

Delta Interagency Invasive Species Coordination (DIISC) Team

Fourth Quarter Meeting

Tuesday November 19, 2024; 10:00 am – 12:00 pm

Attendees

- Rachel Wigginton, Sacramento-San Joaquin Delta Conservancy
- Anji Shakya, Sacramento-San Joaquin Delta Conservancy
- Elizabeth Brusati, DSC
- Thomas Jabusch, CDFW
- Gina Darin, DWR
- Lina Ceballos, State Lands Commission
- Raya Nedelcheva, State Lands Commission
- Chris Scianni, State Lands Commission
- Cesar Blanco, USFWS
- Jessica Vollmet, CDFW
- Virginia Gardiner, DPC
- Janessa Weingand, Contra Costa Department of Agriculture
- Omar Luna, San Joaquin Agricultural Commissioner's Office
- Skylar Carlson, University of the Pacific
- Brighton Heard, Westervelt Ecological Services
- Andrew Chang, Smithsonian Environmental Research Center
- Christine Whitcraft, CSULB
- Edwin Grosholz, UCD
- Julie Anne Gonzalez, San Francisco Bay National Estuarine Research Reserve
- Matt Skattengren, Contra Costa Department of Agriculture
- Nicholas Rasmussen, DWR

Notes

Welcome, announcements, and updates

- Team member announcements
 - None
- Scheduling of 2025 meetings
 - 10 am – 12 pm on 2/19/25, 5/21/25, 3/20/25, and 11/19/25

Golden mussel (*Limnoperna fortunei*) update

- Dr. Thomas Jabusch, CDFW – slides shared with team members
 - Update from time of presentation: online map has been updated to include monitoring sites where no detections were recorded.
- Q&A/Discussion
 - What is the current state of State funding? Are there any promising sources of federal funding?
 - A funding resources team will be developed – they will identify how to best move forward and who will apply for funding.

- We saw that the golden mussel is not yet in San Luis Reservoir but has been detected in the forebay. Do we think they got in through the State Water Project?
 - Confirmed detections were in the forebay and at an outlet of the forebay. We also know that San Luis is a joint facility which gets water from the forebay.
- The presentation indicated that with the right conditions, the golden mussel could reproduce continuously throughout the year. Is there any evidence of possible seasonal reprieve?
 - Based on their behavior in South America, there are periods of the year where the mussels grow more rapidly. Using that information, it is possible that golden mussel growth could slow during winter.
 - There are locations where they reproduce year-round, and there are areas where reproduction is seasonal. However, trends in the Delta remain uncertain.
 - Using other their behavior from other regions is a good starting place, but evolution happens and when species inhabit new places, these behaviors are not guaranteed. There is a possibility the reproductive period extends beyond what is indicated in the literature.
- Where can we access a map or additional details about where current monitoring efforts are taking place?
 - Monitoring efforts across the Delta are being tracked; this information is not currently shared publicly but can be provided upon request.
- In terms of public outreach, does the communications staff at CDFW have public education plans as part of the task force?
 - The communications team is being formed, more information to come.

Standardized repeated surveys for introduced invertebrates

- Dr. Andrew Chang, Smithsonian Environmental Research Center
- Q&A/Discussion
 - Would these efforts jump start a longer-term monitoring program for golden mussel?
 - Smithsonian is helping to fill in gaps on the golden mussel. It is a soft money lab; more funding would be needed to target other areas not targeted by current monitoring efforts.
 - There is value in proactively scanning the horizons – this work is helpful towards that.
 - These efforts get a sense of the organisms that are present now and over time. A lack of technology and funding prevents efforts from being more continuous and widespread.
 - Is there enough existing substrate/structure (plumbing, conveyance, etc.) to use for golden mussel sampling/monitoring efforts? Is there a need to put out more sentinel structures?
 - These methods have slightly different aims. Using existing substrates would increase levels of inspection as it would not replace the inspections under the existing CDFW protocol. The existing program involves putting out standardized substrate so that the substrate type and orientation can be controlled.

- How is golden mussel monitoring occurring in the Delta? What is CDFW's approach?
 - Efforts involve coordinating with others to ensure that duplicate monitoring is not taking place. There is a focus on monitoring areas that haven't been looked at. These are opportunistic – access to waterways and boats are factors limiting access to survey surfaces.
- A poll of attendees signified that many programs could benefit from the data that Smithsonian is collecting.

Evaluating the early detection, rapid response framework for aquatic species in the Delta

- Dr. Christine Whitcraft, CSU Long Beach
- Discussion:
 - There has been interest in this work which was funded by DSC. Together, DSC and Christine have been working on a summary/info sheet which can be used as an outreach tool. Progress on final recommendations continues to move forward.

Agency round robin

- Delta Conservancy - Prop 4 will bring some funding, but more will be known next year.
- Delta Stewardship Council – The [Delta Adapts Climate Change Adaptation Plan](#) is out for public comment, accepted through January 17. Invasive species are mentioned in a general way several times throughout the plan.
- DWR – USFWS permits for full scale Phragmites control at Blacklock were not granted in time for this year; NPDES permit and contracts are in place for weed/Phragmites control. Helicopter spray of 200 acres at Tule Red has taken place. In the past, drones have imaged ribbon weed, this was reimaged this year to monitor growth rates of the population.
- CDFW Nutria Eradication Program – With waterfowl season opening, survey efforts have seasonally shifted to new locations. There have been 4 takes in the Sherman Island/Dutch Slough area of Contra Costa County. High take numbers in Solano County, specifically on Joice Island, up to Suisun City. Lots of detections and catch at Suisun Marsh. Moving forward with scat detection dogs and Judas nutria tagging trials.
- State Parks DBW – Continues to control for aquatic weeds in the Delta. Through a partnership with DWR, now focusing on Lookout Slough.
- SLC Marine Invasive Species Program – Working with partners in WA and OR on ballast water monitoring of freshwater ports. Putting alerts in place for vessels taking in ballast water at the Port of Stockton. Regarding the golden mussel, conversations are being had with port personnel and crew members. A one-page outreach brochure has been created for field inspectors – includes pictures, potential risks, and who to contact, mirroring information from the CDFW press release. Looking to strengthen regulations related to ships coming into brackish/freshwater ports by encouraging a saltwater exchange, which would introduce salt water into their tanks.
- USFWS – Emphasized that in addition to the golden mussels there are other invaders in the Delta. Largescale loach: several reports following a large flow event, mainly centered around San Luis Refuge with a potential to spread; Japanese/Chinese mystery snail: found in Funks Reservoir several years ago, hasn't shown in Sacramento River monitoring efforts yet.
- Contra Costa Ag Dept – Mitten crabs found and intercepted during inspection of parcel facilities; shipped over from China. Working with CDFW and USDA to resolve and stop further

entry. Also working with Contra Costa Water District on ground squirrels; switching from diphacinone to chlorophacinone by next year.

- DPC – no updates
- San Joaquin Ag Commissioner's Office – no response
- SF Bay NERR – Restoration design planning is underway for Goat Island Marsh at Rush Ranch. Drafting the invasive species management plan, incorporating native species and phragmites control.
- CSULB – Christine presented earlier in the meeting.
- UC Davis – representative left before round robin
- University of the Pacific – representative left before round robin
- Westervelt Ecological Services – representative left before round robin

Wrap-up, 2025 meetings, and action items

- 2025 meeting dates