

CA STATE PARKS INVASIVE AQUATIC PLANT CONTROL



DELTA PROTECTION COMMISSION
May 19, 2016



DELTA'S MOST UNWANTED

- ▶ 68,000 acres of Delta & Tributaries
- ▶ Parks is lead agency to cooperate with federal, state and local agencies to control:



Water hyacinth



Egeria densa

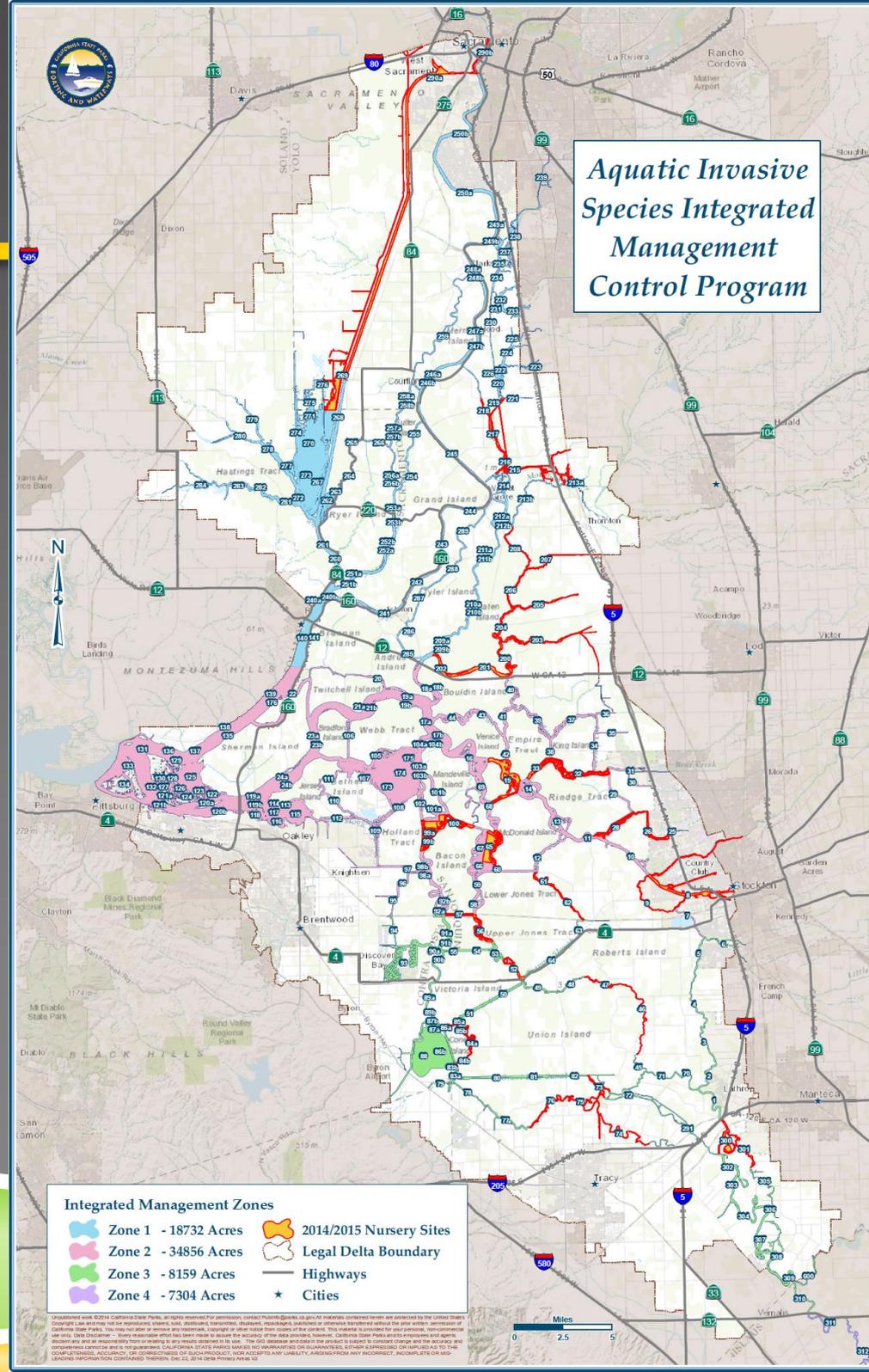


Curlyleaf pondweed

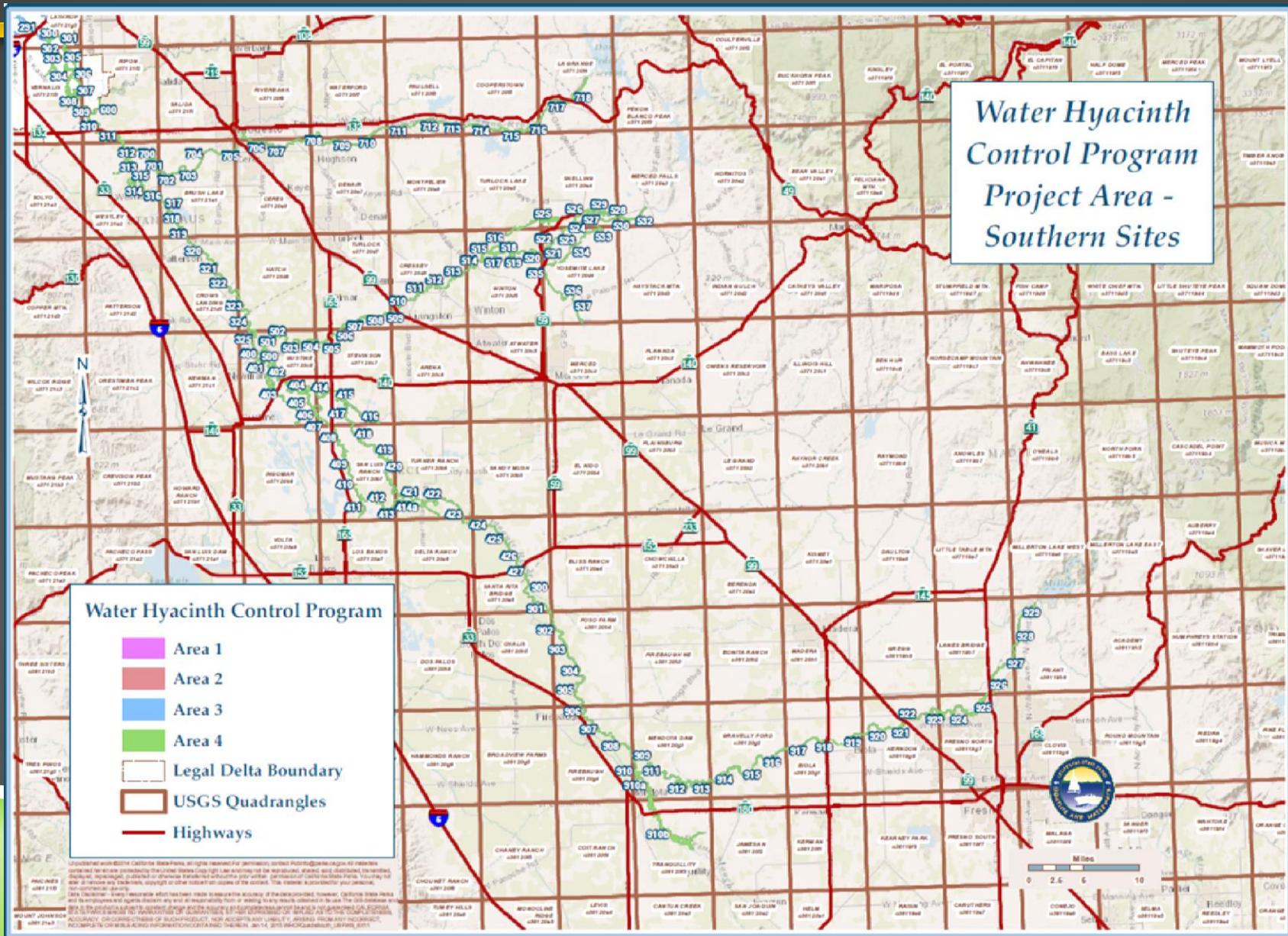


Spongeplant

PROJECT AREA: SACRAMENTO- SAN JOAQUIN DELTA & TRIBUTARIES



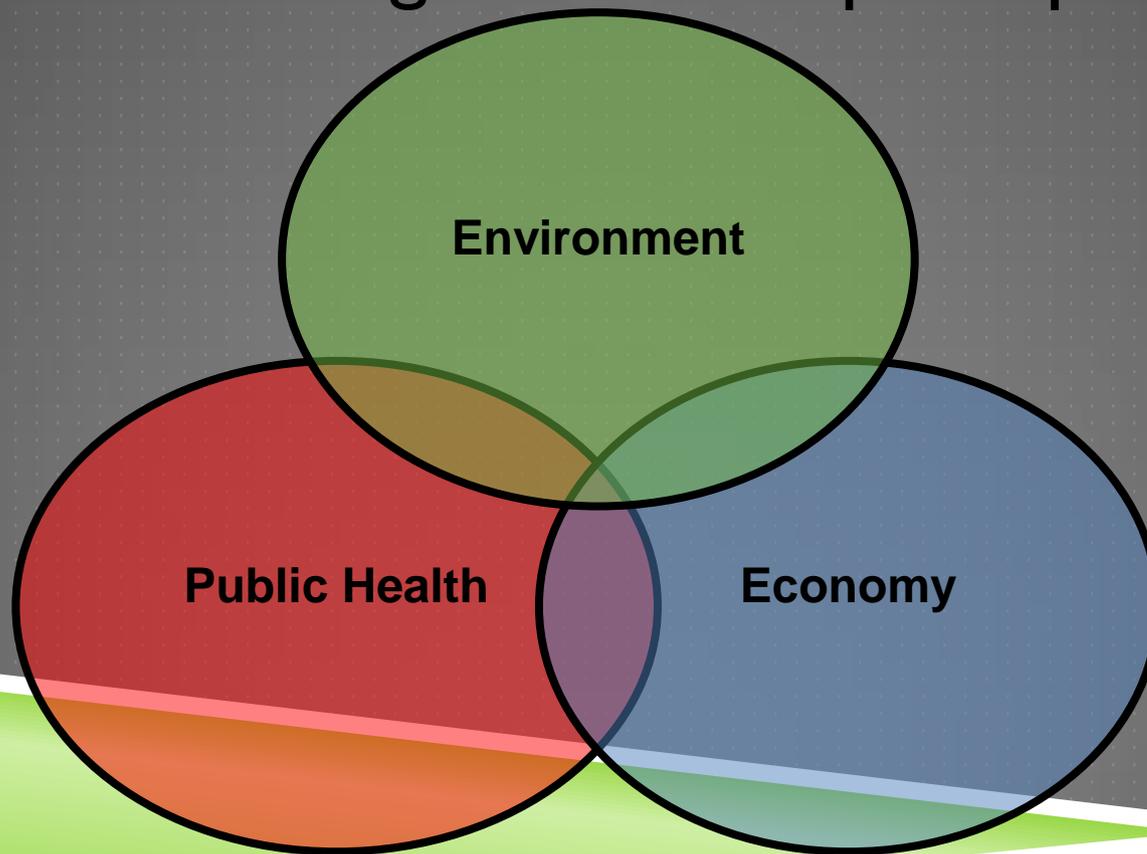
SOUTHERN SITES



Mission

Aquatic Invasive Species (AIS)

- Control program, not an eradication program
- Permissive, not mandatory program
- Control and manage invasive aquatic plants for:



ENDANGERED/THREATENED SPECIES

- ▶ Giant Garter Snake
- ▶ Delta Smelt
- ▶ Delta Steelhead
- ▶ Chinook Salmon
- ▶ VELB

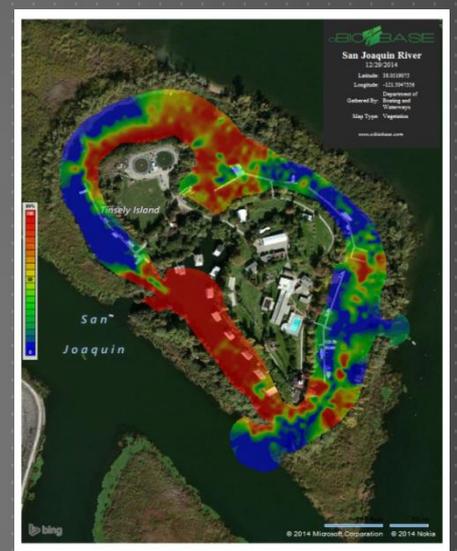


INTEGRATED CONTROL STRATEGY FLOATING AND SUBMERSED VEGETATION



Decision Support Tools

- ▶ Chemical Treatments
- ▶ Mechanical Harvesting
- ▶ Biological Controls
- ▶ Manual Removal
- ▶ Mapping

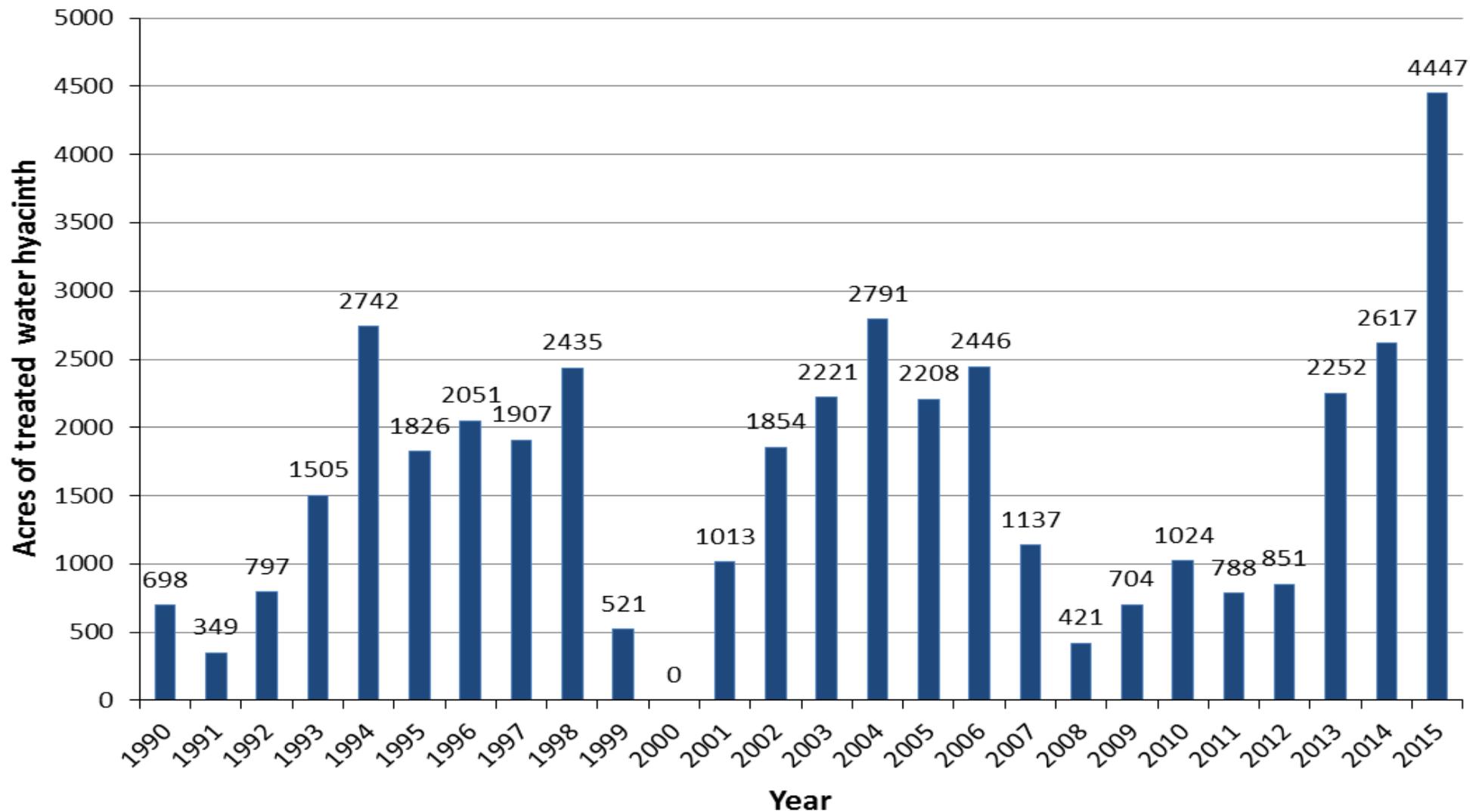


WATER QUALITY MONITORING

- ▶ Herbicide residues
- ▶ Temperature
- ▶ Conductivity
- ▶ Salinity
- ▶ pH
- ▶ Dissolved Oxygen
- ▶ Turbidity



2015 TREATMENTS WATER HYACINTH ACREAGE



WE'VE DONE A LITTLE BETTER

1st Quarter 2016 Report Card

Floating Aquatic Vegetation

- ▶ Water Hyacinth & Spongeplant
 - ▶ Began Treatments March 10 across Delta
 - ▶ 61 sites, 107 applications (412 acres)
 - ▶ Efficacy - moderate to high

Submerged Aquatic Vegetation (17 weeks)

- ▶ Egeria Densa & Curly Leaf Pondweed
 - ▶ Began Treatments March 9 across Delta
 - ▶ 22 sites, 46 applications (2,273 acres)
 - ▶ Efficacy - moderate to high



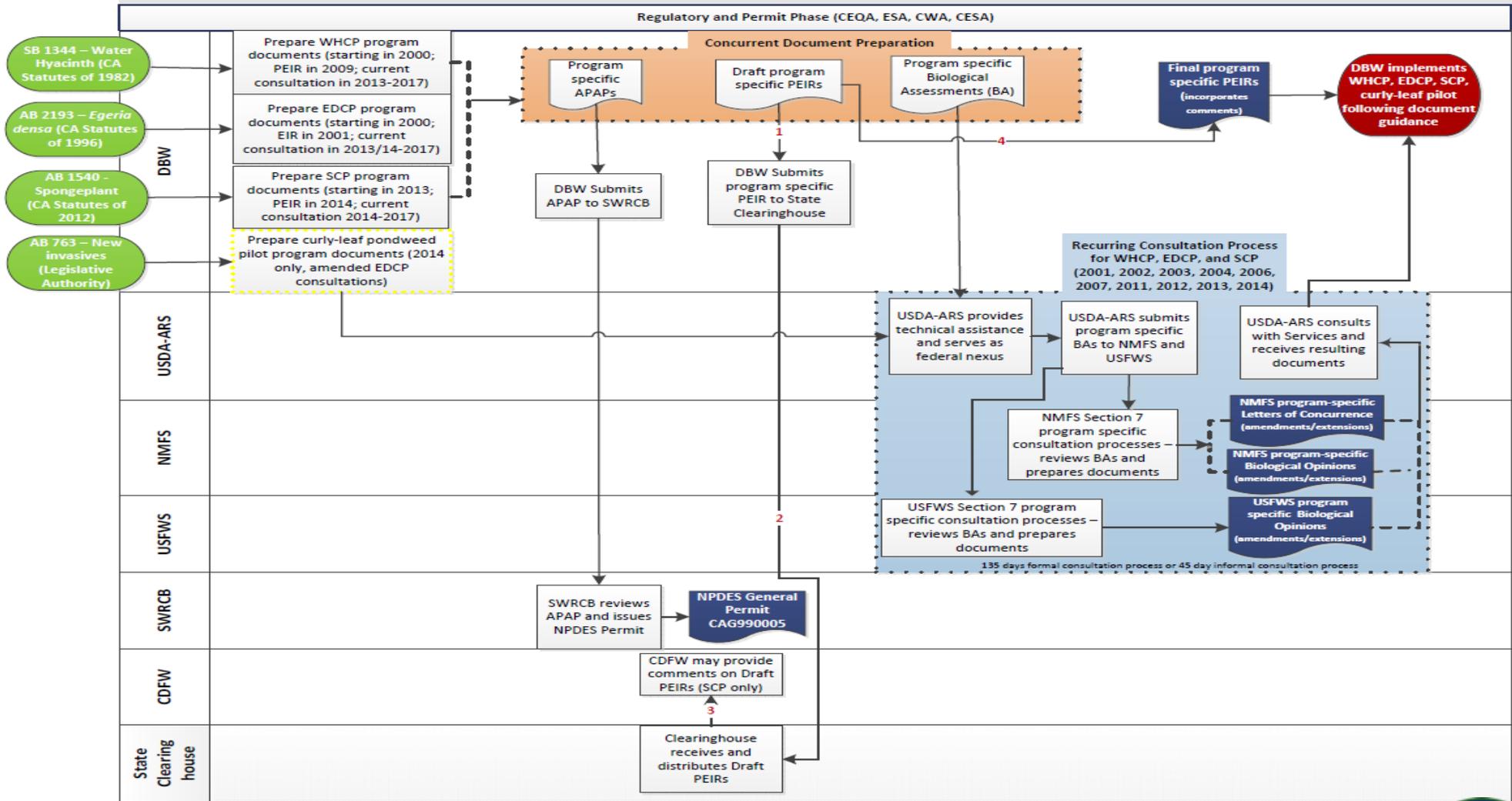
WHY COULD NEXT YEAR BE BETTER?

- ▶ New and More Resources
- ▶ Growing partnerships
- ▶ New Smarter Approaches



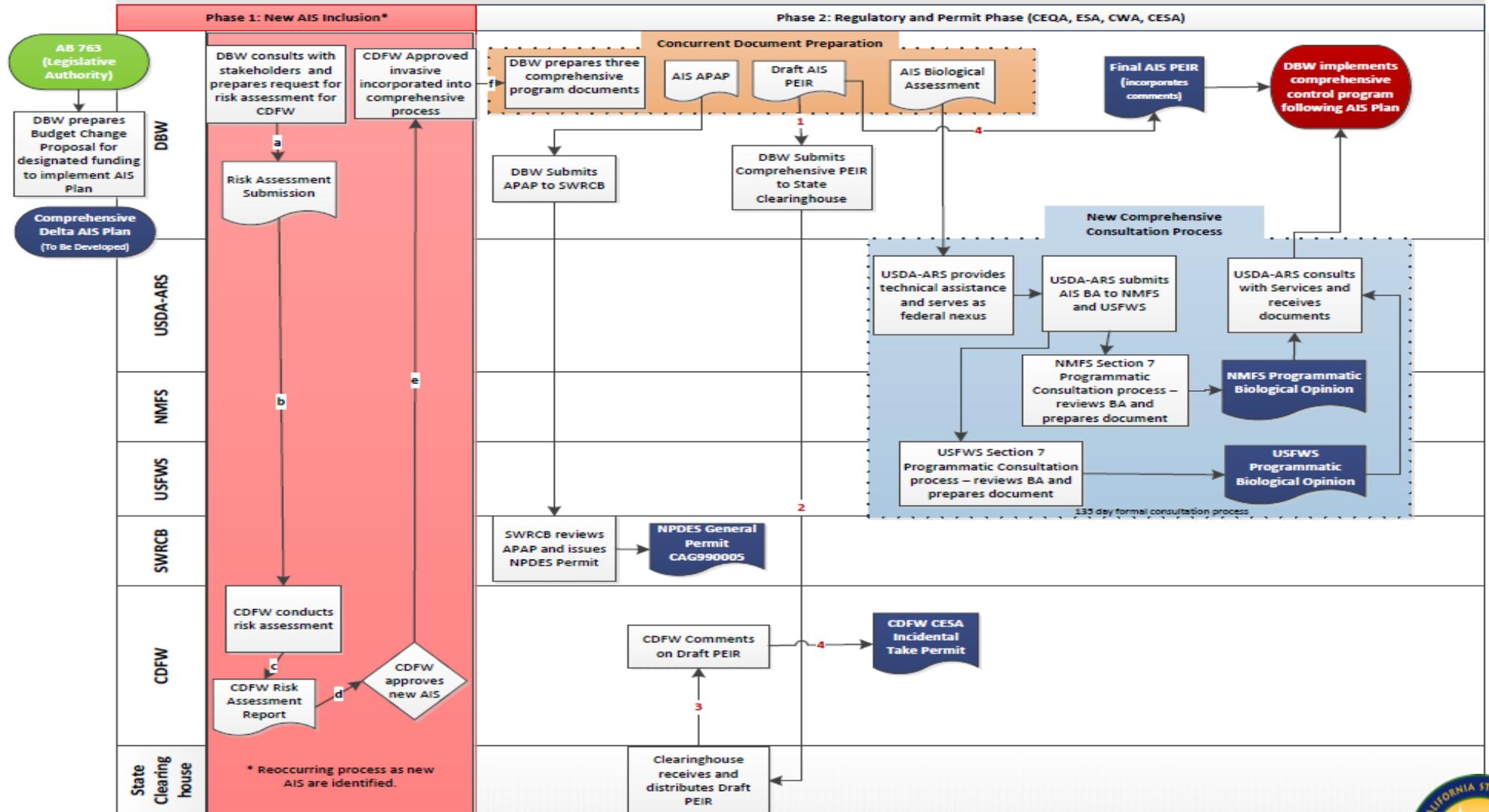
SAME RULES APPLY

Exhibit 1: WHCP, EDCP, SCP, and Curly-Leaf Pondweed Pilot Planning and Regulatory Compliance (DRAFT)



SAME RULES APPLY

Exhibit 2: Delta Aquatic Invasive Species Planning and Regulatory Compliance (DRAFT)



MORE RULES

LOCATION*	BOUNDARY	ACRES AUTHORIZED TO SPRAY 3,500 Acres	ACRES AUTHORIZED TO MECHANICALLY HARVEST 2,040 Acres
NORTH DELTA (Area 1)*	I Street Bridge (Sacramento River) North of Hwy 12	Site Nos. 200-290	Anywhere in the Delta except May and June
	South of Hwy 12	Sites 16-24, 39-44,69, 98a-176	
CENTRAL DELTA (Areas 2 and 3)*	State Route 12 south to BNSR railroad crossing at Cruiser Haven Resort	Site Nos. 11-15, 33, 49-68, 78,79, 83a-97 Site Nos. 1-10, 25-38, 45-48, 70-77, 80-82, 291	Anywhere in the Delta except May and June
SOUTH DELTA (Areas 3 and 4)*	BNSR railroad crossing to State Route 132	Site Nos. 300 – 309, 310 and above	Anywhere in the Delta except May and June

* All areas must comply with federal U.S. Fish and Wildlife Service Biological Opinion based upon Biological Assessments, NOAA Fisheries Letter of Concurrence and California Department of Fish and Wildlife Routine Maintenance Agreement.



STILL MORE RULES

WHCP Treatment Sites^a, Herbicides, and Timing

Delta smelt (DS) Habitat Level	USFWS Area	Delta Boundary Area	Treatment Site Numbers	Fish Survey Reporting Required ^{b,c}	Glyphosate	2,4-D ^d	Penoxsulam ^e	Imazamox ^e	Agridex	Competitor
Primary DS Habitat	1	Legal Delta North of Hwy 12	200- 290	June 1 to June 30	June 1 to Nov. 30	No	No	No	June 1 to Nov. 30	No
		Legal Delta South of Hwy 12	16-24b, 39-44, 69, 98a-176	June 1 to June 30	June 1 to Nov. 30	June 15 to Sept. 15	No	No	June 1 to Nov. 30	No
Secondary DS Habitat	2	Legal Delta South of Hwy 12	11-15, 33, 49-68, 78, 79, 83a-97	March 1 to June 30	March 1 to Nov. 30	June 15 to Sept. 15	No	No	Mar. 1 to Nov. 30	No
Tertiary DS Habitat	3	Legal Delta South of Hwy 12	1-10, 25-38, 45-48, 70-77, 80-82, 291	March 1 to June 30	March 1 to Nov. 30	June 15 to Sept. 15	Mar. 1 to Nov. 30	Mar. 1 to Nov. 30	Mar. 1 to Nov. 30	Mar. 1 to Nov. 30
Non-DS Habitat	4	Legal Delta South of Hwy 12	300-309	March 1 to June 30	March 1 to Nov. 30	June 15 to Sept. 15	Mar. 1 to Nov. 30	Mar. 1 to Nov. 30	Mar. 1 to Nov. 30	Mar. 1 to Nov. 30
		Non-Legal Delta	310 and above	March 1 to June 30	March 1 to Nov. 30	July 15 to Aug. 15	Mar. 1 to Nov. 30	Mar. 1 to Nov. 30	Mar. 1 to Nov. 30	Mar. 1 to Nov. 30

^a DBW may not treat in any site if DO is between 3 ppm and Basin Plan limits (5 ppm to 8 ppm, by location). DBW may not treat if winds are >10 mph (or >7 mph in Contra Costa County).

^b DBW will implement a survey-based approach to conducting treatments that allows for treatments from March through June in areas with re-growing water hyacinth when listed fish species are not present, as reported to NMFS and USFWS.

^c DBW environmental scientists will continue to monitor fish surveys and avoid treating in sites where listed fish species are present; however, formal weekly reporting to NMFS and USFWS is not required after July 1.

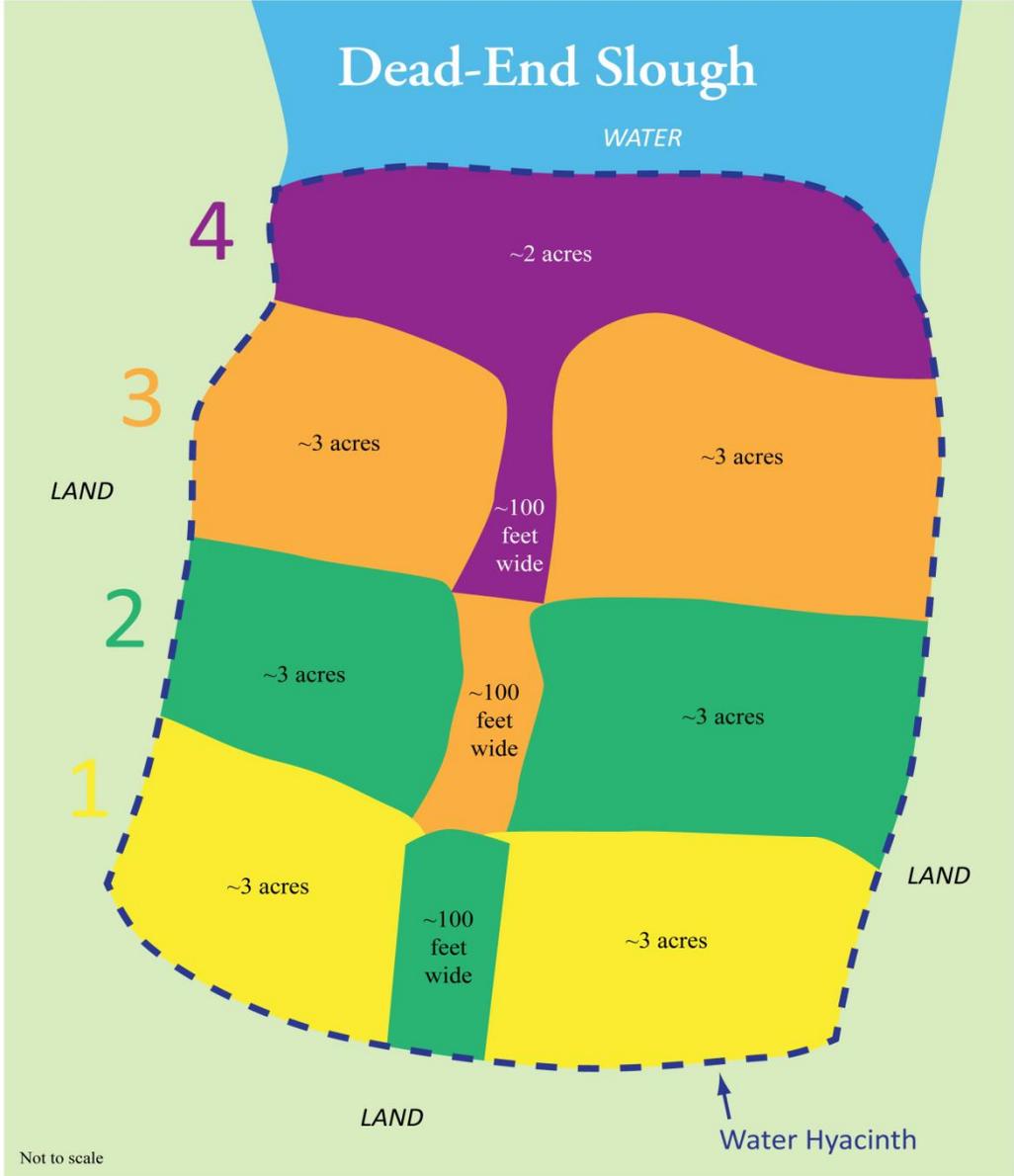
^d The 2,4-D time and location restrictions are specified in the NMFS BO for the Environmental Protection Agency registration of pesticides in order to protect listed salmonid species.

^e DBW will monitor the efficacy of the new herbicides penoxsulam and imazamox (time to symptoms, plant death, and regrowth).



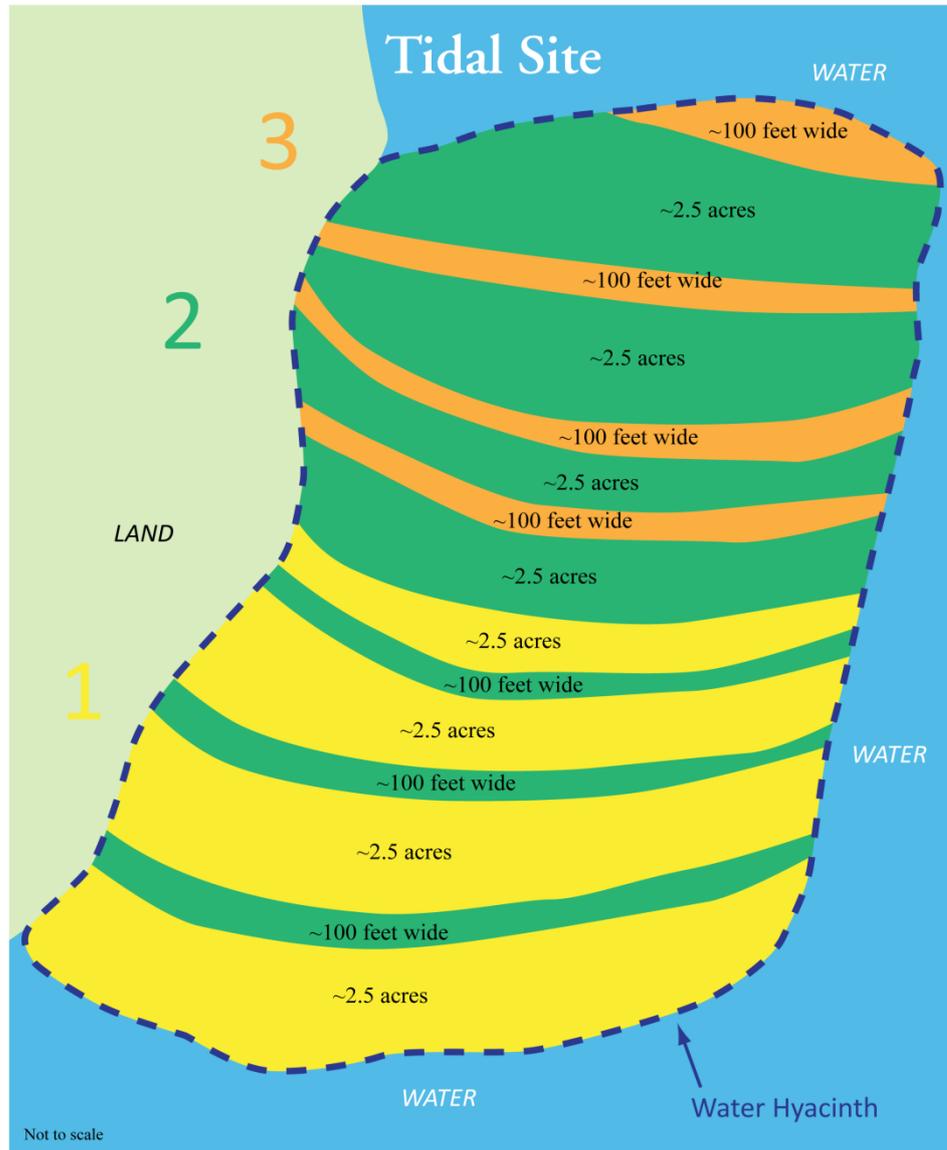
STILL MORE RULES

Exhibit 3
Example Fish Passage Protocol for 20 Acres of Water Hyacinth



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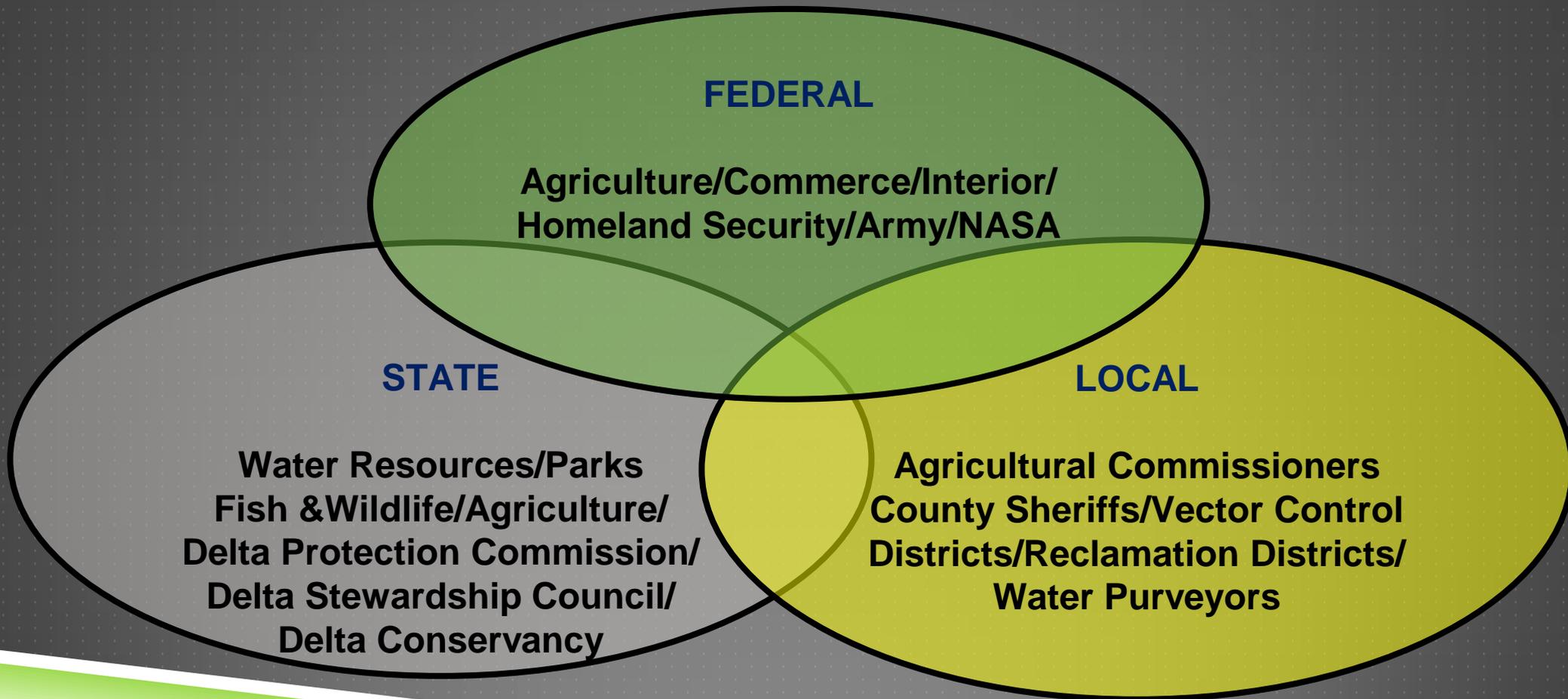
WHAT'S DIFFERENT THIS YEAR?

- ▶ More and Better Resources
 - ▶ 7 of 8 new field staff
 - ▶ 3 New Environmental Scientists
 - ▶ 1 New Toxicologist
 - ▶ 4 new boats, 4 new trucks
 - ▶ 4 year harvesting contract





LEVERAGING PARTNERSHIPS



GROWING PARTNERSHIPS

- ▶ \$300,000 to study cleaner treatment alternatives
- ▶ New California Conservation Corps contract to augment treatments
- ▶ Proactive outreach for Quagga grant awards



TWICE DAILY PATROL



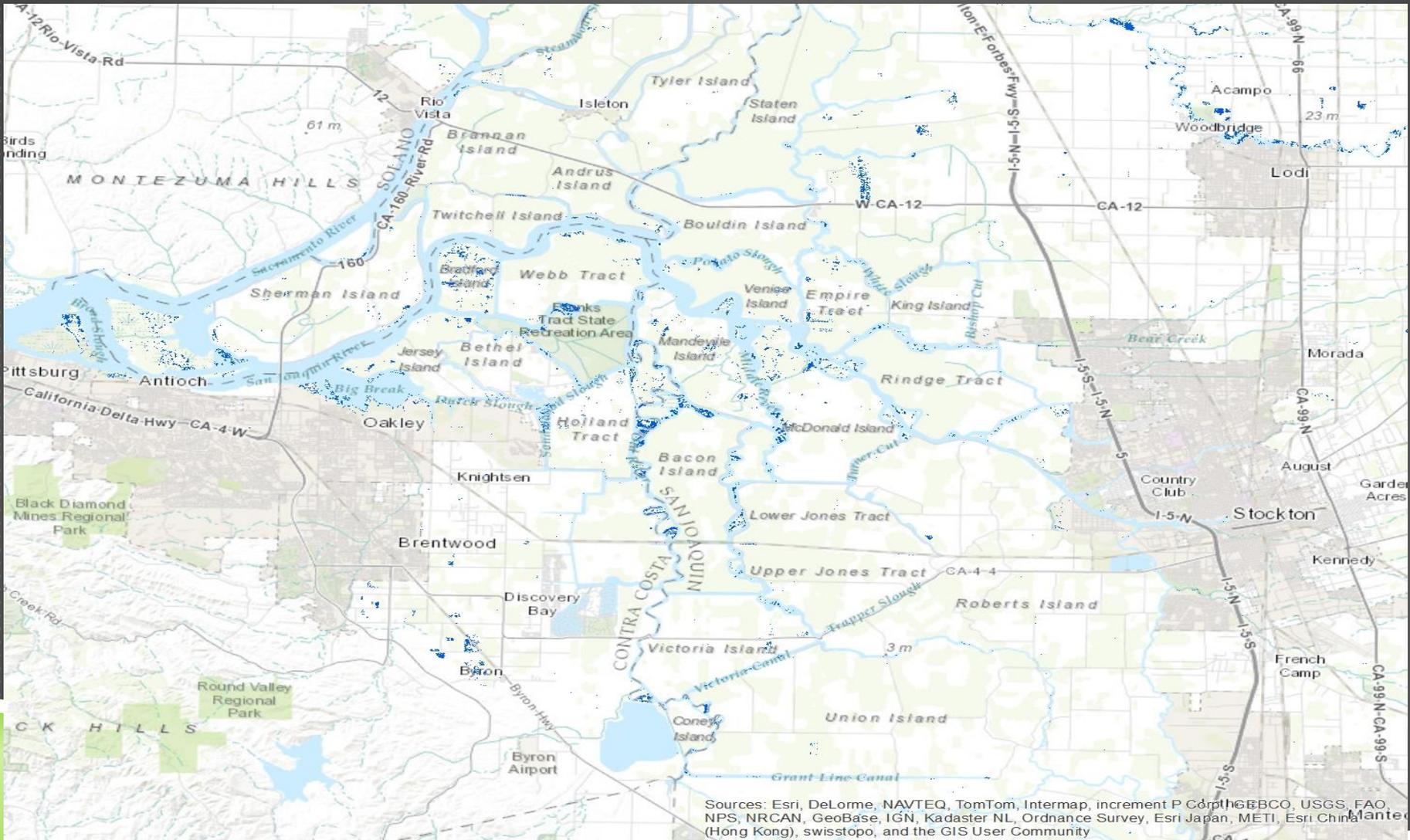
ENGAGING ALL PARTNERS



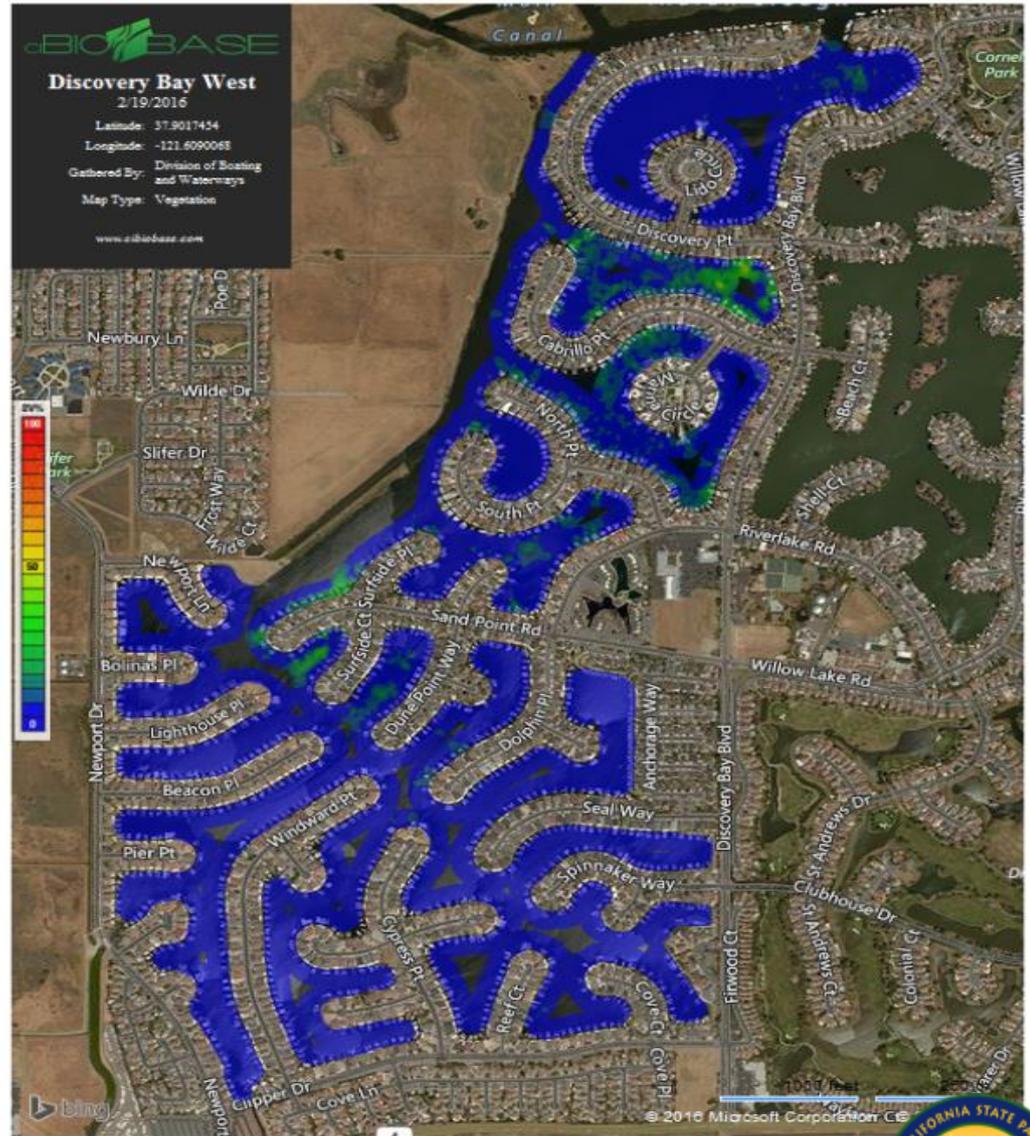
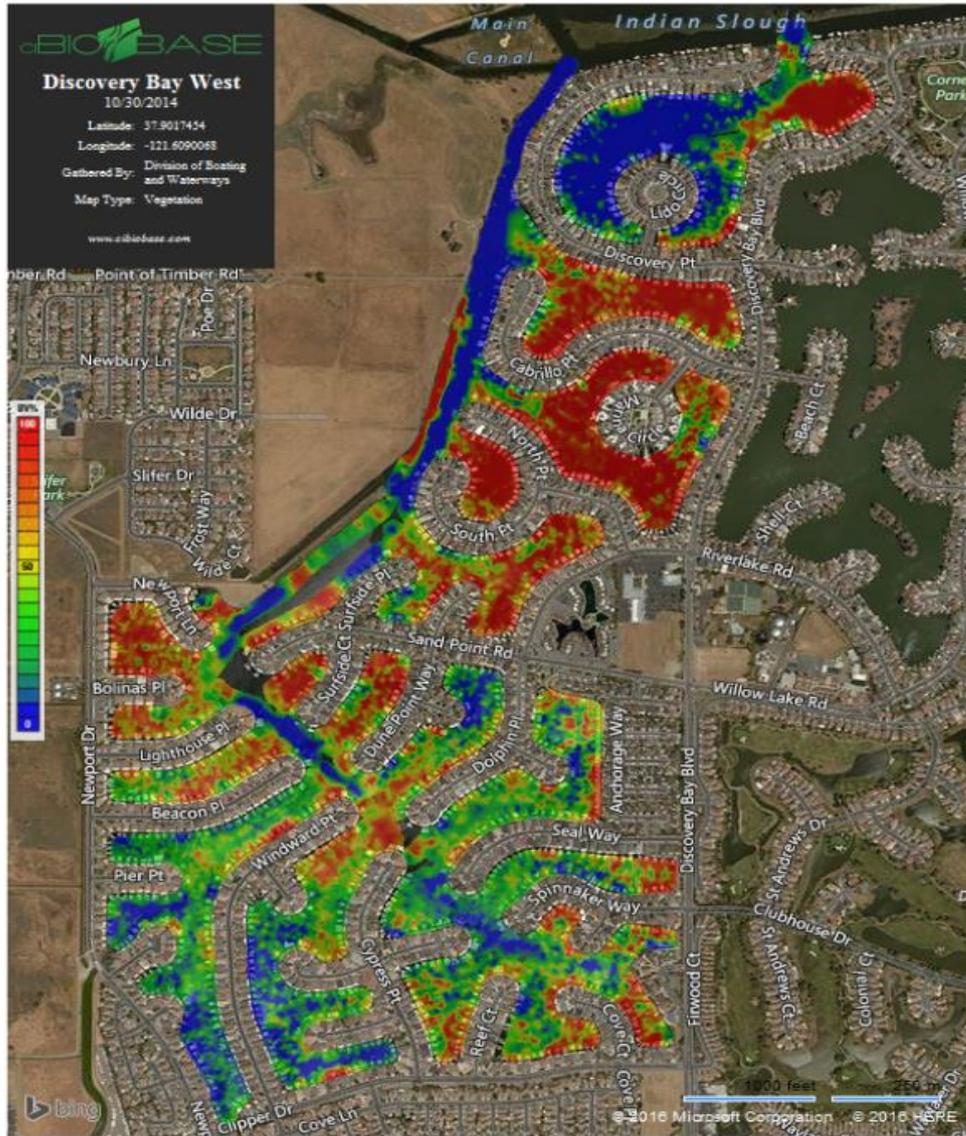
EXPANDING PARTNERSHIPS



WORKING SMARTER



WORKING SMARTER





EMERGING BAD ACTORS



Myriophyllum spicatum
Eurasian water milfoil
Photo by Vic Ramey
Copyright 2000 Univ. Florida



Waterprimrose



Coontail



Fanwort

**Eurasian water
milfoil**



Pennywort

SIGN UP FOR WEEKLY CONTROL NOTICES



INVASIVE WEED TREATMENTS

CA State Parks, Division of Boating and Waterways
Water Hyacinth and Spongeplant Control Program - 2015

Treatments for the Week of May 11th thru May 15th



TREATMENT FOR MAY 11TH THRU MAY 15TH									
	COUNTY								INTENDED SITES
	ALA	CC	FRE	MER	STAN	SAC	SI	SOL	
		●						●	1-10, 14, 25-38, 99
					●			●	300 - 323
		●						●	928, 929
					●				700 - 717
		●						●	48-54, 80-85b, 291

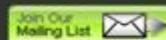
[View Larger Image](#)

"Treatment sites and schedules are subject to change based on regulatory requirements, weather conditions, plant growth and movement, waterway traffic, listed fish presence surveys, and other conditions."

- Spraying will be conducted during the hours of 7am to 4pm weekly, Monday thru Friday.
- Herbicide applications during the time frame will utilize Glyphosate (Roundup Custom) or Imazamox (Clearcast) only.

As of May 1, 2015
408.5* acres of
Water Hyacinth
have been treated.

* Data is preliminary and
subject to change.



[Detailed Site Information](#)

[Northern Treatment Site Map](#)

[Southern Treatment Site Map](#)

[Fish Presence Survey](#)



INVASIVE WEED TREATMENTS

CA State Parks, Division of Boating and Waterways
Egeria Densa, Curlyleaf Pondweed Plant Control Program - 2015

Treatments for the Week of May 11th thru May 15th



	COUNTY				INTENDED SITES
	CC	SAC	SI	SOL	
		●			201, 201, 206
	●	●		●	184, 186, 22, 207, 248, 269a
			●		8, 14, 15, 26, 34, 92
	●				93, 97, 108-112
	●				87, 88

[View Larger Image](#)

"Treatment sites and schedules are subject to change based on regulatory requirements, weather conditions, plant growth and movement, waterway traffic, listed fish presence surveys, and other conditions."

- Applications will be conducted during the hours of 7am to 4pm weekly, Monday thru Friday.
- Herbicide applications during the Notice of Intent time frame will utilize Fluridone (Sonar) only.

[County References:](#)

SITE REFERENCES

- 8 - Atherton Cove/ Louis Park
- 14 - Hog Island
- 15 - Tinsley Island
- 18 - Korih's Pirate Lair
- 18 - Willow Berm Marina
- 18 - Perry's Yacht Harbor
- 22 - Brannon Island SP
- 26 - Village West Marina
- 34 - Bishop Cut
- 38 - Honker Cut
- 87 - Kings Island
- 88 - Italian Slough
- 93 - Discovery Bay West
- 97 - Holland Riverside
- 107 - Piper Slough
- 108 - Sandmound Slough
- 109 - Sandmound Slough
- 110 - Taylor Slough
- 111 - Taylor Slough
- 112 - Dutch Slough
- 140 - Delta Marina
- 203 - Sycamore Slough
- 207 - Beaver Slough
- 209 - B & W Resort
- 250 - Sacramento Marina

[Treatment Site Map](#)



OTHER WAYS YOU CAN HELP

1. Learn to recognize invasive aquatic plants
2. Visit Parks-DBW website <http://dbw.parks.ca.gov>
3. Report Invasive Aquatic Plant Problems
 - AIS@parks.ca.gov with pictures and site information or 1-888-326-2822
4. Participate in new Biological Assessment Process
 - Tell us how you would like us to communicate with you on this.

