. Available online:  
[https://www.cdffa.ca.gov/plant/IPC/encyclopedias/winfo\\_weedratings.html](https://www.cdffa.ca.gov/plant/IPC/encyclopedias/winfo_weedratings.html)