

Delta Interagency Invasive Species Coordination (DIISC) Team

First Quarter Meeting

Tuesday March 14, 2023; 10:00 am – 12:00 pm

Attendees

- Lauren Damon, SSJDC
- Melinda Baerwald, DWR
- Jared Barr, CDFW
- Jason Carter, State Parks, Boating and Waterways
- Gina Darin, DWR
- Emily Funk, UC Davis
- Erin Donley Marineau, Freshwater Trust
- Mary Maret, Sac WMA and Sac Co Regional Parks
- Patrick Moran, US Dept of Ag
- Martha Volkoff, CDFW
- Rachel Wigginton, SSJDC
- Elizabeth Brusati, CDFW
- Ben Weise, CCRCD
- Karen Bigham, CDFW
- Ashley Fossett, State Parks
- Trevor Fox, SSJDC
- Daphne Gille, DWR
- Rachel Klopfenstein, DSC/DSP
- Kristen Pringle, DPC

Action Items

- Reach out to Rachel to be a part of invasive species symposium planning team or provide feedback on theme
- Nerodia volunteer program – reach out to Elizabeth B.

Notes

1. **Welcome and Announcements**
 - a. DIISCT Overview for new members
 - b. California Invasive Species Action Week
 - i. Elizabeth Brusati - Coming up in June (June 3-11). 10th annual and used to spread awareness.
 - ii. Invasive species art and video contest:
<https://wildlife.ca.gov/Conservation/Invasives/Action-Week/Poster-Contest>
 - c. Open call for announcements from meeting attendees

- i. EDRR Directed Action, funded by the Delta Science Program, moving forward. Dr. Christine Whitcraft (CSULB) will attend some future meetings to get feedback from the DIISCT

2. **California Invasive Species Advisory Committee (CISAC) update**

- a. Martha on Ted's behalf. CISAC meetings are public, can get on mailing list to get notifications. Next CISAC is April 18.
 - i. Subscribe for updates on CISAC meetings:
<https://www.cdfa.ca.gov/subscriptions/> Scroll down to "Plant Health" and check the box for "CISAC"
 - ii. Developing an RFP but money has been pulled back, so won't be able to offer funding in 2023. Will move forward with RFP to spend potential future money. Still have a rapid response fund. Process will be outlined by a subgroup and approved by council prior to implementation unless there is an emergency (meeting is 1x per year).
 - iii. Outreach subcommittee – action week. Planning another summit. Project toward minimizing invasive species impact, planning a tour. Can reach out to Elizabeth or Gina for tour location ideas.

3. **Nutria Update**

- a. Jared Barr – 3,406 taken
 - i. Take #'s by county:
 1. 263 Merced Co.
 2. 970 Stanislaus Co.
 3. 241 Fresno (Mendota Pool is a hot spot that recently they have been able to focus on)
 4. 110 San Joaquin (last March 2021 but one detected in Paradise cut area Oct 2022)
 5. 9 Sac Co. (Lower Sherman Island, suspect more and attempting to take remaining)
 6. 12 Mariposa Co.
 7. 1 Madera Co.
 - ii. Precipitation and flooding have been an issue, had to remove some cameras and equipment
 - iii. Moving into Delta for early response in case Nutria are expanding. Adding 8 limited-term positions
 - iv. Punchline: geographic scope has been increased annually, but decrease in # of individuals caught, so overall they have been effective. Average density has dropped from 8 to 5. Consistent level of effort but 50% less individuals captured.

4. **eDNA Briefing**

- a. **Short briefing on recent webinar:** USGS Research: The Bipartisan Infrastructure Law and the Effects of Climate Change on Invasive Species
 - i. Elizabeth Brusati: Webinar on National Invasive species week was interesting and relevant to this group in various ways.

1. 3 hours, first 2 hours about eDNA and last hour was on climate change. Available on YouTube:
<https://www.youtube.com/watch?v=jW2XmUzAk7A>
 2. USGS is developing tools for land managers, public toolbox soliciting input.
 3. USGS developing national inventory of eDNA
 4. Terrestrial plant modeling on 200 US species already and want to add international or other plants. Phenology forecasting.
- b. Update from Department of Water Resources
- i. Emily Funk: recent eDNA project shared PowerPoint – genomic variation lab at UC Davis
 1. Nutria Sherlock Assay – very beginning
 2. Using eDNA and eRNA to detect nutria in Delta. Samples are sensitive and easy to collect. Will eventually be field deployable. Development is longest/most expensive part, but after development it will be cheap and fast.
 3. Ongoing monitoring for presence can help determine if eradication efforts are successful
 4. Sherlock is as sensitive and accurate, but faster and more user friendly compared to qPCR or metabarcoding
 5. eRNA is shorter lived-in environment, only shed by living organisms. eDNA is more stable in environment and can be shed by living or dead organisms, so pairing them reduces false positive detections.
5. **2023 Biennial Delta Invasive Species Symposium**
- a. The DIISCT organizes and facilitates this Symposium every other year and plans to hold the Symposium again in the last quarter of 2023
 - b. If you would like to join the planning team, please email rachel.wigginton@deltaconservancy.ca.gov
 - i. Why should I join?
 1. Networking
 2. Major product of this team --> good attendance and feedback
 3. Development of planning skills
 4. Feeling of accomplishment and afterparty!
 - c. Menti results:
 - i. Topics or themes:
 1. Early detection, rapid response, dispersal, upstream sources
 2. Biological control, GIS detection, prevention, adaptive management, improving funding, collaboration, control in restored sites, aquatic vs. terrestrial, saved the word cloud for future reference
 3. Balancing different goals or conflicting mandates: impacts to endangered species, limitation on tools, green tape
 - ii. How can the symposium add value for you and your work:

1. Virtual option at least, poster session, provide management recs or actionable next steps, a training component, discussion panel or 'ask a scientist' opportunity. Lightning talks.

6. Agency Round Robin

- a. All agency representatives introduce themselves (names, positions)
- b. 1-2 representatives from each agency provide a brief overview of the invasive species work you want to highlight that has taken place since the last meeting (November 2022– now) and any upcoming work that is relevant
- c. Are you facing any challenges you think DIISC Team members could help you address?
 - i. Delta Conservancy
 1. Rachel Wigginton, Lauren Damon, Trevor Fox
 2. Working on executing grants with IS-relevant work and will present later, open funding: NBS
 - ii. CDFW
 1. Elizabeth Brusati, Jared Barr
 2. Annual nerodia water snake trapping, native to eastern US, potential Garter Snake competitor. Field season starts in June. Want to provide training for detection by other groups. ES positions are forthcoming, advertisements will go out to group.
 - iii. DWR
 1. Gina Darin, FRP, works with DBW, and RCD, Solitude Lake management (ICF) to plan weed control at all restoration sites in Delta and Suisun Marsh.
 2. Blacklock Prop 1 is done but will be presented 4 times. Full-scale phragmites removal is going next year.
 3. Assisting with Nutria eradication program with boats and boat operators
 - iv. Delta Stewardship Council
 1. Rachel Klopfenstein: DSP has released the science tracker for collaboration (online repository for all science activities; (<https://sciencetracker.deltacouncil.ca.gov/>), NCEAS for social/ecological projects (<https://deltacouncil.ca.gov/delta-science-program/science-synthesis-working-group>), vacancy for SES in science program in adaptive management unit (AM liaison; <https://www.calcareers.ca.gov/CalHrPublic/Jobs/JobPosting.aspx?JobControlId=358986>) and will be working on social science and connected to ISB, DSP is releasing a funding call in the fall
 - v. Parks DBW
 1. Jason Carter: investigation of new treatment of SAV. Now treating for ribbon weed
 - vi. Freshwater Trust:

1. Erin Marineau, New projects in Delta including groundwater recharge. Want to stay involved and start collaborating, early detection and response. TFT is also hiring an entry-level Support Analyst for our Sacramento office and we would be grateful if folks could help spread the word:
<https://www.thefreshwatertrust.org/jobs-opportunities/>
- vii. Sacramento County WMA
 1. Mary Maret – found both sponge plant and alligator weed (very small population) in American River. Used volunteers and set up wash stations. Hand removal was not effective, will pursue drone spraying. Requesting feedback on alligator weed. Will get connected DBW. Gina said alligator weed can live underwater or terrestrial.
- viii. CCRCD
 1. Ben Weise: manage weeds on DWR mitigation properties. Weeds have been slow this year, working on adaptive management of those weeds, trying to predict how weeds will respond after all this rain.
- ix. USDA-ARS
 1. Patrick Moran – aquatic weed project, Delta-wide project (DRAAWP) ran from 2014-2018 with funding from USDA-ARS. ARS transferred some of the funding to DBW-CA Parks and SSJDC, also four departments at UC Davis. Important research being done on floating and submersed aquatic weeds-chemical and integrated control, but one of the PIs (John Madsen) retired December 2022, so they will re-hire. Also looking into biological control (plant hopper for hyacinth released 2018-2020, sparsely established, need to do follow-up monitoring). Cold-adapted water hyacinth weevil and moth tested and now applying for permission to release. Plan to release alligator weed biocontrol agents (beetle, thrips, moth) that have been widely released in the southeastern U.S. Potential new agents being evaluated for water primrose (challenging due to closely related native species). Have released the arundo shoot-galling wasp and rhizome-feeding armored scale at five sites in the Delta, and the wasp is established at all the sites and the scale at 3 of the sites. The SSJDC was involved in the DRAAWP and was very helpful in the past in gaining access to some of the Delta arundo field sites.
- x. DPC
 1. Kirsten Pringle: hiring for Information officer, looking for someone with background in Delta and science.

- xi. State Lands Commission, Marine Invasive Program, Jonathan Thompson. I have to jump off. Only major update is that we are collecting and analyzing ballast water samples from vessels. This is new and it's very challenging. Most samples are being collected from vessel arrivals into the Port of Stockton.

7. Wrap-up, Next Meeting, and Action Items

- a. See above