

# 2021 BAY-DELTA SCIENCE CONFERENCE CALL FOR ABSTRACTS

**\*\*ABSTRACT DEADLINE: December 28, 2020\*\***

**CONFERENCE DATES: April 6-9, 2021**

The **Biennial Bay-Delta Science Conference** is a forum for presenting technical analyses and results relevant to the Delta Science Program's mission to provide the best possible, unbiased, science-based information for water and environmental decision-making in the Bay-Delta system. The goal of the conference is to offer new information and syntheses to the broad community of scientists, engineers, resource managers, and stakeholders working on Bay-Delta issues. The organizers of the eleventh conference are seeking presentations that support this goal.

The conference program will feature oral and poster presentations that deliver scientific information and ideas relevant to the topic sessions. The conference theme this year is **"Building Resilience through Diversity in Science."** Such diversity can indeed take many forms. In the Bay-Delta, it embodies the habitats and species that inhabit the Sacramento-San Joaquin Delta and San Francisco Estuary. It is also reflected in the scientists who seek to understand how the system functions, the agencies striving for sustainable management, and the people living within its watershed. As the Bay-Delta community works towards a goal of *"One Delta, One Science"* by building resilience in our ecosystem, our institutions, and our collective science enterprise, promoting diversity in its many facets plays a central role. This means moving beyond one perspective or one discipline; we strive to integrate many pieces into a mosaic that depicts the complexity of our systems and enables a collaborative body of science.

This year's theme recognizes that true integration of scientific and human diversity in the Bay-Delta is a work-in-progress, but that charting pathways to get there is essential to build a more resilient water supply and ecosystem in the end. In this light, we invite talks and sessions that provide insight into the diversity of our natural system (species, genetic, habitat, etc.), that represent a diversity of perspectives, and that explore ways to recruit a more diverse scientific community. Talk and poster submissions may consider integrating multiple and alternative perspectives while still presenting cogent technical material through narrative. As the planning committee evaluates proposals,

it will consider the degree to which submissions draw attention to multiple ways of integrating or interpreting data; the use of alternative methods and approaches to arrive at study conclusions; and the identification of cases where multiple viewpoints, perspectives, or stakeholder input has resulted in more robust, resilient, or defensible science. This list is not exhaustive, and we encourage creativity and diversity, as well as traditional and non-traditional means of conveying scientific information. We will feature inclusivity and breadth in our science community where possible when selecting conference presentations.

In addition to general sessions and poster topics which will be based on the abstracts received, conference participants may propose special oral sessions or poster clusters on topics of particular importance to the Bay-Delta, especially topics that address diversity. Instructions for proposing a special session or poster cluster appear after the conference session topics below. **All abstracts for oral sessions (special and general) and posters (including clusters) are due December 28, 2020 by 8:59 PM.**

## **2021 IEP Workshop to be Included in the Bay-Delta Science Conference**

To accommodate the change in scheduling of the 2021 conference and the 2020 Interagency Ecological Program (IEP) Workshop, there will be a dedicated IEP Workshop track at the 2021 conference. Submission of abstracts for consideration as IEP Workshop talks or IEP posters will be made using the 2021 conference abstract submission web forms. You will have the option of designating your talk or poster as being associated with the IEP Workshop. We will make efforts to include the usual array of IEP-focused topics and presenters but assembling the IEP Workshop program under this hybrid arrangement will be new (and probably one-time-only). Please bear with us as we work to support IEP science communication using a more conference-oriented format and online submissions for our solicitation and selection of talks for our 2021 IEP Workshop.

## **Session Topics**

**Diversity, Equity, and Inclusion** – Science to increase human diversity in Bay-Delta science and management. Potential topics include traditional ecological knowledge, methods or examples of including diverse and underrepresented viewpoints in management, or efforts that foster a diverse

workforce in Bay-Delta science.

**Climate Change** – Science to understand long-term trends in snowpack, sea level, drought, storm intensity, and other variables, as well as science to help effectively manage and build resilience to those trends. Management issues include water supply, habitat availability, human safety, and at-risk communities.

**Fish Biology, Ecology, and Protection** – Science that addresses basic life history, behavior, and population structure of Bay-Delta fishes and the factors that affect their distribution and abundance. Suggested topics include population dynamics, emerging methods and technologies, fishery management, migration and spawning behavior, trophic ecology, physiological responses to key environmental stressors, responses to extreme events, and science-based management strategies to protect fish populations. Presentations on engineering to support fish protection goals are also invited.

**Flood Management** – Science that helps to improve flood management and its relationship to water supply. Example topics include ecosystem restoration potential of levee projects, invasive vegetation management on and around levees, and novel approaches to achieve multiple benefits including protecting habitats, water quality, water supplies, agricultural lands, and infrastructure.

**Food Webs** – Science that provides new insights into ecological processes governing and connecting food webs in the Bay-Delta. Examples of topics include insights into phytoplankton or zooplankton communities and effects of contaminants, sediments, nutrients, species invasions, and climate on food web connections.

**Global and Watershed Perspectives** – Science that compares Bay-Delta systems and processes to those in other areas of the globe. Of particular interest is research that highlights connections or discrepancies between regional and larger-scale processes and the Bay-Delta ecosystem or examines effects of larger-scale processes on the ecosystem or its management. New perspectives to evaluate, plan, restore, and organize land management and other resource uses within a watershed to restore ecological health and improve water management are also encouraged.

**Integrative Applied Science** – Science that translates understanding of ecological functions and processes into effective science-based management strategies for the Bay-Delta system. Specific strategies include science-based decision-support tools, collaborative approaches, effective communication strategies, use of conceptual models, and adaptive management.

**Resource Modeling** – Science that employs quantitative models to address complex questions. Specific examples include studies that couple hydrodynamic, sediment, particle tracking, and water quality models with ecosystem models such as those for native species and Bay-Delta and riverine food web dynamics.

**Physical Processes** – Science that improves the understanding of how physical processes such as hydrodynamics, sediment transport, and geomorphology may affect the Bay-Delta system.

**Social Sciences and Human Dimensions** – Research that addresses human dimensions (e.g., social drivers, processes, impacts) of actions and strategies implemented in the Bay-Delta system. Of interest is work that explores the nexus of social and natural sciences to understand environmental issues. Specific topics include but are not limited to social effects of environmental management actions, value-based tradeoffs among alternatives, economics, local partnerships, watershed groups, environmental law, environmental ethics/philosophy, human behavior and behavior change, and public perceptions of environmental issues. Contributions with an environmental justice component are encouraged.

**Species and Communities** – Science that advances the understanding and management of key species and their ecological functions and requirements in the Bay-Delta and its watershed. Of particular interest are studies that could improve the utility of monitoring programs (project and landscape levels), or that focus on species of special concern, numerically dominant species, ecologically important species, or nonnative invasive species.

**Sustainable Habitats and Ecosystems** – Science that provides new insights into the ecological and physical processes governing and connecting habitats in the Bay-Delta and its watershed and highlights the importance of biological diversity for sustainable ecosystems. Lessons learned that can increase effectiveness of ecosystem restoration, protection, management,

and sustainability of riparian habitat, river channels, floodplains, flooded and in-channel islands, levees, wetlands, and terrestrial habitats may be highlighted. Topics could describe aquatic, terrestrial, or human ecosystem sustainability and the kinds of landscape characteristics that can be restored to re-introduce appropriate processes at the scales needed to sustain habitats.

**Water and Sediment Quality** – Science that advances understanding and management of key environmental and drinking water quality constituents, associated biogeochemical processes, and their ecological and public health effects within the Bay-Delta and its upstream watersheds. Key water and sediment quality constituents include inorganic and organic contaminants, organic matter, salinity, sediment, nutrients, and dissolved oxygen.

**Water Supplies and Instream Flows** – Science that advances water supply management strategies to improve water supply and stream flow reliability (timing, frequency, duration, magnitude, etc.). Management strategies may include operation/reoperation of water conveyance facilities, groundwater management (including implementation of the Sustainable Groundwater Management Act), water use efficiency, water demand predictions, water transfers, and water storage. Of particular interest are strategies that incorporate adaptive management approaches.

## Oral Presentations

Oral presentations are expected to advance our state of knowledge by focusing on new findings, models, and syntheses of past and ongoing studies that are relevant to the management or scientific understanding of the Bay-Delta. Presentations should avoid focusing on project or program descriptions or summaries of planned studies. Because we anticipate that requests for oral presentations will exceed the available time slots, the Program Committee will assign oral presentations based on technical merits of the abstract, relevance of the topic, and importance of the findings. Abstracts should provide a clear description of the contribution, **including their relevance to Bay-Delta management**. Speakers will be limited to one oral presentation.

## Special Oral Sessions

There will be a limited number of special sessions devoted to topics of

particular interest to the Bay-Delta community. Proposals for special oral sessions must be submitted by the abstract submission deadline (December 28, 2020). Special oral session proposals are to be submitted using a form available on the conference website and require a session title, the name of the session chair(s), a short (<200 words) description of the session topics (including relevance to Bay-Delta management), and a list of proposed presentation titles and authors. Each presentation proposed in the special oral session must have its own submitted abstract by the abstract deadline. Both submissions are required for special oral session proposals.

The special session presentations should be well integrated and representative of the current body of research on the topic. The Program Co-Chairs may also work with the Special Session Organizer (the person submitting the proposal) to develop the final configuration, including the possible addition of related talks from the pool of general submissions. Because of overwhelming demand for speaking slots, the length of a proposed special session will be limited. Specifically, a given special session can range from  $\frac{1}{4}$  of a day to a half day (one-two session blocks). Each block consists of five 20-minute talks and may include a panel discussion in place of one or more talks. Proposals including discussion panels should include the length of the discussion period (must be in 20-minute intervals). Proposed panels should inclusively and equitably reflect a diversity of perspectives and participants presenting the discussion topic. Because we anticipate that special session proposals will exceed the available time slots, the Program Committee may not accept a special session proposal, and submitted abstracts will be considered for inclusion in other conference sessions based on the technical merits of the abstract, including relevance of the topic, presentation of results, and importance of the findings.

Special consideration will be given for session proposals that integrate the theme of diversity in Bay-Delta science as described earlier. Presentations on “management-relevant science” related to the session topic are encouraged. Examples of topics from past Bay Conferences include: Suisun Marsh and the Arc, Lost in Translation: The Art of Interpreting Complex Science for Policymakers, Anatomy of the Spring 2016 Phytoplankton Bloom in the Delta, and Adaptive Management in the Delta: Learning from Habitat Projects.

## **Poster Presentations**

The poster session is a very important part of the conference. Posters will be

displayed throughout the conference, and virtual discussions between the presenters and conference attendees will be encouraged. Posters may also include project/program summaries relevant to Bay-Delta issues, as well as reports of work planned or in progress. Presenters should indicate the theme most pertinent to the subject of the poster from the list on the abstract submittal form, as the posters will be arranged by theme. **Inclusion of a statement in the text of the abstract and poster on the relevance of the study's findings to Bay-Delta management is strongly encouraged.**

## Poster Clusters

Similar to special oral sessions, there is the opportunity to organize groups of posters on a particular topic and to have those posters grouped together. Poster clusters require a chairperson to organize the cluster and to prepare an overview poster that synthesizes information from the individual posters to provide larger-scale conclusions or applications of results. The posters should be well-integrated and complementary as a cluster. Including a diversity of perspectives is encouraged. **Proposals for poster clusters must be submitted by the abstract submission deadline of December 28, 2020.** Proposals are to be submitted using a separate form available on the conference website and require the cluster title, the name of the cluster chair(s), a paragraph (<200 words) describing the content and focus of the cluster including the relevance of this topic to Bay-Delta management, as well as a list of poster titles and authors. Each presentation proposed in the poster cluster must have submitted its own abstract by the abstract deadline. Both submissions are required for poster cluster proposals.

## Art-Science Collaborations

As in previous years, the conference will feature artwork relating to the estuary and/or the conference theme. Artists of **all forms and media, including but not limited to painting, photography, sculpture, digital, music, and performance** are encouraged to apply. Because this will be a virtual art exhibit, we encourage use of digital media and/or high-quality photography of physical objects/paintings.

In addition to our general call for artist submissions, we are particularly interested in featuring original works created through collaborations between artists and scientists. Art-science collaborations deepen and enrich artistic work while communicating scientific research to broader audiences.

For artists interested in collaborating with a scientist: you don't need any scientific expertise, just curiosity and willingness to learn! For scientists interested in collaborating with an artist: you don't need any artistic experience, just curiosity and willingness to learn! After all, your graphs and data visualizations are really just art in disguise...

To apply, please submit a 200-word description of your project, or proposed project, the name(s) of the project contributor(s), the project's connection to the Sacramento-San Joaquin Delta or San Francisco Estuary, and (preferred but not required) its connection to the conference theme. You may submit either through the abstract submission website or by email to [Chelsea Batavia](#). Please use email if you would like to include images (up to three) with your submission. Priority will be given to projects showcasing diverse viewpoints, unique art-science collaborations, and underrepresented groups.

If you have any questions, or to find an artist or scientist to collaborate with, please email Art Co-Chairs [Chelsea Batavia](#) or [Rosemary Hartman](#).

### Student Awards

Awards will be given for the best student oral and poster presentations during the conference. Please indicate student status on the abstract form.

**To qualify for a student award, you must have carried out the presented work while you were a registered student, and you must make the presentation yourself.**

### Abstract Requirements and How to Submit

All presenters (oral and poster) must submit an abstract using the online form that will be available through the [conference website](#). There is a 300-word limit on the abstract text. Please fill in all the blanks on the form, including selection of the appropriate theme or special session, any special presentation needs, and your preference for an oral or poster presentation. Depending on the number and content of abstracts submitted, the Program Co-Chairs may move some of the requested oral presentations into the poster session and vice versa. Incomplete or poorly written abstracts and those that are not relevant to Bay-Delta issues will not be accepted.

**Abstract content:** A complete abstract should include the following four components:

- **Problem statement:** What problem are you trying to solve and why?

- **Approach:** How did you go about solving or making progress on the problem?
- **Results:** What are your main findings?
- **Conclusions/Relevance:** What are the scientific and management implications of your findings, including the relevance of your findings to Bay-Delta management? What insights do your findings provide towards ecosystem sustainability in the near and long-term futures? **Authors are strongly encouraged to include this relevance statement in the abstract.**

## Questions?

**Oral technical program or the abstract submittal process questions** should be directed to the Program Co-Chairs. Email [Sam Bashevkin](#), [Mike Chotkowski](#), and [Josh Israel](#).

- **Session Chair Volunteers:** If you are interested in serving as chair of a general session, please contact Sam, Mike, and Josh above. Session Chair assignments will be made when the final list of conference sessions has been determined.

**Posters or poster cluster questions** should be directed to Poster Co-Chairs [Eva Bush](#) and [Chris Kwan](#).

**Art-Science collaboration questions**, including help finding an artist or scientist collaborator(s) should be directed to Art Co-Chairs [Chelsea Batavia](#) and [Rosemary Hartman](#).

**The Brown-Nichols Science Award questions** should be directed to the Award Chairs: [Michelle Shouse](#) and [Lauren Hastings](#).

**Other aspects of the conference:** Questions regarding other parts of the conference should be directed to Conference Co-Chairs [Steve Culberson](#) (IEP), [Stacy Sherman](#) and [Richard Connon](#).

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The link to submit abstracts will be located on the [conference website](#).

Information on the Delta Science Program is available at the [Delta Science Program website](#).

### **The Brown-Nichols Science Award**

This award was established to recognize the contributions of scientists for their significant research and active involvement in facilitating the use of science for managing the San Francisco Estuary and watershed. The award recipient will be recognized during the opening plenary session at the 2021 conference. **The deadline for nominations is January 11, 2021.**