

Trinity River Watershed Council

June 10th, 2025 at 10:00am – 12:00pm

Trinity River Restoration Program Office, 1313 Main Street, Weaverville

Our Mission:

To protect, enhance, restore and revitalize the watershed through collaborative efforts that leverage external resources, work toward common goals, educate and engage community stakeholders, address natural resource issues, and support healthy ecosystems for future generations.

Agenda

10:00-10:10 Welcome and Introductions

10:10-10:45 Guest Speakers Topic: Updates on Golden Mussel Response in California with Kristin Hubbard and Dominique Norton from California Department of Fish and Wildlife

10:45-10:50 Announcements

10:50-11:55 Partner Updates

- | | |
|--|---|
| a. USFS – Shasta Trinity National Forest | j. Tsnungwe Tribe |
| b. USFS- Six Rivers National Forest | k. Nor Rel Muk Wintu Nation |
| c. Bureau of Land Management (BLM) | l. Trinity County Resource Conservation District |
| d. California Department of Fish and Wildlife (CDFW) | m. The Watershed Research and Training Center |
| e. Natural Resources Conservation Service (NRCS) | n. 5 Counties Salmonid Conservation Program/ Northwest California Resource Conservation & Development Council |
| f. Trinity River Restoration Program (TRRP)/ Bureau of Reclamation (BOR) | o. Trinity County Fish and Game Commission |
| g. Trinity County | p. Trinity County Agricultural Alliance |
| h. Hoopa Tribal Fisheries | q. Flowra |
| i. Yurok Tribal Fisheries | r. New Attendees |

11:55-12:00 Close

Next Meeting is September 9th, 2025 at 10 am-12 pm

Virtual Meeting Information

Zoom link: <https://us02web.zoom.us/j/89707228772?pwd=WUo1VW5hS2x0UC85ODE4dFViNEFYUT09>

Meeting ID: **897 0722 8772**

Passcode: **96093**

+16694449171,,89707228772#,,,,*96093# US +16699009128,,89707228772#,,,,*96093# US (San Jose)

Questions?

Contact Annyssa Interrante at 530 623 6004 X 209 or email at ainterrante@tcrd.net

Trinity River Watershed Council – June 13th, 2023

Attendance

In person (5):

- Annyssa Interrante – Trinity County Resource Conservation District
- Kelly Sheen – Trinity County Resource Conservation District
- Chris Losey – Flowra
- Eric Peterson – Trinity River Restoration Program
- Kiana Abel – Trinity River Restoration Program

Online (14):

- Dominique Norton – California Department of Fish and Wildlife
- Kristen Hubbard – California Department of Fish and Wildlife
- Greg Pasternak – UC Davis
- Cyndie Childress – Nor-Rel-Muk Wintu Nation
- Dave DeLange – Trinity Public Utilities District
- Diana Judnick – California Department of Fish and Wildlife
- Jacqueline Mathews – California Department of Fish and Wildlife
- James Lee – Trinity River Restoration Program
- Karl Reisinger – Trinity County Resource Conservation District, NRCS affiliate
- Justyna Marszalek – Yurok Tribe Fisheries
- Leslie Mounivong – Watershed Research and Training Center
- Matt Mitchell – California Department of Fish and Wildlife
- Josh Smith – Watershed Research and Training Center
- Zach Reinstein – Yurok Tribe Fisheries

Meeting Start: 10:03

Guest Presentation

Updates on Golden Mussel Response in California with Kristin Hubbard and Dominique Norton from California Department of Fish and Wildlife

- CDFW's Quagga and Zebra Mussel Program
 - Coordinates with agencies, non-profits, and special interest groups to prevent the spread of quagga and zebra mussels
 - Limitations of agency authority and jurisdictions necessitate this collaboration
 - One regional scientist per six CDFW regions
 - Law enforcement division trains canine unit in the detection of invasive mussels
 - Work expanded to cover "Invasive Mussels", including quagga, zebra, and golden mussels
 - These invasive mussels are similar in their biology and vectors
 - Change in nomenclature to prevent confusion with public messaging
 - Similarities between invasive mussels mean prior material can still be used for golden mussels
 - Outreach materials, guidance documents, monitoring protocols, etc.
 - Biggest challenge of golden mussel response: Number of waters at risk and geographic scope

Questions?

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- Golden Mussel Background
 - First found in the Port of Stockton in San Joaquin County
 - Likely introduced via ship from international port (Native to SE Asia and China)
 - Rapid and dense colonization, settle on hard and semi-hard surfaces, and can spawn continuously given suitable conditions
 - Intensive filter feeding and colonization
 - Can thrive in fresh and brackish waters
- Golden Mussel Biology
 - Not closely related to quagga and zebra mussels
 - Life stages
 - Eggs – float through water
 - Veliger – microscopic larval stage
 - Settlers – hard to see, settle on surfaces and feel like sandpaper
 - Adults – up to 1 -2 inches in size (look and feel like sunflower seeds)
 - Can begin reproducing at 3 months old and reproduce rapidly
 - Broad tolerance for salinity, pH, dissolved oxygen, and have lower calcium requirements than quagga and zebra mussels
 - Can withstand polluted waters and fairly high salinity pulses for short periods of time
 - These tolerances mean many of the North State waters that couldn't support quagga and zebra mussels are now susceptible to golden mussel establishment
- Golden Mussel ID
 - Often on the underside of docks
 - Often dark brown above the keel and yellow below
 - Iridescent inside, purple above keel and white below
 - Bissel threads (like other invasive mussels)
- Golden Mussel Impacts
 - Alters food webs and increases algal blooms
 - Can damage the water conveyance system of California, as well as hydroelectric plants
 - Can damage watercraft
- Detections
 - Map available on website
 - Known Locations
 - San Joaquin Delta
 - State Water Project
 - Operating under the assumption that golden mussels will spread throughout the delta and through places that get delta water
- California Water Conveyance
 - In California 75% of precipitation falls in the northern portion of the state, but 80% of water demand is in the south
 - Solved via interconnected water supply system
 - Damage to the water conveyance system could be highly detrimental to the agricultural system of California
 - Mussels are easily spread through this system
- California's Golden Mussel Response

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- First response action to form a multi-agency golden mussel task force to lead coordinated response in the state
- First task force meeting was held in November
- Golden Mussel Response Framework
 - The goal of the state's golden mussel response as to prevent the further spread of golden mussels and minimize their impacts
 - Objectives
 - Communication
 - Containment
 - Prevention
 - Monitoring
 - Partner Engagement
 - Population Suppression
 - Science and Capacity Building
- Golden Mussel Response Authority
 - Currently no federal laws to regulate golden mussels
 - State Lands Commission petitioning to add golden mussels to Lacey Act (injurious species)
 - State Lands Commission is working on emergency ballast water exchange regulations
 - CDFW this year created a rating for golden mussels as an A-rated agricultural pest.
 - In December of last year, the Department of Fish and Wildlife requested that Fish and Game Commission includes golden mussels in our restricted species list, which is Title 14, Section 671.
 - Would give CDFW the authority to have law enforcement division impound contaminated vessels and mandate decontamination
 - CDFW is encouraging local agencies to create local ordinances to support elements of golden mussel programs
- Golden Mussel Response Monitoring
 - Monitoring protocols for quagga and zebra mussels are appropriate for early detection of golden mussels as well
 - Artificial substrates
 - Surface surveys
 - Plankton Tows
 - Expanded locations for monitoring as water quality parameters are wider for golden mussels than quagga and zebra mussels
 - CDFW working on developing PCR protocols to ID using DNA
- Golden Mussel Response Containment
 - Recreational watercraft is a major vector
 - Four golden mussel infested watercraft that originated from the Delta that have been intercepted at Folsom, Berryessa, Tahoe, and Thermolito Forebay during pre-launch inspections
- Golden Mussel Response Prevention
 - No legal requirement for a local agency to establish a golden mussel prevention or containment program
 - Prevention measures that are used for quagga and zebra mussels are effective to protect against golden mussels
 - Grant opportunities available for local agency golden mussel prevention programs

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- For purchasing equipment and funding training
- Additional funding opportunities may appear
- Golden Mussel Response Outreach and Education
 - Including golden mussels in current mussel outreach materials
 - Division of Boats and Waterways conducting outreach throughout Delta
 - Partnering with local agencies important for spreading word to the public
- Questions and Comments
 - Dave: “Regarding the mussel stickers on boats and why the DMV decided to not include those. Was there something that went on for funding? Do we have to apply for that separately?”
 - Dominique: “That is a massive issue and it directly affects our program because we do receive funding through the mussel sticker fee to help fund our work. I honestly don't quite understand why that decision was made. It certainly has created challenges and has resulted in the decrease purchase of those mussel stickers. So historically what had happened is that when you receive your watercraft, your vessel registration from DMV, they would include that mussel sticker fee as part of the paper and part of the online process. And for whatever reason, a decision was made to not include the mussel sticker fee as part of that process. And it requires a second step for the vessel owner to then go and physically apply for the mussel sticker fee. It certainly has created challenges and the Division of Boating and Waterways, where that sticker fee is connected with the code and regulations, is looking at solutions for that for future years.”
 - Annyssa: “The inspections, are we doing those year-round or just during the primary boating season?”
 - Dominique: “That would be a decision that's made at individual water bodies by individual water managers. The Department of Fish and Wildlife does not have authority or jurisdiction at individual water bodies outside of the wildlife areas that we manage. And so that's where we lean on the local agency. And I recognize that there's challenges and it becomes very tricky because we don't have a lot of resources to help support either staffing or equipment purchases, so on and so forth.”
 - Dominique: “And so by using our quagga and zebra mussel prevention program guidance document, what you do is you walk through the various vectors. So what kind of public access and usage is there? And then you'd work with Kristen to evaluate what are your options, what's feasible, given your current resources. And so it really varies. So a water body that's used actively year-round, for example, Southern California, is much warmer year-round than you are up north. So the boating season is much longer. So that's something you would look at and consider.”
 - Dominique: “We're really early in our understanding of golden mussels in our state. I can tell you with quagga mussels in the Colorado River system, we see spawning nearly year-round. So that threat is present year-round. There will be mussel infested watercraft leaving the Delta year-round. So that threat is there. It's not necessarily a seasonality issue, so to speak. But certainly your traffic changes throughout the year based on the weather. So yeah, it's not an easy answer, but it's certainly a threat year-round.”
 - Annyssa: “Are you also working on the partnership engagement, as well as reaching out to Kristen about actual applications of monitoring?”
 - Dominique: “I work in our headquarters, we have Kristen in our Region 1, who's your point

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of contact. From the task force perspective, I'm the lead for coordinating the partner engagement team. We do have mainly federal and state agencies in that group, but we have been slowly adding local agencies. Nestled under that, we have the science and capacity building group. When it comes to the monitoring that Kristen's implementing in her region, that is guided by my colleague, Tomas Jabush, who has a couple people working underneath him. So they look at water bodies statewide to prioritize, well, to determine frequency and type of monitoring at water bodies. And then Kristen works with them to review their recommendation, and then she's the boots on the ground who's actually conducting the monitoring. Ideally, you're working through Kristen, and Kristen has access to me if there's something that comes up that she can't answer.”

- Kiana: “I think it's important to note, too, that the managers of our systems up here are the Forest Service and the National Park Service. There is an effort within Reclamation and those two agencies to directly address the Northern Reservoirs, although we are not anywhere as far along as CDFW and California teams that are working in the Delta right now. The meetings that I've been involved with Reclamation haven't had any state presence. I know that Kristen has been working with us at Reclamation folks just to get everything kind of moving off the ground. But I think there will be a need to be able to coordinate regionally versus at the state level. And I don't know that we're there yet, though.”
 - Dominique: “California is challenging in that we don't have single water managers at water bodies, as you're implying. The Bureau of Reclamation has a hand in it. Forest Service has a hand in it. And then there tends to be a local agency involved as well. State parks could be as well. There's no statewide standard that's been implemented as a result. And so programs are varying. I'm trying to encourage our federal partners to standardize programs within their systems as best as possible. For example, the Bureau of Reclamation worked with state parks to create the program at Folsom Lake very recently. That was an isolated decision. And I guess what I'm trying to still parse out is how can we work better with our federal partners, given the very challenging situation that they're in, so that it's not this piecemeal. I am trying as our partner engagement lead to engage our federal partners, like I said, actively engaged with the Bureau of Reclamation. They're organized in that they have an invasive mussel staff person out of their Sacramento office. And then they have someone out of their Boise office that is overseeing a wider region in the West. Forest Service has been a challenge to engage. I have another point of contact, and I'm trying to find someone a little higher than at that local level so that, again, they can trickle down the information and try to standardize between locations. I was just able to engage the Army Corps of Engineers, so we're slowly bringing them on.”
 - Kristen: “I have been engaged with the Park Service, the Bureau, the Forest Service locally. I missed the last two meetings because I was out in the field, but they've had regular meetings, and I was on those meetings quite frequently.”
- Kiana: “The DWR site, which has all of the actions or actions being taken in each waterbody in the state. And I don't know that every waterbody is listed, but I think that is a really good resource for folks. I know that Reclamation is putting together sort of that same list, but for Reclamation, the infrastructure that Reclamation has control over. Like you mentioned, there's other agencies involved with each of those waterbodies. So it's just taking them a little bit longer in getting that together.”

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- Clarification
 - Tables of water quality standards for survivability of mussels may not be reliable as CDFW is still in its early stage of understanding golden mussel behaviors
 - The department has not made a formal determination of water quality standards
 - Recommends being conservative as it is difficult to know how the golden mussel might adapt, as it has shown to be highly adaptable
 - Kristin will be at Trinity Lake and Lewiston Lake doing surface surveys and trying to get artificial substrates in place
 - Will also be elsewhere in the North State (Whiskeytown and Shasta)
 - Scent detection dogs being used at Whiskeytown and Law Enforcement Department is working with the Whiskeytown staff on inspections
 - Current budgetary crisis and the challenges faced by federal partners has limited access to resources, however the similarities of dealing with golden mussels and other invasive mussels means that CDFW has existing resources that can apply to golden mussels
 - There's talk in other areas of the state of creating a regional approach to standardizing what's happening at waterbodies as a customer service to the public for standardization
 - Current challenges:
 - Lack of updated watercraft inspection information on Trinity and Shasta Lakes on the Division of Boats and Waterways webpage
 - Lack of local decontamination options
 - Local pressure washer may be interested in becoming a decontamination option
 - Difficult for the public to “Clean, drain, dry” boats to guarantee they are clean
 -
 - CDFW proposing an opt in program for local agencies to adopt the Uniform Minimum Protocols and Standards for Watercraft Inspection Programs, and all of the Watercraft Inspection and Decontamination training material

Partner Updates

NRCS

- Karl: “We are just working on our programs, the same as we ever have and haven't gotten any updates on any potential restructuring plans or anything yet.”

TRRP

- James: “We recently completed our watershed programmatic environmental assessment that covers a lot of potential partners in the Trinity watershed. If you're planning a restoration project in the watershed, that there may actually be plenty of environmental coverage already done for it. So hopefully make things move faster. TRRP lost our environmental permitting specialist, Lauren Alvarez. She took one of the offers that federal employees have had to resign. She'll go to work for Ironwood, who is our environmental services contractor. We've got a project going on by the Junction City campground. It's going to be happening for the rest of the summer. If you see equipment out there, that's us doing our work.”

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Yurok Tribal Fisheries

- Justyna: “We are working on the Upper Conner Creek project. The Yurok Tribe Construction Corporation is facilitating construction operations, and Yurok Tribe Fisheries Department is providing compliance support for the construction general permit. We are supporting the Watershed Research and Training Center on Salt Creek and Corral Gulch projects, as requested, likely with construction and technical support. We are still in the planning and design phase on Indian Creek Phase 2, right below the county bridge there. We are also making progress toward implementing a feasibility study for replacing the crossing at this location. For Weaver Creek, we are nearing the end of environmental compliance and coordinating with the BLM and Trinity County to complete NEPA and CEQA, respectively. The draft EA is currently back in revision mode to incorporate everybody's edits and reflect comments and include additional information. And construction is scheduled to begin on that project in 2026. I have a brief update regarding the remote stream incubators from Kyle. He mentioned that the Trinity program is operating the downstream out-migrant traps in Willow Creek and will be throughout August.”

TCRCD

- Annyssa: “We are currently working on our forest stewardship agreement and deploying temperature loggers and conducting snorkel surveys at the end of July. We are helping the Forest Service with the road and hydrology surveys for the Big Ranch NEPA. We are conducting flow monitoring on several of the main tributaries and working on fish passage surveys to kind of clean up the last bit of potential barriers that haven't been surveyed within the county. And that we also applied for that boating access grant for equipment and training for golden mussels. We applied for that SFRA boating access grant for equipment and training for golden mussel and watercraft inspection and decontamination trainings. We should hear about that by the end of the month if we will have equipment to support our federal partners with golden mussel response on Trinity and Lewiston Lakes.”

WRTC

- Josh: “We have a new fish biologist. She's out right now, but you guys can meet her sometime. Allison Coffield started working on May 5th. Cindy also has a couple of technicians, Farrah, Tyler, and Jacob Hoadley working with her at the moment. I wanted to update people because people had asked several times about the helicopter wood loading on the South Fork Trinity River. This was a couple of years ago. We implemented the project where we took about 300 trees from various different places and loaded them into the upper South Fork way above Forest Glen. We're going to do some more monitoring this summer to kind of like really track more. We put two logs in this location and between the logs that we put in and the logs that came in with the wildfire, there's four different wood jams and a whole bunch of different smaller habitat pockets that are really neat up there. We found two sets of steelhead spawning right here and new gravels that weren't there beforehand.

We've got the Upper Hay Fork Creek watershed assessment that we're working on. Mostly meadow restoration, mining, tailing assessment, and fish passage components to that. For the Salt Creek project in Hayfork, NIFWF and the Bureau of Reclamation actually came back and added some more funding to that. We have a bit more money being ready for implementation. But we're mostly just working on

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environmental compliance still. We're looking for next year to be implementing that hopefully summer of 2026. The Corral Gulch Meadow Restoration Project NEPA was just signed last week, or we're hoping to have it signed next week. And we are getting really close on our 1600 CESA coverage. So that should be ready to go and we should be hopefully implementing in PBR work in July and heavy equipment work in August and September. The plan with Meadows Partnership is still kind of plugging away watershed center specific meadows projects, mostly just doing a lot of planning still. There's a whole bunch of projects across the whole county that are in kind of different stages of development. Weaverville Community Forest, we're working with the RCD on process-based restoration initiative trying to design some projects there. Mumbo, Picayune, Mule Creek are some of the other places that we're looking at doing some meadow restoration work as soon as we can get the permitting in order.

Leslie has been working on this Statewide Restoration General Order, SIRGO. It's a large-scale habitat restoration programmatic environmental compliance in CEQA. It doesn't cover everything, but it does cover an awful lot and it's going to be set up for the entire Trinity County. So, any type of process-based restoration work that people want to be doing in Trinity County can theoretically be covered under this. There's still surveys that need to be done, but it's going to be really streamlined. If anybody has projects that they have ideas on, let me know.

We're doing a bunch of monitoring work for the Forest Service. That's what Cindy Buxton and Allie and the crews are all working on. Tanks and Forbearance, Leslie's probably, she's hoping to get two more tanks systems installed in July, and then we're hoping for three more in the fall or spring of 2026. We have the remote site incubator stuff that we're working with Zach Reinstein, and hoping to develop a number of those sites on the South Forks of the Trinity River and hoping to have them ready for this fall. At least, at least five sites going this fall, hopefully more if there are enough eggs.

Zach Blanchard's doing a lot of roads work at the moment. Probably the two main initiatives of the McFarland area and the August Complex fire footprint, and then probably the Knob fire on South Fork Mountain down by Willow Creek, Sawyer area. And, Emma's putting together a lot of growth site reclamation work, mostly in the South Fork also."

Flowra

- Chris: "We're almost finished with our So I wanted to talk about the 319H grant just briefly, which we got thanks to your support and support of others on this call. So we did back in the winter, we did a sediment source inventory. We now have costs and estimated costs for implementation. And so we're putting together a sediment source treatment plan, which basically Comes up with estimated costs for repair for all the Post Mountain PUD roads. So the grant, again, is to do road repair on the roads managed by the Post Mountain public utilities district. It's funded by The EPA's 319H program, which is administered by the North Coast Water Board. We are technically a subcontractor under Cannabis for Conservation, who is the lead grantee of this. We are now at the point where we are prioritizing roads for treatment.

We had a great meeting in May and some folks from Water Board Came out and confirmed that there was a lot of good work to be done and that it couldn't all be done all at once. We had great attendance

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from the community. Nine individuals showed up at a regular Post Mountain Community Board Meeting, which was impressive at 10 o'clock on a Friday. So we are using multiple factors in Prioritizing and ordering and ranking the treatments. And we did some public involvement. We had a survey that we opened to members of the community where they could kind of vote on where they'd like to see work done and that was very successful. We got about 25 responses. We're putting together a proposed treatment plan that orders and prioritizes the roads to be treated and I'm hopeful that by the end of next week we will have a draft for all of you to comment on it. We're looking for some input from the resource manager and the scientific community on how we should prioritize. Once we have selected five miles of road to obtain permitting we're going to be able to use the Five Counties amount of waiver most likely, but we'll still have to do some LSA work. And that'll set us up for another grant where we can actually start to do work on about five miles of road in Post Mountain restoring it for sediment reduction and also for community use. And it's exciting to see members of the community come out and express opinion. We get a lot of Hmong involvement, Flowra has Hmong translators, we were able to utilize that we're able to have the plan for your comments and input."

UC Davis

- Greg: "I'm hoping to have Salt Creek gauged for the upcoming year, but by the time I got the sensors for this year, it was too late, flows are already too high and I have submitted some proposals. But because of federal funding changes the money evaporated. It was all paper funding. So I'll keep working at it."

Meeting adjourned 11:27 a.m.

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DWR



GOLDEN MUSSEL

Limnoperna fortunei

TRINITY RIVER WATERSHED COUNCIL

June 10, 2025 | Dominique Norton and Kristin Hubbard

CA Department of Fish and Wildlife

CDFW's Q/Z Mussel Program

- Coordinate within CDFW and across agencies
- Coordinate with western states and nationally
- Early detection monitoring
- Lab for Q/Z identification and PCR confirmation
- Regional staff conduct early detection monitoring and support local agency's prevention and containment efforts.
- Law Enforcement support



Golden Mussels

- First detection in North America
- Native to China and SE Asian
- Likely introduced by a ship from an international port
- Mass colonization of infrastructure, necessitating ongoing removal to maintain operation
- Intensive filter feeding and colonization alters the environment
- Nearly all California fresh and brackish waters are suitable for establishment



DWR monitoring equipment. Oct 2024.

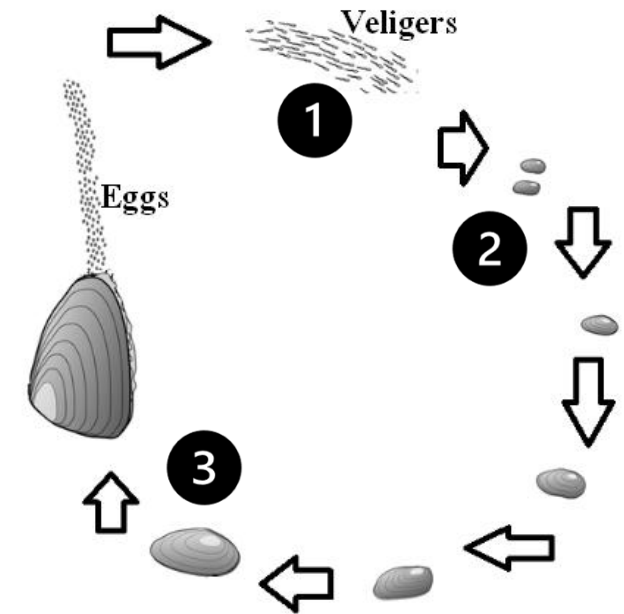
Biology

1. Veliger – Microscopic, planktonic larval stage
2. Settlers – Settle on surfaces, feel like sandpaper
3. Adults – up to 1-2 inches in size

Rapid reproduction and growth rate

Prolific filter feeders

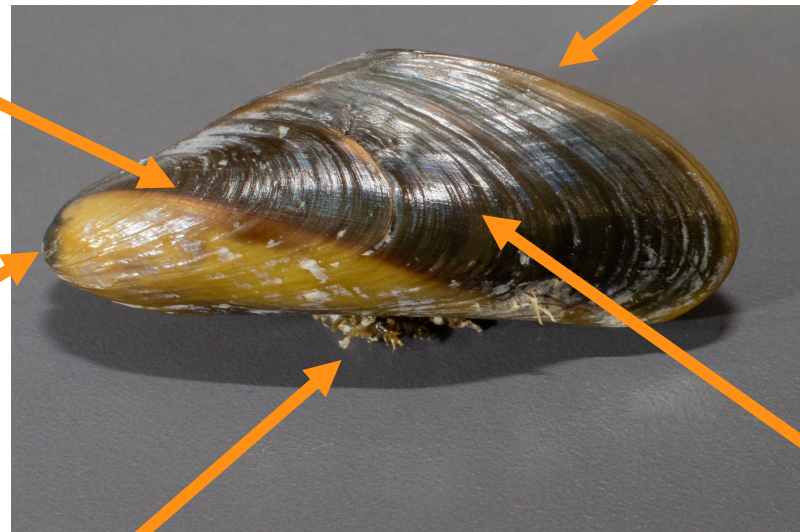
Broader tolerance for salinity, pH, and dissolved oxygen (DO), lower calcium



Identification

Often dark brown above, yellow below

Very sharp dorsal margin, often have yellow rim



Rounded anterior end

Elongated, rounded triangle shape

Byssal threads!

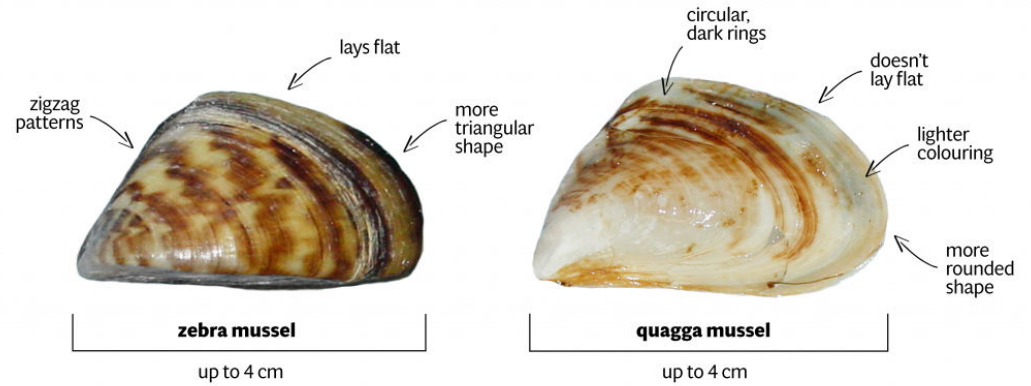
Smooth, shiny exterior

Identification

Golden mussels – golden to dark brown



Dreissenids – sharply pointed umbo, triangular or D shape



Impacts

- Alter food webs by consuming plankton and nutrients
- Increased harmful algal blooms
- Impede water delivery, hydroelectric power generation
- Damage watercraft



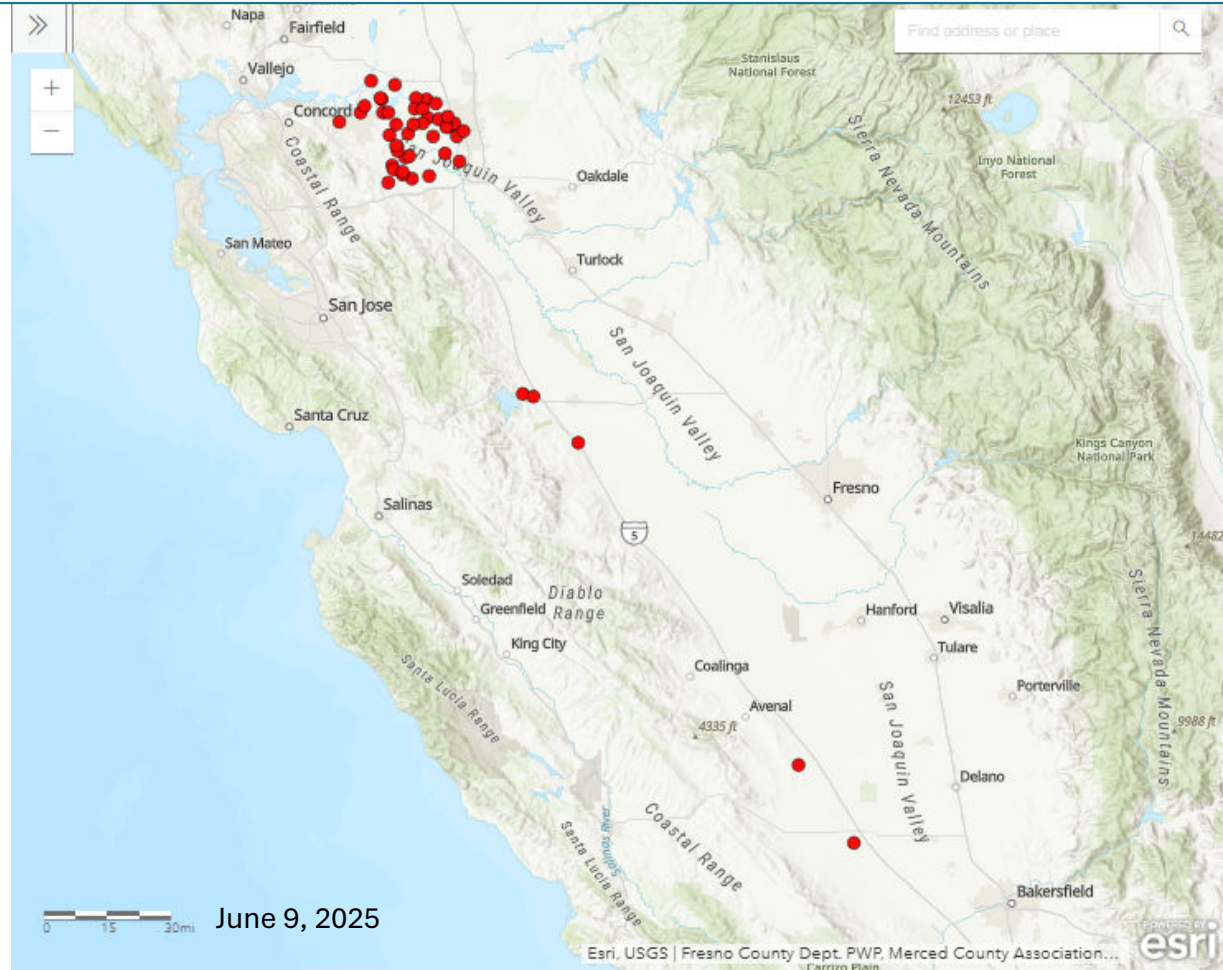
DWR, O'Niell Forebay

Map of Detections to Date

Sacramento-San Joaquin Delta

State Water Project

- O'Neill Forebay, Check 13
- Dos Amigos Pumping Plant
- Las Perillas Pumping Plant (Coastal Branch)
- Check 24



California's Water Conveyance Projects

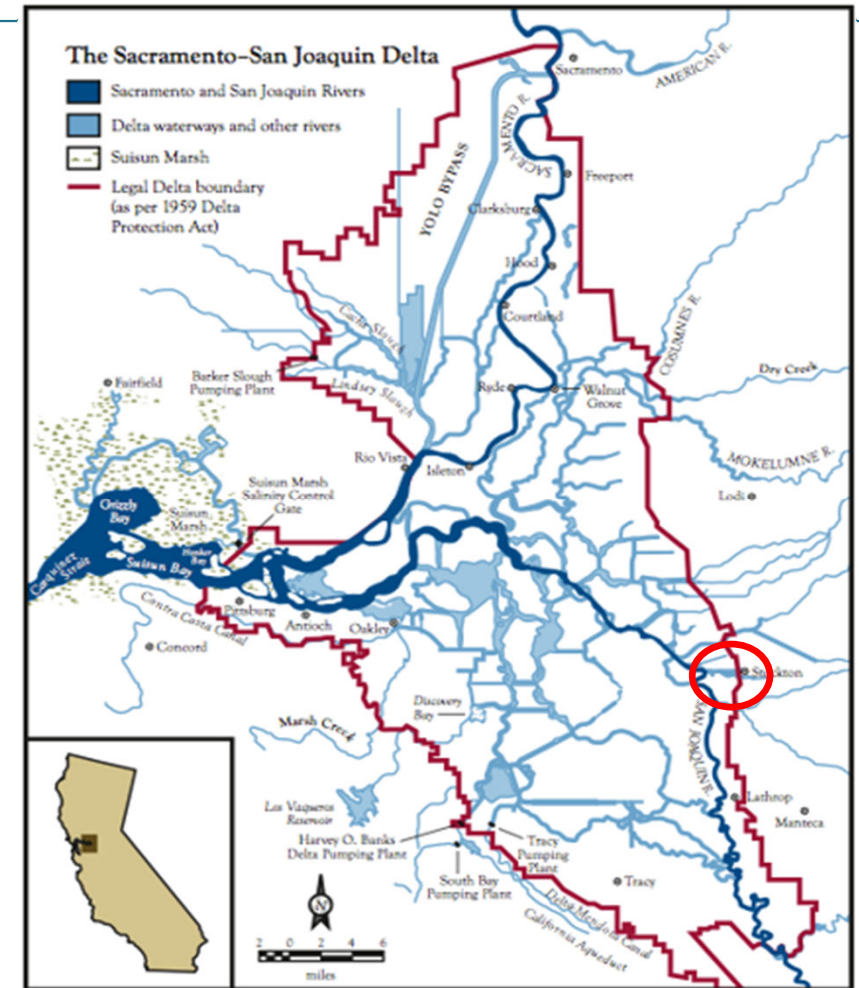
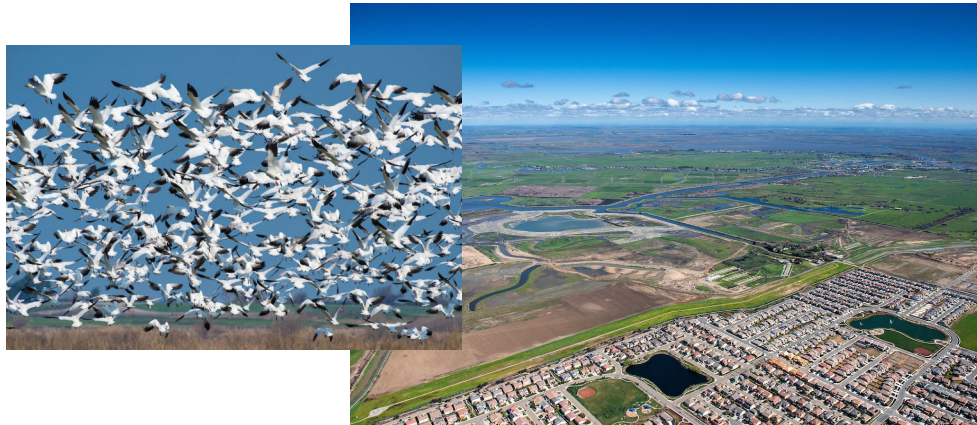


Sacramento-San Joaquin Delta

1,100 miles of levees

738,000 acres

5 counties



California's Golden Mussel Response



DWR. Oct 2024.

- Golden Mussel Multi-Agency Task Force
 - Response Framework
- Authority
- Monitoring
- Containment
- Prevention
- Education and Outreach

Golden Mussel Response – Framework

State of California

GOLDEN MUSSEL RESPONSE FRAMEWORK

California Department of Fish and Wildlife
California State Parks
California Department of Water Resources
California State Lands Commission
California Department of Food and Agriculture
California State Water Resources Control Board
United States Bureau of Reclamation
United States Fish and Wildlife Service

April 14, 2025

Goal: Prevent the further spread of golden mussel and minimize their impacts on the environment, economy, infrastructure, and human health.

- Objectives
 - Communication
 - Containment
 - Prevention
 - Monitoring
 - Partner Engagement
 - Population Suppression
 - Science and Capacity Building

Golden Mussel Response – Authority



DWR

- Currently lacking federal laws
- State Lands Commission is working to establish commercial ballast emergency regulations
- CDFG rated golden mussel as an “A rated” pest
- CDFW requested emergency inclusion of golden mussel to regulations (Title 14, Section 671 – Restricted Species List) which prohibits the importation, transportation or possession of golden mussel in California

Golden Mussel Response – Monitoring

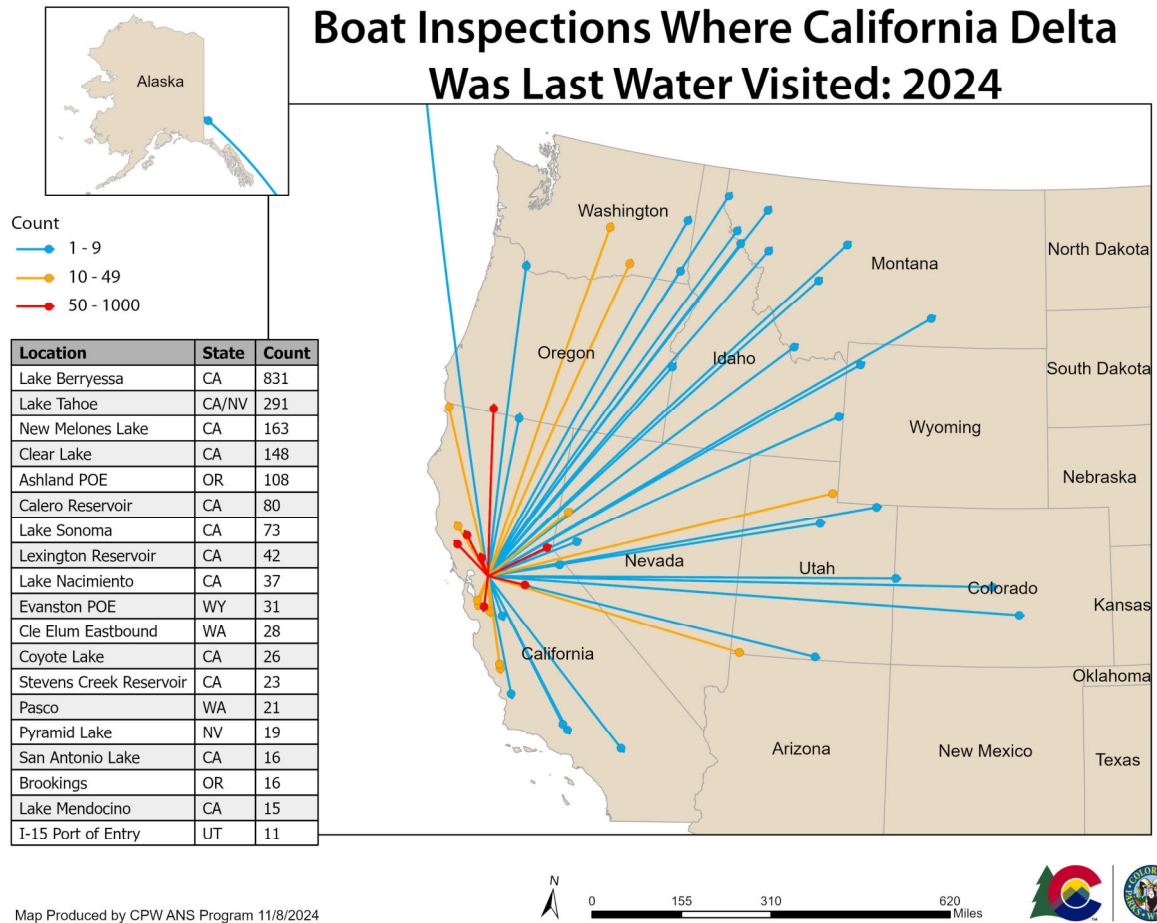
- Delineate the infestation in Delta
- Early Detection Monitoring
 - Artificial substrates
 - Surface surveys
 - Plankton sampling
- Reporting platform
- Increasing CDFW's laboratory capability



Contra Costa County, Oct 2024

DWR

Golden Mussel Response – Containment



Golden Mussel Response – Prevention



DWR.

- CDFW's Regional Scientists are available to assist local agencies development new programs and modify existing programs and offer training
- Held Statewide Prevention Summit for Water Managers
- Funding Opportunities for local agencies
 - Division of Boating and Waterways Quagga/Zebra Mussel Prevention Grant (Closed April 18)
 - SFRA Boating Access Grant (Closed May 23 @ 4pm)

Golden Mussel Response – Outreach and Education

DON'T MOVE A MUSSEL

Clean, Drain, and Dry
to Protect California Waters

www.wildlife.ca.gov/Invasives | 866-440-9530

CLEAN
DRAIN
DRY

Prevent the spread of invasive mussels

GOLDEN MUSSEL

QUAGGA MUSSEL

ZEBRA MUSSEL

CLEAN your gear, boat, and trailer before leaving the area. Remove plants, animals, and mud. Dispose of unwanted bait and debris in the trash.

DRAIN bilge, ballast, wells, and buckets before you leave the parking area, and never drain back into the waterway.

DRY equipment before launching into another body of water. Waiting periods can vary – check with your local waterbody.

ANCHOR & LINE, DOCK LINES, BALLAST TANK, LIVE WELLS, BILGE, MOTOR, PROP, TRAILER, HULL, ROLLERS, BUNKS, AXLE, PROP

Display your **DMV Registration** and **Mussel Fee Sticker** on the hull

- Outreach Plan in development
- State Lands Commission developed flyer for inspectors and vessel crews
- State Parks, DBW is conducting outreach to public recreating in the Delta
- CDFW's Webpage
<https://wildlife.ca.gov/Conservation/Invasives/Species/Golden-Mussel>

Resources

- [Invasive Mussel Rack Card](#)
- [CDFW Golden Mussel Web Page](#)
- [Golden Mussel Distribution Map](#)
- [Golden Mussel Fact Sheet](#)
- [Golden Mussel Response Framework](#)
- [CDFW Quagga/Zebra Prevention Program Page](#)
- [Watercraft Inspection & Decontamination Training](#)
- [Division of Boating and Waterways Watercraft Inspections in California and Vessel Restrictions](#)
- [Department of Water Resources Invasive Mussel Mitigation](#)



Questions | Contact

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DWR