Midpeninsula Regional
Open Space District

R-18-148
Meeting 18-41
December 6, 2018

AGENDA ITEM 2

AGENDA ITEM

Formation of a Science Advisory Panel

GENERAL MANAGER'S RECOMMENDATION

Review and provide direction on the proposed formation of a Science Advisory Panel as described in the staff report.

SUMMARY

A Science Advisory Panel (SAP) would enhance the scientific validity of ecosystem management decisions and serve as an important resource to inform regional management topics. Additionally, the SAP would also present an independent science-based review of the Midpeninsula Regional Open Space District's (District) existing and ongoing land management practices and decisions. Several strong, scientific institutions operate within the San Francisco Bay region and offer unique scientific expertise for the District's conservation efforts. The San Francisco Estuary Institute (SFEI) and Point Blue Conservation Science (Point Blue) provide complimentary conservation science expertise. Based on staff research, the General Manager recommends forming a SAP via a contractual arrangement with SFEI, and Point Blue as a subcontractor. An annual work plan, that identifies specific topics and projects for SAP review and input, would be prepared as part of the annual action plan and budget development process.

DISCUSSION

Background
The District regularly works on projects that require scientific expertise to inform land management and research objectives. Staff typically includes subject matter expertise on project teams. Additionally, staff have worked with local academic institutions on numerous projects to ensure that resource management decisions utilize the full breadth of scientific understanding and incorporate results of the latest research, or directly drive scientific exploration of subjects by funding original research.

Scientific knowledge is driven by research (and opinions), which through repeated observation and experimentation, enhances the confidence of results and advances the field of study by coalescing around accepted scientific findings. This process can be slow and sometimes obtuse to the outside observer or land manager seeking to apply scientific findings to land management decisions. Moreover, seemingly contradictory findings can exist on a subject, requiring a trained expert familiar with the full breadth of findings on a subject to determine 'what the science says' (or does not say) on a particular subject.

The District's usual practice of contracting with subject matter experts is largely successful in ensuring that staff applies the best and most current scientific findings to District projects. However, this practice provides a single opinion on issues, which is not always sufficient for controversial subjects where scientific opinion has not yet coalesced. Having a larger, independent scientific review body would address some of these challenges.

A SAP would establish the scientific basis to aid and inform the District when faced with challenging management decisions. A SAP would also advance research efforts for important regional, science-based management topics. Additionally, a SAP would also present an independent review of the District's existing and ongoing land management decisions.

Based on staff research, the General Manager recommends using a contracting model to secure SAP services, which would provide flexibility in the formation and use of a body of scientists to provide independent review of District projects and topics of interest (See Process Diagram, Attachment 1). The Santa Clara Valley Water District, who established a Science Advisory Hub to support their One Water Plan Program in 2014, provides a good example of this contracted advisory body structure. Their science advisory structure is provided under contract by the San Francisco Estuary Institute-Aquatic Science Center (SFEI).

San Francisco Estuary Institute
Formed in 1986 (originally as the Aquatic Habitat Institute), the San Francisco Estuary Institute (SFEI) was established to ensure that the best and most current scientific understanding was applied to environmental management decisions within the San Francisco Bay region. SFEI founders believed that management of the Estuary would be enhanced if all sides in debates over water quality policy had access to sound, objective, scientific information about pollutants. To remain focused on the science, SFEI was prohibited from recommending water quality policies. To this day, SFEI continues to function as an independent, scientific body supporting work throughout the San Francisco Bay region, working with other organizations and agencies to inform many natural resource issues and topics well beyond its original water quality focus.

SFEI is well suited to address many District subject matter needs, from contaminants and toxicity to aquatic systems restoration and other water resources information needs. Additionally, SFEI has established connections with many local institutions, allowing it to draw upon national and international scientific expertise on broad natural resource topics on an as needed basis. Some examples of SFEI's programs and projects include their historical ecology program, the Re-Oaking Silicon Valley Project, and SFEI's role as the science advisors for the Resilient By Design Bay Area Challenge.

Point Blue Conservation Science
Point Blue Conservation Science (Point Blue), formerly the Point Reyes Bird Observatory, is an interdisciplinary group of scientists organized as a 501(c)(3), working on a variety of land management and technical areas relevant to the District's interests. Of note is the expertise they have developed through establishment of the Rangeland Monitoring Network, which is a regional monitoring program to measure the ecological value of rangelands and recommend conservation actions that enhance their function for people and wildlife. Point Blue has also established significant expertise related to climate change and restoration science, providing scientific expertise throughout San Francisco and the central coast regions of California.

Science Advisory Panel
Point Blue and SFEI have worked jointly on several projects within the San Francisco Bay

region to provide a wide breadth of scientific review. Because each organization has complimentary conservation science expertise, the General Manager recommends forming a SAP as a contractual arrangement through SFEI, with Point Blue as a subcontractor. This structure would take advantage of SFEI's administrative experience running similar advisory bodies for the Santa Clara Valley Water District and the Sacramento-San Joaquin Delta Restoration Plan, and tap into the significant terrestrial and working lands technical expertise provided by Point Blue.

The initial responsibilities of the Science Advisory Panel could include the following two main areas of work:

1. *Preparation of summary briefing papers on topics of interest to the District.*
   Approval of this list of topics could be a component of the Board's annual action plan and budget development process. Examples of topics that are currently relevant to the District's work are below:

   - Coastal Riparian Ecosystem Buffers and Ecological Function
     District staff have been working with partners to develop Riparian Easements on agricultural conservation projects to protect ecological functions, water quality, and riparian habitats. Significant gaps in ecological science exist relative to which ecological services are provided by differing riparian widths. Given the financial and agricultural viability costs related to protecting riparian habitats, establishing sound scientific basis for these corridor widths is critical to the successful implementation of conservation actions.

   - Climate Change
     The Board recently adopted the Climate Action Plan and Climate Policy. The work on this program now turns to studying ways for reducing the District's greenhouse gas emissions associated with all aspects of District work. Additionally, work will soon begin to evaluate enhanced carbon sequestration actions and identify those areas and habitats that are more and less resilient to the forecasted impacts associated with climate change.

2. *Providing Review and Scientific Opinion on Specific Projects*
   During the preparation of the annual work plan, staff would identify those projects where it would be most beneficial to receive outside scientific review to inform decision-making. Examples of potential projects include:

   - Toxicological Review of Pesticides within the IPM Program
     During the review of the IPM Program and evaluation of glyphosate toxicity, the Board received information from the District's toxicological consultant on the human health and potential environmental impacts of chemical pesticide use. Questions were raised by several members of the public regarding the adequacy of the toxicological review with a suggestion to form a science advisory committee.

   - Prescribed Fire Program Development
     The District's development of a Prescribed Fire Program was initiated in FY2018-19 and is expected to be completed within the next two years. This work will establish the parameters and practices for using fire to manage and restore habitats across the

open space preserves and with partners. Fire science is a relatively young field of ecological study and significant disagreements exist regarding the efficacy of fire for ecosystem restoration and the frequency of historic fire on the landscape. This, combined with the inherent risk of fire, will mean that sound science will be critical to the success of this program.

In addition to these main areas of focus, a SAP could also host an Annual Year-in-Review meeting to share the results of the work program and major findings with a wider audience including our partners, stakeholders, and the public.

FISCAL IMPACT

Preliminary estimates for the expected contract cost for SFEI to convene and coordinate a Science Advisory Panel range from $50,000 to $100,000 annually. The annual cost would vary dependent upon the number of meetings held per year, the number of topics and management actions requested for review, and deliverables or 'white papers' requested. If supported, a budget for this panel would be included in the Fiscal Year 2019-20 Budget & Action Plan.

BOARD COMMITTEE REVIEW

This item is presented to the full Board given full Board interest.

PUBLIC NOTICE

Public notice was provided as required by the Brown Act.

CEQA COMPLIANCE

This item is not a project subject to the California Environmental Quality Act.

NEXT STEPS

If supported by the Board, staff will incorporate the development of a Science Advisory Panel as laid out in this report into the Fiscal Year 2019-20 Budget process.

Attachments:
1. Proposed Science Advisory Panel Process Diagram

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Attachment 1: Proposed Science Advisory Panel Process Diagram