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ACTION ITEM

San Francisco Estuary and Watershed Science Contract Approval

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Summary: Publication of the online journal *San Francisco Estuary and Watershed Science (SFEWS)* has been a cooperative effort between the Delta Stewardship Council (and previously, CALFED) and the University of California, Davis (UC Davis) since 2003, with additional support from the University of California Digital Library (CDL) and the U.S. Geological Survey (USGS). The current contract between the Council and UC Davis will expire on June 30, 2018. Staff recommends that the Council enter into a new two-year contract with UC Davis.

Requested Action

Authorize the Executive Officer to enter into a new two-year contract with UC Davis to provide a total of $766,158 for continued publication of the *SFEWS* online journal from June 30, 2018 to May 10, 2020 and to make additional amendments as necessary.

The Executive Officer has delegated authority up to $500,000 to enter into contracts and interagency agreements on the Council's behalf. Because this contract exceeds that amount, it requires Council authorization.

Background

As identified in the Delta Reform Act, "the mission of the Delta Science Program is to provide the best possible scientific information for water and environmental decision making in the Bay-Delta system." The Delta Science Program fulfills this mission in part by adding to the body of best available scientific information through funding research (grants and fellowships) and peer-reviewed publication of research findings. The journal's associate editors (collectively called the Editorial Board, listed in Attachment 1) represent a list of the most eminent water scientists in the region.

What does the journal cover?
SFEWS (http://www.escholarship.org/uc/jmie_sfews) is a unique online journal that is a primary source of peer-reviewed, credible science relevant to water and ecosystem management issues of the San Francisco Estuary (i.e., Bay-Delta) and its watershed and contributes toward the achievement of a key objective of the Delta Science Plan. Limited access to the scientific literature among agencies and stakeholders has long been cited as an impediment to staying up-to-date on most recent science developments. Importantly, as an open-access journal, which charges neither authors for submissions nor readers for access, *SFEWS* addresses this challenge and contributes towards building an open science community in the estuary.

Popular topics in 2017 covered California's water management issues (drought, storage, groundwater), listed species under the Endangered Species Act, and agricultural practices and economic outcomes relevant to water supply. Policy issues in other articles discussed management of Delta islands, landscape restoration, managed aquifer recharge, and adaptive management.

In 2016-2017, the journal published the peer-reviewed "State of Bay Delta Science" as a core component of the Delta Science Program's science strategy. It issued a 15-article series across three issues summarizing the "State of Bay-Delta Science" in which leading experts summarized the state of knowledge with regard to all of the main issues affecting this important environment. This series of synthesis papers formed the foundation for the subsequent Science Action Agenda, which has become the guidance document for filling critical knowledge gaps for the science community as a whole to inform the next generation of management decisions.

Upcoming publications will likely include a special issue on entrainment of endangered fish species into the Central Valley and State Water Project pumping facilities (sponsored by Collaborative Science and Adaptive Management Program (CSAMP)); as well as a proposed monograph summarizing how science was used to inform management decisions in response to the 2012-2016 drought. The articles published in the journal continue to have influence beyond the local and regional scientific community and often support important policy decisions or dialogue – even nationally and internationally.

What is the journal's impact on policy?

Historically, *SFEWS* has been a source of information for those evaluating potential implications of policies, programs, and projects on desired environmental outcomes. For example, the influential National Academy of Sciences book, *Sustainable Water and Environmental Management in the California Bay-Delta* cited articles from *SFEWS* repeatedly, with 15 papers cited in Chapter 5, "Stressors." Additionally, articles by William Bennett in 2005 and Wim Kimmerer in 2008 continue to influence policy with regard to listed or endangered species. More recently, a publication by Cloern et al., "Water Wasted to the Sea" (2017) was aimed at a broader policy audience. Articles on salinity tolerance and an influential review of the state of delta smelt science have been subjects of discussion by the policy group Collaborative Science and Adaptive Management Program (also known as CSAMP), which consists of leaders from all major water and fisheries management agencies and stakeholder groups.

In 2013, *SFEWS* implemented the idea of publishing policy-relevant short essays aimed at decision-makers, as suggested by the editorial board and Philip Isenberg, then Chair of the Council. In the last two years, these short essays addressed issues like wetlands restoration, the diversity of uses of Delta water, better accounting for Delta water, and how knowledge of historic primary production in the Delta can aid restoration strategies. If resources allow, the journal will continue to accommodate the publication of these essays.

Emails from readers reflect the unique role played by *SFEWS*. For example, Mike Connor, General Manager of the East Bay Dischargers Authority commented on an *SFEWS* issue containing articles on groundwater and challenges in the Delta: "Stunningly good issue…You have really achieved something. Thanks from us California citizens and scientists."

Who reads the journal?

Since the journal's inception in October 2003, a total of 47 issues have been published, with 228,778 requests for access to articles. Twenty-three papers were published in 2017, adding to the growth in the number of papers published per volume. The steady growth of the journal's influence is illustrated by Google Analytics' comparison of access requests per year (Attachment 2).

Another set of performance indicators are the CiteScore metrics calculated and given by Scopus, a well-respected abstracting and indexing service. This indicator considers how many times articles published in *SFEWS* are cited in other articles, and is therefore a measurement of the impact a journal has on the scientific community. Scopus' CiteScore for *SFEWS* increased from 0.32 *citations* to 1.64 *citations* from 2014 to 2017, indicating considerable increase in impact in just three years. Also in 2017, *SFEWS*' CiteScore Rank was 55 of 183 titles in the "Environmental Science" category, a remarkable climb from 2014, when the article was ranked 120 of 179 titles.

eScholarship data (from the California Digital Library), which provides open-access scholarly publishing services and a dynamic research platform to scholars worldwide) show 29,167 total requests for *SFEWS* articles in 2017, compared with 25,465 total requests in 2016. In-depth research articles continue to be the most widely read among the scientific community, but succinct and timely essays on the same topics reach a greater number of readers with more varied backgrounds.

While we estimate the number of papers published in *SFEWS* in this period will remain at the rate of current publication (typically 20–30 papers per annual volume), we expect efforts to increase journal access and activities to expand readership. Such efforts include improving web site capabilities, and continued promotion and integration of *SFEWS* content with science communication partners through social media outlets and blogs.

The Delta Science Program and *SFEWS* editorial staff continually promote readership of the journal in a number of ways:

- Encouraging that grants and fellowships funded by the Council submit research results to *SFEWS*;
- Encouraging synthesis papers, prepared as part of our joint science symposia with UC Davis, to be submitted to *SFEWS*;
- Soliciting essays and papers by and from the Editorial Board;

- Promoting *SFEWS* at the State of the Estuary and Bay-Delta Science conferences; and at smaller venues like the Interagency Ecological Program annual workshop, the UC Davis Office of Research Expo, and the CSAMP;

- Promoting *SFEWS* through social media outlets and blogs; and

- Linking *SFEWS* articles to the U.S. Department of the Interior's cross-reference database which provides more unique places on the web where people can discover the content that *SFEWS* publishes.

Fiscal Information

Publication of *SFEWS* is a shared effort of the Council, the California Digital Library, USGS, and UC Davis (Attachment 3). The Council provides direct financial contributions, and the CDL and UC Davis provide a nearly equal amount of in-kind services. In-kind services from the CDL include the journal's electronic publishing platform, direct web access to the journal, and IT support. UC Davis' in-kind support includes providing an independent, university based "home" for the journal and support for developing and maintaining an archive of legacy articles. USGS supports computer and IT services for the editor-in-chief.

The current contract with *SFEWS*, July 1, 2016 through June 30, 2018, supports the publication at an average level of $332,435 per year. The proposed new contract calls for the Council to allocate $766,158 to continue publication of *SFEWS* from July 1, 2018 through June 30, 2020 (an average of $383,079 per year, representing a 15 percent increase). The additional funds correspond to increasing the managing editor's time from 83 percent to 100 percent to accommodate activities to grow readership of the journal.

This investment will leverage an in-kind contribution of approximately $498,000 from CDL, UC Davis, USGS, special issue underwriters, and other agencies, universities, and stakeholders (Attachment 3).

List of Attachments

Attachment 1: *SFEWS* Associate Editors, 2017
Attachment 2: *San Francisco Estuary and Watershed Science* Quarterly Access, 2003–2017
Attachment 3: *San Francisco Estuary and Watershed Science* Online Journal – Budget Summary

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