

[Relicensing Participants - At the November 18, 2014 meeting, CDFW said the Tahoe Regional Planning Agency (TRPA), Pacific Gas and Electric Company (PG&E), Sacramento Municipal Water District (SMUD), Placer County Water Agency (PCWA), El Dorado Irrigation District (EID), and United States Army Corps of Engineers (USACE) currently had and implemented aquatic invasive species (AIS) plans. YCWA requested copies of these plans from CDFW, but CDFW said it preferred YCWA contact each of the above parties to obtain a copy of its plan. YCWA has now obtained these plans. Provided below is a comparison of what Relicensing Participants have proposed to be included in YCWA's AIS plan (note that YCWA has not agreed to the proposals) and what is included in each of the referenced plans. While the table below is not definitive, it does provide useful information as we continue discussions regarding the YCWA AIS Plan, which is scheduled for discussion at the January 28, 2015 meeting. YCWA 1/15]

DRAFT Table 1. Comparison of AIS plans.

Scope of AIS Plan Proposed by Relicensing Participants for Inclusion in New Yuba River Development Project License	AIS Plans Referenced by Relicensing Participants as Similar in Scope as the AIS Plan Proposed by Relicensing Participants for Inclusion in New Yuba River Development Project License		Is the Scope the Same as the Scope Proposed by Relicensing Participants for Inclusion in New Yuba River Development Project License?
	Project Owner/Operator (Reservoir(s))	Scope of AIS Plan	
TARGET INVASIVE SPECIES			
Includes 14 species: Mollusks <ul style="list-style-type: none"> • Quagga mussel • Zebra mussel • New Zealand mudsnail • Asian clam Amphibians <ul style="list-style-type: none"> • American bullfrog Aquatic Plants <ul style="list-style-type: none"> • Curly leaf pondweed • Eurasian watermilfoil • Hydrilla • Water hyacinth • Brazilian waterweed • Parrot's feather milfoil • Carolina fanwort • Water primrose Algae <ul style="list-style-type: none"> • Didymo 	TRPA (Lake Tahoe, Fallen Leaf Lake, Echo Lake, Cascade Lake and Spooner Lake)	Mollusks <ul style="list-style-type: none"> • Quagga mussel • Zebra mussel • Asian clam Amphibians <ul style="list-style-type: none"> • American bullfrog Aquatic plants <ul style="list-style-type: none"> • Curly leaf pondweed • Eurasian watermilfoil • Hydrilla • Brazilian waterweed • Parrot's feather milfoil Algae <ul style="list-style-type: none"> • Didymo 	No, 10 species vs. 14 species
	PG&E (PG&E owns/operates 99 reservoirs, and has one AIS Plan that covers all 99 of the reservoirs. The AIS plan does not cover diversion dam impoundments.)	Mollusks <ul style="list-style-type: none"> • Quagga mussel • Zebra mussel 	No, 2 species vs. 14 species
	SMUD (Union Valley Reservoir, Ice House Reservoir and Rancho Seco Lake; which is three out of the 12 reservoirs operated by SMUD. No AIS plans for any diversion dam impoundments.)	Mollusks <ul style="list-style-type: none"> • Quagga mussel • Zebra mussel 	No, 2 species vs. 14 species

Table 1. (continued)

Scope of AIS Plan Proposed by Relicensing Participants for Inclusion in New Yuba River Development Project License	AIS Plans Referenced by Relicensing Participants as Similar in Scope as the AIS Plan Proposed by Relicensing Participants for Inclusion in New Yuba River Development Project License		Is the Scope the Same as the Scope Proposed by Relicensing Participants for Inclusion in New Yuba River Development Project License?
	Project Owner/Operator (Reservoir(s))	Scope of AIS Plan	
TARGET INVASIVE SPECIES (continued)			
	PCWA (French Meadows Reservoir, Hell Hole Reservoir and Oxbow Reservoir; which is three out of the five reservoirs operated by PCWA.)	Mollusks <ul style="list-style-type: none"> • Quagga mussel • Zebra mussel 	No, 2 species vs. 14 species
	EID (Jenkins Lake, Silver Lake and Caples Lake; which is three of six reservoirs operated by EID. It has no plans for any diversion dam impoundments.)	Mollusks <ul style="list-style-type: none"> • Quagga mussel • Zebra mussel 	No, 2 species vs. 14 species
	USACE; (Englebright and Martis Creek Lake; which is 2 out of the 12 California reservoirs operated by USACE. Does not have a written plan.)	Mollusks <ul style="list-style-type: none"> • Quagga mussel • Zebra mussel 	No, 2 species vs. 14 species
DRESSENIID MUSSELS - ARTIFICIAL SUBSTRATE MONITORING			
Once monthly from May through October (7 months) at the following 13 locations (91 events/year): Our House Diversion Dam Impoundment Log Cabin Diversion Dam Impoundment New Bullards Bar Reservoir <ul style="list-style-type: none"> • Willow Creek Inlet • Dark Day Boat Ramp • Madrone Cove • Moran Cove • Cottage Creek Boat Launch • North Yuba River inlet • Tractor Cove • All four floating comfort stations 	TRPA	Does not require artificial substrate monitoring	No, Not required vs. required
	PG&E	Requires artificial substrate monitoring annually on 29 out of 99 reservoirs that PG&E's Vulnerability Assessment determined were Low to Moderate Levels of Infestation Risk. No diversion impoundments.	No, Annually vs. seven months and No diversion impoundments vs. diversion impoundments
	SMUD	Requires artificial substrate monitoring: <ul style="list-style-type: none"> • Monthly monitoring from approximately May through October at one site on Union Valley, Ice House and Loon Lake reservoirs • Quarterly at Rancho Seco Lake (2 sites), Robb's Forebay (1 site), Folsom South Canal Intake (1 site) 	No, Quarterly at some sites vs. seven months at all sites
	PCWA	Does not require artificial substrate monitoring	No, Not required vs. required

Table 1. (continued)

Scope of AIS Plan Proposed by Relicensing Participants for Inclusion in New Yuba River Development Project License	AIS Plans Referenced by Relicensing Participants as Similar in Scope as the AIS Plan Proposed by Relicensing Participants for Inclusion in New Yuba River Development Project License		Is the Scope the Same as the Scope Proposed by Relicensing Participants for Inclusion in New Yuba River Development Project License?
	Project Owner/Operator (Reservoir(s))	Scope of AIS Plan	
DRESSENIID MUSSELS - ARTIFICIAL SUBSTRATE MONITORING (continued)			
	EID	<p>Monitoring: Concentrated during the spring to fall months given the unlikelihood of a detection even when access was possible outside of this period.</p> <p>Boat ramps & public access areas:</p> <ol style="list-style-type: none"> 1. Jenkinson Lake (5 sites) monitored 3X per year (deployment of substrates [May], substrate check [July], and substrate removal [September]) <ol style="list-style-type: none"> a. Main Boat Launch b. Marina c. Stonebreaker Boat Launch d. Dam #2 Buoy Line e. Boat rental facility by Stonebreaker Boat Launch 2. Silver Lake (2 sites) monitored 2X per year (deployment of substrates [May/June], and substrate removal [September/October]) <ol style="list-style-type: none"> a. Near the dam and EID boat launch b. Along eastern shore where private launching facility exists for Kit Carson Lodge (with permission) 3. Caples Lake monitored 2X per year (deployment of substrates [May/June], and substrate removal [September/October]) <ol style="list-style-type: none"> a. EID boat launch ramp b. Caples Lake Resort (with permission) 	No, Maximum three months vs. seven months
	USACE	Use CDFW protocol at Englebright (1 site) and Martis Creek Lake (1 site)	No, 1 site per reservoir vs. multiple sites per reservoir

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DRESSENIID MUSSELS – VISUAL SURFACE MONITORING			
Once monthly from May through October (7 months) at the following 11 locations (77 events/year): Our House Diversion Dam Impoundment Log Cabin Diversion Dam Impoundment New Bullards Bar Reservoir <ul style="list-style-type: none"> • Willow Creek Inlet • Dark Day Boat Ramp • Garden Point Campground • Frenchy Point Campground • Madrone Cove Campground • Marone Cove • New Bullards Bar Dam • Cottage Creek Boat Launch • Emerald Cove Marina 	TRPA	Does not require surface monitoring	No, Not required vs. required
	PG&E	Requires surface monitoring annually on 29 out of 99 reservoirs that PG&E's Vulnerability Assessment determined were Low to Moderate Levels of Infestation Risk. No diversion impoundments.	No, Annually vs. seven months
	SMUD	Requires surface monitoring once in fall when water surfaces are low at one site on Union Valley, Ice House and Loon Lake	No, Annually monitor vs. seven months
	PCWA	Requires surface monitoring annually at one site each at: <ol style="list-style-type: none"> 1. French Meadows Boat Ramp 2. Hell Hole Boat Ramp 3. French Meadows Powerhouse Tailrace @ Hell Hole Reservoir 4. Ralston Powerhouse Tailrace @ Ralston Afterbay 5. Oxbow Powerhouse Intake @ Ralston Afterbay Requires surface monitoring during annual maintenance throughout the water treatment and distributions systems	No, Annually monitor per site (only 1-2 sites per reservoir) (plus random during O&M) vs. seven months at up to nine sties
	EID	Does not require surface surveys	No, Not required vs. required
	USACE	Do not perform surface surveys	No, Not required vs. required

Table 1. (continued)

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DRESSENIID MUSSELS – VELIGER TOWS			
<p>Once monthly from June through September (4 months) at the following 9 locations (36 events/year):</p> <p>New Bullards Bar Reservoir</p> <ul style="list-style-type: none"> • Willow Creek Inlet • Dark Day Boat Ramp • Garden Point Campground • Frenchy Point Campground • Madrone Cove Campground • Marone Cove • New Bullards Bar Dam • Cottage Creek Boat Launch • Emerald Cove Marina 	TRPA	<p><u>Lake Tahoe:</u> Once per month from June through September at 8 locations:</p> <ul style="list-style-type: none"> • Sand Harbor • Elk Point • Tahoe City dam area • Emerald Bay • Cave Rock boat launch • Lakeside Marina • Lake Forest boat launch • Tahoe Keys lagoons <p><u>Fallen Leaf Lake, Echo Lake, Cascade Lake, Spooner Lake:</u> Once at the beginning and once at the end of the recreation season if contaminated boats use lake or unconfirmed report of mussel presence</p>	Yes
	PG&E	May do veliger tows annually for any of the 4 out of 99 reservoirs that PG&E's Vulnerability Assessment determined were High Levels of Infestation Risk.	No, Annually only at High Vulnerability reservoirs vs. monthly at Low Vulnerability reservoirs
	SMUD	Does not require veliger monitoring	No, Not required vs. required
	PCWA	Does not require veliger monitoring	No, Not required vs. required

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DRESSENIID MUSSELS – VELIGER TOWS (continued)			
	EID	1. Jenkinson Lake (5 sites) plankton tows 3X per year (May, July], and September) <ul style="list-style-type: none"> a. Main Boat Launch b. Marina c. Stonebreaker Boat Launch d. Dam #2 Buoy Line e. Boat rental facility by Stonebreaker Boat Launch 2. Silver Lake (2 sites) monitored 2X per year (May/June, and September/October) <ul style="list-style-type: none"> a. Near the dam and EID boat launch b. Along eastern shore where private launching facility exists for Kit Carson Lodge (with permission) 3. Caples Lake monitored 2X per year (May/June, and September/October) <ul style="list-style-type: none"> a. EID boat launch ramp b. Caples Lake Resort (with permission) 	No, Maximum of three times per year at one reservoir and two times a year at two reservoirs vs. four times per year
	USACE	Do not do veliger monitoring	No, Not required vs. required

Table 1. (continued)

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INCIDENTAL OBSERVATIONS			
Record on field data sheets incidental observations of previously unknown or undocumented occurrences of target AIS or new AIS: <ul style="list-style-type: none"> • During dreissenid mussel monitoring • During any aquatic monitoring required as part of the new license. 	TRPA	Does not require incidental observations	No, Not required vs. required
	PG&E	Does not require incidental observations	No, Not required vs. required
	SMUD	Does not require incidental observations	No, Not required vs. required
	PCWA	Does not require incidental observations	No, Not required vs. required
	EID	Does not require incidental observations	No, Not required vs. required
	USACE	Does not require incidental observations	No, Not required vs. required
TREATMENT/ERADICATION			
Establish and manage actions for rapid response and eradication of AIS when necessary Control the spread of AIS and minimize their impacts on Project facilities and Project-affected waters	TRPA	Currently control/eradicating of aquatic plants & Asian clam, have a Rapid Response Program for dreissenid mussels	Yes
	PG&E	Does not include treatment/eradication	No, Not required vs. required
	SMUD	Currently there are not treatment/eradication procedures due to low vulnerability.	No, Will develop if vulnerability increases vs. required despite Low Vulnerability
	PCWA	Currently there are not treatment/eradication procedures due to low vulnerability.	No, Will develop if vulnerability increases vs. required despite Low Vulnerability
	EID	Will develop if dreissenid mussels are found	No, Will develop if dreissenid mussels are found vs. develop immediately despite no known mussels
	USACE	Does not require treatment/eradication	No, Not required vs required

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EDUCATION			
Post signs at known access points	TRPA	Use USFWS's Stop Aquatic Hitchhikers – "Clean, Drain and Dry" via flyers, regulatory boat launch signs, training materials, highway billboards, TV advertisements, and brochures.	No, Project facilities only vs. project and non-project facilities
Our House Diversion Dam Impoundment			
Log Cabin Diversion Dam Impoundment			
New Bullards Bar Reservoir: <ul style="list-style-type: none"> • Dark Day • Cottage Creek • Moran Cove • Campgrounds • Day-use areas 	PG&E	Will consider posting and distributing various education materials at park kiosks, chamber of commerce, local businesses and at any point of entry to a waterbody.	No, Might do vs. required and Education for project facilities only vs. education for project and non-project facilities
Oregon Creek Day Use Area (non-Project facility)	SMUD	Use "Don't Move a Mussel" theme notices at Union Valley Reservoir, Ice House Reservoir and Loon Lake at the boat launch facilities	No, Signs only vs. signs and brochures and Education for project facilities only vs. education for project and non-project facilities
Provide information pamphlets at all developed public boat launch facilities and campgrounds	PCWA	Use "Don't Move a Mussel" theme notices at boat ramps at: Hell Hole Boat Ramp, French Meadow Boat Ramp, McGuire Boat Ramp, Ralston Afterbay Cartop Boat Ramp, Indian Bar Rafter Access, Lake Theodore, Lake Arthur, McCrary Reservoir, Caperton Reservoir, Clover Valley Reservoir, Whitney Reservoir and Mammoth Reservoir.	No, Signs only vs. signs and brochures and Education for project facilities only vs. education for project and non-project facilities
	EID	Does not include education	No, Not required vs. required
	USACE	Use Highway Advisory Signs, to present messages about the mussels to the public	No, No posted signs vs. brochures and posted signs and Education for project facilities only vs. education for project and non-project facilities

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BMPS FOR PROJECT ACTIVITIES			
<p>Utilize Hazard Analysis and Critical Control Point (HAACP) process to develop BMPS for Project activities. BMPS will include the following, as applicable:</p> <ul style="list-style-type: none"> • Hazard Analysis and Critical Control Point Training • List of AIS with potential to be introduced. • Preventive measures for AIS with potential to be introduced by YCWA or YCWA's contractors. • Identifying critical control points for prevention of AIS with potential to be introduced. • Any necessary implementation monitoring for potential AIS to ensure BMPS are followed. • Actions that will be taken if an introduction of AIS is found during the O&M activity. • Control or eradication measures for existing AIS within Project-affected waters, where such measures are practical or shown to be effective. 	TRPA	Uses HAACP	<p>Yes, Required to use HAACP</p> <p>No, No detailed BMPS vs. detailed BMPS</p>
	PG&E	<p>Prevention program for recreationists only</p> <p>Does not use HAACP</p> <p>No BMPS listed</p>	<p>No, No required BMPS vs. required BMPS and Does not use HAACP vs. required to use HAACP</p>
	SMUD	<p>Prevention program for recreationists only</p> <p>Does not use HAACP</p> <p>No BMPS listed</p>	<p>No, No required BMPS vs. required BMPS and Does not use HAACP vs. required to use HAACP</p>
	PCWA	<p>Prevention program for recreationists only</p> <p>Does not use HAACP</p> <p>No BMPS listed</p>	<p>No, No required BMPS vs. required BMPS and Does not use HAACP vs. required to use HAACP</p>

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BMPs FOR PROJECT ACTIVITIES (continued)			
	EID	No prevention activities No BMPs listed	No, No required BMPs vs. required BMPs
	USACE	No written Plan, therefore no BMPs	No, No BMPs vs. required BMPs