B.E.A.C.O.N.
Beach Erosion Authority for Clean Oceans and Nourishment

A California Joint Powers Agency

Member Agency Representatives

Monica Solorzano
City of Carpinteria

Kyle Richards, Vice-Chair
City of Goleta

Gabe Teran
City of Oxnard

Steven Gama
City of Port Hueneme

Doug Halter
City of San Buenaventura

Eric Friedman
City of Santa Barbara

Laura Capps
Das Williams
County of Santa Barbara

Vianey Lopez, Chair
Matt LaVere
County of Ventura

Executive Director
Marc Beyeler

Santa Barbara Address:
105 East Anapamu, Suite 201
Santa Barbara, CA 93101

Ventura Address:
501 Poli St.
P.O. Box 99
Ventura, CA 93001

Email:
Staff@Beacon.ca.gov

Website:
http://www.beacon.ca.gov

NOTICE MEETING

BEACH EROSION AUTHORITY FOR CLEAN OCEANS AND NOURISHMENT (BEACON)
SCIENCE ADVISORY COMMITTEE (SAC) MEETING

NOTICE IS HEREBY GIVEN of a **MEETING** of the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) Science Advisory Committee. The date, time, and place of the meeting shall be as follows:

DATE: **Friday, November 8, 2024**
TIME: **11 am to 12.30 pm**
PLACE: **Hybrid In-Person/Remote Meeting (see details below)**

In-Person:
City of Carpinteria
Carpinteria City Hall
City Council Chambers
5775 Carpinteria Ave
Carpinteria, CA 93013

The agenda of business to be conducted is below. In September 2021, The California State Legislature passed, and the Governor signed, Assembly Bill 361 (Rivas, 2021), which amended the Government Code to allow Brown Act bodies to continue to meet remotely if certain elements are met.

The following alternative methods of participation are available to the public:

1 You may observe the live meeting of the Science Advisory Committee via Zoom Meeting:
https://us02web.zoom.us/j/88245683883?pwd=8qrThURLjwatwafs4C6NtvOQgxKjJ7.1
Meeting ID: 882 4568 3883
Passcode: 822754

2 You may call in to listen live to the Science Advisory Committee Meeting by dialing: 1 669 444 9171 and then entering the following when prompted: Meeting ID: 882 4568 3883 and Passcode: 822754.

3 If you wish to make a general public comment or to comment on a specific agenda item, the following methods are available:

a Distribution to the Science Advisory Committee. Submit comments via email to Staff@Beacon.ca.gov prior to 5:00 p.m. on Wednesday, November 6, 2024, or though mail to BEACON Attn: Science Advisory Committee at 501 Poli Street, Ventura, CA 93001 to be received no later than 5:00 pm on Wednesday, November 6, 20024. Your comment will be placed into the record and distributed appropriately.

b Read into the record at the meeting. Submit comments of 250 words, or less, via email to Staff@Beacon.ca.gov prior to 5:00 p.m. on Wednesday, November 6, 2024, prior to the SAC meeting. Please indicate if you would like to make a general public comment, a comment on a specific agenda item, or both. Please state in your email, or mail, if you would like the comment "read into the record." Every effort will be made to read your comment into the record, but some comments may not be read due to time limitations. Comments timely received on an agenda item will be placed into the record and distributed accordingly.

c By Zoom. Log onto Zoom as described above. The meeting will be controlled by the BEACON Executive Director. If you wish to make a comment during the agenda item for public comment, please raise your hand using the Zoom instructions on your computer. By using the typed messaging capability of Zoom you should also indicate to the Executive Director which Agenda Item you wish to speak on or if you wish to make a general comment that is not specific to an Agenda Item. BEACON Staff will make every effort to call you during the indicated item so that you may comment.

In compliance with the Americans with Disabilities Act, individuals needing special accommodations to participate in the meeting should contact BEACON at least three working days prior to the meeting.

BEACON
Science Advisory Committee (SAC)
MEETING AGENDA
Friday, November 8, 2024
11:00 am to 12:30 pm

MEETING AGENDA

1. **Administrative Items**
   A. Call to Order and Roll Call –
   Dr. Patsch and Dr. George, SAC Co-Chairs,
   Acknowledge BEACON SAC Meeting being held consistent with the traditional Brown Act teleconference rules and requirements allowing for remote and in-person meetings.
   B. Consideration and Approval of the Minutes of the BEACON SAC Meeting of February 27, 2023.

2. **Public Comment for items not on the agenda**

3. **2024-2025 SAC Schedule**
   Beacon Science Staff present draft schedule.

4. **Nomination and Selection of SAC Member - Social and Environmental Justice Expert**
   Co-Chair Proposal for Selection.
   Attachment 1: Social and Environmental Justice and Equity Expert Call for Nominations.
   Attachment 2: Resume.

5. **BEACON Staff Recommendation on SAC Re-appointment for 2025-2026**
   Beacon Science Staff and Co-Chairs present proposal for SAC Re-appointment.
   Attachment 1: SAC Membership 2023-2024.

6. **Presentation on Status of BEACON Science Research Agenda Implementation Activities**
   6a. Report from the USGS on Physical Shoreline Monitoring Program in the SB Littoral Cell.
   6b. Report from Beacon Science Staff on Beacon Science Research Agenda Activities.
   6c. Round-robin presentations by SAC Members regarding latest research projects and latest research initiatives.
   Attachment 1: Science Research Agenda.
   Attachment 2: November 2023 Manager-Scientist Summit.

7. **Planning for 2024-2025 Manager/Scientist Workshop**
   Winter 2024-2025 Manager/Scientist Regional Workshop: Review Workshop Planning Tasks (Proposed for Santa Barbara).

8. **Adjourn**

Late Distribution of Materials

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the City Clerk to all or a majority of the members of the BEACON Board less than 72 hours prior to that meeting are available for inspection in the City Clerk Office, at 5775 Carpinteria Ave, Carpinteria, CA 93013 and on the Internet at: BEACON.CA.GOV.

Any written ex-parte communication subject to disclosure by members of the BEACON Board may be published online as an attachment to the corresponding item.

ITEM 1B - Consideration and Approval of the Minutes of the BEACON SAC Meeting of February 27, 2023

SAC Meeting Minutes – February 27, 2023

BEACON SCIENCE ADVISORY COMMITTE MEETING MINUTES

DATE: Monday, February 27, 2023
TIME: 2:30 PM
PLACE: TELECONFERENCE

Item	1A	Call to Order and Roll Call– Co-Chair, Dr. George; Marc Beyeler
Minutes/ Actions:	**Co-Chair Patsch acknowledged the reappointment of the SAC Membership, including Co-Chairs by the Beacon Board of Directors at its November 2022 Meeting.** **Members Present:** • **Dr. Kiki Patsch** • **Dr. Doug George** • **Mr. Robert Battalio PE** • **Dr. Jenifer Dugan** • **Dr. Lesley Ewing PE – joined at 9:36AM** • **Dr. Philip King** • **Dr. Charles Lester** **Members Absent:** • **Dr. Dan Reineman** • **Dr. David Revell** • **Dr. Dan Hoover** • **Dr. Sean Vitousek** • **Dr. Kristen Goodrich** **Manager Liaisons:** • **Mr. Aaron Engstrom** • **Ms. Melissa Hetrick** **Also, in attendance BEACON Executive Director Marc Beyeler and CA Sea Grant Program Coordinator Jenna Wisniewski, and BEACON Program Manager, Gerald Comati.** **Motion to approve by Dr. Ewing, second by Dr. King** **Public Comments:** • **Members of the public briefly introduced themselves.**	

Item	1B	Report on Circumstances of the COVID-19 State of Emergency Co-Chair Dr. George; Executive Director Marc Beyeler
Minutes/ Actions:	Mr. Beyeler gave an overview of the State order and background of both the Counties of Santa Barbara and Ventura on virtual public meetings. **Motion to receive and file the report and to direct the SAC to meet remotely. Motion to approve by Dr. Ewing, second by Dr. King.** **Unanimously approved.** **Public Comments:** • None.	

BEACON SCIENCE ADVISORY COMMITTE MEETING MINUTES

DATE: Monday, February 27, 2023
TIME: 2:30 PM
PLACE: TELECONFERENCE

Item	**1C**	**Consideration and Approval of Minutes of the BEACON SAC Meeting held on May 25, 2022- Co-Chair Dr. Patsch; Executive Director Marc Beyeler**
Minutes/ Actions:	Mr. Beyeler presented minutes from the May 25, 2022, meeting. **Motion to approve by Dr. Lester, second by Dr. Dugan.** **Unanimously approved.** **Public Comments:** • None.	

Item	**2**	**Public Comment for items not on the agenda** **Co-Chair Dr. George and Executive Director Marc Beyeler**
Minutes/ Actions:	Co-Chair asked for any public comment for items not on the agenda. • Nick Sadrpour said hi to the SAC and was excited to follow them. • Aaron Engstrom of the City of Ventura expressed his excitement to meet the SAC No public comments were offered.	

Item	**3**	**Nomination and Selection of SAC Member: Social and Environmental Justice Expert** **Co-Chairs**
Minutes/ Actions:	The SAC discussed the continued need for a Social and Environmental Justice Expert. Securing a suitable candidate was challenging. It was agreed that a selection committee should be formed. It was agreed that ideally the candidate reside within the BEACON jurisdiction. In addition, it was agreed that qualifications for the position should be developed. Doug George agreed to set up a shared document for qualification criteria. **Motion by Dr. Ewing, second by Dr. Dugan.** **Unanimously approved.** **Public Comments:** • None.	

Item	**4**	**Discussion of BEACON Research Agenda Implementation Planning-Regional Coastal Adaptation Monitoring Program (RCAMP) Executive Director Marc Beyeler, and Program Consultant**
Minutes/ Actions:	Executive Director Beyeler introduced Nick Garrity of Environmental Science Associates and any guests to the meeting interested in this item. Mr. Beyeler gave an overview of the project with City of Santa Barbara to align regional monitoring efforts. A pilot project to develop a framework for determining sea level rise indicators through monitoring that can lead to identifying adaptation actions. The consultant presented the Regional Coastal Adaptation Monitoring Program (RCAMP) scope and schedule and managed SAC and Manager/Stakeholder discussion and input.	

BEACON SCIENCE ADVISORY COMMITTE MEETING MINUTES

DATE: Monday, February 27, 2023
TIME: 2:30 PM
PLACE: TELECONFERENCE

	No action was required to be taken. **Public Comments:** None.

Item	**5**	**Planning for 2023 Manager/Scientist Summit** **Co-Chairs and BEACON Staff**
Minutes/ Actions:	Dr. George introduced that we are planning for another in the next in series of Manager-Scientist Summits. The current team helping organize are the co-chairs, manager liaisons, Mr. Beyeler, and Ms. Wisniewski. Dr. George invited volunteers from the SAC to assist with planning the summit. The Summit being planned in coordination with the Headwaters to Ocean Conference, with both to be held at the same venue in Ventura, Ca. **No action was required to be taken.** **Public Comments:** None.	

Item	**6**	**Adjournment Co-Chairs**
Minutes/ Actions:	Dr. George summarized the meeting and next steps. Winter-Spring 2025 for next SAC meeting. **No action was required to be taken.**	

Public comment was solicited after each agenda item. No public comment was received except where noted.

Adjourn to next regular meeting to be scheduled in Winter/Spring 2025 in person. Meeting Minutes by Gerald Comati and Marc Beyeler

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STAFF REPORT

Meeting Date: November 8, 2024
Agenda Item: 2

To: **Science Advisory Committee**
From: **BEACON Science Support Staff**
Date: **November 1, 2024**

Subject: **Public Comment for Items not on the Agenda**

RECOMMENDED ACTION:

Receive Public Comments.

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STAFF REPORT

Meeting Date: November 8, 2024
Agenda Item: 3

To: Science Advisory Committee
From: BEACON Science Support Staff
Date: November 1, 2024

RE: SAC 2024-25 Schedule

RECOMMENDED ACTION:

Receive report from BEACON Science Support Staff on Proposed 2024-25 SAC Schedule.

DISCUSSION:

BEACON staff is proposing a SAC Schedule below for 2024-25. Staff is recommending the SC review the schedule for purposes of planning through 2025.

2024 Manager-Scientist Workshop	Winter 2024-2025
Co-Chairs Coordination Mtgs	Quarterly
2025 SAC Meeting	Spring 2025
BEACON Science Staff Mtgs	Bi-Monthly
2025 Manager-Scientist Meeting	Fall/Winter 2025

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STAFF REPORT

Meeting Date: November 8, 2024
Agenda Item: 4

To: **Science Advisory Committee**
From: **SAC Co-Chairs and BEACON Executive Director**
Date: **November 1, 2024**

RE: **Nomination and Selection of SAC Member - Social and Environmental Justice Expert**

RECOMMENDED ACTION:

Receive report and recommendation from Co-Chairs on the Nomination and Selection of the Social & Environmental Justice Expert, accepting the recommendation of the Co-Chairs, consistent with the action approved by the SAC at its February 27, 2023, meeting.

DISCUSSION:

At its 2023 SAC meeting, the SAC authorized the Co-Chairs to work with staff to organize the solicitation and nomination of candidates for a Social & Environmental Justice Expert, and to bring a recommendation on the selection of a new SAC member to the SAC for review and ratification.

BEACON staff, working the Co-Chairs, prepared a solicitation notification and conducted two solicitation and outreach efforts during the end of 2023 and early 2024. Two nominations were received. The Co-Chairs reviewed both nominations and the supporting materials submitted.

The Co-Chairs are recommending that the SAC accept the recommendation to add Dr. Jose Castro-Sotomayor, Assistant Professor at California State University Channel Islands to the SAC. Dr. Castro-Sotomayor has been at CSUCI since 2019.

Currently Dr. Castro-Sotomayor is part of research teams investigating various aspects of coastal access and beach use in southern California. Dr. Castro-Sotomayor has collaborated with several members of the BEACON SAC including Drs. Patsch, Reineman and Lester. Dr. Castro-Sotomayor brings extensive training and experience in environmental communication and community engagement and participation. Dr. Castro-Sotomayor's nomination papers are included as an attachment to this staff report.

Attachment 1: Social and environmental justice and equity expert call for Nominations.
Attachment 2: Resume

ITEM 4 - Nomination and Selection of SAC Member - Social and Environmental Justice Expert

ATTACHMENT 1

Social and Environmental Justice and Equity Expert Call for Nominations

Beach Erosion Authority for Clean Oceans and Nourishment

SOCIAL AND ENVIRONMENTAL JUSTICE AND EQUITY EXPERT

CALL FOR NOMINATIONS

SCIENCE ADVISORY COMMITTEE (SAC)

JANUARY 2024

BEACON, The Beach Erosion Authority for Clean Oceans and Nourishment, and BEACON's **Science Advisory Committee** (SAC) are seeking nominations for a person with Social and Environmental Justice and Equity expertise to join the BEACON SAC.

- **BEACON**

  The Beach Erosion Authority for Clean Oceans and Nourishment (BEACON), is a California Joint Powers Authority (JPA) that has been working to address the multiple issues of coastal erosion, coastal water quality, coastal restoration, and environmental justice and coastal equity along the Ventura and Santa Barbara coast since 1986. In the most recent past, BEACON has been developing programs, policies, and projects integrating regional sediment management, climate adaptation, and community-level resilience, with a particular focus on under-served and under-represented coastal communities.

- **Science Advisory Committee (SAC)**

  In **2020,** the BEACON Board of Directors appointed a Science Advisory Committee. The SAC consists of 12 members (link to full list of names here), covering multiple areas of expertise, spanning physical, environmental, and social and economic topics. In **2022,** The Beacon board re-appointed SAC members for a second two-year term.

  SAC Members are expected to attend one annual meeting (hybrid, with in-person and remote), and are invited to attend the annual BEACON Manager-Scientist Workshop. In addition, on occasion, members of the SAC are asked to participate in development and review of science and technical research and policy activities.

- **Science Research Agenda**

  The Science Research Agenda was adopted by the SAC in **2021.** It endorses increased and expanded data collection, monitoring, and policy research on many topics, including environmental justice and environmental equity. BEACON has been supporting research on aspects of community education, outreach, and coastal access.

- **SAC Equity and Justice Expert**

  In **2022**, the **BEACON SAC** voted unanimously to recommend that an additional member to be added to the SAC with Social and Environmental Justice and Equity Expertise. The SAC seeks an individual experienced in multiple theories of social and environmental justice, including distributive, procedural, as well as recognition.

  BEACON is particularly interested in an individual combining knowledge and experience with scientific data and data methods, along with 'traditional' community knowledge, including Indigenous Traditional Knowledges (ITK), and data collection and analysis methods.

  Types of knowledge resulting from the lived experience can contribute to a place-based, regional and community-level science and policy program at BEACON.

  BEACON understands the special relationships that must be recognized in interactions with tribal indigenous Chumash peoples upon whose un-ceded lands BEACON conducts its activities.

Candidate Background

Name_____

Email Address and Phone Number_____

Affiliation (if/as relevant)_____

Breadth of SEJ Expertise_____
_____
_____

Depth of SEJ Expertise_____
_____
_____

Thoughts on the relevance of your SEJ Expertise on the BEACON SAC_____
_____
_____

Thoughts on areas of interest you have in joining the BEACON SAC_____
_____
_____

Thoughts on contributions you might like to make on the BEACON
SAC_____
_____
_____

Other comments and thoughts you would like add to this nomination_____
_____
_____

Relevant Professional and/or Community Involvements_____
_____
_____

Send nomination to: link
(with Resume/CV attached)

ITEM 4 - Nomination and Selection of SAC Member - Social and Environmental Justice Expert

ATTACHMENT 2

Dr. Castro-Sotomayor, Resume

JOSÉ CASTRO-SOTOMAYOR, Ph.D.
jcs@csuci.edu
+1 (805) 427 6171

EDUCATION

2018 **Ph.D. Communication**
Department of Communication and Journalism
University of New Mexico, U.S.
Dissertation: Translating global nature: territoriality, environmental discourses, and ecocultural identities.
Advisor: Tema Milstein, Ph.D.

2008 **M.A. Communication**
Communication Program
West Texas A&M University, U.S.
Thesis: Living concepts: a multi-sited ethnography of social perceptions in Barrio Logan.
Advisor: Kristina Drumheller, Ph.D.

2005 **B.A. Sociology, minor in Political Science**
Pontificia Universidad Católica del Ecuador
Thesis: Autonomy and corporative development in the Ecuadorian Armed Forces: an analysis of the Homeland Security discourse (1978-2005).
Advisor: Bertha García, Ph.D.

AREAS OF EXPERTISE: Environmental and intercultural communication, ecocultural identity and systems of meaning, environmental and climate education, environmental governance and community engagement, place-based decolonial pedagogy, activism.

ACADEMIC PROFESSIONAL EXPERIENCE

2019 – Present **Assistant Professor.** Communication Program
Environmental Communication emphasis.
California State University Channel Islands, United States.

2017-2018 **Research Assistant.** Department of Geography & Environmental Studies.
University of New Mexico, Albuquerque, United States.

2009-2012 **Director Unidad para el Desarrollo de la Ciencia y la Investigación:**
Departamento de Economía y Comercio Internacional.
Universidad Antonio Nariño. Bogotá, Colombia.

2004-2006 **Co-editor,** *Democracia, Seguridad, y Defensa* bimonthly bulletin, Fundación Democracia, Seguridad y Defensa, Quito, Ecuador.

2002-2006 **Research Assistant.** Project: "Democracia, Seguridad y Defensa." Pontificia Universidad Católica del Ecuador, Quito.

2002-2002 **Research Assistant.** Project: "Structural Adjustment Participatory Review International." Centro de Estudios Latinoamericanos, Pontificia Universidad Católica del Ecuador, Quito.

LEADERSHIP:

2022-Present **Editorial Board**. Quarterly Journal of Speech

2020-Present **Associate Editor.** Frontiers in Communication
Science and Environmental Communication Section

2020-Present **Member.** International Advisory Board
Journal Estado y Comunes
Instituto de Altos Estudios Nacionales (Ecuador)

2021-2023 **Chair.** Teaching Committee
Environmental Communication Division
National Communication Association (USA)

2020-2021 **Member.** Nomination Committee
Environmental Communication Division
National Communication Association (USA)

TEACHING EXPERIENCE:

2019-Present California State University Channel Islands (Camarillo, CA, United States)
Assistant Professor
Communication Program

- Environmental Communication
- Environmental Conflict Management
- Community-based Storytelling
- Advanced Intercultural Communication
- Media and the Environment
- Introduction to Communication Studies

2013-2017 UNIVERSITY OF NEW MEXICO (Albuquerque, NM, United States)
Predoctoral stand-alone Instructor/Teaching Assistant
Department of Communication and Journalism

- Language, Thought, and Behavior (online & face-to-face)

- Intercultural Communication
- Communication in Organization (online & face-to-face)
- Rhetoric and the Environment
- Theories of Communication (online & face-to-face)
- Public Speaking

Teaching Assistant

- Ecocultural Communication: Humans and "The Environment." Teaching Assistant. Spring, 2014.
- International Cultural Conflict and Community Building. Co-facilitator "Community Building Workshop." Spring 2015 & 2018 (two-days workshop)

2009-2013 UNIVERSIDAD ANTONIO NARIÑO (Bogotá, Colombia)
Associate Professor. Department of Economy and International Trade

- Culture and Globalization
- Economic Geography
- Research Seminar (undergraduate)

2009-2010 UNIVERSIDAD DEL ROSARIO (Bogotá, Colombia)
Lecturer. Department of Political Science and Government

- Media and Politics

2008-2008 WEST TEXAS A&M UNIVERSITY (Canyon, TX, Unites States)
Instructor/Teaching Assistant. Department of Communication

- Basic Public Speaking
- Theater Critique - TA

MENTORSHIP – UNDERGRADUATE:

- Pineda, Mateo (2012). *Analysis of La Luna Radio's influence on Ecuador's political culture: Quito's society during the overthrow of the President Lucio Gutierrez, April 13 to 20, 2005.* Department of Political Science and Government, Universidad del Rosario. Bogotá, Colombia.

- Rojas, Andrés (2011). *Impact of alternative development programs as a strategy to eradicate illegal plantations in the Colombian Amazonia.* Department of Economics and International Trade, Universidad Antonio Nariño. Bogotá, Colombia.

- Pinzón, Mario (2011). *The construction of public opinion through the Colombian private television, 2002-2010.* Department of Political Science and Government, Universidad del Rosario. Bogotá, Colombia.

CURRENT RESEARCH PROJECTS

2021-Present **Co-Investigator.** *Beach Sustainability Assessment: Comprehensive Analysis for Management Project.* https://www.bsa-camp.org/

2023-Present **Principal Investigator.** *Youth climate activism: Assessing the effectiveness of CFROG's Climate Literacy Program Environmental Voices Academy – EVA.* Community-based Project in collaboration with Climate First: Replacing Oil & Gas (CFROG) and its Environmental Voices Academy (EVA).

2023-Present **Principal Investigator.** *Ecocultural Pedagogy: Fostering Ecocultural Regenerative Practices in high school students.* Community-based Project in collaboration with Farm-to-School Program, and initiative part of the Oxnard Union High School District.

CONSULTING

2018-Present **Fundación Ser Ambiente,** Quito, Ecuador. Ad-hoc consultant.

2010-2012 **Natura Regional Foundation**, Colombia-Ecuador. Sub-Coordinator. Project: "Environment and Biodiversity as Encounter Point among Social Actors from Colombia and Ecuador." Supported by Development Bank of Latin America (CAF).

2010-2010 **Natura Regional Foundation.** Bogotá, Colombia. Facilitator. Workshop "Strengthening Sustainable Development through Participatory Communication."

2008-2008 **Consultant, Synergy Art Foundation**, San Diego, CA. Developing promotional and socialization material. Project "Barrio Logan Arts District."

PUBLICATIONS

EDITED BOOKS

- Milstein, T. & **Castro-Sotomayor, J.** (Eds.) (2020). *Routledge Handbook of Ecocultural Identity.* London, UK.: Routledge. https://doi.org/10.4324/9781351068840

Tarla Rai Peterson Book Award 2020. Environmental Communication Division, National Communication Association (USA)

JOURNAL ARTICLES

- Cadaval, M., Méndez, G., Hernández A. & **Castro-Sotomayor, J.** (2023) Contributions to the pluriverse from indigenous women professors of intercultural universities, *Globalizations*, DOI: 10.1080/14747731.2023.2193546

- Mudambi, A. Collier, MJ., Muneri, C., Scott, L., Watley E. & **Castro-Sotomayor, J.** (2023) Toward Critical Reflexivity through Critical Intercultural Communication Pedagogy: Student Discourse in an Intercultural Conflict Course, *Western Journal of Communication*, 87: 3, 347-369, DOI: 10.1080/10570314.2022.2141071

- Murphy, P. & **Castro-Sotomayor, J.** (2020). From Limits to Ecocentric Rights and Responsibility: Communication, Globalization, and the Politics of Environmental Transition. *Communication Theory* https://doi.org/10.1093/ct/qtaa026

- Castro-Sotomayor, J. (2020). Territorialidad as environmental communication. Special issue "Decolonizing Communication Studies: A view from the Global South," *Annals of The International Communication Association*, *1*(44), 50-66. https://doi.org/10.1080/23808985.2019.1647443

- Castro-Sotomayor, J. (2019). Emplacing climate change: Civic action at the margins. *Frontiers in Communication*, *4*. https://doi.org/10.3389/fcomm.2019.00033

Christine L. Oravec Journal Article Award 2020. Environmental Communication Division, National Communication Association (USA)

- **Castro-Sotomayor**, J. Hoffman, J., Parks, M. Siebert, & M. Thomas, M., Milstein, T. (2018). Embodying education: performing environmental meanings, knowledges, and transformations. *The Journal of Sustainability Education.* Special Issue: Art, Social change, & a Vision of Sustainability.

- Castro, J. (2011). Elementos de reflexión para una Agenda Ambiental en la frontera entre Colombia y Ecuador. *Revista Rostros y Rastros*. Instituto de Estudios del Ministerio Público (IEMP) de la Procuraduría General de la Nación, Colombia. *(7)* July – December, pp. 35 – 44. ISSN: 2027-3029.

- Castro, J. (2009). Gentrificación y la nueva economía urbana en Barrio Logan: el Chicano Park como espacio público resistencia cultural y contestación política. *Revista NODO* (7) 4 July – December, pp. 5 – 34. ISSN: 1909-3888.

BOOK CHAPTERS

- **Castro-Sotomayor, J.** & Parks, M. (2024). Ethnographic iterations and possibilities of research in environmental communication. *Handbook of Environmental Communication*, Anabela Carvalho and Tarla Rai Peterson (Eds.) De Gruyter Mouton.

- **Castro-Sotomayor, J.,** & Minoia, P. (2024). Cultivating postdevelopment from pluriversal transitions and radical spaces of engagement. In H. Melber, U. Kothari, L. Camfield, & K. Biekart (Eds.), *Challenging global development: Towards decoloniality and justice* (pp. 95–116). Palgrave Macmillan.

- **Castro-Sotomayor, J.,** & Minoia, P. (2023). Cultivating postdevelopment from pluriversal transitions and radical spaces of engagement. In Henning Melber, Uma Kothari, Laura Camfield, Kees Biekart (Eds.), *Challenging Global Development: Towards Decoloniality and Justice* (EADI Global Development Series). 95-166. Palgrave Macmillan. Open Access.

- Milstein, T., Mocatta, G., & **Castro-Sotomayor, J.** (2023). Ecocultural identity and media. In Lopez, A., Ivakhiv, A., Rust, S.,Tola, M., Chang, A.Y, & Kiu-Wai, C. (Eds.). *Routledge Handbook of Ecomedia Studies*. London: Routledge. Open access.

- Milstein, T., Carr, J., **Castro-Sotomayor, J.**, & Thomas, M. (2022). Rewilding environmental communication through transformative teaching. In Takahashi, B., Metag, J., Thaker, J. & Evans Comfort, S. (Eds.) *The Handbook of International Trends in Environmental Communication.* 391-406. New York: International Communication Association Routledge Handbooks Series. https://doi.org/10.4324/9780367275204-29

- Castro-Sotomayor, J. (2020). Ecocultural identities in intercultural encounters. In Milstein & Castro-Sotomayor (Eds.) *Routledge Handbook of Ecocultural Identity.* London, UK.: Routledge. pp. 66-85. https://doi.org/10.4324/9781351068840-4

- Milstein, T. & Castro-Sotomayor, J. (2020) Ecocultural identity: An introduction. In Milstein & Castro-Sotomayor (Eds.) *Routledge Handbook of Ecocultural Identity*. London, UK.: Routledge. pp. xvii-xxiii.

- Abram, D., with Milstein, T. & **Castro-Sotomayor, J.** (2020). Interbreathing ecocultural identity in the Humilocene. In T. Milstein & J. Castro-Sotomayor (Eds.) *Routledge International Handbook of Ecocultural Identity*. London, UK: Routledge. London, UK.: Routledge. pp. 5-24 https://doi.org/10.4324/9781351068840-1

- Karikari, E., **Castro-Sotomayor, J.**, & Asante, G., (2020). Illegal mining, identity, and the politics of ecocultural voice in Ghana. In Milstein & Castro-Sotomayor (Eds.) *Routledge Handbook of Ecocultural Identity.* London, UK.: Routledge. pp. 240-259. https://doi.org/10.4324/9781351068840-15

- Milstein, T. & Castro-Sotomayor, J. (2020) Afterword: Surviving and thriving: The Ecocultural identity invitation. In Milstein & Castro-Sotomayor (Eds.) *Routledge Handbook of Ecocultural Identity.* London, UK.: Routledge. pp. 275-277. https://doi.org/10.4324/9781351068840-102

- Milstein, T., Alhinai, M, **Castro, J.,** Griego, S., Hoffmann, J, Parks, M., Siebert, M. & Thomas, M. (2017). Breathing life into learning: ecocultural pedagogy and the inside-out classroom. In Milstein, T., Pileggi, M., & Morgan, E. (2017). *Environmental Communication Pedagogy and Practice.* London, UK. Routledge, pp. 45-62. https://doi.org/10.4324/9781315562148-6

- Castro, J. (2004). Responsabilidad social en la seguridad ciudadana. En Jarrín, Oswaldo. *Memoria del Proyecto: Política pública de seguridad ciudadana. Primera fase.* Quito, Facultad Latinoamericana de Ciencias Sociales; Grupo Fundación Esquel – Sede Ecuador *Revistas FLACSO.*

Inter-Universities Essay Award. Latin American Faculty of Social Science -FLACSO, Quito, Ecuador.

JOURNAL SPECIAL ISSUES

- Minoia, P., & Castro-Sotomayor, J. (2024). Education and socio-environmental justice in the pluriverse: Decolonial perspectives. *Globalizations*, *21*(2), 303–312. https://doi.org/10.1080/14747731.2024.2316880

BOOK REVIEWS

- Castro-Sotomayor, J. (2024). The Art of Narrative Constellations: Advocating for Inclusive Science Stories. Review Essay of Emma Frances Bloomfield (2024) *Science v. Story: Narrative Strategies for Science Communicators* https://doi.org/10.1080/17524032.2024.2348496

- Castro-Sotomayor, J. (2017). Susanna Priest (2017): *Communicating climate change: the path forward. Language & Ecology*. http://ecolinguistics-association.org/journal

REPORTS

- Lucio, G. & **Castro, J.** (2011). *Agenda Positiva Binacional sobre Medio Ambiente, Biodiversidad y Recursos Hídricos*. Fundación Natura Regional-CAF. ISBN: 978-9978-58-174-2.

- Castro, J. (Ed.). Mamián, Dumer & Benjamín Inuca (2011). *Construyendo la Frontera Fuera del Tiempo en que Vivimos: La Minga de Pensamiento del Pueblo Pasto.* Fundación Natura Regional – CAF. ISBN: 978-9978-58-175-9.

BOOK TRANSLATION (English-Spanish)

- Castro, J. (2012) (translator). Mares, David y Palmer David (2012). *Poder, Instituciones y Liderazgo en la Paz y en la Guerra: Aprendizajes de Perú y Ecuador (1995-1998).* Facultad Latinoamericana de Ciencias Sociales, Ecuador. ISBN. 978-978-67-370-6. Original Title: Power, Institutions, and Leadership in Peace and War: Lessons from Ecuador and Peru (1995-1998).

- Castro, J. (2012) (translator). Vivares, Ernesto (2012). *Hacia una Nueva Economía Política Internacional de los Bancos Regionales de Desarrollo: El Caso del Banco Interamericano de Desarrollo y su Papel en el Proceso de Liberalización de Argentina en la Década de 1990.* Facultad Latinoamericana de Ciencias Sociales, Ecuador. Original Title: Towards a New International Political Economy of Regional Development Banks: The Case of the Inter-American Development Bank and its Role in the Argentine Liberalization Process of the 1990s.

PUBLICATIONS-IN-PROGRESS

- Co-editor with Emma Bloomfield. *Intersectional Change-Makers/ing in Environmental Activism.* Accepted for publication by Michigan State University Press.

- Book chapter: **Castro-Sotomayor, J.** Eros and Polity in Environmental Activism. To be included in Emma Bloomfield & José Castro-Sotomayor (Eds.) *Intersectional Change-Makers/ing in Environmental Activism*).

- Special Issue: Enabling Diverse, Global Voices in Environmental Communication. *Frontiers In Communication.* Expected publication 2025

MEDIA

- Space-Place entanglemtism & Space-Place dualism. Interview excerpt included in the "Environmental Ideology Map" part of the Moulding Nature– Discursive Struggles Over the Environment exhibition. MISTRA Environmental Communication Research Programme, Charles University of Prague.

- Podcast: *Environmental Communication*, with Bridie McGreavy and Edward Maibach. 1h 15 min. Communication Matters: The NCA Podcast. U.S.A. October 28th 2021.

- Podcast: *The Routledge Handbook of Ecocultural Identity*. with Tema Milsten and John Carr. Duration: 1h 14 min. Custodians of the Planet. July 12th 2020.

- Interview: *Ecocultural Identity*. The Philosopher's Zone, Australian Broadcasting Corporation. 25 Apr 2021

OTHER PUBLICATIONS:

- Castro-Sotomayor, J. (2009). Psicoanálisis de la UNASUR: entre perversos, neuróticos, histéricos y obsesivos. *Revista Saber Económico* vol. 2 (6), April-June. ISSN 2011-5385.

- Castro-Sotomayor, J. (2009). Del templo a la Casa Blanca: religión y política en Estados Unidos. *Revista Saber Económico*, vol. 2 (5), January-March. ISSN 2011-5385.

- Castro-Sotomayor, J. (2004). La "casa tomada:" una alegoría de la seguridad ciudadana. Boletín Bimensual *Democracia, Seguridad y Defensa, N-6*.

- Castro-Sotomayor, J. (2005). El corporativismo militar. Boletín Bimensual *Democracia, Seguridad y Defensa,* N-11.

RESEARCH PRESENTATIONS

- Castro-Sotomayor (November 2021) *Responding to the Climate Crisis: Ecocultural Identities and the Value of Nature in a Disrupted Planet*. CSUCI Discussion Series "Our Stories Matter"

- Castro-Sotomayor, J. (2021, October), *Pluriverse, Education, and Territorial Justice.* Presentation delivered as part of the Helsinki Institute of Sustainability Science, Global South Encounters.

- Castro-Sotomayor. J. (2021, May). *Identidad Ecocultural: Una Propuesta Teórica para Repensar la Interculturalidad en el Norte Global* (Ecocultural identity: A theoretical proposal to rethink interculturality in the Global North). Primer Congreso de Plurinacionalidad, Saberes Ancestrales y Gestión del Conocimiento. Universidad Estatal Amazónica, Ecuador.

- Castro-Sotomayor, J. (2020, October). *La Teoría Crítica Decolonial en los Estudios de la Comunicación Social. Un coloquio Sur-Norte en Estudio de Comunicación y Cultura.* Cátedra UNESCO. Universidad Javeriana, Colombia.

- Castro-Sotomayor, J. (2020, May). *Territoriality as Environmental Communication.* Paper in the panel "'Decolonizing communication studies" Global Communication and Social Change (GCSC) division. Conference chair selection, Sponsored panel. International Communication Association Annual Conference, Gold Coast, Australia (online)

- Castro-Sotomayor, J. (2019, April). *Territorialidad, traducción e identidades ecoculturales en la educación intercultural: El caso de la etnia transfronteriza Awá* [Territoriality, translation, and ecocultural identities in intercultural education: The case of the transboundary ethnicity Awá]. Presented at the XVII Encuentro de Geografía de América Latina, Quito, Ecuador.

- Castro-Sotomayor, J. (2017, November). *Reflecting upon inter-field conversations: Intercultural and environmental communication crossroads.* Presented at the annual meeting of the National Communication Association. Dallas, TX.

Top Student Paper. International and Intercultural Communication Division.

- Castro-Sotomayor, J. (2017, April). *Foundations of critical community-based pedagogy.* Presented at 'Experiential Learning Workshop." University of New Mexico, Albuquerque, NM.

- Castro-Sotomayor, J. (2017, June). *An ecological perspective on communication, culture, and identity politics*. Paper in the panel "The politics of ecological identity." International Environmental Communication Association Conference on Communication and Environment. Leicester, UK.

- Castro-Sotomayor, J. (2016, June). *The politics of ecological identity in transboundary stages: An environmental communication perspective on the Ecuador-Colombia border.* Paper in the panel "The economic and political impact of the environment crisis." Global Studies Association Conference. Austin, TX.

- Castro-Sotomayor, J. (2016, April). *Environmental communication in transboundary sites: Ecocultural and intercultural praxis for environmental governance at the border between Ecuador and Colombia.* Paper. Conducting Fieldwork Under Complicated Circumstances Conference. Albuquerque, NM.

- Castro-Sotomayor, J, (2015, November). *Sumak Kawsay: Communicating efforts to decolonize nature in Ecuador.* Paper in the panel "Embracing opportunities for decoloniality through environmental communication." National Communication Association. Las Vegas, NV.

- **Castro-Sotomayor, J.** & Pérez-Marín, M (2015, June). *Internationalization and interdisciplinarity: Mapping the field of environmental communication: a content analysis of Environmental Communication: A Journal of Nature and Culture (2007 – 2014).* Paper. International Environmental Communication Association Conference on Communication and Environment. University of Boulder, CO.

- **Castro-Sotomayor, J.**, Hoffmann, J., Parks, M., Siebert, M., Thomas, M. (2015, June). *When I Say Nature, I Mean…* Performance piece. International Environmental Communication Association Conference on Communication and Environment. University of Boulder, CO.

- **Castro-Sotomayor, J.**, Griego, S., Hoffmann, J., Milstein, T., Parks, M., Siebert, M., Thomas, M. (2015, June). *Rediscovering querencia: Narratives of displacement and dwelling in ecocultural scholarship from the American Southwest.* Panel. International Environmental Communication Association Conference on Communication and Environment. Boulder, CO.

- Castro-Sotomayor, J. (2015, May). *Competing meanings in environmental discourses: A textual analysis of the binational environmental agenda between Ecuador and Colombia.* Paper. International Communication Association. San Juan, Puerto Rico.

- Castro-Sotomayor, J. (2015, March). *Decolonizing nature: Reflections on the ontological and epistemological implications of Sumak Kawsay.* Paper. Symposium Communication, Postcoloniality, and Social Justice: Decolonizing Imaginations. Villanova University, PA.

- Milstein, T., Alhinai, M., **Castro Sotomayor, J**., Griego, S., Hoffmann, J., Perez Marin, M., & Siebert, M. (2014, November). *Ecocultural pedagogy and the inside-out classroom*. Panel. Environmental Communication Pedagogy and Practice. Preconference Scholars Seminar. National Communication Association. Chicago, IL.

- Milstein, T., Alhinai, M., **Castro Sotomayor, J**., Griego, S., Hoffmann, J., Perez Marin, M., & Siebert, M. (2014, November). *Roundtable on pedagogy*. Workshop. Environmental Communication Pedagogy and Practice Preconference Scholars Seminar. National Communication Association. Chicago, IL.

- Castro-Sotomayor, J. (2010, October). *Bogotá ¿ciudad creativa?* Paper. IX Symposium "Investigación urbano regional: gestión urbana, calidad de vida e inclusión social." Universidad Piloto de Colombia. Bogotá, Colombia.

- Castro-Sotomayor, J. (2010). *Planeta Tierra, Fuente de Vida: Naturaleza y Yo.* Presentation. "Foro del Agua" organized by Alliance against Hunger and Malnutrition – United Nations. Tumaco, Nariño, Colombia.

- Castro-Sotomayor, J. (2008, October). *Healing narrative: system and symptom in Obama's rhetorical response on March 18, 2008, in Philadelphia at the Constitution Center.* Paper. Texas Speech Communication Association. Corpus Christi, TX.

ORGANIZER & REVIEWER:

- **Conference Reviewer.** Panel & competitive papers. Environmental Communication Division. International Communication Association: Gold Coast, Australia, May 2020. Panels & competitive papers. National Communication Association: Las Vegas, NV. 2015 & Salt Lake City, UT, 2018, Seattle, WA, 2021 Environmental Communication Division & Critical/Cultural Studies Division.

- **Conference Panel Organizer/Chair**. *The politics of ecological identity: An ecological perspective on communication, culture, and identity politics*. Panel. International Environmental Communication Association Conference on Communication and Environment. Leicester, UK. June 2017.

- **Journal Reviewer.** Environmental Communication (Journal of the International Environmental Communication Association, TheIECA); African Journalism Studies; Frontiers in Environmental Science, section Science and Environmental Communication; Language and Ecology, (Journal of the International Ecolinguistics Association), and Estado & Comunes (Instituto de Altos Estudios Nationales, Ecuador).

HONORS & AWARDS

NATIONAL LEVEL:

- **Tarla Rai Peterson Book Award.**
  Environmental Communication Division
  National Communication Association (USA). 2020.

- **Christine L. Oravec Journal Article Award.**
  Environmental Communication Division
  National Communication Association (USA). 2020.

- **Student Top Paper.**
  International and Intercultural Communication Division.
  National Communication Association.
  Dallas, TX. November 2017.

UNIVERSITY LEVEL:

- **Excellence in Research, Scholarly, and Creative Activities.**
  School of Arts and Sciences
  California State University Channels Islands. 2021-2022

- **Community-based Research Faculty Fellowship.**
  Center for Community Engagement.
  California State University Channel Islands. 2021-2022.

- **Latin American and Iberian Institute Ph.D. Fellowship.**
  University of New Mexico. 2017-2018.

- **Engaged Pedagogy Graduate Fellowship.**
  Community Engaged Learning and Research.
  University of New Mexico. Fall 2016.

- **Outstanding Achievements and Performance Award.**
  Director of Unit for the Development of Science and Research.
  Universidad Antonio Nariño. Bogotá, Colombia. 2010.

- **Inter Universities Essay Award.**
  Latin American Faculty of Social Science -FLACSO.
  Quito, Ecuador. 2004.

DEPARTMENT LEVEL:

- **Culture, Social Justice, and Change Award.**
  Department of Communication and Journalism.
  University of New Mexico. 2018.

- **Outstanding Ph.D. Student.**
  Department of Communication and Journalism.
  University of New Mexico. 2017.

- **Communication and Journalism Ph.D. Teaching Award.**
  Department of Communication and Journalism.
  University of New Mexico. 2015.

- **Outstanding Graduate Student.**
  Speech Communication Program.
  West Texas A&M University. 2008.

- **Lambda Pi Eta.**
  National Communication Association.
  Gamma Phi Chapter at West Texas A&M University. 2008.

GRANTS & FUNDING

- **Center for Integrative Studies**
  California State University Channel Islands
  November 2021.

- **Writer-In-Residence Fellowship.**
  National Consortium on Environmental Rhetoric and Writing.
  January 2018.

- **Doctoral Conference Presentation Award.**
  Graduate Studies. University of New Mexico. Summer 2017.

- **Scholarship Convocatoria Abierta 2012.**
  Secretaría Nacional de Educación Superior, Ciencia y Tecnología, Ecuador.
  2013-2017.

- **Doctoral Conference Presentation Award.**
  Graduate Studies.
  University of New Mexico. Fall 2015.

- **Professional Development Grant.**
  Graduate and Professional Students Association.
  University of New Mexico. 2014.

- **Mesa School/Academic Excellence Scholarship.**
  West Texas A&M University. 2007.

- **Speech Faculty Enrichment Scholarship.**
  West Texas A&M University. 2007.

LANGUAGES

- **Spanish:** Native. **English:** Fluent. **French:** Intermediate.

B.E.A.C.O.N.
Beach Erosion Authority for Clean Oceans and Nourishment

A California Joint Powers Agency

Member Agencies

Monica Solorzano
City of Carpinteria

Kyle Richards, Vice-Chair
City of Goleta

Gabe Teran
City of Oxnard

Steven Gama
City of Port Hueneme

Doug Halter
City of San Buenaventura

Eric Friedman
City of Santa Barbara

Laura Capps
Das Williams
County of Santa Barbara

Vianey Lopez, Chair
Matt LaVere
County of Ventura

Executive Director
Marc Beyeler

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STAFF REPORT

Meeting Date: November 8, 2024
Agenda Item: 5

To: Science Advisory Committee
From: BEACON Science Support Staff
Date: November 1, 2024

RE: Science Advisory Committee Re-appointment for 2025-2026

RECOMMENDED ACTION:

Receive report from BEACON Science Staff on SAC Re-Appointment.

DISCUSSION:

Members of the SAC are appointed by the Chair of the BEACON Board of Directors with confirmation by the Board of Directors. Each member serves for a two-year term. Members can be re-appointed for multiple two-year terms.

In November 2022 the Chair appointed the current membership of the SAC, naming Dr. Patsch and Dr. George as Co-Chairs. At its November 7, 2022, Board Meeting, the BEACON Board of Directors confirmed the appointment of the current members of the BEACON Science Advisory Committee for a two-year term made by the Chair of the Board of Directors.

Over the past two years the SAC and SAC members have provided valuable scientific and technical assistance in support of BEACON's mission, goals, and activities. The Science Research Agenda developed by the SAC has helped BEACON focus and sharpen its research and science support efforts, even as these address broad physical, environmental, ecological, and social data and research needs.

The BEACON staff support the re-appointment of the SAC and have discussed this recommendation with the BEACON Chair. BEACON staff has solicited the current SAC members, including the two Co-Chairs, as to their availability and interest to serve for another two-year term. All responses to date have been in the affirmative.

BEACON staff intend to recommend the Chair re-appoint all those members indicating a willingness and readiness to serve for another two-year term and will schedule the item for the upcoming November 2024 Board Meeting to confirm the re-appointment of SAC members.

Attachment 1: BEACON 2023/2024 SAC Membership

ITEM 5 - Science Advisory Committee (SAC) Re-Appointment

ATTACHMENT 1

SAC Membership 2023-2024

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Marc Beyeler

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Website:
http://www.beacon.ca.gov

BEACON Science Advisory Committee (SAC) Membership 2023-2024

(Approved by BEACON Board of Directors, November 8, 2022)

Co-Chair Dr. Kiersten Patsch
Associate Professor, Environmental Studies and Resource Management, California State University, Channel Islands
kiki.patsch@csuci.edu

Co-Chair Dr. Douglas George
Vice President, California Shore & Beach Preservation Association
douglasgeorge.phd@gmail.com

Mr. Robert Battalio. P.E.
Senior Engineer, Environmental Science Associates (ESA)
BBattalio@esassoc.com

Dr. Jenifer E. Dugan
Associate Research Biologist, Marine Science Institute
j_dugan@lifesci.ucsb.edu

Dr. Lesley Ewing, P.E.
Senior Coastal Engineer, California Coastal Commission (Retired)
lesleycoastal@gmail.com

Dr. Kristen Goodrich
Coastal Training Program Coordinator, Tijuana River National Estuarine Research Reserve
kgoodrich@trnerr.org

Dr. Dan Hoover
Oceanographer, Pacific Coastal and Marine Science Center, United States Geological Survey
dhoover@usgs.gov

Dr. Philip King
Professor, Department of Economics, San Francisco State University
pgking@sfsu.edu

BEACON SAC Membership 2023-2024

Dr. Charles Lester
Ocean and Coastal Policy Center, Marine Science Institute, UCSB
charleslester@ucsb.edu

Dr. Dan Reineman
Assistant Professor, Environmental Sciences and Resource Management, California State University, Channel Islands
dan.reineman@csuci.edu

Dr. David Revell
Principal, Integral Corporation
drevell@integral-corp.com

Dr. Sean Vitousek
Research Oceanographer, Pacific Coastal and Marine Science Center, United States Geological Survey
svitousek@usgs.gov

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STAFF REPORT

Meeting Date: November 8, 2024
Agenda Item: 6

To: **Science Advisory Committee**
From: **BEACON Science Support Staff**
Date: **November 1, 2024**

RE: **Presentation on status of BEACON Science Research Agenda Implementation Activities**

RECOMMENDED ACTION:

Receive and file presentations on the BEACON Science Research Agenda implementation. Staff of the USGS will provide a focused update of long-term physical shoreline monitoring. BEACON Science Staff will provide status updates of BEACON implementation activities and input received on the Science Research Agenda. Receive input from SAC Members on recent research projects and initiatives that can inform the Beacon Science Research Agenda. Staff is recommending that the SAC undertake a full review of the Science Research Agenda in 2025.

DISCUSSION:

In 2021, the BEACON SAC developed and adopted a multi-year Science Research Agenda with a specific implementation plan focused on priority program areas. Starting in January 2021, the BEACON Science Advisory Committee (SAC) began reviewing how science research and data collection could be enhanced and expanded to better inform decision-making, addressing the complementary BEACON goals of regional sediment management (RSM), coastal resource and ecosystem management, and regional climate change and sea level rise (SLR) adaptation planning. The Science Research Agenda was adopted in December 2021.

BEACON science staff have undertaken several complementary science and research initiatives since 2022 to address multiple SAC goals. Expanding and enhancing regional monitoring capabilities, data collection efforts, and decision-support tools were identified as priority implementation needs.

This staff report summarizes the current status of important implementation actions and activities undertaken between 2021-2024 and suggestions for proposed additions to the original research topics and priorities. This staff report incorporates many of the comments received at the November 2023

Manager-Scientist Summit (Attachment 1: BEACON 2024). Add additional comment on what was discussed at the summit-what were the comments about? Maybe-incorporates many of the research agenda focus group discussion comments or something like that

BEACON's science and policy work in the past decade has focused on long-standing watershed and coastal restoration activities focused on nature-based projects and initiatives, the development of robust regional data and information, supported by long-term monitoring of coastal natural resources and restoration project performance.

This report includes a brief summary of important implementation actions taken in the past two+ years and includes suggested additions to the initial Research Agenda supporting increased communication, engagement, and outreach activities with under-represented and disadvantaged communities, as well as the need for greater input and consultation with Chumash representatives.

Science Research Agenda-Updating Gaps in Science, Data, Knowledge, Tools and Policy

Since the original Agenda document was completed in 2021, the SAC has held two annual Manager-Scientist workshops, as well as organized additional meetings and workshops to support discussion and review of research needs and priorities. In addition to the original Research Agenda topics included below, this report includes language addressing two important topics contributed by managers and interested stakeholders, 1. Equity and Community Engagement and Communication and 2. Chumash Tribal Engagement.

The Beacon staff and SAC have received input requesting consideration of additional research focus on Equity, Community Engagement and Communication. Similarly, BEACON has received input from representatives of the Chumash that there are legal requirements that BEACON, and the BEACON SAC, must observe engaging the Chumash Tribes in the environmental review of any program implementation, including any monitoring pilot projects. BEACON staff suggest that the SAC consider adding these topics as subject for consideration and possible addition to any review to the Science Research Agenda during the proposed review in 2025.

For example, Chumash representatives have provided important comments on physical, ecological, and social science research areas, identifying assessment of sensitive coastal physical and ecological resources used for purposes of social-cultural and traditional practices as a gap not yet addressed in either current or planned physical and ecological monitoring planning. The input cited the lack of adequate social-cultural research on the use of sensitive coastal resources by traditional Chumash coastal communities. Finally, tribal representatives cited lack of adequate research on governance and engagement needs, especially new or innovative Tribal consultation models, and new collaborative community-based science and research models.

Governance, Management and Decision-Support Science

Since 2022, the Beacon executive and program staff have continued to develop program elements addressing governance, management and decision-support through a combination of BEACON in-

kind and funding support, grant and contract funding, and partnership projects. Projects underway addressing one or more elements of Governance, Management, and Decision-Support, include: an

analysis of options for improving the governance integration of regional sediment management and regional Climate and SLR Adaptation in California and research and development for proto-typing a regional data and information management system.

BEACON is currently investigating governance options for integrating RSM and SLR Adaptation supported by a grant from the Coastal Conservancy. The study seeks to identify alternative means and measures that could contribute to better integration, alignment, and cost-effectiveness in planning for and implementing both regional sediment management and coastal climate and sea level rise adaption programs and projects. The study is working to identify and analyze various government and management options for increasing the integration of two complimentary goals. Results will be completed in 2025.

BEACON is examining integrated data management system options for a demonstration pilot project, an Information Hub, to further develop regional information infrastructure. Such a system would address accessibility to multiple user groups, including technical and scientific staff, agency coastal management and resource staff, interested stakeholders, decision-makers, and the public. Such a hub can serve to support improved and expanded data accessibility, transparency and usability allowing for better sharing of data and information. (See below Communicating Research and Science).

Integrating Climate Science

Multiple BEACON activities address integrating Climate Science, including our Coastal Resilience Project funded by the CA OPC, and our RCAMP Project supported by the Coastal Commission.

BEACON's Coastal Resilience research and policy project, supported by the OPC, involves multiple agency representatives. The grant project tasks will be completed by the end of 2024 and results shared with the SAC and interested stakeholders in the new year. The grant goals include to provide data with analysis to inform coastal regional sediment management and coastal climate adaptation. Several complimentary information and planning needs are being addressed in this research project.

For the past two years, BEACON has been developing the Regional Coastal Adaptation Monitoring Program (RCAMP) in partnership with the City of Santa Barbara, with funding from the California Coastal Commission, identifying regional monitoring data needs for climate and SLR adaptation. The RCAMP will fill a portion of this priority need by developing regional monitoring program elements focused on coastal adaptation that can serve to

support adaptation planning, including informing the implementation of adaptation actions and activities.

In addition, BEACON has received several suggestions for additional research on Climate Science to address knowledge gaps, including:

- Expanded research focus on equity outcomes of SLR decision-making and policy;
- Enhanced engagement on Climate and SLR impacts and planning, particularly on social impacts and outcomes and community effects; and
- Expanded research on climate and weather 'extreme events', including cumulative and combined coastal flooding threats and effects, and threats and effects from increasing heat.

Regional Monitoring Programs

The initial science research agenda identified gaps and voids in regional monitoring needed to support coastal sediment management, coastal access and recreation, coastal restoration and coastal climate and SLR adaptation. Since 2021 BEACON staff have been working with local agencies to identify opportunities for funding to support advancing regional monitoring programs addressing the multiple topic areas of physical, environmental, ecological, and social and human use. Several examples of current BEACON efforts are described below.

Physical Data: The RCAMP described above supports on-going Physical Shoreline Data Collection currently being undertaken as part of a long-term science program of the USGS. In the past 20 years the USGS has undertaken several complementary shoreline profiling efforts along the BEACON coast, including the shoreline and nearshore monitoring at more than 6 dozen locations, multiple special focus areas monitoring, special study monitoring, such as following the Montecito Debris Flow incident. USGS has supported other related bluff and coastal hazard modeling, including the COSMoS model that has produced hazard projections for the BEACON Coast.

Ecological Data: The OPC Coastal Resilience project above includes review of the status of ecological monitoring and needs for expanding long-term regional ecological data development. The RCMP similarly supports efforts to address gaps and shortfalls in ecological data, analysis and assessment frameworks focused on climate and SLR adaptation needs.

Social Science Data: In the past decade, BEACON's social science data assembly and analysis efforts have included social cultural as well as socioeconomic monitoring and survey data. The BEACON Science Research Agenda has recognized the limits to, the expense of, and the lack of funding to support, traditional beach access data.

Over the past three years, BEACON staff has been pioneering the use and applicability of new geo-located cell-phone location-derived beach use data. BEACON, and its project

partners, are now completing the initial phase of a pilot project involving this use mobile device location-derived data.

However, research shows that every source has limits and constraints, requiring that the various datasets be compared and combined in a larger program. To complement the use of the mobile device dataset, BEACON, and its project partners, organized, raised funding for, and conducted a Summer Beach Count/Survey project in 2024, for a select number of SoCal beaches.

BEACON staff intends these coordinated beach use research efforts to contribute to a regional beach use and beach management and governance monitoring program, incorporating data collection, data management, data analysis, and development of decision-support tools.

Interdisciplinary Research

BEACON' Science Research Agenda, and BEACON's staff efforts have both emphasized the need to consider interdisciplinary approaches to research topics and efforts. Several of BEACON's research initiatives seek to addresses topics of physical, ecological and social science from multiple disciplines.

Surfers Point Monitoring Pilot Project: Surfers Point Regional Sentinel Monitoring Site Monitoring. Organized in 2020, with monitoring conducted in 2021, 2023, and 2024, BEACON coordinated monitoring of the SP Living Shoreline and Managed Retreat Project. This monitoring pilot project built on the project monitoring conducted from 2013-2017 for the Phase 1 project. The most recent BEACON Monitoring expanded monitoring, incorporating 3-D aerial data and imagery. BEACON is contributing BEACON funding to support the monitoring effort and is searching for funding to support long-term monitoring of the Ventura River-Seaside Wilderness Coastal Monitoring Project (extending from Emma Wood and Seaside Wilderness Park in the west to the Surfers Point at Seaside Park project area to the east).

Modeling

BEACON seeks to identify issues and topics that can benefit from the application of computer modeling. BEACON has been collaborating with USGS through its OPC Project to undertake sediment modeling of transport and fate at select beach locations at Goleta County Beach and Carpinteria City Beach to expand our knowledge of the shoreline extent and character from beach nourishment deposition projects. This research has been focused on assessing the transport and fate of sediment fines.

BEACON staff are currently pursuing opportunities to extend this research to a fuller range of sediments, including fines and cobbles. The focus on fines and cobble has been identified as a gap in our knowledge of impacts of beach nourishment activities on coastal sensitive resources.

BEACON staff will continue to emphasize data collection and modeling of sediment source, transport, and fate to help inform regional sediment management coastal adaptation activities.

Prototyping

BEACON has continued to support innovative prototyping efforts, including evaluation of 'soft' nature-based stabilization and retention structures such as hybrid dune restoration elements in its long-standing demonstration pilot project at Surfers Point at the Ventura River mouth. Current monitoring efforts support assessing project performance. Results of the monitoring efforts provide technical and scientific data and information to support outreach and education regarding project success metrics and successful prototyping.

The SP Monitoring Project, started by BEACON in 2020, is a major BEACON research initiative contributing to support regional baseline shoreline data collection. Over the course of the most recent monitoring, these efforts have broadened to include 3-D aerial video and photographic imagery. Additional monitoring data collection is now being investigated by BEACON and its project partners, including additional imagery and remote sensing monitoring.

Equity, Community Engagement, Involvement and Communication

The BEACON SAC and BEACON staff have received a great amount of input regarding the need to recognize the importance of providing opportunities for the full involvement of members of the public and interested stakeholders to solicit input, plan review, program development and policy priorities. The BEACON staff are developing additional communication and engagement projects that increase transparency and encourage input from the community. Specifically, these projects will focus on providing transparency and presentation of BEACON's plans and projects to community members, and the incorporation of more public voice in project processes.

BEACON has received comments on the need to expand research efforts addressing social-cultural data and information needs. One important research topic is the need to focus additional research addressing differential vulnerabilities facing underrepresented communities. Suggestions included research on hazards and risks, research on 'extreme event' response planning, and research on community-scale/neighborhood scale adaptation actions,

Chumash Tribal Consultation

BEACON has received extensive comment on the need to expand its consultation and engagement with representatives of Chumash Tribes, including in reviewing and further developing its Science Research Agenda and in BEACON's research and planning initiatives. Increased and early consultation with representatives of the Chumash has been identified as a gap in current outreach and engagement efforts. In addition, comments have been received regarding the need to address alternative and innovative research and policy methods emphasizing collaborative action. Chumash Tribal representatives invite listening, dialogue, and securing a role in BEACON's proceedings.

Recommendation

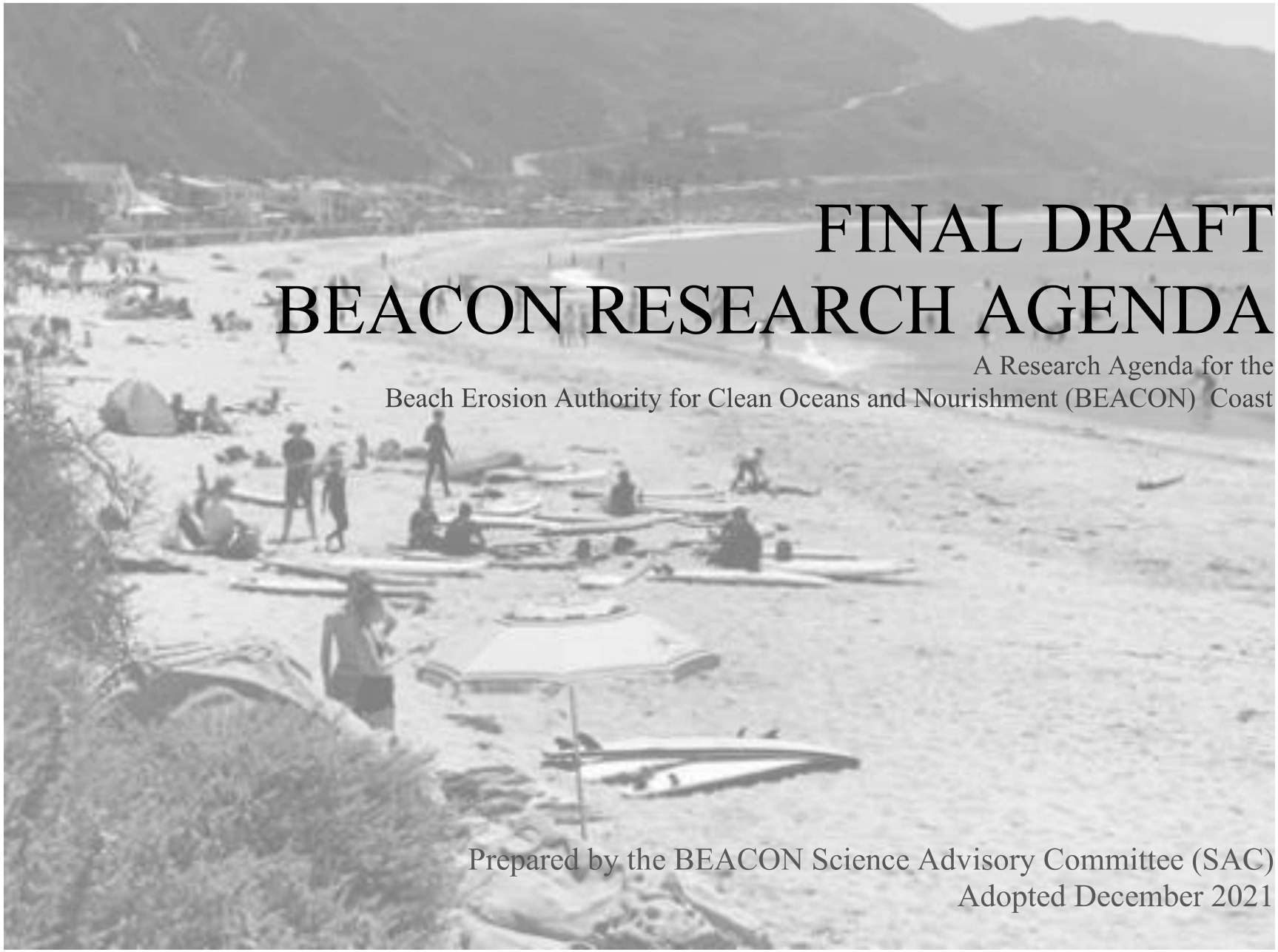
The BEACON Science Staff is recommending the SAC approve undertaking a review of the Science Research Agenda during 2025.

Attachment 1: Science Research Agenda
Attachment 2: Summary of November 2023 Manager-Scientist Summit

ITEM 6 - Staff Presentation on status of BEACON Science Research Agenda Implementation Activities

ATTACHMENT 1

Science Research Agenda



FINAL DRAFT
BEACON RESEARCH AGENDA

A Research Agenda for the
Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) Coast

Prepared by the BEACON Science Advisory Committee (SAC)
Adopted December 2021

A Research Agenda for the BEACON Coast and the Santa Barbara Littoral Cell
2021-2026
BEACON Science Advisory Committee
Adopted December 2021

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BEACON Background

BEACON's policies, projects, and programs seek to accomplish important complimentary goals and objectives. BEACON's Coastal Regional Sediment Management Plan (BEACON, 2009) is intended to outline the ways and means to conserve and restore the valuable sediment resources along the Santa Barbara and Ventura Counties coastline.

BEACON's programs and projects seek to reduce shoreline erosion and coastal storm damages, protect sensitive environmental resources, increase natural sediment supply to the coast, preserve and enhance beaches, improve waterquality along the shoreline, and optimize the beneficial use of material dredged from ports, harbors, and other opportunistic sediment sources.

BEACON's primary objectives[1] are to:
A. Identify solutions to coastal erosion and environmental problems;
B. Coordinate the use of local, state, federal and private resources;
C. Facilitate design, financing, construction and maintenance of beach restoration, shoreline protection, and environmental protection and enhancement projects;
D. Collect and analyze data needed to facilitate the design projects and to monitor their performance;
E. Coordinate local government involvement and keep elected officials and citizens informed;
F. Support the preparation of contingency plans by Member Agencies to be ready in emergencies to direct public and private efforts to combat erosion and to take steps necessary to coordinate the protection of public and private property;
G. Spearhead local government lobbying efforts at the State and Federal levels;
H. Collect and analyze data addressing regional-level climate and sea-level rise impacts to coastal beaches, coastal beach access, and coastal structures;
I. Identify regional-level solutions to impacts resulting from changes in climate, weather, and sea-level rise that may affect BEACON member agencies beaches through coordinated regional planning; and
J. Coordinate regional-level responses among BEACON member agencies to climate, weather, and sea-level rise changes impacting beaches, coastal beach access, and coastal structures.

[1] BEACON Bylaws Article II Section 1

BEACON Mission, Vision, and Operating Principles

BEACON Mission

Provide venue for regional coordination of beach nourishment, coastal resources restoration, and protection of coastal water quality within Ventura and Santa Barbara counties to ensure that beaches are sustainably maintained and preserved, coastal shoreline resources are enhanced, coastal water quality protected, and coastal beach access provided.

BEACON Vision

The BEACON coast, its beaches, and its natural coastal resources are preserved, enhanced and sustainably managed in perpetuity through close coordination and collaboration among its member agencies, the public, and its community and private partners.

BEACON Operating Principles

Collaborative: Partnering with Others
Inclusive: Informing and Including all interested Stakeholders
Science-based: Utilizing the Best Available Science to Support
DecisionsTransparent: Open Communication of Intentions and
Plans Accountable: Documenting and Measuring Outcomes
Equitable: Ensuring Access and Resilience for all BEACON Communities and all Residents

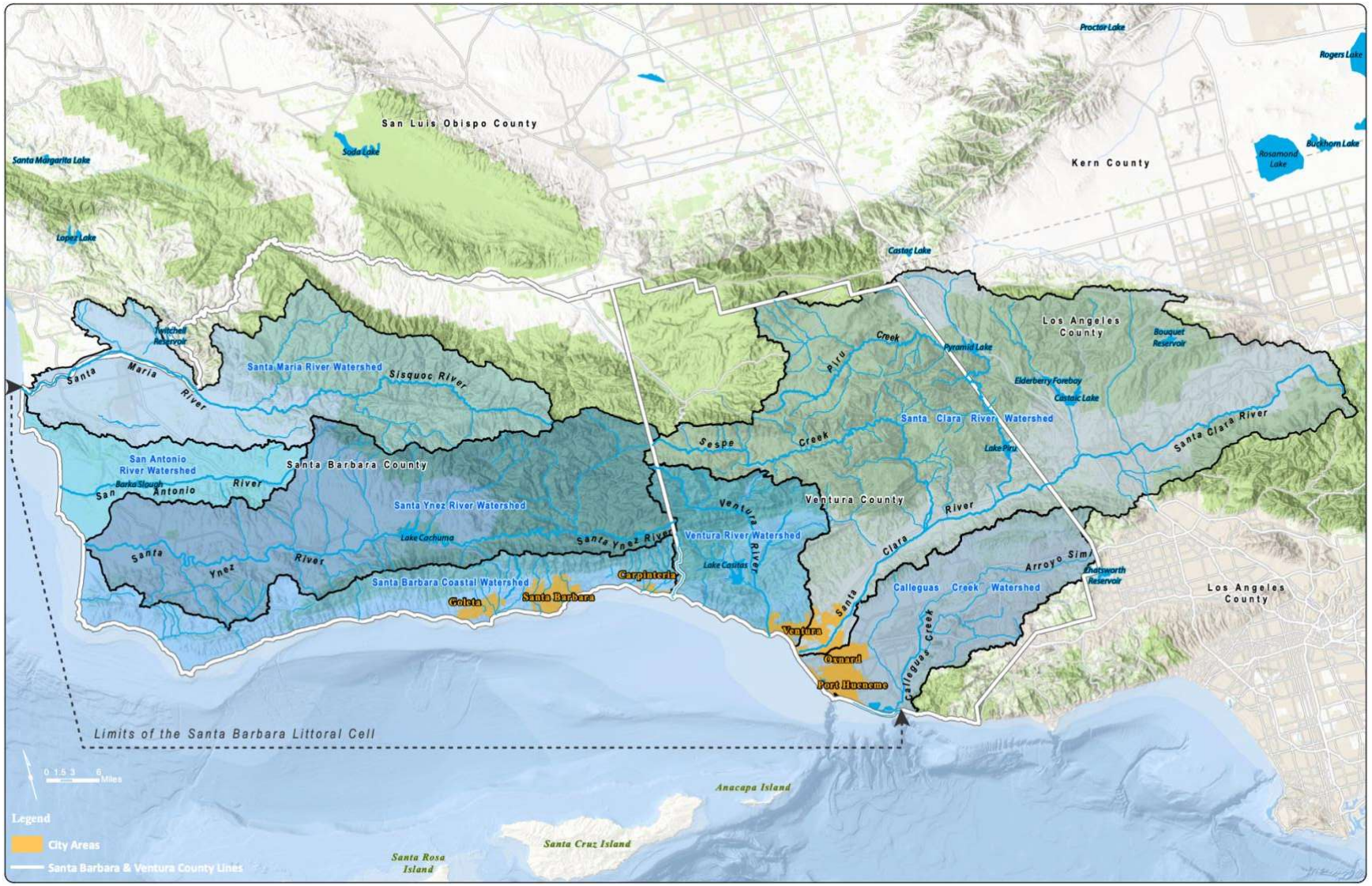

Figure 1. BEACON "Coast" and the Santa Barbara Littoral Cell

Summary: Linking Science Research and Regional Sediment Management and Climate Adaptation

This document outlines an initial Research Agenda for the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON). This document is meant to be adaptable and updated over time as new opportunities, issues, and relevant coastal management needs arise. The information provided within was developed by the BEACON Science Advisory Committee (SAC) for the purposes of identifying key research and scientific actions that would advance BEACON's primary objectives of coordinated regional coastal resource management, including those specifically designated in the updated BEACON Strategic Plan (BEACON 2021c).

For the past year and one-half, BEACON executive staff and Board have been developing and implementing policies and plans for expanded science support for BEACON's programs and projects. In November 2020, the BEACON Board approved Bylaws for a BEACON SAC and confirmed the initial leadership and membership of the SAC (BEACON, 2020a, 2020b, 2021a). Starting in January 2021, the BEACON SAC has been meeting and reviewing how science research and data collection can be enhanced and expanded to better inform decision-making, and address the related topics of regional sediment management (RSM), coastal resource and ecosystem management, and regional climate change and sea level rise (SLR) adaptation planning.[2] The BEACON SAC's over-arching goal is to provide recommendations and guidance to the BEACON Board and executive staff for understanding the existing coastal conditions and anticipated future shifts to coastal resources based on climate and adaptation scenarios.

The BEACON "Coast" (Figure 1), the coast of Santa Barbara and Ventura counties, includes the Santa Barbara Littoral Cell, the largest littoral cell along the California Coast, stretching more than 140 miles from the Santa Maria River in the north to the Mugu Submarine Canyon to the east. The BEACON Coast drains several large coastal watersheds providing sediment and sand to the coast. This important coastal region faces many threats and many challenges, including many management and governance demands, requiring BEACON to seek out the best available science and support any new initiatives, or activities, that would assist with improved decision-making and improved outcomes. Outside the Santa Barbara Littoral Cell, BEACON can provide support and coordinate on sediment projects within the portion of the Zuma and Santa Monica Littoral Cells that reside off the coast of Ventura County.

BEACON's Coastal Regional Sediment Management Plan (CRSMP) (BEACON, 2009) outlines key understandings and management strategies. Particularly, beach nourishment (including beneficial reuse of sediment) has been a long-term strategy used in conjunction with coastal engineering and shoreline stabilization techniques. Going forward there is critical need to better understand policy, regulatory, and funding aspects of coastal regional sediment management (BEACON 2021d, Ulibarri et al., 2020). Additionally, there are gaps of understanding from the physical and engineering perspective of sediment grain size, placement technique, source, and stockpiling where additional research can help inform specific management actions (Ludka et al. 2018, Ludka et al., 2016, Pendleton et al., 2012).

[2] SAC Agenda and Meeting Minutes, January 19, 2021 and SAC Agenda and Meeting Minutes, January 29, 2021.

This document outlines an initial Research Agenda supporting management and decision-making for regional sediment management, coastal resource management and regional climate change and sea-level rise adaptation planning. BEACON is in a unique position to better connect science and policy as it acts in many important ways as a boundary organization[3] translating science and technical information for decision-makers and the public.

The key objective going forward is to bridge identified gaps between science and decision-making, better integrating science into BEACON's program and project initiatives. BEACON can serve as a facilitator, connecting regional to local coastal resilience, science, and decision-making. While the pace of science research in the BEACON coast is accelerating, there is an opportunity to solidify pathways between these science efforts and BEACON's programs and policies. The charge of the BEACON SAC members is to use their expertise and robust experience to inform the BEACON Board and staff on critical science activities to support the region as a whole.

Figure 2 highlights the overlap and illustrates the coordination and integration of science and perspectives from the SAC into BEACON activities. The development of this Research Agenda is an iterative process that requires regular evaluation and feedback from both the SAC and relevant managers and stakeholders. There are several discrete steps that have been followed by BEACON in the process of developing the Research Agenda, including:

- Prepared a Science Strategy, identifying the need for the SAC and the need for a Science Action Plan;
- Identified the elements of a Science Action Plan; Established the SAC;
- Prepared a set of Science Goals and Objectives; Completed an initial Science and Data Gap Analysis;
- Developed priorities for an initial BEACON Research Agenda; Convened a Managers-Scientists Workshop;
- Prepared the BEACON Research Agenda, and developed a short-term Research Agenda Implementation Plan.

Importantly, the initial Science Goals and Objectives and recommended action items have been included in BEACON's first Strategic Planning Goals and Objectives document, adopted in March 2021. (BEACON, 2021c). This document serves as a framework for BEACON to continue supporting research and projects that help implement BEACON's Strategic Plan (BEACON 2021c).

[3] Boundary organizations often perform important translation functions in making complex scientific and technical information 'understandable' to more generalist decision-makers, stakeholders and members of the public.

Gaps in Science, Data, Knowledge, and Policy

Currently, several different data collection and research efforts focused on coastal sediment processes, coastal and ocean physical systems, and a range of climate adaptation needs are being undertaken by partner organizations which could help inform BEACON's regional sediment management actions going forward (BEACON, 2009). Appendix A outlines several relevant science initiatives that can be leveraged to better inform BEACON member agencies.

Figure 2. Diagram of activities and overlap amongst BEACON Board and staff, Science Advisory Committee, and relevant coastal natural resource managers.

BEACON staff and board members, as well as BEACON's member agency managers, need to better understand current data collection and research efforts, gaps in the collection of data, and identify future data collection and research needs. Additionally, BEACON can support increased integration of these science initiatives to support decision-making, and establish pathways for science to inform decision-making, including in the areas of climate adaptation and coastal resilience. Figure 2 illustrates that an interdisciplinary approach is essential to the coordination and integration of science. Information from the local resource managers as well as the SAC can assist the BEACON Board and staff in providing resources and support that is helpful at the regional level.

This proposed research agenda addresses gaps in science and data to support policy, programs, and projects addressing regional management, including related gaps covering a range of topics: Management and Decision Science, Physical Conditions and Shoreline Changes, Social and Economic Conditions and Trends, Coastal Ecology and Ecosystem Services, and restoration science and practice (see Figure 3). These items address goals and objectives (Appendix B) identified in the BEACON Strategic Plan (BEACON, 2021c). It is important to note the emphasis of interdisciplinary efforts throughout many of the identified focus areas,

implementation actions, and nested. Additionally, it is important to note that any future research and science endeavors also need to nest within planning and implementation efforts taken by individual municipalities and jurisdictions in the region. Appendix C catalogues the local agency coastal vulnerability and adaptation planning resources. BEACON intends to keep the activities listed in Appendices A and C up to date going forward. The Research Agenda Early Implementation Actions reflect the prioritization made by the BEACON SAC to key areas where specific investment would benefit the coastal resources in the BEACON region. These Research Agenda Actions take into consideration ongoing science activities (Appendix A) and existing planning investments (Appendix C) all through the lens of BEACON's programmatic goals and objectives (Appendix B).

SAC Focus Area		Research Agenda Early Implementation Actions	Nested Tasks	BEACON Strategic Plan Goals and Objectives					
Management and Decision Science		-	-	**Goal 2**			Obj. 2.1		
		Expand coordination role and activities analyzing and implementing best options to increase coordination and connections, including acting as hub, serving as connector, and/or functioning as a repository	Build BEACON stakeholder network	Obj. 8.1					
		Continue and expand upon focused efforts to link scientists through the BEACON SAC, and develop expanded partnerships with local and regional managers such as ongoing Managers Workshops and targeted integration of science (including social science) efforts to better understand how science activities can contribute to achieving management goals. Consider appointing a Manager Liaison to the SAC to facilitate direct communication between groups.	Science-Policy Pathways (regulatory agency workshops)	**Goal 8**		Obj. 8.2		Obj. 8.3	
			Model Regional Permit	Obj. 1.1	Obj. 1.2	Obj. 1.2.1	Obj. 1.2.2	Obj. 1.3	
Integrating Climate Science into BEACON Policies, Programs and Projects		-	-	**Goal 1**					
		Develop work plans to integrate climate and SLR impacts into regional sediment management plans focused on downscaled regional shoreline models and watershed coastal flooding models.	-	Obj. 2.2					
		Develop an update to the BEACON Coastal Regional Sediment Management Plan (CRSMP) that includes current climate and sea level rise information, in additional to adaptation strategies that can be taken at a regional level.	SLR Update-CRSMP	Obj. 2.2.1			Obj. 3.1		
		Continue to identify and keep up to datea a catalogue of local jurisdiction assessment and planning documents that incorporate sea level rise and climate science into coastal resource management.	-	Obj. 2.2					
Regional Monitoring Programs	-	Further work towards coordination of regional monitoring (of all types) including data standardization, shared data repository for local projects to feed into, and some initial analysis and metrics to help local managers easily use and implement monitoring information, including bluff-backed beaches, and align the various monitoring programs to better leverage one another.	Regional Monitoring Program Review	Obj. 2.3					
	Physical Shoreline Data Collection and Monitoring	Extend shoreline physical profiling to all regional beaches and align the various monitoring programs to better leverage one another.	Aligning Regional Monitoring	Obj. 3.2					
			Extend Shoreline Profiling	Obj. 3.2					
	Coastal Ecology and Ecological Regional Monitoring	Develop a Sandy Beach Habitat and Species Framework Analysis and expand baseline data collection of habitat and species conditions within the region. Areas of less disturbance, and restored sites could be prioritized for reference sites.	-	**Goal 2**					
		Develop draft scope of work for an Ecosystem Goals Program	-	**Goal 2**					
	Human Use and Economics Data Collection and Monitoring	Update human beach use and beach user information, including socio-economics, and investigate development of a data portal housed at BEACON or a local university. Areas of less disturbance, and restored sites could be prioritized for reference sites.	Updating User Data	**Goal 7**			Obj. 7.3		
			Socio-Economic Data Portal						
			Develop Regional Recreational Goals						
Interdisciplinary Research Approach		Extend the CEVA framework analysis from Santa Barbara County to the littoral cells encompassing encompassing Ventura County.	-	Obj. 2.4					
Modeling		-	-	**Goal 3**					
		Seek funding to support further modeling efforts focused on watershed to littoral cell processes and regional downscaling of climate linked impacts (e.g. sea level rise, temperature, fire, precipitation, and flooding) including extreme events.	Regional SLR-Climate Downscaling	Obj. 2.2					
			Regional Beaches Vulnerabilty Modeling	Obj. 3.3					
			Watershed Extreme Event Flood Modeling	**Goal 2**					
		Continue to support data collection and modeling of sediment source, transport, and fate to help inform coastal adaptation activities (e.g. beach nourishment/beneficial use, prototyping shoreline stabilization projects, dredge material placement, identifying priority monitoring areas, etc.) This includes sediments of many grain sizes, from mud to sand and larger sizes such as cobble.	Sediment Fines-Transport&Fate Modeling	Obj. 1.1.1			Obj. 1.1.2		
Prototyping and Demonstration Projects		Develop one or more new research project(s) focused on innovative sediment retention structures that are environmentally sound and provide resilient features.	-	Obj. 4.1	Obj. 4.2	**Goal 5**	Obj. 5.1	Obj. 5.1.1	Obj. 5.1.2
			Beach-Dune LS	Obj. 4.3			Obj. 7.1		
			Green Groins	**Goal 4**					
			Reefs-Oil Piers Demo Pjt	Obj. 4.4					

Figure 3. Crosswalk table of SAC Focus Areas, Research Agenda Early Implementation Actions, Nested Tasks, and BEACON Strategic Plan Goals and Objectives (see Appendix B) (BEACON, 2021c).

Research Agenda Focus Topics and Suggested Implementation Actions

The Draft BEACON Science Action Plan (2020a) identified several areas of research focus which the SAC reviewed at its sessions in January 2021. SAC members added and further elaborated on these topics, identifying early implementation priorities, continuing data needs, and frameworks and mechanisms for organizing research priorities and activities at its meeting in April 2021.

Below are the research focus areas identified by the BEACON SAC and further described below:

- *Management and Decision Science*
- *Integrating Climate Science into BEACON Policies, Programs and Projects*
- *Regional Monitoring Programs*
    - *Physical Shoreline Data Collection and Monitoring*
    - *Coastal Ecology and Ecological Regional Monitoring*
    - *Human Use and Economics Data Collection and Monitoring*
- *Interdisciplinary Research Approach*
- *Modeling*
- *Prototyping and Demonstration Projects*

Management and Decision Science

BEACON should expand its focus on governance and management science in order to broaden and improve its effectiveness as a regional leader through multi-agency and interdisciplinary coordination, capacity building, and program implementation (Goodrich et al., 2020). Examining the connections between science and policy in an effort to improve them, will require BEACON to bring to bear an analysis and evaluation of governance structure, coastal management process, and science techniques and methods. Identifying and assessing adaptation pathways will also require a focus on governance and management typologies and evaluation methods (Norgaard et al., 2021). This includes the use of a range of analytical tools and activities including focused surveys and workshops of member agencies and relevant researchers, a range of different normative and formative evaluation techniques, and various planning tools, such as scenario planning.

Additionally, of key importance, is BEACON's role as a convener within the region helping share lessons learned from demonstration projects and best practices within the region. The distilling and translating of research, monitoring, and modeling information can support advancements in local efforts to help achieve regional goals (Goodrich and Warrick, 2015).

Regional goals are necessary to drive the form, function, and evaluation of activities pursued by BEACON. Along with climate change impacts, management and governance touches every other aspect of this Science Research Agenda. Through any number of governance and adaptive planning and iterative frameworks, BEACON can champion advancements in regional coastal management through science supported decision making.

These holistic approaches require establishment of regional goals that drive a monitoring and inventory of coastal resources, assessment of changes to those resources, an understanding of feasible actions to implement, and ongoing monitoring to ensure actions meet the designated goals of managing those coastal resources. Figure D-1 (Appendix D) illustrates a framework of an iterative process that can integrate management and governance science with the other major themes identified by the SAC: interdisciplinary, climate science, modeling and prototyping, and monitoring, focused on regional goals.

Early Implementation Actions:

- Expand coordination role and activities analyzing and implementing best options to increase coordination and connections, including acting as hub, serving as connector, and/or functioning as a repository.
- Continue and expand upon focused efforts to link scientists through the BEACON SAC, and develop expanded partnerships with local and regional managers such as ongoing Managers Workshops and targeted integration of science (including social science) efforts to better understand how science activities can contribute to achieving management goals. Consider appointing a Manager Liaison to the SAC to facilitate direct communication between groups.

Integrating Climate Science into BEACON Policies, Programs and Projects

Climate change and sea level rise represent the most serious threat to successful sediment management and coastal adaptation within the BEACON coast. BEACON must integrate up-to-date climate science into its policies, programs, and projects (BEACON, 2016, King et al., 2015). Recent science and technical reports and studies detail projected changes from climate and SLR, including extreme events and impacts on regional shorelines. For example, Vitousek et al. (2017) found that 31-67% of beaches in Southern California could be lost due to shoreline change under SLR projections of 0.93-2.0m in the absence of any adaptation interventions. Study of the 2015-16 El Niño winter demonstrated the need for higher spatial and temporal resolution of shoreline monitoring through LiDAR or satellite imagery to better understand how the shifts of mean wave direction and energy correspond with shoreline changes (Smith and Barnard, 2020, Barnard et al., 2017).

These resources and other assessments should be expanded and further downscaled to the BEACON coast and these new science and research efforts should guide BEACON's incorporation of climate change and SLR considerations into a comprehensive climate and SLR update to the CRSMP (BEACON 2009) which includes considering potential opportunities for regional adaptation strategies. This builds off local efforts towards understanding SLR vulnerabilities and adaptation possibilities that BEACON member agencies have done. BEACON intends to continue coordinating and tracking local activities and initiatives (Appendix C) which will be used to inform how BEACON can promote regional activities to support local agencies.

Early Implementation Actions*:*

- Develop work plans to integrate climate and SLR impacts into regional sediment management plans focused on downscaled regional shoreline models and watershed coastal flooding models.
- Continue to identify and keep up to date a catalogue of local jurisdiction assessment and planning documents that incorporate sea level rise and climate science into coastal resource management.
- Develop an update to the BEACON Coastal Regional Sediment Management Plan (CRSMP) that includes current climate and sea level rise information, in additional to adaptation strategies that can be taken at a regional level

Regional Monitoring Programs

Implementing BEACON's programs and projects need to be supported by continuing regional monitoring, including US Geological Survey's (USGS) shoreline profiling, and expanded regional monitoring program incorporating ecological baseline data and information, and human use and user information. This effort requires a formalized review of all active monitoring programs in the BEACON region.

Early Implementation Actions*:*

- Further work towards coordination of regional monitoring (of all types) including data standardization, shared data repository for local projects to feed into, and some initial analysis and metrics to help local managers easily use and implement monitoring information, including bluff-backed beaches, and align the various monitoring programs to better leverage one another.

Physical Shoreline Data Collection and Monitoring:

Monitoring physical changes to the coastline has been a long priority of BEACON, its member agencies, and partners. Fortunately, there exists a robust surveying program through the USGS for much of the Santa Barbara and Ventura coastline. Additionally, there are other various physical monitoring efforts including those that utilize student groups at CSU Channel Islands led by SAC co-chair Dr. Kiki Patsch, and the Community Alliance for Surveying the Topography of Sandy Beaches (CoAST SB) program sponsored by California Sea Grant. Additionally, various ad hoc monitoring occurs to a limited extent around coastal development projects. While these activities provide ample information about the physical status of the beaches, BEACON should take a leadership role to better align the monitoring programs to fill spatial and temporal gaps, as well as to focus efforts around management needs.

Early Implementation Actions*:*

- Extend shoreline physical profiling to all regional beaches and align the various monitoring programs to better leverage one another.

Coastal Ecology and Ecological Regional Monitoring:

Less ecological research has been conducted in the past twenty years within the BEACON coast than physical science. However, BEACON's sediment management efforts have relied on available physical and ecological science initiatives addressing the regional sediment management program and individual project impacts. While assessments of individual projects on coastal ecology have been helpful, they are often performed to achieve specific permitting requirements with narrow spatial and temporal scopes. Thus, they have been unable to provide a holistic view on the status and trends of regional coastal ecology, nor how management actions coupled with background climatic and seasonal changes alter these systems. Going forward, BEACON's sediment management and climate change adaptation programs and activities should expand support for up-to-date ecological research focused on coastal and marine ecosystems, habitats, and species, particularly shoreline and marine environments including sensitive beach and intertidal areas (Barnard et al., 2021, Myers, et al. 2019).

There are opportunities to attenuate climate change related impacts to different coastal habitats, including beaches and wetlands. Local governments can manage these ecosystems and the surrounding area so they more effectively sustain ecosystem services and the beneficial services they provide into the future (e.g. stopping beach grooming and restoring wide beaches so dunes can form; allowing both wetlands and beaches to transgress inland; removal of shoreline armoring and effective sediment management), contributing to an ecosystem-based adaptation (Schooler et al., 2019, Myers, et.al., 2019). At the same time, there is a need to better understand the potential for ecological impacts of specific coastal management features and strategies (e.g. groins, revetments, nourishment activities, etc.) as well as a better understanding of the immediate, cumulative, and long term ecological impacts of these (Griggs et al., 2020, Dugan and Hubbard, 2011).

The SAC discussed two models of regional ecosystem goal setting for habitat and resource restoration in CA that may offer some lessons learned, including the San Francisco Bay Habitat Goals program (SCC, 2010-18) and the Southern California Wetlands Recovery Program (SCC, 2018). These examples can help scope a path forward for BEACON to consider regional ecosystem goal setting relevant to coastal resources.

Early Implementation Actions:

- Develop a Sandy Beach Habitat and Species Framework Analysis and expand baseline data collection of habitat and species conditions within the region. Areas of less disturbance, and restored sites could be prioritized for reference sites.[4]
- Develop draft scope of work for an Ecosystem Goals Program

Human Use and Economics Data Collection and Monitoring:

Over the past twenty years, BEACON has incorporated available coastal user and economic data into its program and project development, supporting the collection and assessment of baseline human use and economic information. These data remain incomplete, however, and BEACON needs to support expanded social science data collection and analysis to support its sediment management, climate adaptation, and ongoing coastal resilience efforts (King et al. 2018, King and McGregor, 2012).

Currently, many social science topics addressing governance, institutional competencies, and law and policy remain un- and under-studied. Socio-economic data, including beach use data, "is stale or inaccurate" (King, 2021). The BEACON study area needs more human use research with regard to the following: (1) Who visits, why, and where are they from? (2) What mechanisms can improve underserved communities access and use of BEACON's beaches? (3) What is the economic impact of BEACON's beach visitation? (4) How will sea level rise and other anthropogenic changes impact BEACON's beaches and beach visitation? The answers to these questions can lead BEACON towards better understanding current recreational activities and potential regional recreational goals.

Early Implementation Actions:

- Update human beach use and beach user information, including socio-economics, and investigate development of a data portal housed at BEACON or a local university. Areas of less disturbance, and restored sites could be prioritized for reference sites.[5]

Interdisciplinary Research Approach

Translating scientific research into useful management actions requires an interdisciplinary approach and lens. Deconstructing silos and bridging gaps between fields is an approach that the BEACON SAC has identified as critical for supporting informed regional sediment management and sea level rise adaptation. Recent science activities (Appendix A) and local agency planning (Appendix C) both contain interdisciplinary research approaches. Going forward, the BEACON SAC

[4] These can include areas with limited access, development, disturbance, as well as sites that have been restored. For example, portions around Vandenberg Air Force Base, Hollister Ranch, and the Jack and Laura Dangermond Preserve, among others.

supports projects with multi-disciplinary teams that help achieve regional sediment management challenges. For example, BEACON's programs and projects must address combined social and ecological systems if they are to be successful. Regional sediment management approaches emphasize the development of multiple benefit projects that address both environmental and social benefits. Increasing efforts within the BEACON coast are being directed to interdisciplinary analysis but gaps and voids remain (Myers et al., 2019). Through the SAC activities and objectives identified in the Science Action Plan, BEACON will have the requisite information to intentionally encourage interdisciplinary science for improved decision-making. The Santa Barbara Area Coastal Ecosystem Vulnerability Assessment (CEVA) analyzed future changes to southern Santa Barbara County climate, beaches, watersheds, wetland habitats and beach ecosystems. This example framework can be implemented in Ventura County providing for a consistent analysis of ecosystem vulnerability for the BEACON region.

Early Implementation Actions:

- Extend the CEVA framework analysis from Santa Barbara County to the littoral cells encompassing Ventura County.

Modeling

BEACON needs to continue to support and expand modeling efforts of partners that can help provide insight to innovative regional sediment management and SLR adaptation solutions. BEACON has supported efforts to model regional climate and SLR impacts on coastal resources and supported modeling efforts aimed at better understanding sediment transport and fate dynamics on a littoral cell basis. BEACON should further this work and include watershed scale approaches that link upper reaches of fluvial systems with coastal environments. This information can directly lead to advancements in the development of and understanding of various prototypes of coastal adaptation strategies and shoreline stabilization techniques.

BEACON should support updating and refining regional down-scaling of climate, and weather models, including extreme events, that address coastal watershed and coastal ocean conditions affecting both sediment management and coastal adaptation.

Early Implementation Actions:

- Seek funding to support further modeling efforts focused on watershed to littoral cell processes and regional downscaling of climate linked impacts (e.g. sea level rise, temperature, fire, precipitation, and flooding) including extreme events.
- Continue to support data collection and modeling of sediment source, transport, and fate to help inform coastal adaptation activities (e.g. beach nourishment/beneficial use, prototyping shoreline stabilization projects, dredge

material placement, identifying priority monitoring areas, etc.) This includes sediments of many grain sizes, from mud to sand and larger sizes such as cobble.

Prototyping and Demonstration Projects

BEACON has been a long-time supporter of proof-of-concept demonstration projects, involving living shoreline treatment projects, and innovative coastal resource restoration projects, including integrated beach and dune restoration and 'managed retreat' projects.

BEACON should continue to support innovative prototyping efforts, including sand stabilization and retention structures, such as 'green' groins that prioritize mimicking natural cobble berm features. These efforts can better establish the type and extent of impacts (positive and negative) coastal resilience strategies have on natural environments (Ventura County, 2019). In particular this includes building experimental design components into projects with alternative features to support designing strategies that produce the best results to achieve local and regional goals (i.e., ecological, recreational, protective, etc.).

Early Implementation Actions:

- Develop one or more new research project(s) focused on innovative sediment retention structures that are environmentally sound and provide resilient features.

Research Agenda Early Implementation Actions Summary

Management and Decision Science

- Expand coordination role and activities analyzing and implementing best options to increase coordination and connections, including acting as hub, serving as connector, and/or functioning as a repository
- Continue and expand upon focused efforts to link scientists through the BEACON SAC, and develop expanded partnerships with local and regional managers such as ongoing Managers Workshops and targeted integration of science (including social science) efforts to better understand how science activities can contribute to achieving management goals. Consider appointing a Manager Liaison to the SAC to facilitate direct communication between groups.

Integrating Climate Science into BEACON Policies, Programs and Projects

- Develop work plans to integrate climate and SLR impacts into regional sediment management plans focused on downscaled regional shoreline models and watershed coastal flooding models
- Continue to identify and keep up to date a catalogue of local jurisdiction assessment and planning documents that incorporate sea level rise and climate science into coastal resource management.
- Develop an updated to the BEACON Coastal Regional Sediment Management Plan (CRSMP) that includes current climate and sea level rise information, in additional to adaptation strategies that can be taken at a regional level.

Regional Monitoring Programs

- Further work towards coordination of regional monitoring (of all types) including data standardization, shared data repository for local projects to feed into, and some initial analysis and metrics to help local managers easily use and implement monitoring information, including bluff-backed beaches, and align the various monitoring programs to better leverage one another.

Physical Shoreline Data Collection and Modeling

- Extend shoreline physical profiling to all regional beaches and align the various monitoring programs to better leverage one another.

Coastal Ecology and Ecological Regional Monitoring

- Develop a Sandy Beach Habitat and Species Framework Analysis and expand baseline data collection of habitat and species conditions within the region. Areas of less disturbance, and restored sites could be prioritized for reference sites.

Human Use and Economics Data Collection and Monitoring

- Update human beach use and beach user information, including socio-economics, and investigate development of a data portal housed at BEACON or a local university. Areas of less disturbance, and restored sites could be prioritized for reference sites.

Interdisciplinary Research Approach

- Extend the CEVA framework analysis from Santa Barbara County to the littoral cells encompassing Ventura County.

Modeling

- Seek funding to support further modeling efforts focused on watershed to littoral cell processes and regional downscaling of climate linked impacts (e.g. Sea level rise, temperature, fire, precipitation, and flooding) including extreme events.
- Continue to support data collection and modeling of sediment source, transport, and fate to help inform coastal adaptation activities (e.g. beach nourishment/beneficial use, prototyping shoreline stabilization projects, dredge material placement, identifying priority monitoring areas, etc.) This includes sediments of many grain sizes, from mud to sand and larger sizes such as cobble.

Prototyping and Demonstration Projects

- Develop one or more research project(s) focused on innovative sediment retention structures that are environmentally sound and provide resilient features.

Research Agenda Implementation Schedule 2021-2022

The implementation schedule below (Figure 4) highlights key activities to be initiated, or expanded and enlarged, in the next two years in support of ongoing and proposed BEACON activities. Leveraging external sources, BEACON has secured funding for some of the early implementation activities recommended and will be working with project partners to implement portions of the recommended actions and activities, including considering developing coordinated regional monitoring programs, and supporting demonstration projects to evaluate project effectiveness and feasibility and potential applicability to other coastal sites and locations.

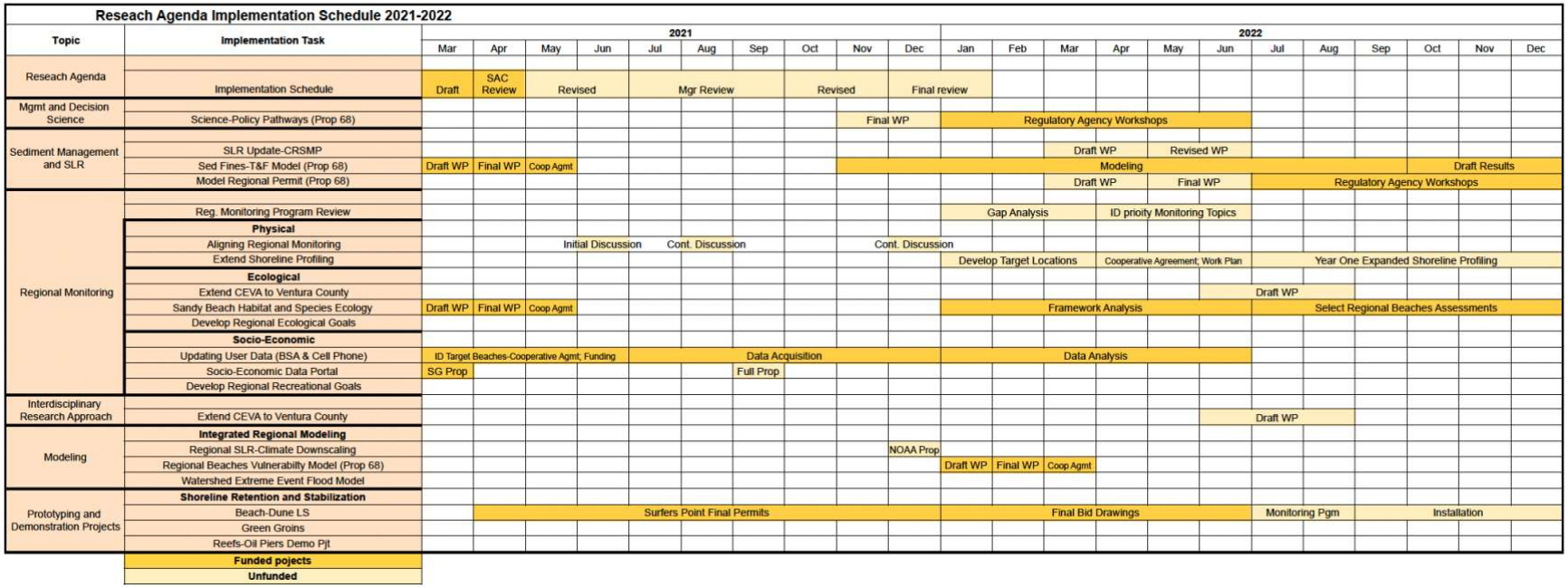

Figure 4. Research Agenda Implementation Schedule 2021-2022

Sources and References

P.L. Barnard, et.al. (2009). Coastal Processes Study of Santa Barbara and Ventura Counties, California. United States Geological Survey (USGS). Report 2009-1029.

Barnard, P. L., Dugan, J. E., Page, H. M., Wood, N. J., Hart, J. A. F., Cayan, D. R., Erikson, L. H., Hubbard, D. M., Myers, M. R., Melack, J. M., & Iacobellis, S. F. (2021). Multiple climate change-driven tipping points for coastal systems. *Scientific Reports 2021 11:1*, *11*(1), 1–13. https://doi.org/10.1038/s41598-021-94942-7

BEACON. (2009). Coastal Regional Sediment Management Plan- Central Coast from Pt. Conception to Pt. Mugu. https://beacon.ca.gov/wp-content/uploads/2021/03/CRSMP.pdf

BEACON. (2010). Sensitive Shoreline and Nearshore Resources and Shoreline Types Within the BEACON Jurisdictional Region. Beach Erosion Authority for Clean Oceans and Nourishment, August, 2010.

BEACON. (2011). COASTAL REGIONAL SEDIMENT MANAGEMENT PLAN FINAL Focused Programmatic Environmental Impact Report (Revised) Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) March 2011.

BEACON. (2016). BEACON Survey. BEACON Board Meeting, March 2016, Ventura, CA.

BEACON. (2020a). BEACON Science Advisory Committee (SAC) Bylaws, adopted November 20, 2020.

BEACON. (2020b). BEACON Science Advisory Committee (SAC) Membership, approved November 20, 2020.

BEACON. (2021a). Draft BEACON Science Action Plan, January 2021.

BEACON. (2021b). BEACON SAC Agenda and Meeting Minutes, January 19, 2021 and January 29, 2021.

BEACON. (2021c). BEACON Strategic Plan 2021-2026, Adopted March 19, 2021. https://beacon.ca.gov/wp-content/uploads/2021/03/Final-BEACON-Strategic-Planning-Goals-2021-26.pdf

BEACON. (2021d). BEACON SAC Managers Workshop, June 17, 2021 Workshop Summary. https://caseagrant.ucsd.edu/sites/default/files/users/nsadrpour/6.14.21_BEACON_Workshop_Summary.pdf

California Coastal Conservancy. (1999; 2014). San Francisco Baylands Ecosystem Habitat Goals Report; Baylands Ecosystem Habitat Goals Technical Update. California State Coastal Conservancy, Oakland, CA.

California Coastal Conservancy. (2010). San Francisco Subtidal Habitat Goals 50 Year Conservation Plan. California State Coastal Conservancy, Oakland, CA.

California Coastal Conservancy. (2018). Regional Strategy, 2018. California State Coastal Conservancy, Oakland, CA.

California Coastal Commission. (2015). Improved Valuation of Impacts to Recreation, Public Access and Beach Ecology from Shoreline Armoring, Administrative Draft, September 28, 2015, San Francisco, Ca.

Chambers Group, Inc. (2001). BIOLOGICAL REPORT: Appendix B., Moffatt & Nichol Engineers. 2001. Technical Report, South Central Coast Beach Enhancement Program Criteria and Concept Design. February 2001. Prepared for

Coastal Frontiers. (2000). Fall 2000 BEACON Beach Profile Survey Letter Report. January 2, 2001. Prepared for BEACON.

Dean, RG. (1988). Sediment Budget BEACON Project - Santa Barbara to Point Mugu. Report prepared for Noble Consultants. 18 pp.

Department of Boating and Waterways and State Coastal Conservancy. (2002.) California Beach Restoration Study. January 2002. Sacramento, California.

Dugan, J.E. and David M. Hubbard. (2011). Ecological Effects of Coastal Armoring: A Summary of Recent Results for Exposed Sandy Beaches in Southern California.

Finzi Hart J.A., P. M. Grifman, S. C. Moser, A. Abeles, M. R. Myers, S. C. Schlosser, J. A. Ekstrom (2012). *Rising to the Challenge: Results of the 2011 Coastal California Adaptation Needs Assessment.* USCSG-TR-01-2012.

Goodrich, K. A. and Jonathan A. Warrick. (2015). Fines: Rethinking our Relationship. The Proceedings of the Coastal Sediments. https://doi.org/10.1142/9789814689977_0148

Goodrich, Kristen A., George, D. A., Beyeler, M, Grifman, P, Sadrpour, N. (2020). Toward improved coastal sediment management through coordination in California, Shore & Beach, 88(3), 31-38. https://doi.org/10.34237/1008833

Griggs, G., Kiki Patsch (2018). Natural changes and human impacts on the sand budgets and beach widths of the Zuma and Santa Monica cells, Southern California. Shore & Beach 86, (1), Winter 2018.

Gary Griggs, Kiki Patsch, Charles , K., Lester, and Ryan C., & Anderson, R. (2020). Groins, sand retention, and the future of Southern California's beaches. *Shore & Beach*, Vol. 88, No. 2, Spring 2020. 14–36. https://doi.org/10.34237/1008822

Goals Project. (2015). The Baylands and Climate Change: What Can We Do. Baylands Ecosystem Habitat Goals Update 2015 prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project. California State Coastal Conservancy, Oakland, CA.

Judge, J., Newkirk, S., Leo, K., Heady, W., Hayden, M., Veloz, S., Cheng, T., Battalio, B., Ursell, T., and Small, M. (2017). Case Studies of Natural Shoreline Infrastructure in Coastal California: A Component of *Identification of Natural Infrastructure Options for Adapting to Sea Level Rise* (California's Fourth Climate Change Assessment). The Nature Conservancy, Arlington, VA. 38 pp.

King, Philip. (2006). The Economics of Regional Sediment Management in Ventura and Santa Barbara Counties, prepared for the California State Resources Agency, fall 2006, prepared for the Coastal Sediment Management Work group (CSMW): http://dbw.ca.gov/CSMW/PDF/Economics_of_RSM_0706.pdf. And Prepared under contract to BEACON.

King, P.G. (2021). Presentation to Implementing and Scaling Resilient Solutions in Coastal California, University of California, Irvine, March 3, 2021.

King and McGregor. (2013). Managing Sandy Beaches. Prepared for the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON). Ventura, Ca.

King, P.G., McGregor, A. R., & Whittet, J. D. (2015). Can California coastal managers plan for sea-level rise in a cost-effective way? *Http://Dx.Doi.Org/10.1080/09640568.2014.985291*, *59*(1), 98–119. https://doi.org/10.1080/09640568.2014.985291

King, P.G, McGregor, A.R. (2012). Who's counting: An analysis of beach attendance estimates and methodologies in southern California. *Ocean and Coastal Management*, *58*, 17–25. https://doi.org/10.1016/j.ocecoaman.2011.12.005

King, P. G., Nelsen, C., Dugan, J.E., Hubbard, D.M., Martin, K.L., Battalio, R.T. (2018). Valuing beach ecosystems in an age of retreat. Shore and Beach, 86(4) 45-59.

Ludka, B.C., Gallien, T.W., Crosby, S.C., Guza, R.T., 2016. Mid-El Niño erosion at nourished and unnourished Southern California beaches. Geophys. Res. Lett. 43, 4510–4516. https://doi.org/10.1002/2016GL068612

Ludka, B.C., Guza, R.T., O'Reilly, W.C., 2018. Nourishment evolution and impacts at four southern California beaches: A sand volume analysis. Coast. Eng. 136, 96–105.https://doi.org/10.1016/j.coastaleng.2018.02.

Moffatt & Nichol Engineers. (2005). Implementation Guidelines and Compliance Protocol. February 2005. Prepared for BEACON.

Moser, S., J. Finzi Hart, A. Newton Mann, N. Sadrpour, and P. Grifman (2018). "Growing Effort, Growing Challenge: Findings from the 2016 CA Coastal Adaptation Needs Assessment Survey." *California's Fourth Climate Change Assessment.*

Myers, M.R., Barnard, P.L., Beighley, E., Cayan, D.R., Dugan, J.E., Feng, D., Hubbard, D.M., Iacobellis, S.F., Melack, J.M., Page, H.M. (2019). A multidisciplinary coastal vulnerability assessment for local government focused on ecosystems, Santa Barbara area, California. Ocean Coast. Manag. 104921. https://doi.org/10.1016/j.ocecoaman.2019.104921

Norgaard, R. B., Wiens, J. A., Brandt, S. B., Canuel, E. A., Collier, T. K., Dale, V. H., Fernando, H. J. S., Holzer, T. L., Luoma, S. N., & Resh, V. H. (2021). Preparing Scientists, Policymakers, and Managers for a Fast-Forward Future. *San Francisco Estuary and Watershed Science*, *19*(2). https://doi.org/10.15447/SFEWS.2021V19ISS2ART2

Patsch, KGriggs, G. (2008). A sand budget for the Santa Barbara littoral cell, California. Mar. Geol. 252 (1–2), 50–61. https://doi.org/10.1016/j.margeo.2008.01.013.

Pendleton, L., Mohn, C., Vaughn, R.K., King, P.G., Zoulas, J.G. (2012). Size matters: The economic value of beach Erosion and Nourishment in Southern California. Contemp. Econ. Policy 30, 223–237. https://doi.org/10.1111/j.1465-7287.2011.00257.

Rosov, Brad, Stephanie Bush, Tiffany Roberts Briggs, Nicoloe Elko. (2016). The State of understanding the impacts of beach nourishment activities on infaunal communities. Shore & Beach, Vol. 84., No. 3, Summer 2016.

Schooler, N.K., Dugan, J.E., Hubbard, D.M., Straughan, D. (2017). Local scale processes drive long-term change in biodiversity of sandy beach ecosystems. Ecol. Evol. 7 (13), 4822–4834. https://doi.org/10.1002/ece3.3064.

Schooler, N. K., Dugan, J. E., & Hubbard, D. M. (2019). No lines in the sand: Impacts of intense mechanized maintenance regimes on sandy beach ecosystems span the intertidal zone on urban coasts. *Ecological Indicators*, *106*. https://doi.org/10.1016/j.ecolind.2019.105457

Smith, S.A. and P.L. Barnard. 2020. The Impacts of the 2015/2016 El Niño on California's Sandy Beaches, Geomorphology (2020), https://doi.org/10.1016/j.geomorph.2020.107583.

Ulibarri, N., Goodrich, K. A., Wagle, P., Brand, M., Matthew, R., Stein, E. D., & Sanders, B. F. (2020). Barriers and opportunities for beneficial reuse of sediment to support coastal resilience. *Ocean and Coastal Management*, *195*. https://doi.org/10.1016/j.ocecoaman.2020.105287

U.S. Army Corps of Engineers. (1978). Survey of Beach Erosion Conditions, Ventura County. USACoE, Los Angeles District, Coastal Planning Division, Los Angeles, CA.

U.S. Army Corps of Engineers, (1997). Santa Barbara and Ventura Counties Shoreline, California Draft Reconnaissance Report. US Army Engineer District Los Angeles, Los Angeles, CA.

US Army Corps of Engineers. (2018). California Regional Assessment, National Shoreline Management Study, September 2018.

U.S. Army Corps of Engineers. (2006). Coastal Sediment Analysis Tool (CSBAT) Beta Version-Sediment Management Decision Support Tool for Santa Barbara and Ventura Counties, Draft Technical Report for U.S. Army Corps of Engineers, Los Angeles District, June 2006.

Ventura County. (2019). VC Resilient Coastal Adaptation Project- Sea Level Rise Adaptation Strategies Report. County of Ventura Resource Management Agency-Planning Division. https://docs.vcrma.org/images/pdf/planning/programs/vcrcap/adaptation_report_final.pdf

Vitousek, S., P. L. Barnard, P. Limber,L. Erikson, and B. Cole. (2017). A model integrating longshore and cross-shore processes for predicting long-term shoreline response to climate change, J. Geophys. Res. Earth Surf., 122, 782–806, doi:10.1002/2016JF004065.

Warrick, J.A., 2013. Dispersal of fine sediment in nearshore coastal waters. Journal of Coastal Research, 29(3), 579–596. Coconut Creek (Florida), ISSN 0749-0208.

Appendix A: Relevant Research and Science Initiatives in SBLC

Research Initiative	Sponsor Agency	Research Topic	Geographic Extent	Principal Investigator(s)	Time Period	Research Focus	Source of Funds	Cooperating Agencies	Link to Available Resource
Shoreline Monitoring	USGS	Physical Monitoring	SBLC-Elwood-Pt. Mugu	Dan Hoover	1995-present	Shoreline monitoring	USGS	BEACON	
SBC LTER	NSF	Ecological Monitoring	Santa Barbara Channel (local focus)	Bob Miller	2000-present	Kelp ecosystem monitoring		NSF, UCSB, MSI, LTER network	https://sbclter.msi.ucsb.edu/
SBC Kelp Monitoring	UCSB	Ecological Monitoring	Coal Oil Point Reserve	Jessica Nielsen	2012 to present	Kelp monitoring			https://copr.nrs.ucsb.edu/about/programs/subtidal-monitoring
Multi-Agency Rocky Intertidal Network (MARINe)	BOEM, NPS, OPC, PISCO, US Navy	Ecological Monitoring	Alaska to Baja	Pete Raimondi	1997-present	Rocky intertidal habitats	Various	Several	https://marine.ucsc.edu/index.html
BOEM		OCS Oil and Gas Pgm				Environmental impacts			
CoSMoS	USGS	Flood Modeling, Cliff Failure, Coastal Groundwater Response	California	Patrick Barnard	2013-present	Coastal storms and sea level rise impacts modeling	USGS, OPC	Several	• https://www.usgs.gov/centers/pcmsc/science/coastal-storm-modeling-system-cosmos?qt-science_center_objects=0#qt-science_center_objects • https://ourcoastourfuture.org/ • https://www.usgs.gov/apps/hera/
CoSMoS COAST	USGS	Shoreline Modeling	California	Sean Vitousek	2017-present	Shoreline evolution	USGS	Several	
Santa Barbara Channel MPA Collaborative	OPC, BEACON	Ecological Management	Santa Barbara MPAs	Julie Bursek, Kristen Hislop	2012-present	MPA management and enforcement	OPC, SB Museum of Natural History	OPC, CDFW, CINMS, EDC	https://www.mpacollaborative.org/santabarbara/
Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO)	UCSB, UCSC, OSU	Ecological Monitoring	Oregon and California	Jennifer Caselle, Carol Blanchette, Libe Washburn	1999-present	Long term ecosystem monitoring	Various	CDFW, OPC, CINMS, ReefCheck	http://www.piscoweb.org/
Beach Sustainability Assessment (BSA)	CSUCI	Interdisciplinary coastal assessment	Santa Barbara and Ventura	Kiki Patsch, Dan Reineman, Phil King, Nina Roberts, Charles Lester	2013-present	Ecology, Geomorphology, Social Utility	CSUCI, CSU COAST, CASG		https://www.bsa-camp.org/
COPE Ecological Monitoring Network	UCSB	Ecological Monitoring	Central Coast	Ali Burgos	2021-present	Subtidal ecological monitoring	NSF COPE		
Dune Science Collaborative	CASG	Dune/Living Shoreline strategies	California	Laura Engeman; Nick Sadrpour	2020-present	Community of practice around dune coastal resilience strategies	Honda Foundation CASG	CASG, USC SG, Bay Foundation, CRC	https://www.resilientcoastlines.com/home
Permit Streamlining: Fine Sediment Transport/Fate, Ecological Impacts,	OPC, BEACON	Interdisciplinary sediment permitting	Santa Barbara	Marc Beyeler, Jon Warrick, Jenny Dugan, Nick Sadrpour,	2021-2023	Permit Streamlining: Fine Sediment Transport/Fate,	OPC, BEACON, SB County	Santa Barbara County Flood Contol District	

Placement Protocols, etc.				Maureen Spencer		Ecological Impacts, Placement Protocols, etc.	Flood Control		
Marshes on the Margin	SCC, NCCOS	Ecological and physical changes of wetlands due to sea level rise	Southern California Bight	Evyan Sloane, John Largier, Karen Thorne, Jeremy Lowe, Jeff Crooks, Melodie Grubbs, Eric Stein	2018-present	wetland transitions and mouth opening/closing changes due to sea level rise	NCCOS EESLR	TRNERR, Santa Barbara Airport	https://trnerr.org/marshes-on-the-margin/
Coastal Resilience-Ventura/Santa Barbara	TNC	Coastal Hazards Modeling	Santa Barbara and Ventura	Bob Battalio	2013-Present	Coastal Hazards Mapping	TNC	ESA, BEACON, several	https://coastalresilience.org/project/santa-barbara-county/ https://coastalresilience.org/project/ventura-county/
Coastal User Assessment	BEACON/ MRCA/C ASG	Coastal use	Santa Barbara-Malibu	Kiki Patsch, Nate Merrill, Sean Anderson, Marc Beyelor, Elena Eger, Nick Sadrpour, Tom Ford	2021-Present	Coastal User identification	BEACON, MRCA,C ASG	BEACON, MRCA, CASG, CSUCI, Bay Foundation, EPA	
Impact of Sea-Level Rise on Groundwater Pollution Vulnerability in Shallow Coastal Aquifers	CSU COAST/ CASG	SLR flooding and groundwater	Oxnard	Ben Hagedorn, Matt Becker, Danielle Bram	2021-Present	Groundwater flooding impacts on toxic sites	CSU COAST/C ASG	CSULB, CSUN	
Community Science:									
Grunion Greeters	Pepperdine	Ecological Monitoring	Southern California Bight	Karen Martin	2010?	Grunion spawning	NMFS-SWR	Several	http://grunion.pepperdine.edu/ggproject.htm
Communicty Alliance for Surveying the Topography of Sandy Beaches (CoAST SB)	CASG	Physical Monitoring	Santa Barbara (various beaches)	Aaron Howard	2018-present	Shoreline monitoring	Various	USGS, BEACON, CASG	https://caseagrant.ucsd.edu/project/coast-sb-community-alliance-for-surveying-the-topography-of-sandy-beaches
Beach Water Quality	SB ChannelKeeper	Water Quality Monitoring	Santa Barbara and Ventura	Ben Pitterle		Water quality	Island Brewing Company		https://www.sbck.org/our-work/field-work/beach-water-quality/
Surfrider BWTF-Ventura	Surfrider	Water Quality Monitoring	Ventura and Santa Barbara	April Bender	2018-present	Water quality	Chuck Vinson Memorial Fund		https://ventura.surfrider.org/programs-and-campaigns/bwtf/
King Tides	California Coastal Commission	Coastal Storms and Flooding	Ventura and Santa Barbara			Coastal flooding		Coastal Commission	https://www.coastal.ca.gov/kingtides/index.html

Appendix B- BEACON Strategic Plan Goals and Objectives (BEACON, 2021c)

Strategic Planning Work Plan Actions	1-2 years	3-5 years	Continuous
Goal 1 Promote Beach Preservation and Beneficial Use of Sediment			
Obj. 1.1 Preservation and Restorationof Natural Sand Supply			X
Obj. 1.1.1 Complete SB Debris Basin Project	*X*		
Obj. 1.1.2 Support Matilija Dam Removal Project	*X*		
Obj. 1.2 Support Harbor Sand By-pass Dredging			X
Obj. 1.2.1 CI Sand Bypassing	*X*		X
Obj. 1.2.2 Port of Hueneme Sand Dredging	*X*		X
Obj. 1.3 Opportunistic Sand-Regional Permit	*A1; A2*	A3; A4	
Goal 2 Expand Science Support to BEACON			
Obj. 2.1 Create Science Advisory Committee	*A1; A2; A3*		
Obj. 2.2 Integrate Climate/SLR Science in BEACON Policies	*X*		
Obj. 2.2.1 Complete SLR Update to CRSMP	*X*		
Obj. 2.3 Continue and Expand Regional Shoreline Monitoring			X
Obj. 2.4 Promote Interdisciplinary Science Research Efforts			X
Goal 3 Expand BEACON's Regional Sea Level Rise Coordination and Planning Activities			
Obj. 3.1 Develop Regional Climate and Sea Level Rise Adaptation Strategy	*X*		
Obj. 3.2 Investigate Establishing Regional Shoreline Monitoring Program	*X*		
Obj. 3.3 Pursue Regional-Level Sea Level Rise Studies, Projects and Funding	*X*		
Goal 4 Develop Innovative Sand Retention Projects			
Obj. 4.1 Seek funds to study innovative approaches	*X*		
Obj. 4.2 Identify and develop innovative demo projects			X
Obj. 4.3 Surfers Point Project-Complete Final Engineering	*X*		
Obj. 4.4 Oil Piers Reef Project-Update Feasibility Analysis		X	
Goal 5 Support Expanded Coastal and Marine Restoration			
Obj. 5.1 Support Natural Infrastructure Demo Projects			X
Obj. 5. 1.1 Expand Goleta Bay Kelp Demo Project	*X*		
Obj. 5.1.2 Dunes Demonstration Model Project		*X*	
Goal 6 Maintain and Enhance Coastal Water Quality	*X*		
Obj. 6.1 Integrate Water Quality Criteria in Projects			X
Goal 7 Support Coastal Access and Recreation			
Obj. 7.1 Support Completion of Surfers Point Project		A2	
Obj. 7.2 Complete Mondo's Cove Beach Access Project	*A1*	A2	
Obj. 7.3 Maximize Coastal Access and Recreation in BEACON projects			*X*
Goal 8 Improve Planning, Governance and Funding	*A1*		
Obj. 8.1 Develop Strategic Planning Goals and Objectives			
Obj. 8.2 Strengthen Governance Partnerships	*X*	A2	X
Obj. 8.3 Develop Expanded Local Funding	*A1*		X

Appendix C- BEACON Local Agency Coastal Vulnerability and Adaptation Planning Resources

Member Agency	Climate Planning Documents	Climate Action Plan	Regional Modeling	Vulnerability Assessment	Economic/ Fiscal impact	Governance	Adaptation Policy/ Strategy Planning	Regional Adaptation Policies and Strategies	BEACON Regional Consultation	Notes
City of Santa Barbara	Climate Action Plan (2012); Goleta Slough Area Sea-Level Rise and Management Plan (2015); Sea-Level Rise Vulnerability Assessment (2018); Updated Coastal Land Use Plan (2019); Draft Sea Level Rise Adaptation Plan and Vulnerability Assessment Update Public Review Draft (2020)	CAP: Appendix B. SB Sea Level Rise Study (2012)	P. Barnard-USGS; Santa Barbara County Coastal Hazard Modeling and Vulnerability Assessment (2015)	Sea Level Rise: Griggs & Russell (2012): Vulnerabilty Analysis (2015); Vulnerability Assessment Update (2018)	Cost-Benefit Analysis AECOM (2020)	SLR Adaptation Plan Subcommittee; City Staff Interdepartmental SLR Team	Prioritiization and Selection of Adaptation Strategies (2018); Coastal Land Use Plan interim development review policies (2019); High Priority for Next Five Years (2020)	Shoreline Monitoring: Beach, Bluff, SLR, Groundwater, Flooding Events; Expand Beach Nourishment; Joint Studies; Regional Climate Collaborative: Research on case studies, law and policy on adaptation implementation; BEACON SLR Update to CRSMP; State Adaptation Funding	K. Traiberg; G. Comati-BEACON	ESA and AECOM; CoSMoS (USGS); Adaptation Principles
City of Goleta	City of Goleta Coastal Hazards Vulnerability Assessment and Fiscal Impact Report (2015)	City of Goleta Climate Action Plan (2014)	Santa Barbara County South Coast Coastal Resiliency ESA Modeling (2015); USGS Coastal Storm Modeling System (CoSMoS)	City of Goleta Coastal Hazards Vulnerability Assessment and Fiscal Impact Report (2015)	City of Goleta Coastal Hazards Vulnerability Assessment and Fiscal Impact Report (2015)		City of Goleta Coastal Hazards Vulnerability Assessment and Fiscal Impact Report (2015)		Anne Wells, Goleta; G. Comati; J. Bailard-BEACON	https://www.cityofgoleta.org/city-hall/planning-and-environmental-review/advance-planning-division
City of Carpinteria	General Plan/Local Coastal Plan Update; Sea Level Rise Vulnerability Assessment and Adaptation Project (2019)		COSMos	D. Revell- Revell	P. King-Revell		D. Revell-Revell	Dune & Shoreline Management Plan: Living Shoreline Project (Phase 1: City Beach)	B. Brennan; J. Bailard	
County of Santa Barbara	Sea Level Rise & Coastal Hazards Vuolnerability Assessment (2017);	Energy and Climate Action Plan (2015)	B. Battalio-ESA (South Coast); Coastal Resilence Santa Barbara (ESA) 2015; D. Revell-Revell (North Coast);	D. Revell-Revell					M. Beyeler-BEACON	
City of Oxnard	Local Coastal Plan Update: Sea Level Rise Vulnerability Assessment (2016); Sea Level Rise Adaptation (2018)			D. Revell-Revell	P. King-SFSU		S. Hecht-UCLA (Not completed)			
City of Ventura	Climate Action and Resilience Plan (2020)									Prop 84 Wildfire Recovery and Resiliencey Planning Grant (June 2020)
County of Ventura	Sea Level Rise Adaptation Strategies Report (2019)	2040 General Plan (Sept, 2020)	TNC/CCC Coastal Resilience Tool, ESA.; B. Battalio-ESA; CoSMoS 3.0,; Barnard-USGS;	County/D. Revell-Revell, 2018	P. King-Revell	Local Coastal Program Amendments led by Planning; CAP implementation Planning and CEO's Office, Climate Emergency Council	Adaptation Plan by County/Revell, 2019. Planning working with other agencies on adaptation projects, preparing Local Coastal Program(LCP) Amendments	Shoreline Management Plans, Beach Nourishment; Ephemeral Cobble Groin Pilot Project, sediment bypassing at Point Mugu, transport inland debris basin sediment to the coast, dune restoration, support Beacon updates to CRSMP, improve access, etc.	J. Bailard; M. Beyeler-BEACON	Planning Divison is Updating LCP with CCC Planning Grant, Harbor Dept. applied to Conservancy for dune restoration grant in Summer of 2020 for Hollywood Beach

Appendix D: Framework for Integration

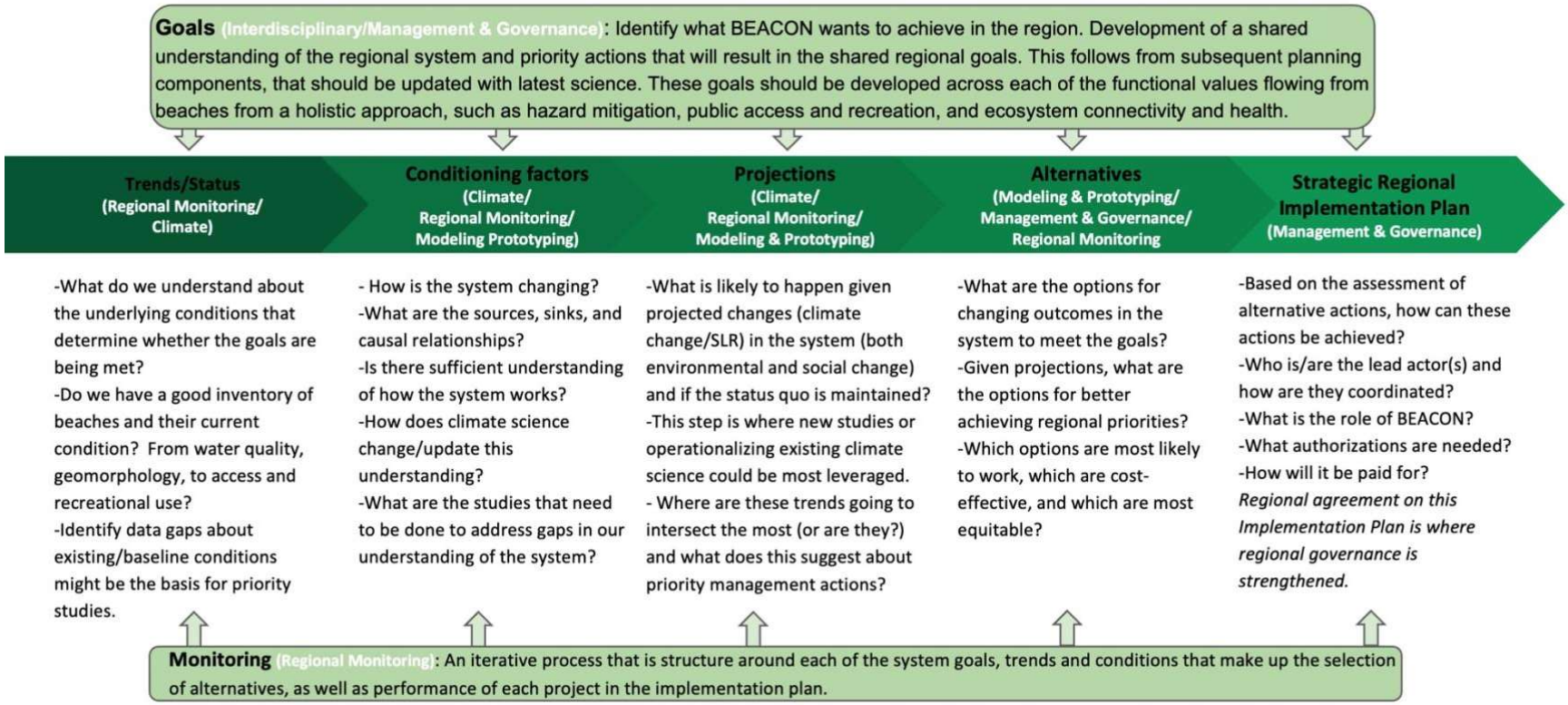

Figure D-1. A framework of an iterative process that can integrate management and governance science with the other major themes identified by the SAC: interdisciplinary research approach, climate science, modeling and prototyping, and monitoring, focused on regional goals.

Report Preparation

Marc Beyeler, BEACON, Science Director
Nick Sadrpour, California Sea Grant, Program Coordinator

Dr. Kiki Patch, BEACON SAC, Co-Chair
Dr. Doug George, BEACON SAC, Co-Chair

Listing of Science Advisory Committee Members
Bob Battalio, P.E.
Dr. Jenifer Dugan
Dr. Lesley Ewing, P.E.
Dr. Kristen Goodrich
Dr. Dan Hoover
Dr. Phil King
Dr. Charles Lester
Dr. Dan Reineman
Dr. David Revell
Dr. Sean Vitousek

ITEM 6 - Staff Presentation on status of BEACON Science Research Agenda Implementation Activities

ATTACHMENT 2

November 2023 Manager-Scientist Summit

BEACON Manager-Scientist Summit
November 28, 2023
Ventura, California

Summary Memo

March 2024

BEACON Manager-Scientist Summit-November 2023

The BEACON Manager-Scientist Summit was first initiated by BEACON in 2021 and has been held annually for the past three years. For the first two years the meeting was held as a remote teleconference meeting. The November 2023 Summit was held for the first time as a hybrid in person and remote meeting attracting nearly five dozen participants. BEACON Executive and Science Support Staff are assisted by the SAC Co-Chairs and the two Manager Liaisons in coordinating and organizing these annual meetings. The meetings focus on multiple goals, including providing periodic opportunities for formal and informal exchanges, review of progress on current policy and research initiatives, and consideration of revised and or new policy and research needs going forward.

1. Welcomes and Acknowledgements

Doug George called all of the participants to order for the start of the Summit by the ringing of a 'bell,' and a 'good morning.' Doug identified himself, and made short business announcements to the group, followed by short comments about the history of the BEACON science summit.

Doug introduced BEACON Board Member and Ventura City Councilmember **Doug Halter** for short remarks to Summit participants. Doug welcomed the summit participants to Ventura and to the BEACON 'summit.' He extended greetings from the BEACON Board and Chair of the Board of Directors. He emphasized the role of BEACON and its regional focus on climate change and Sea Level Rise adaptation. He wished the participants a productive and meaningful day of presentations and discussion, and an educational outing to the Surfers Point project in the afternoon.

Doug George reminded the group that the Summit was taking place on the un-ceded lands of the Chumash people. He identified members of the BEACON SAC, giving them a charge to listen and learn from the various managers and stakeholders participating in the summit and to think about how science and research efforts can support decision-making. He identified members of the planning committee, emphasizing that this is a collaborative effort, involving multiple partner agencies and many partner staff. Finally, he shared a quote from CS Holling in 1973 on resilience, pointing out the relevance of the thoughts now 50 years later to our current circumstance.

> "A management approach based on resilience, on the other hand, would emphasize the need to keep options open, the need to view events in a regional rather than a local context, and the need to emphasize heterogeneity. Flowing from this would be not the presumption of sufficient knowledge, but the recognition of our ignorance; not the assumption that future events are expected, but that they will be unexpected. The resilience framework can accommodate this shift of perspective, for it does not require a precise capacity to predict the future, but only a qualitative capacity to devise systems that can absorb and accommodate future events in whatever unexpected form they may take."

Doug Halter, BEACON Board Member welcomes Summit Participants to Ventura and to the BEACON Manager-Scientist Summit

2. Review of Purposes and Goals of Summit

Doug George reminded the group of the meeting's multiple and complementary purposes and goals, including:

-Providing a periodic formal meeting between managers and scientists to discuss policy and research needs.
-Formal and informal opportunity for exchange.
-To review progress on current research agenda initiatives.
-Discuss Research Priorities going forward.

He asked two manager liaison representatives, **Melissa Hetrick** and **Aaron Engstrom,** representing the City of Santa Barbara and the County of Ventura, respectively, for introductory remarks.

Melissa Hetrick, Resilience Program Supervisor for the City of Santa Barbara, emphasized the 2021- current resilience actions of the City of SB with two main outstanding issues: 1. What is an acceptable level of risk for designing and implementing programs and projects; and 2. Do we have the information we need to understand threats to coastal resources and coastal communities? The January 2023 storms were timely for this effort as they pointed out what we do not know. They resulted in a very big enterprise of collecting information and a need to document effects and impacts, even while all the knowledge lives within people that may or may not be available currently or in the future.

Aaron Engstrom, Manager Long Range Planning for County of Ventura, emphasized resilience planning and adaptation planning activities locally like Surfers Point that include comprehensive neighborhood scale planning. He emphasized shoreline planning through

management like dune restoration, which can lead the way to policies beyond retreat, as well as highlight local ecosystems and access. He highlighted the need to work on sediment policy and links to climate change, incorporating equity and justice issues.

3. Implementing the BEACON Research Program: Regional Coastal Adaptation Monitoring Program (RCAMP) RCAMP

Doug George introduced the RCAMP as an example of implementation activity of the BEACON research agenda, which seeks to provide actionable science that can inform policy and programs.

Nick Garrity and **Amber Inggs**, representing the consultant team leader Environmental Science Associates (ESA), gave a presentation on the progress on preparing the RCAMP, covering several topics, emphasizing the importance of monitoring to planning for resilience and adaptation.

Nick and Amber identified the principal goal, and the many multiple complementary objectives. Importantly, the RCAMP plan will include regional monitoring 'pilot projects' to inform Sea Level Rise Adaptation decision-making and regional monitoring programs. Nick emphasized that there will be continuing opportunities to provide input on the RCAMP, on both plan development, and the identification of pilot projects to assess out regional monitoring initiatives.

4. Roundtable discussion on Integrated Planning and Permitting for Regional Sediment Management and Sea Level Rise (SLR) Adaptation

Doug George introduced **Marc Beyeler** to moderate a roundtable presentation and discussion on planning and permitting for sediment management and beach nourishment, and SLR adaptation.

Marc Beyeler introduced purposes of the roundtable and the three roundtable panelists**: Jamie King,** of the Resource Conservation District of the Santa Monica Mountains (RCDSMM); **Andrew Raaf,** of the Santa Barbara County Flood Control Department; and **Jeremy Smith**, from the California Coastal Commission. Two local case studies were presented, one by Jamie on the Topanga Lagoon Project in Santa Monica Bay, and another by Andrew on Santa Barbara County beach and nearshore sediment deposition, followed by comments by Jeremy from the California

Coastal Commission.

Marc indicated that the roundtable participants were asked to broadly address the topic and given four different questions to address, including:

1. What are the physical and ecological factors of importance to consider in beach nourishment projects, i.e., best restoration design and management practices
2. What needs to be accomplished before a regional permit framework can happen (what milestones and actions are necessary to get there)?
3. How to improve existing permitting coordination, looking to recent work in California as examples going forward.
4. How best to integrate local efforts into a regional sediment management framework.

Several important issues were covered in the roundtable presentations, and in the follow up questions and comments. Many discussions focused on the twin topics of opportunities for beneficial use of coastal sediments, and the multiple barriers and constraints to beach and nearshore deposition of sediments.

Jamie King presented a case study on the Topanga lagoon Restoration Project. She emphasized that Topanga Watershed is the second largest watershed in the Santa Monica mountains. The restoration project is a long-term, multi-decade, collaborative, multi-agency coastal wetland and lagoon restoration project. The restoration project addresses many coastal issues, including suitability of sediment for beach and nearshore marine deposition, sensitivity of shoreline habitats and species to either/both beach or nearshore deposition, need to plan for multiple benefits and values, including human use, all while addressing sea level rise, and climate and weather changes.

Andrew Raaf described the program operations for emergency deposition of sand on beaches and in the surf zone. Andrew emphasized both the need for emptying debris basins and dredging sediment out of Carpinteria Marsh to address flood management and marsh ecological health, and the opportunity to use the sediment at regional beaches, including Carpinteria City

Beach and Goleta County Beach. Andrew emphasized the need to design appropriate monitoring and management requirements, with potentially more customized approaches for each receiver beach. Refining monitoring requirements over time based on results may result in more useful information at more efficient costs.

Jeremy Smith reviewed the legislative goals and requirements of the Coastal Act and policies and noted that both support the goal that qualifying sediment materials should be going to the beach to re-nourish the littoral cell, while at the same time protecting and minimizing negative impacts to coastal resources. Sediment management and beach restoration projects which support SLR adaptation encompassing multiple benefits are supported by the CCC Executive Director and Commission staff. He highlighted that several notable projects have been approved by the Commission recently, including various SCOUPs, and federal Army Corps projects. He concluded, agreeing that permitting processes could be improved, and cited both the Topanga Lagoon project and the Santa Barbara County Flood Control project as examples of increased coordination. He was hopeful that site-specific monitoring could address uncertainty and gaps, leveraging long term regional data sets.

Questions and Comments

Discussion involved the participants and presenters about the following:

-Considering increased and expanded use of cobble, to examine its performance, benefits and limitations on use in different environments.

-Considering -de-constructing infrastructure, allowing nature to work, implement new restoration ideas and then monitor for effectiveness.

-Considering establishment of offshore reefs to help nearshore beaches.

-Designated coastal sediment deposition areas for storm events.

-CCC 80/20 rules, not regulatory rules. USEPA does consider dumping over 50% fines over limit of ocean dumping and must go to regulated EPA designated site.

-Wash State Nearshore EPA Monitoring Program may be a good model to examine.

-Funding for monitoring during emergencies as case examples of what is happening, increase modeling for emergency events.

-Need to look upstream and ground truth the models.

5. Linking Regional and Statewide Initiatives

Marc Beyeler and **Laura Engeman** spoke about Nature-based climate adaptation strategies, lessons learned, and opportunities, emphasizing sharing knowledge/expanding our knowledge base of coastal resources, linking From Project Level Monitoring to Regional Monitoring Programs. **Marc** reported on the project level monitoring at Surfers Point, one of the oldest living shoreline and managed retreat projects in California. **Laura,** an Extension Specialist at CA Sea Grant/Scripps spoke about the goals and purposes of the California Dune Science Network, a collaborative statewide network led by CA Sea Grant to document dune project results and share results focused on lessons learned and best practices. She emphasized a growing movement to advanced monitoring in beach change like lidar and

satellite, citizen science, and advanced community engagement, highlighting that we need collaborative community efforts like the Dune Network, utilizing multiple tools in order to complete dune and sand monitoring.

6. Reviewing Regional Research, Monitoring, and Data Needs

Doug George instructed the participants in the concluding morning session reviewing regional research and data needs. Facilitators: **Doug George**, **Kiki Patsch**, **Karina Johnston, and Melissa Hetrick** ran small breakout groups for a 30-minute group discussion; they then reported back to the entire group and participated in a 20-minute large group discussion

Prompts:
1. What are important unaddressed Social and Environmental Justice issues for our region?
2. Do we know/How do we know what science initiatives are needed to address current information needs and inform regional policy development?
3. Are there/What are important regional coastal water quality information needs that can/should be addressed in the BEACON Research Program?
4. What regional adaptation strategies, actions, and tactics could benefit by increased and or expanded research in an updated Research Program?
5.How do we build regional monitoring capabilities?

Small Group Discussion Summary:

1. What are important unaddressed Social and Environmental Justice issues for our region?

For this topic, multiple groups emphasized the importance of enhancing tribal connections and fostering increased engagement with tribal representatives in discussions. Additionally, these groups recognized the imperative for heightened communication and outreach, particularly directed towards underrepresented communities. This necessitates the exploration of more innovative engagement strategies, including the identification of more inclusive meeting venues and approaches. Multiple groups also pinpointed paid parking as a critical concern. This issue poses a barrier for numerous coastal visitors and could be addressed through initiatives such as the distribution of coastal permits. Other proposals include elevating BEACON's involvement with underrepresented communities through organizational partnerships and representation within the SAC along with increased engagement with local, state, and federal agencies to streamline environmental justice issues.

2. Do we know/How do we know what science initiatives are needed to address current information needs and inform regional policy development?

Several groups highlighted the necessity of establishing a baseline profile for monitoring sites to effectively address monitoring requirements and facilitate storm impact reporting and emergency permit sediment disposal. This entails not only documenting the natural variability of sites but also capturing natural processes, thereby promoting the assessment of habitat

transgression and evolution over time. Other ideas included identifying overlap within projects across the region, both on a local and regional scale, and working on an outlined plan that drives data needs.

3. Are there/What are important regional coastal water quality information needs that can/should be addressed in the BEACON Research Program?

In terms of water quality parameters, multiple groups identified the need for including bacteria in monitoring and turbidity. Microplastics were also highlighted as important additional water quality parameters. There was a collective emphasis on highlighting the importance of a regional understanding of connectivity within sediment, and a regional understanding of pollution sources and communities at risk. One group proposed more consideration of opportunities that allow sediment to redistribute naturally with estuarine systems rather than offshore deposition, and additional monitoring facilitated by BEACON during the off season.

4. What regional adaptation strategies, actions, and tactics could benefit by increased and or expanded research in an updated Research Program?

In an updated Research Program, multiple groups said they would expand initiatives to identify the public safety element and have more publicly accessible safety information and outreach. There were also multiple mentions of developing state guidelines to conduct evaluations of managed retreat and increased socio-economic data collection. Maximizing natural sediment movement and the need for reference sites and baselines when identifying coastal impacts were also recorded as useful updates to the Research Program, along with BEACON ideas for monitoring post-emergency, managed retreat, and offshore reefs.

5. How do we build regional monitoring capabilities?

To further increase monitor capabilities, data gaps need to be addressed. Potential data gaps in various areas were highlighted. This includes the variability of fine sediments in nearshore environments, biological impacts, connectivity between ecosystems, and rocky intertidal habitats. BEACON could help inform some of these data gaps and tie to the regional monitoring program. Multiple groups indicated regional monitoring capabilities would benefit from better leveraging of existing efforts including additional work with Universities, State, Federal, & local agencies. Groups also saw a benefit from expanding uses of aerial monitoring technology like drone, satellite and lidar.

Table 1. Summary of Small Group Discussions

1. What are important unaddressed Social and Environmental Justice issues for our region?	**2.** Do we know/How do we know what science initiatives are needed to address current information needs and inform regional policy development?	**3.** Are there/What are important regional coastal water quality information needs that can/should be addressed in the BEACON Research Program?	**4.** What regional adaptation strategies, actions, and tactics could benefit by increased and or expanded research in an updated Research Program?	**5.** How do we build regional monitoring capabilities?
-BEACON can have a higher level of engagement (partnership with organizations, representation on SAC) -Engagement with other agencies to streamline process -Increased tribal connections needed -More communications and outreach needed, projects should be presented to the community + they have a voice in the process -Paid parking at coast barrier to visitors	-Look at overlap of projects across region -Need an outlined plan that drives data needs -Need to know baseline profile for areas in order to monitor -Understand natural variability of a site-try to mimic	-Understand regionally the connectivity of sediment -Better understand where pollution is coming from and who is at risk -More monitoring by BEACON including off season -Include bacteria in monitoring/turbidity -Consider opportunities that allow sediment to redistribute naturally with estuarine systems rather than offshore deposition	-State guidelines to conduct evaluations ve managed retreat -More communications of public safety information -How to identify impacts to existing conditions without a baseline-need reference sites -Maximizing natural sediment movement Beach nourishment and more help on offshore reefs -BEACON ideas for monitoring post-emergency	-Better leveraging of existing efforts-work with Universities, State, Federal, & local agencies –Benefit from expansion of data (drone, satellite, Lidar ect.) -Address data gaps: Fines and variability of fine sediments in nearshore environments, rocky intertidal habitats, what is acceptable variability? -Beacon could help inform some of these data gaps and tie to the regional monitoring program

7. Afternoon Field Visit: Surfers Point Project

Summit participants shared a box lunch and field site visit to the Surfers Point Living Shoreline and Managed Retreat Project adjacent to the Ventura River Mouth, fronting the Ventura County Fairgrounds along the main Ventura shoreline. Four group expert facilitators, supported by technical expert staff, provided descriptions of the 12-year old successful coastal project. The group leaders all participated in various elements of project conception, planning and design, engineering, implementation, stewardship, and monitoring. Importantly, long-term monitoring program results were reviewed with the small groups.

The project encompasses multiple goals, including coastal restoration, living shoreline design elements, a program of managed retreat, and acting as a demonstration project of SLR adaptation. Important project level information was exchanged in the small groups and many key areas of project development, design, implementation, and stewardship were discussed. Importantly, members of the small groups discussed the need to replicate project elements, scale up similar projects, and document and exchange lessons learned at the regional level.

Overview Instructions: **Marc Beyeler**; Presenters/Group Leaders/Facilitators: **Paul Jenkin, Bob Battalio, Dave Hubbard, Kiki Patsch, Cody Stults, Peter Shayedi, Louis White, and Amber Inggs**

8. Summit Follow-up & Next Steps

The summit was a major opportunity to identify optics, topics, issues and activities to be considered as BEACON staff and SAC prepare an update to its Science Research Agenda. This summit Summary is an important record of the presentations, discussion, input, and formal exchange during the full day summit program. The many discussion points, comments, and suggestions provided by summit presenters and participants will serve as important input to the 2024 Update.

A draft Update will be prepared in the coming few months with opportunity for review and comment by SAC members, agency managers and staff, and interested stakeholders before being presented for approval at the Spring 2024 SAC Meeting. The Update will include a revised two-year implementation plan for 2024-2026 identifying programmatic activities proposed to be undertaken and/or completed, including any new proposed initiatives.

BEACON welcomes further comments and suggestions at any time regarding its science research activities. You are encouraged to contact BEACON staff- Marc Beyeler at beyeler@beacon.ca.gov. or Jenna Wisniewski at Wisniewski@beacon.ca.gov.

B.E.A.C.O.N.
Beach Erosion Authority for Clean Oceans and Nourishment

A California Joint Powers Agency

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STAFF REPORT

Meeting Date: November 8, 2024
Agenda Item: 7

To: Science Advisory Committee
From: Co-Chair and BEACON Science Support Staff
Date: November 1, 2024

RE: Planning for 2024-2025 Manager/Scientist Workshop

RECOMMENDED ACTION:

Receive short report from SAC Co-Chair and BEACON Science Support Staff on Planning for the Manager-Scientist Summit Winter 2024-25

DISCUSSION:

The SAC has supported planning for the BEACON Manager-Scientist Summits held in 2022 and 2023. SAC Co-Chairs and Beacon science staff coordinate the planning for each summit with volunteers from the SAC and managers. The 2023 Summit was held in Ventura, and we are proposing that the 2024-25 meeting be held in Santa Barbara, California.

BEACON has a short list of volunteers from previous planning efforts, and we want to renew our request for volunteers to help the planning committee (SAC Co-Chair, BEACON Science Support Staff, Manager Liaisons).