

DELTA SCIENCE FELLOWS PROGRAM - 2020
Request for Applications
Delta Science Program
California Sea Grant College Program

Applications are due by 5:00 pm Pacific Daylight Time, December 20, 2019

NOTE: The Delta Science Program and California Sea Grant will host an optional informational webinar to review the fellowship program and application logistics on **October 24, 2019 from 10:00am to 12:00pm.**

To join, go to <https://ucsd.zoom.us/j/156950966>

This presentation will be recorded and made available on the Sea Grant website.

**If this is your first time using Zoom, we encourage you to login at least five minutes before the webinar starts, as you may need to download software.*

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Please read this solicitation carefully as there have been changes from previous announcements.

OVERVIEW

The Delta Science Program and California Sea Grant are excited to announce another round of Delta Science Fellowships. This fellowship funds up to two (2) years for research projects that will advance the state of knowledge underlying high priority science issues that affect the California Bay-Delta and its management as a coupled human and natural system. Eligible applicants include postdoctoral researchers, Ph.D. students and for the first time for this fellowship, masters students. Priority topic areas are identified below (also see Appendix B for details), and include research in both the natural and social sciences. **Applications are due by 5:00 pm Pacific Daylight Time, December 20, 2019.**

Delta Stewardship Council

On February 3, 2010, the Sacramento-San Joaquin Delta Reform Act of 2009 took effect creating the Delta Stewardship Council (Council) as an independent state agency with the mission to achieve the coequal goals. As stated in the California Water Code section 85054, “Coequal goals means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place.” Under the same legislation, the Delta Science Program replaced and became the successor to the CALFED Science Program, and the Delta Independent Science Board replaced the CALFED Independent Science Board; the latter reports to the Council.

Delta Science Program

The mission of the Delta Science Program is to provide the best possible unbiased scientific information to inform water and environmental decision-making in the Sacramento-San Joaquin Delta (Delta) (Appendix A) to support achieving the coequal goals. This body of knowledge must be unbiased, relevant, authoritative, integrated across program elements, and communicated to the scientific community, agency managers, stakeholders, and the public.

The Delta Science Program’s mission is carried out through funding research, synthesizing and communicating scientific information to policy and decision makers, promoting independent scientific peer review, and coordinating with Delta agencies to promote science-based adaptive management. As part of the Council, the Delta Science Program assists with the development and periodic updates of the Delta Plan’s adaptive management program.

In June 2019, the Delta Science Program released the updated [Delta Science Plan](#) which lays the foundation for achieving a shared vision for Delta science: ‘One Delta,

One Science' – an open Delta science community that works collaboratively to build a shared body of scientific knowledge with the capacity to adapt and inform future water and environmental decisions. The Delta Science Plan was developed by the Delta Science Program with contributors from across the diverse science community engaged in improving understanding of the complex Bay-Delta system and structuring scientific findings to inform policy and management actions. The Delta Science Plan is part of the three-part planning, implementation, and reporting science strategy for the Delta, which also includes the Science Action Agenda and the State of Bay-Delta Science.

The Science Action Agenda

The [2017-2021 Science Action Agenda](#) (SAA) is a four-year science agenda for the Delta that prioritizes and aligns science actions to inform management decisions, fills gaps in knowledge, promotes collaborative science and human dimensions research, builds the science infrastructure, and achieves the objectives of the Delta Science Plan. The SAA will advance scientific knowledge needed for Delta management and policy decision-making and inform Delta-related science work plans and projects. Development of the SAA included input and review from numerous entities including the Delta Science Program's Science Advisory Committee, the Independent Science Board, the Delta Agency Science Workgroup, the Interagency Ecological Program, and the broader Delta science community. **The 2020 Delta Science Fellowship priority topic areas are based on the Science Action Agenda (see below and Appendix B for details on priority topic areas).**

Delta Science Fellows Program

Since 2003, the Delta Science Program and the California Sea Grant College Program have sponsored a fellowship program for Ph.D. students and postdoctoral researchers. **In addition, for the first time, we will be accepting applications for the 2020 Delta Science Fellowship from students who are in masters programs.** The aim of the Delta Science Fellows Program is to bring together junior scientists with Delta agency scientists and senior research mentors in collaborative research, data analysis, and synthesis projects relevant to Delta policy and management, including analyses of the immense monitoring database collected and maintained by the implementing agencies. The Delta Science Program is again seeking applications from qualified individuals to compete for fellowship opportunities. California Sea Grant will administer and manage the fellowship program on behalf of the Delta Science Program. Fellowships will be awarded based on the intellectual merit of the application and the expected contribution to the priority issues identified by the SAA (refer to Appendix B).

Goals

The goals of the Delta Science Fellows Program are to:

- (1) Engage highly qualified scientific talent to help advance the state of scientific knowledge on the Delta Plan policy areas and high priority science actions identified by the SAA. The Delta Plan covers the Sacramento-San Joaquin Delta and Suisun Marsh (Appendix A). Proposed fellowship projects may include areas outside the Delta and Suisun Marsh, including the Delta watershed and critical

linkages with San Francisco Bay, if the project affects achievement of the coequal goals (Appendix B);

(2) Provide support for the training and development of natural and social scientists to work in multidisciplinary research, including synthesis and/or modeling-based projects intended to support resource management in the Delta; and

(3) Promote scientific partnerships across research institutions, agencies, non-profit organizations, and disciplines.

To be eligible applicants **must** identify a community mentor, often an agency scientist, who has direct experience in data collection and analysis and/or how the science may contribute to management issues or fundamental understanding of the Delta system. During the fellowship, the fellow, community mentor(s) (more than one is acceptable), and research mentor will collaborate on the approved project, and together they will provide updated progress information and drafts of any manuscripts intended for publication to the Delta Science Program. The research mentor will be in charge of the project, providing broad oversight and review of the fellow's research and products. A mentoring plan between the fellow, the research mentor, and the community mentor(s) will be required within one month after the fellowship is initiated (see Appendix D).

Applicants are encouraged to use existing data sets to the maximum extent feasible. If collection of new data is part of the proposed research, the prospective Fellow should clearly explain how these new data will supplement available data and what existing data will be used as part of the project.

Fellowship Opportunities

To achieve these goals, the Delta Science Program and agency partners are expected to sponsor approximately 6-8 fellows in disciplines that address the 2020 priority research topics as described in Appendix B.

FELLOWSHIP PROGRAM

Award

The fellowship will provide up to two (2) years of support based on scope/type of projects and contingent upon the availability of funds, for postdoctoral, Ph.D., and Masters fellows, in the form of a grant/award that includes funds for a stipend and for research-related expenses. Once the funds are awarded by California Sea Grant through a cooperative agreement with the Delta Science Program, the fellow's stipend and research related expenses will be administered by the university, college, or research institution with which the fellow and/or research mentors are affiliated.

Postdoctoral fellows will receive up to \$55,000 per year stipend. Ph.D. and masters fellows will receive up to \$35,000 per year stipend, for a maximum duration of two years. In addition, each fellow may request funds (up to \$34,000 per year for postdoctoral fellows or \$23,000 per year for Ph.D. and masters fellows) for research

supplies/equipment, travel and other expenses necessary for carrying out the proposed research, and attending scientific meetings including the Bay-Delta Science Conference or State of the Estuary Conference (see “Communication of Information”).

The funds for research-related costs and benefits are subject to a maximum indirect cost rate limit of 30%, in accordance with rates determined/set by the cooperative agreement between the Delta Science Program and California Sea Grant. The maximum amount requested for the stipend and research and/or education-related expenses (including tuition or health benefits) should not exceed \$115,700/year for postdoctoral fellows and \$75,400/year for Ph.D. and masters fellows, including indirect costs.

For Ph.D. and masters fellows, the portion of the award provided to each fellow for tuition (unless waived), health insurance, and other university fees will be determined by each university in accordance with its guidelines. The portion of the award for living expenses will be distributed as a monthly stipend, not as salaries, wages, and benefits, by the academic or research institution affiliated with the fellow.

Continued support after the first year will be contingent on satisfactory performance of the fellow and on the availability of funds.

Mentorship Program

A formal mentoring plan will be required to be submitted within one month after funds are awarded and the fellowship is initiated. The purpose of the mentoring plan is to ensure a quality experience for the Fellow that provides a springboard to a career in scientific research and/or program implementation.

A sample mentoring plan is provided in Appendix D.

2020 Priority Topic Areas

For 2020, the Delta Science Fellows Program is requesting submission of research proposals that are responsive to one or more of the priority science actions identified in the 2017-2021 Science Action Agenda (See Appendix B for details on each topic).

2017-2021 Science Action Agenda Priority Science Actions:

1. Invest in assessing the human dimensions of natural resource management decisions
2. Capitalize on existing data through increasing science synthesis
3. Develop tools and methods to support and evaluate habitat restoration
4. Improve understanding of interactions between stressors and managed species and their communities
5. Modernize monitoring, data management, and modeling

Guiding Documents

- 2017-2021 Science Action Agenda: <http://deltacouncil.ca.gov/science-program/2017-2021-science-action-agenda>
- Delta Science Plan: <https://deltacouncil.ca.gov/pdf/2019-delta-science-plan.pdf>
- 2016 Delta Smelt Resiliency Strategy: <http://resources.ca.gov/docs/Delta-Smelt-Resiliency-Strategy-FINAL070816.pdf>
- Sacramento Valley Salmon Resiliency Strategy: <http://resources.ca.gov/sacramento-valley-salmon-resiliency-strategy/>
- Independent Review of the Draft Bay Delta Conservation Plan Effects Analysis, Phase 3 – Chapter 5: Effects Analysis and Associated Technical Appendices: <http://deltacouncil.ca.gov/event-detail/10163>
- Fall Low Salinity Habitat (FLaSH) Studies and Adaptive Management Plan Review: <http://deltacouncil.ca.gov/event-detail/7070>
- National Academies Report on Sustainable Water and Environmental Management of the California Bay-Delta: http://www.nap.edu/catalog.php?record_id=13394
- Delta Plan: <https://deltacouncil.ca.gov/pdf/delta-plan.pdf>
- Bay Delta Conservation Plan/California WaterFix/EcoRestore: <http://baydeltaconservationplan.com/Home.aspx>
- State Water Resources Control Board Bay Delta Plan update: http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/
- Delta Protection Commission Economic Sustainability Plan: http://www.delta.ca.gov/files/2016/10/Final_ESP_w_Appendices_2012.pdf
- Delta Independent Science Board Report – Review of Research on the Delta as an Evolving Place <http://deltacouncil.ca.gov/docs/review-research-sacramento-san-joaquin-delta-evolving-place-delta-independent-science-board>
- Delta Conservation Framework another potential addition? <https://www.wildlife.ca.gov/conservation/watersheds/dcf>
- Delta Conservancy Strategic Plan: <http://deltaconservancy.ca.gov/strategic-plan/>
- *The State of Bay Delta Science, 2016*: <http://sbds.deltacouncil.ca.gov/>

The Delta Stewardship Council web page is undergoing significant changes to provide increased accessibility and some documents may not be available in the short term. If you cannot find documents above, please contact Maggie Christman (maggie.christman@deltacouncil.ca.gov, 916-445-0464) for assistance.

Research Mentors

Fellowship applicants **must** include a letter of support from the research mentor they plan to work with on the proposed effort. Research mentors must be scientists actively engaged in natural sciences, social sciences, or policy as the primary focus of their position, with a publication record in peer-reviewed scientific journals. Research mentors working at academic institutions must be employed at the tenure-track level of Assistant Professor or higher (academics holding non-teaching, research faculty positions and/or those permitted by their institution to serve as principal investigators on

grants are also eligible to be research mentors).

Applicants for the Ph.D. and masters fellowships should be working with a research mentor from the academic institution at which they are enrolled. Applicants for the postdoctoral fellowship may work with mentors from any academic or research institution.

Community Mentors

In addition to working with research mentors, fellows **are required** to collaborate with at least one community mentor. The role of this mentor is to help guide research relevance, participate in the co-production of research, and help translate and communicate findings. Community mentors must have social or natural scientific and/or engineering training, and be familiar with existing data and resource issues central to the proposed research. Current involvement with the Delta programs or agencies working on Delta issues is preferred. Community mentors may be agency scientists, managers, engineers, or scientific/technical staff in environmental organizations, or stakeholder associations.

Fellows will work closely with community mentors, sharing ideas and progress throughout the project. Fellows may also communicate their findings and request feedback from an appropriate scientific/technical group focused on the Delta system. Examples include, but are not limited to, Interagency Ecological Program project work teams, Ecosystem Restoration Program, California Water Plan, Central Valley Flood Management Planning Program, Delta Protection Commission, Delta Conservancy, Integrated Modeling Steering Committee, and California Water and Environmental Modeling Forum.

As part of the application, applicants must identify at least one community mentor and include a corresponding letter of support from that community mentor. The apparent or demonstrated depth of collaboration with mentors is an important factor in the selection process and applicants are encouraged to enlist the community mentor during the proposal development stage. Applicants may have more than one community mentor.

Please contact Maggie Christman (Maggie.Christman@deltacouncil.ca.gov, 916-445-0464) for additional information regarding potential community mentors.

Communication of Information

BAY-DELTA SCIENCE CONFERENCE

Fellows will be required to present the results of their research at the Bay-Delta Science Conference or the State of the Estuary Conference, either as a poster or oral presentation. The conferences are held in Sacramento and the San Francisco Bay area, respectively. Fellows should budget for travel to at least one conference in their application. Fellows are also strongly encouraged to present their research at other national and international professional meetings.

PEER-REVIEWED PUBLICATIONS

Fellows are required to publish results from this fellowship in peer-reviewed, open-access journals, for example, *San Francisco Estuary & Watershed Science*.

DELTA STEWARDSHIP COUNCIL MEETINGS

Fellows may be asked to give a limited number of briefings to Council technical groups or agency managers in Sacramento, California. In these cases, California Sea Grant will fund additional travel costs, if needed.

EARLY CAREER LEADERSHIP WORKSHOP

If offered during the fellowship, fellows will be expected to attend a two to three day Early Career Leadership Workshop, which includes a Delta Stewardship Council meeting, during their fellowship. This workshop helps to put research in the context of management challenges, provides training in communicating science, provides advice on how to build a successful science career, and provides advice on career opportunities.

ANNUAL REPORTS

All fellows must prepare annual progress reports to be submitted to the California Sea Grant Office, which will deliver these to the Delta Science Program. The progress report will detail the grantee's research activities, provide retrospective and prospective revision of the research plan, and report expenditures. Additionally, a copy (may be electronic) of any poster/other professional submissions to that year's science conference(s) or scientific journals will be required at the end of each year. Additional metrics specified in the mentoring plan should be reported.

FINAL COMPLETION REPORT

Each fellow must produce and submit to the California Sea Grant Office a final research report, deliverable to the Delta Science Program, at the end of the respective fellowship agreement period. The final report will summarize results and accomplishments of the research project, including all publications since the fellowship's inception. Additional metrics specified in the mentoring plan should be reported.

This is a prestigious fellowship program with past recipients going on to successful careers in agencies, universities, and other organizations. Fellows are encouraged to maintain contact with Sea Grant during and after their fellowship in order to communicate their research through blogs, presentations, etc. and may also be invited to participate in review panels and other activities, wherever they may eventually reside.

FELLOWSHIP SELECTION AND APPLICATION PROCESS

Eligibility

POSTDOCTORAL FELLOWSHIPS

Prospective postdoctoral science fellows must hold a Ph.D. or complete a Ph.D. before the starting date of the fellowship, in a doctoral degree program in the environmental

sciences, engineering, social sciences, human dimensions or in a related field appropriate for disciplines identified under “Fellowship Opportunities.” Any postdoctoral researcher may apply who is associated with an accredited U.S. institution of higher learning for the duration of the grant. Postdoctoral fellowships will not be awarded unless and until the prospective fellow has fully completed the Ph.D. degree.

PH.D. (GRADUATE DOCTORAL) FELLOWSHIPS

Prospective Ph.D. science fellows must, at the time of application, be in or have recently been admitted to a Ph.D. degree program in natural resources, environmental sciences, environmental policy and management, engineering, social sciences, human dimensions, or coastal, aquatic or related sciences at any accredited U.S. institution of higher education. Candidates must remain associated with an accredited U.S. institution of higher learning for the duration of the award.

MASTERS (GRADUATE MASTERS) FELLOWSHIPS

Prospective masters science fellows must, at the time of application, be in or have recently been admitted to a masters degree program in natural resources, environmental sciences, environmental policy and management, engineering, social sciences, human dimensions, or coastal, aquatic or related sciences at any accredited U.S. institution of higher education. Candidates must remain associated with an accredited U.S. institution of higher learning for the duration of the award.

Selection Criteria

The fellowships will be awarded in a competitive process to the most highly qualified applicants.

The selection criteria will include:

- A. The quality of the research proposal, including appropriateness of the approach to be used.
- B. The strength of academic performance and relevant academic achievement, experience, and the quality of applicant’s career goal statement.
- C. The importance of the proposed research to science needs identified in Appendix B.
- D. The research mentor’s demonstrated abilities in the general area of questions addressed by the proposal.
- E. The expected quality and strength of interaction that will be developed between the research institution, the community mentor and her/his organization.

Selection Procedure

Selection is highly competitive. Applications must be submitted to the California Sea Grant College Program Office no later than 5:00 pm Pacific Daylight Time, December 20, 2019. One or more review panels consisting of outside, independent expert reviewers from relevant disciplines, Delta Science Program leadership, and California Sea Grant leadership will be convened in Winter 2020 to review and recommend

selection of finalists to the Delta Science Program lead scientist, using the criteria outlined above. We anticipate awarding a combined total of approximately 6-8 fellowships for 2020. All applicants will be notified of the selection decision early to mid-April 2020.

Permits

For scientists proposing the collection of new samples - the proposer is required to provide documentation in the project narrative of the proposal that any permit(s) (for example, the proposed take of a threatened or endangered species under the federal or State Endangered Species Acts, a geophysical survey permit from the California State Lands Commission for all waters of the Delta if proposing the use of acoustic generating equipment) required for the collection of those samples is (or will be) in hand by the start date of the project. Surveying permits and other types of permits may also be required (e.g., from the Institutional Review Board), and should be documented in the project narrative. If no such permits are required, we ask that this be stated in the proposal text. Ensuring that all permits are properly obtained before research commences is the responsibility of the applicant. For additional information, go to <https://www.fws.gov/permits/instructions/ObtainPermit.html>.

Timetable

December 20, 2019 (5 p.m. PT) - Applications due to California Sea Grant College Program via eSeaGrant online submission portal

April 2020 (approximate) - Applicants notified of selection results

May 2020 (approximate) – Start date: Funds awarded to the selected Delta Science Masters, Ph.D. and postdoctoral fellows

May 2022 (approximate) – 2-year fellowship awards end. 1-year fellowships will also be considered (ending May 2021).

PLEASE NOTE THAT DUE TO THE CONSTRAINTS INHERENT TO THE FUNDING SOURCE, NO TIME EXTENSIONS BEYOND DATES SPECIFIED IN THE AWARD WILL BE POSSIBLE.

Application Process and Contents

Electronic Submission

Proposals are required to be submitted using eSeaGrant by 5:00pm PDT on December 20, 2019 PDT: <http://eseagrant2.ucsd.edu>

If applicants have not registered in eSeaGrant, you will need to register first. Once you login, you have the option to change your password. Simply click on your name in the upper-right corner of the screen, and select “My Profile”.

To start a proposal, or revisit/edit an existing proposal, click “RFP (Request for Proposals)” on the banner head. Then click “Add Proposal” under “2020 Delta Science Fellowship”.

In order to submit a proposal, you must work down the sequence of sections (“Start Here” through “Submission Preview”) listed on the left side of the proposal window. eSeaGrant provides sections to upload required forms. Some of these pages may require additional calculations and pop-up pages, so please allow your browser to display pop-up windows and enable JavaScript. Files to upload must be converted to PDFs before uploading to eSeaGrant (except the matching funds spreadsheet). Multiple documents must be consolidated into one PDF for each section (except for CVs).

We recommend that eSeaGrant users access the system, review submission requirements within it, and start to upload necessary documents well in advance of the submission deadline. This will give users the opportunity to obtain any necessary clarification or assistance before the deadline. **The submission deadline will not be extended.**

For questions regarding use of eSeaGrant, please contact Miho Ligare at (858) 534-1160; email: miligare@ucsd.edu

Contents of a Complete Application

Listed below are the requirements for a complete application package. Please use this as an inventory checklist to aid you in preparing the application.

1) Title or Cover Page

A signed title page must be included with the proposal. A blank copy downloadable in Excel format, labeled “DSF-2020.Cover-Page”, can be found [here](#). Please provide all requested information and obtain the required signatures. If you are applying from an academic institution, send your original proposal to your campus research office for local campus approval. The completed and signed title page must be converted to a PDF and uploaded.

2) Project Summary

The Project Summary is fillable on-line in eSeaGrant. **Applicants will need to prepare separate, brief sections for objectives, methodology and rationale (referring to relevance to high priority Delta science actions [Appendix B]) to complete the Project Summary form.** The project summary presents a concise description of the proposed research in a form useful to a variety of readers not requiring detailed information. The project summary is the most widely consulted description of your project.

3) Project Narrative

The Project Narrative will be a single PDF file including multiple components. The format may vary; however, applications should include the information listed below. The Proposed Research section (3a) of the Project Narrative file **MUST not exceed 12 pages** (INCLUDING illustrations, charts, tables, and figures). The other components of the Project Narrative listed below as 3b, 3c, and 3d do not count towards your 12 page limit.

3a) **Proposed Research** (12-page limit, not including literature citations, using 12-pt font and 1" margins, top, bottom, left and right). The format is flexible but please address the following:

1. Introduction/Question/Objectives: What is the question/problem being addressed? What are the goals and objectives of the proposed research? These should be well defined and clearly stated.
2. Approach/Plan of Work: What is the anticipated approach to the proposed research? The application should present evidence that there has been thoughtful consideration of the approach to the question(s) under study, with a timeline for meeting objectives during the requested period of support. Sufficient detail of the methodologies should be provided to facilitate an assessment of the adequacy of the approach to achieve the stated objectives.
3. Output/Anticipated Products and/or Benefits: Upon commencement of the fellowship, what are the anticipated benefits to the fellow, the research mentor, community mentor(s), and the relevance of the research to policy or management of the Delta. What can be expected after year 1, or year 2? Please describe anticipated per year outcomes.
4. References and Literature Citations: Should be included but will not be counted toward the 12-page limit for the proposed research.

3b) **Explanation of how the proposed research links to the high priority science actions identified in Appendix B** (1-page limit).

3c) **Personal Statement** from the fellowship candidate that describes how this research fits into the fellow's career plans and summarizes experiences that specifically prepared the applicant for this research task (not to exceed 2 pages).

3d) **CVs** from the fellowship candidate, research mentor(s), and community mentor(s) (not to exceed 2 pages for each CV).

4) Budget and Budget Justification

Pay careful attention to the annual budget limits noted above (see section titled Fellowship Program – Award). Budget worksheets will need to be created in eSeaGrant.

A budget workbook available in [Excel](#) (called DSF-2020.Budget) may help in planning your budget. However, please remember that your budget submission and justification must be completed using the online form in eSeaGrant. Do not submit the Excel file as your final budget.

In eSeaGrant the fellow's stipend should be listed under "Section G-Other costs" and not under salaries and wages. Also, as applicable, indicate expected costs for expendable supplies, publication costs, and travel (please clearly identify any travel proposed outside of California).

This fellowship does not require matching funds so "Grantee Mos. Effort" and "Grantee Share" should be left blank.

The funds for research-related costs and benefits are subject to a maximum indirect cost rate of 30%, in accordance with rates determined/set by the cooperative agreement between Delta Science Program and California Sea Grant.

All budget sections will require justification. The budget justification should explain all budget items in sufficient detail to enable reviewers to evaluate the appropriateness of the research-related funds being requested.

For any questions regarding your budget, please contact the California Sea Grant Assistant Director Rose Madson, rmadson@ucsd.edu or by telephone 858-534-4601.

5) Letters of Support

The fellowship application requires that letters of support be included from each community and research mentor. These should be collected, converted to a PDF, and uploaded in eSeaGrant.

5a) Letter of support from prospective community mentor(s) (1-2 pages): A community mentor must be identified and contacted early in the project development phase and a letter of support from the community mentor(s) must be included. For questions regarding community mentors, please contact Maggie Christman (Maggie.Christman@deltacouncil.ca.gov). A list of potential community mentors that indicate a willingness to work with a fellow is available upon request.

5b) Letter of commitment from the research mentor: The application must include a letter from the research mentor indicating a willingness to be a mentor for the applicant, and expressing support of the proposed research project (not to exceed 2 pages). If the fellow is selected, a mentoring plan similar to the sample in Appendix D will be required within a month of starting the fellowship.

6) Three letters of academic recommendation (in addition to the letters of support described above): It is the responsibility of the prospective fellow to arrange to have three letters of recommendation sent directly to Sea Grant by the application deadline. Referees should address the academic qualifications and performance of the

candidate fellow. A letter of academic recommendation can come from your research mentor; however, the content should address the candidate's academic qualifications and not duplicate material from the letter of support. Please identify the three referees that will be submitting a letter of academic recommendation in eSeaGrant. Letters can be set via eSeaGrant or as an attachment to an email to sgproposal@ucsd.edu

IMPORTANT: To maintain confidentiality, letters of recommendation may be submitted directly from the referee to CASG through eSeaGrant and must be submitted by the application deadline to be considered. Alternatively, letters (PDF or Word document) may be emailed directly to sgproposal@ucsd.edu by the referee.

7) Copies of graduate and undergraduate transcripts (undergraduate transcripts are required from Ph.D. and masters fellowship applicants only): Transcripts are required and should be uploaded as PDFs into eSeaGrant.

Information Contact

Additional information about the fellowship may be obtained from:

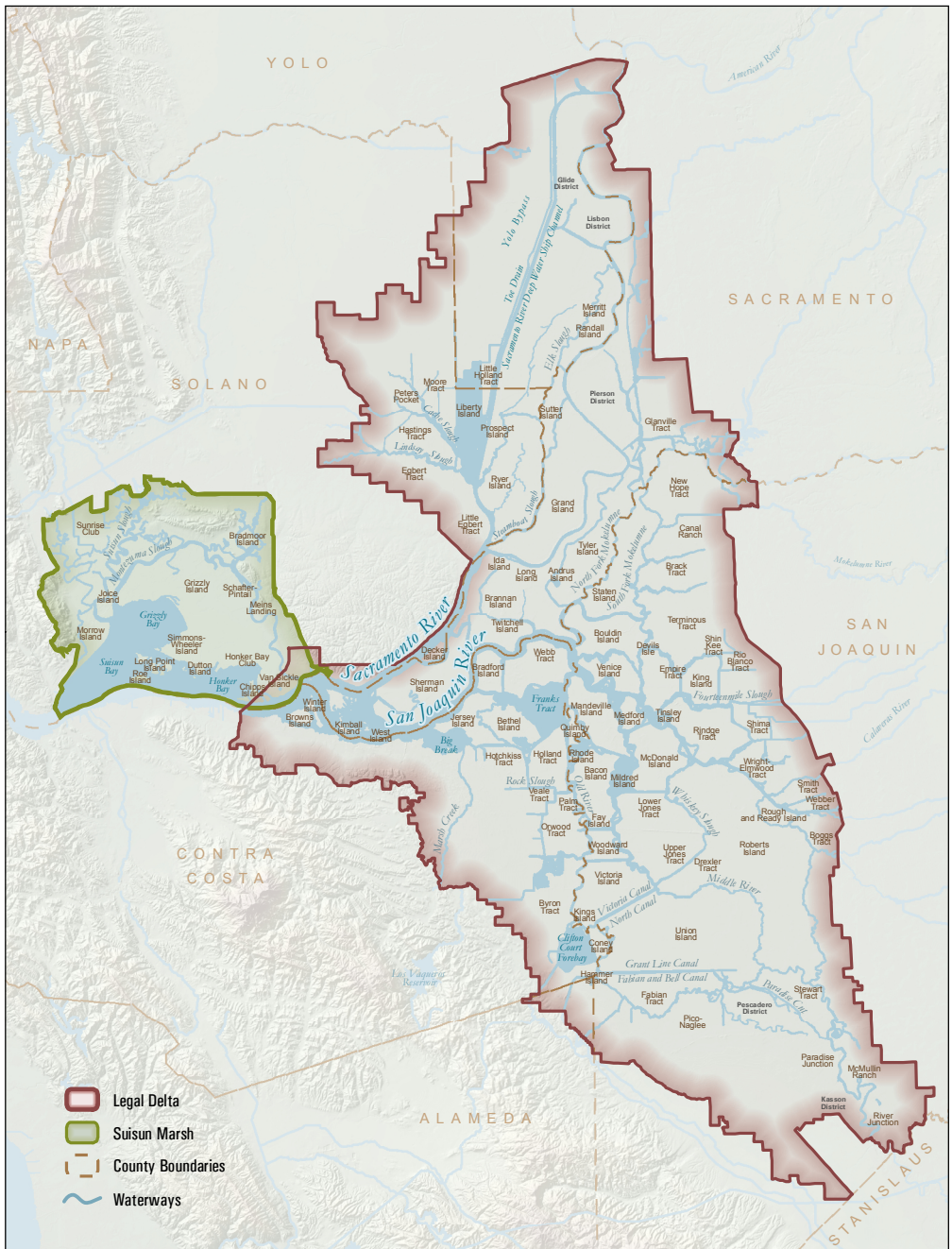
Miho Ligare
Research & Fellowship Coordinator
California Sea Grant
(858) 534-1160
sgproposal@ucsd.edu

In addition, California Sea Grant and the Delta Science Program will host an optional webinar to review the fellowship program and application logistics on **October 24, 2019 from 10:00am to 12:00pm.**

To join, go to <https://ucsd.zoom.us/j/156950966>

This presentation will be recorded and made available on the Sea Grant website.

**If this is your first time using Zoom, we encourage you to login at least five minutes before the webinar starts, as you may need to download software.*



The Sacramento-San Joaquin Delta and Suisun Marsh, Figure 1-1

Appendix B: Delta Science Fellows 2020 High Priority Science Actions

Action Area 1: Invest in assessing the human dimensions of natural resource management decisions

- A. Investigate the most cost-effective methods to improve species' habitat on working lands.
- B. Develop tools to assist adaptive management in the Delta.
- C. Initiate a research program on the Delta as an evolving place that integrates the physical and natural sciences with the social sciences.

Action Area 2: Capitalize on existing data through increasing science synthesis

- A. Strategically build the capacity to do collaborative science and science synthesis through implementing the science synthesis mechanisms outlined in the Delta Science Plan.
- B. Identify and prioritize important data sources that should be interconnected to promote collaboration and provide the technology necessary to allow this information to be easily accessed.

Action Area 3: Develop tools and methods to support and evaluate habitat restoration

- A. Develop methods for evaluating long-term benefits of habitat restoration based on current understanding of how species use restored areas and how use changes over time as habitats evolve.
- B. Estimate and assess the system-wide effects of location and sequence of tidal marsh habitat restoration projects in regions where sea-level is rising and climate is changing.






Action Area 4: Improve understanding of interactions between stressors and managed species and their communities

- A. Implement studies to better understand the ecosystem response before, during, and after major changes in the amount and type of effluent from large point sources in the Delta including water treatment facilities.
- B. Identify areas that act as refugia for species of concern during extreme conditions, particularly drought and flood, to inform management decisions and priorities during extreme climate events.
- C. Understand mechanisms for observed relationships between flows and aquatic species.
- D. Evaluate the effects of toxicity (e.g., contaminant mixtures, pharmaceutical products, HABs) on aquatic species' survival including possible effects on predation.

Action Area 5: Modernize monitoring, data management, and modeling

- A. Advance integrated modeling through efforts such as an open Delta Collaboratory (physical or virtual) that promotes the use of models in guiding policy.
- B. Explore innovative technologies and cost-effective methods for scientific monitoring and analysis of flow, water quality, and ecosystem characteristics (e.g., improved tools for fish monitoring, LiDAR, high-resolution bathymetry technology, new measurements for Delta levee hazards, and citizen scientist monitoring programs).



-  Legal Delta and Suisun Marsh
-  Delta Watershed (Water Code Sec. 85060)
-  Trinity River Watershed
(part of North Coast Watershed, but connected to Delta via CVP)
-  Areas outside the Delta Watershed
that use Delta water
-  Sacramento River & San Joaquin River

Appendix D: A Sample Science Fellow Mentoring Plan

Delta Science Fellow Mentoring Plan

This Delta Science Fellow Mentoring Plan has been prepared by *Jane Smith, Delta Science Fellow, at University of the Bay, Sacramento*. The Plan establishes guidelines for work to be performed by the **Delta Science Fellow** in support of the Delta Plan with a Science Fellowship Award entitled “*Mercury Interactions with Algae: Effects of Mercury Bioavailability in the Delta*”. The **Delta Science Fellow** will work at *University of the Bay, Sacramento* with *Dr. John Doe (Research Mentor)* and *Dr. Adam Buck (Community Mentor)* at *State Water Resources Control Board*, and will conduct research on specified tasks: 1. *Water sample collection*, 2. *Laboratory analysis*, 3. *Statistical analysis*, 4. *Model development*, 5. *Data management and reporting*.

1. Orientation

Jane Smith (**Delta Science Fellow**) will attend:

(a) Program Orientation

- *Attendance at the Delta Science Fellowship Orientation Program*
- *Internship in the Delta Science Program (this will be a one-week program unless the project requires more interaction with the Science Program)*

(b) Project Orientation

This will include in-depth conversations between the research and the community mentor and the **Delta Science Fellow**. Mutual expectations will be discussed and agreed upon in advance. Orientation topics will include (a) the amount of independence the **Delta Science Fellow** requires, (b) interaction with coworkers, (c) productivity including the importance of scientific publications, (d) work habits and laboratory safety, and (e) documentation of research methodologies and experimental details so that the work can be continued by other researchers in the future.

2. Career Counseling will be directed at providing the **Delta Science Fellow** with the skills, knowledge, and experience needed to excel in his/her chosen career path. In addition to guidance provided by the research mentor, the **Delta Science Fellow** will be encouraged to discuss career options with researchers and managers at the *University of the Bay, Sacramento* and the *State Water Resources Control Board*.

3. Experience with Preparation of Grant Proposals will be gained by direct involvement of the **Delta Science Fellow** in proposals prepared by the *University of the Bay, Sacramento*. The **Delta Science Fellow** will have an opportunity to learn best practices in proposal preparation including identification of key research questions, definition of objectives, description of approach and rationale, and construction of a work plan, timeline, and budget.

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4. Publications and Presentations are expected to result from the work supported by the Fellow award. These will be prepared by the Fellow under the direction of *Dr. John Doe* and in collaboration with other researchers as appropriate. The **Delta Science Fellow** will receive guidance and training in the preparation of manuscripts for scientific journals and presentations at conferences.

The Fellow is also expected to present project results at the Bay-Delta Science Conference or the State of the Estuary Conference in at least one of the years of the Fellowship. Attendance of the annual meetings of the California Water Environment Modeling Forum (CWEMF) and/or the Interagency Ecological Program (IEP) Conference as well as of appropriate IEP technical team meetings (PWTs, see <http://www.water.ca.gov/iep/docs/IEP-ORG.pdf>) is also encouraged.

5. Teaching and Mentoring Skills will be developed in the context of regular meetings within the *University of the Bay, Sacramento* research group during which graduate students and postdoctoral researchers describe their work to colleagues within the group and assist each other with solutions to challenging research problems, often resulting in cross fertilization of ideas.

6. Instruction in Professional Practices will be provided on a regular basis in the context of the research work and will include fundamentals of the scientific method, and other standards of professional practice. In addition, the **Delta Science Fellow** will be encouraged to affiliate with one or more professional societies in his/her chosen field and to attend meetings of the professional society.

Participation at the Early Career Leadership Workshop organized by California Sea Grant and the Science Program is expected. This training will include: planning your research career, national and global trends in science, ethics, data management, proposal writing, communicating science, the science-policy interface, and creating a diverse workforce.

7. Technology Transfer/Outreach activities will include regular contact with scientists/managers at the *State Water Resources Control Board*. The **Delta Science Fellow** will be given an opportunity to become familiar with the university-agency-private sector relationship including applicable confidentiality requirements.

8. Success of the Mentoring Plan will be assessed through a process established at the beginning of the fellowship. The Science Program encourages evaluation and monitoring of the Delta Science Fellow's personal progress and his/her impacts to the science needs. Tracking of the progress toward his/her career goals after finishing the postdoctoral program should also be included.

This sample is adapted from the National Science Foundation guidelines for mentoring. http://www.nsf.gov/pubs/policydocs/pappguide/nsf10_1/gpg_2.jsp [Section J]