

Guidelines for Preparing a NERRS Science Collaborative Biannual Progress Report

This document provides guidance for preparing and submitting a NERRS Science Collaborative semi-annual progress report. Timely submission of progress reports is a requirement of your contract with the Science Collaborative through the University of New Hampshire. These reports help us meet our grant obligations to the National Oceanic and Atmospheric Administration (NOAA). They also help us stay in touch with your projects. The more we know about your projects, the better we are able to support your work and share any knowledge generated or lessons learned with your colleagues in the NERRS and NOAA.

Due Dates

Progress reports are due on March 1st (for reporting period 9/1 through 2/28) and September 1st (for reporting period 3/1 through 8/31). Late reports will result in withheld payment of invoices and affect the competitiveness of proposals you submit to the Science Collaborative in the future.

Confidentiality

Staff from the Science Collaborative and NOAA will read your report. In addition, your report will be posted on the *nerrs.noaa.gov* website unless you mark it “CONFIDENTIAL,” in red, at the top of each page. A brief project overview (see below) will remain public.

Intellectual Property

If you are filing for a patent you should be aware of potential disclosure issues. If you have questions about this, please contact your institution's office of technology transfer or intellectual property and let us know to keep your report, or sections of your report, confidential until you are certain it can be made public.

Submission

Please email one paginated electronic copy of your report in a PDF format of 5 MB or less to cindy.tufts@unh.edu. Please do not submit a scan of a printed document. Graphics (tables, figures, photos, etc.) can be embedded in the document, or included at the end of the report, with clear text references and labeling.

Questions

If you have questions about your project or if you need to request a change to the project duration or budget, please contact Cindy Tufts (cindy.tufts@unh.edu; 603-862-3676).

Progress Report Format

Please use the following form to complete your report. Use headings A through E in the order in which they are presented here. Respond to the questions under each heading in the order that suits you.

Completing this progress report will require the perspectives of other members of your project team, including intended users. Keep in mind obtaining these perspectives may add to the time needed to complete your report. Please plan accordingly, allowing enough time to submit your report by the deadline.

NERRS Science Collaborative Progress Report for the Period 3/1/13 through 8/31/13

Project Title: Temporal Investigations of Marsh Ecosystems (TIME)

Principal Investigator(s): Dr. Jeff Crooks, Kristen Goodrich

Project start date: September 2012

Report compiled by: Kristen Goodrich

Contributing team members and their role in the project: Dave Ceppos, Collaborative Lead; Dorian Fougères, Collaborative Team; Julio Lordes, Team Member (TRNERR); Cristina Bourassa, Team Member (TIDES intern); Greg Gauthier, Team Member; Eric Stein, Team Member; Steve Steinberg, Team Member; Chris Solek, Team Member

- A. Progress overview: State the overall goal of your project, and briefly summarize in one or two paragraphs, what you planned to accomplish during this period and your progress on tasks for this reporting period. This overview will be made public for all reports, including confidential submissions.

The overall goals of the TIME (Temporal Investigations of Marsh Ecosystems) Project are to gain an understanding of stakeholder needs in estuarine management through an issues assessment, create a typology of ecosystem services provided by Southern California tidal wetlands, conduct a historical ecology study of the Tijuana River Valley (leveraging external funding), create models to track shifting services over time, and develop tools to disseminate and visualize models and other project-related information. TIME will synthesize information from the past, present, and future to inform wetland recovery goals in southern California both regionally and at the place-based Tijuana River National Estuarine Research Reserve.

During this reporting period, the TIME team focused on the following objectives: (1) develop and refine issues assessment; (2) deliver issues assessment; (3) analyze issues assessment findings; (4) design process for next project phase using results of the issues assessment; (5) hire and train support staff; and (6) cultivate team culture and relationship with intended users.

- B. Working with Intended Users:

- Describe the progress on tasks related to the integration of intended users into the project for this reporting period.
- Who has been involved?

In addition to conducting an issues assessment focus group with an intended user group, the Wetlands Recovery Project (WRP) Wetlands Managers Group (WMG) on May 2, CCP presented preliminary findings on July 10, with follow-up on August 7.

Between each of these meetings, the TIME team members worked with the Coastal Conservancy staff (including a TIME team member who staffs the WRP) to maximize

efficiencies between TIME and the proposed Regional Strategy update (led by the WRP WMG), and work to support it. Establishing this crosswalk emerged as one of the most prominent direction-setting efforts to-date.

- What did you learn? Have there been any unanticipated challenges or opportunities?

An issues assessment, as rigorously conducted for the TIME project, is extremely time intensive. There was a certain impatience, among intended users, with the duration of the issues assessment and frustration with the issues assessment identifying information that the intended users “have talked about before.” Reinforcing that social science (like applied science) can be conducted to test a hypothesis and concretely establish norms, was a challenge for the team to impress, amidst the desire to “get working.” The TIME team has discussed the potential benefit that a dedicated NSC “pre-project program” could bring to projects with shorter timelines (2 years or less). A pre-project program, in this case, could ensure the time needed to conduct an issues assessment, for example, and create more intellectual space to develop resulting deliverables.

When presented with preliminary findings, including a proposed workshop schedule, intended users reacted with concern: “how many meetings do we need to go to?” This points to a recurring issue when working with a small community of practice – stakeholder fatigue. The TIME team continues to explore mechanisms to minimize meeting “burn-out” and incentivize participation.

Some resistance to collaboration as a process continues to exist. For example, an individual at an intended user meeting stated, “TIME can produce their decision-making framework, and we will see if we decide to use it.” This sentiment sheds light on an organizational culture and established process - one where products are developed, presented, and then decided upon versus a collaborative environment where intended users are asked “what do you need?” and then work to co-develop. The TIME team continues to see opportunity in refining its communications approach and working with individuals to describe the collaborative intent.

In addition, beyond learning lessons from working with intended users, the TIME team learned that establishing best practices early on – collective rules of engagement, regular communication – is equally important to internal team function.

- Has interaction with intended users brought about any changes to your methods for integration of intended users, the intended users involved, or your project objectives?

To some extent, yes. The TIME Project initially proposed to work with two intended user groups – the WRP WMG and Tijuana River Valley Recovery Team (TRVRT). Our initial intent was to work with the WMG to develop the decision-making framework (DMF), and then apply this framework to the Tijuana River Valley (TRV), working more

closely with the other intended user group. Through feedback gained from meetings with the WMG, the TIME team has been urged to develop this framework for the TRV and scale up, rather than develop this framework for the region and scale it down for a place-based project (ex: TRV). The TIME team will explore with the Coastal Conservancy and WMG the utility of the DMF to prioritize projects across the region, but this is secondary to supporting site-specific restoration planning.

- How do you anticipate working with intended users in the next six months?

The TIME team intends to increase its interaction with the TRVRT as team members work to develop the DMF for the TRV, but continue to attend recurring WRM WMG meetings to provide updates and get input, when timely.

C. Progress on project objectives for this reporting period:

- Describe progress on tasks related to project objectives for this reporting period.

The purpose of the issues assessment was to (1) clarify desired outcomes and scope of project; (2) collect stakeholder feedback to inform and influence the methods to achieve the project goals; and (3) refine the approach for workshops, public engagement, and Project Team interaction.

To accomplish this, the Collaborative Lead, Center for Collaborative Policy (CCP) conducted issues assessments with:

1. Key individuals
2. Coastal Conservancy staff
3. Wetlands Recovery Project (WRP) Wetlands Managers Group (WMG) (Intended User)
4. Biological consultants
5. WRP Task Forces: joint Santa Barbara-Ventura and Orange-San Diego County (including L.A.), with option of follow-up online survey for those unable to attend or not initially included

Draft findings and recommendations were presented to WMG on July 10 and final findings and analysis were presented to the TIME team in August.

- What data did you collect?

The issues assessments that were delivered in focus group settings were professionally facilitated and mediated by CCP, and were grounded in a core set of questions collaboratively developed by the TIME team and Coastal Conservancy staff. Issues assessment focus groups were held over 4-5 hours and yielded rich qualitative data sets that were then coded (analyzed) by CCP staff to develop process recommendations.

Data was distilled into principles, conundrums, and framework points, including an examination of the role of a Science Advisory Panel (or TIME Technical Advisory Committee).

Principles

1. Utilize rather than reinvent existing databases and tools
2. Demonstrate how to apply the concept of ecosystem services and historical ecology through case studies that link past, present, and future information
3. Need standard approach to valuation, and valuing tradeoffs that can be equally applied at regional level and site level
4. Address emerging issues that are likely to become more important in coming years
5. Clarify that “ecosystem services” is an umbrella term that is not limited to human benefits (i.e., not limited to recreation, cultural resources, aesthetics), and includes intrinsic values and biodiversity
6. Historical ecology provides a reference point, not a meter-by-meter prescription
7. Visualization tools should support decision-making
8. Be useful to local project proponents
9. Obtain executive commitment to use the framework
10. Advance efforts to create a regional identity and solicit regional funding
11. Ensure that TIME directly informs the WRP Regional Strategy

Some principles were “ah-hahs” that weren’t preconceived, while others are affirmations of how TIME was envisioned.

Conundrums

1. What constitutes a “self-sustaining” wetland?
2. How can one accommodate sea level rise in an urbanized/urbanizing context?
3. Should the transfer of genetic material be discouraged or anticipated, in light of climate change and species migration?
4. How do we maintain currently valuable habitat – at the same time as we create conditions for habitat in the future?
5. How do we assess the contribution of local wetland habitats and habitat diversity to regional habitat targets and diversity?
6. To what degree should restoration planning be nested within watershed planning?
7. To what degree should we mimic what existed historically?
8. Should a particular wetland be maintained as an open or closed system?
9. Is the restoration of faunal communities desirable?
10. What is the most effective approach for predator control?
11. What are the ecological consequences of contaminants, and how important is contaminant control?
12. Are un/treated stormwater flows compatible with restoration?
13. How do we help regulatory and management agencies define and pursue common goals for regional wetland restoration?
14. How do we work through conflict and scientific uncertainty in a productive way?

15. How do we build the communicative and collaborative capacity of agencies and stakeholders?
16. How do we minimize the time and resources spent on the permitting process?
17. Can we combine various agency funding sources into a single account that supports regional restoration priorities?
18. How can we minimize mission-specific requirements associated with agency funding, so that wetland restoration is guided more by site-specific ecological conditions?
19. Can we standardize innovative approaches to mitigation at a regional context?

Conundrums do not refer to something that's good or bad, but rather something that is hard to work through and not readily resolvable; it's a persistent, widespread, and a recurrent condition of current landscapes and environments, rather than a discrete problem to be solved once and for all. The TIME project will use selected conundrums as a foundation from which to build the decision-making framework.

Framework points

1. The goals of the effort should include:
 - Provide the best scientific basis for decision-making;
 - Create deliverables that are used consistently;
 - Update the assessment of restoration opportunities to include the past decade of data (i.e., include and frame as services);
 - Provide more specificity on how to prioritize opportunities, and thus inform the Regional Strategy.
2. The framework needs to provide consistent basic information on the services in each hydrologic sub-region, and then provide a structure for assessing management tradeoffs in terms of these services. People want a tool to weigh tradeoffs in terms of services.
3. The framework needs to address a series of ecological, valuation and mitigation, land use, and financial questions that are fundamental to prioritizing restoration opportunities.
4. Services and their valuation can be linked to show historical changes over time, starting from the historical ecology. Different future scenarios can be identified for likely impacts to services, and then the value of these likely services can be assessed to compare different restoration alternatives.
5. The framework must also squarely address the management conundrums and identify what tradeoffs exist in terms of the services provided by a wetland when different restoration approaches are taken.

Summaries of the focus groups are attached.

- Has your progress in this period brought about any changes to your methods, the integration of intended users, the intended users involved or the project objectives?

Again, to some extent, yes. To develop the place-based DMF, the TIME team has very

specific, practical questions (and wants narratives) of wetlands managers, including those intended users in the TRV, who are involved in wetlands restoration and are using temporal information. The issues assessment was not designed to garner this type of information, but subsequent workshops (professionally facilitated to promote scientist-manager dialogue) will. Additionally, TIME will convene a Technical Advisory Committee of subject matter experts to serve in a core capacity across the workshops.

- Have there been any unanticipated challenges, opportunities, or lessons learned?

Please see unanticipated challenges, opportunities, and lessons learned in B.

- What are your plans for meeting project objectives for the next six months?

The analysis of the data gained from the issues assessment has informed the initial process design for the next phase of TIME. CCP and TIME team will finalize process design and implementation (workshops) will occur in the next project period. Additionally, the TIME project will leverage the NOAA Climate Program Office-funded Climate Understanding and Resilience in the River Valley (CURRV) project that will embark on a vulnerability assessment in the upcoming period, to inform the future aspect of TIME.

D. Benefit to NERRS and NOAA: List any project-related products, accomplishments, or discoveries that may be of interest to scientists or managers working on similar issues, your peers in the NERRS, or to NOAA. These may include, but are not limited to, workshops, trainings, or webinars; expert speakers; new publications; and new partnerships or key findings related to collaboration or applied science.

Beyond the lessons learned described above, the TIME team continues to compile and synthesize information on Mediterranean-climate California estuarine ecosystems, their functions and services, how they change over time, and their management.

E. Describe any activities, products, accomplishments, or obstacles not addressed in other sections of this report that you feel are important for the Science Collaborative to know.

Julio Lorda, TRNERR post-doc, has been hired to develop the ecosystem services typology aspect of the TIME project. TIDES intern, Cristina Bourassa joined the TIME team and is supporting the development of the scope of work for the Transfer grant (awarded by NSC) "TIC TOC." TIC TOC will provide a forum for the DMF to be reviewed by colleagues at San Francisco Bay NERR involved with their recently awarded NSC grant. Additionally, TIC TOC will support the launch of a TIME website and increase regional information networking. CCP, TIME Collaborative Lead, will spearhead this effort.

Historical ecology archival data continues to be obtained from repositories in both the

United States and Mexico. The International Boundary and Water Commission (IBWC) in San Ysidro held several useful photos and maps related to groundwater and land surveys. Plans are underway to visit several San Diego archives through September. Additionally, the initial planning steps have been taken to recover archival data from Mexico – some valuable document from Mexican archives have been already obtained. Potential archives and library holdings in Mexico have been identified and a list of places to visit has been compiled, including the expected findings.

Kristen Goodrich, TIME Project Coordinator, presented on the TIME project for the June CTP virtual meeting to summarize project successes to date, project challenges, lessons learned, and thoughts on how the collaborative learning process can be better leveraged in the future and/or benefit others embarking on a similar project.

An original architect of the TIME proposal, Karen Bane (Coastal Conservancy) has been re-engaged by the Conservancy to provide remote support through the next phase of the TIME project.

MEETING SUMMARY | TIME Issues Assessment

Wetlands Managers Group

Southern California Coastal Water Research Project (SCCWRP)

May 2, 2013

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1. Meeting Synopsis

The Wetlands Recovery Project (WRP) Wetlands Managers Group (WMG) met on May 2, 2013, for a special meeting to participate in a group interview for the issues assessment of the Temporal Investigations of Marsh Ecosystems (TIME) project. Facilitators from the Center for Collaborative Policy, a TIME project team member, interviewed six WMG members in advance of the session, and shared the initial findings as a way to begin discussion.

The two broad collaborative objectives of TIME are to gain an understanding of stakeholder needs in estuarine management through an issues assessment, and to create a typology of ecosystem services provided by Southern California tidal wetlands. The applied science objectives are to conduct a historical ecology study of the Tijuana River Valley (leveraging external funding), create models to track shifting services over time, and develop tools to disseminate and visualize models. This meeting worked to achieve the first of two collaborative project goals – the issues assessment.

The group interview included discussion of historical ecology, visualization tools, value and commitment, and future focus, among other topics. Discussions are summarized below.

2. Action Items

1. Any Manager to contact Greg Gauthier or Kristen Goodrich for a follow-up discussion with CCP, if desired

2. Any Manager to provide feedback on WRP Task Force members recommended for interviewing as part of the issues assessment (this list distributed by Greg Gauthier via follow-up email)

3. Welcome and Opening Remarks

Greg Gauthier opened the meeting with general business and opened the floor for member announcements.

4. Project Refresher

Kristen Goodrich briefly described the TIME project, including the recent branding of the project and how the issues assessment is the first step in the project. Participants were referred to TIME fact sheet (distributed in advance of the meeting and as part of meeting materials).

5. Presentation of Preliminary Findings

Dorian Fougères (Center for Collaborative Policy) reviewed major themes and findings from the preliminary interviews of WRP Managers to set the stage for the group interview. The powerpoint is included with this draft meeting summary.

6. Group Interview

Mr. Fougères facilitated a group interview among members of the WRP to inform the issues assessment. This summary captures information shared and discussion threads, including the work of the WRP Managers and direction-setting for TIME.

A. Historical Ecology

A robust discussion around historical ecology and how it will inform work in the region and will be communicated with the larger public occurred at the onset of the interview. Overall, members of the WRP encouraged the positive framing of historical ecology and expressed the need for new language to embody the positive value of wetland recovery as a benefit/enhancement to society, while not oversimplifying.

- How does historical ecology inform us? This is the critical question.
 - Ormand Beach is an example where it helped to make sense of alternatives.
 - It helps to visually educate the public.
- A tagline should be developed for public communication purposes.
- The value of historical ecology needs to be explained. At the project level, it helps with the following:
 - Cost savings (e.g., determining when not to restore compared with a realistic opportunity, tailoring a design to what's possible)
 - Establishing a common "baseline" (e.g., a point in history; note "baseline" has a regulatory meaning in some contexts, see below)

- Establishing a project is linked to local geography in a way that is meaningful for local residents and connected to their history (broadly, it contributes to a sense of place and identity)
- Showing what has not changed and ensuring that regulatory assumptions (e.g., about the need to intervene because of historical changes) are accurate,
- Providing insight to ecological processes, drivers, and potential actions,
- Providing a way to proactively influence public opinion, decision makers, and managers, and
- Future planning and adaptation, for example with sea level rise, historical imagery and visualization can show changes and potentially inform assessments of the impacts of future extreme events
- At the regional level, historical ecology helps with the following:
 - Identifying wetland archetypes, including diversity and connectivity (in other words, it shows the value of what remains today)
 - Assessing the economic value of mitigation efforts
 - Prioritizing which areas do or do not receive funding
- Throughout the work, TIME and the WMG must take care to set appropriate expectations and correct misperceptions about what will and will not be produced by the project, and how and when historical ecological information will be used (or not).
- Historical ecology will not be used in a prescriptive way to design meter-by-meter restoration plans. Nonetheless, there are some situations in which a more prescriptive use may be appropriate. These situations need to be clarified and explained as they occur, as they are atypical.
- Historical ecology is a tool in the decision-making toolbox, as well as a way to educate the public and stakeholders (including agency executives), and to garner resources and support.
- Internally as well as in public communication, the group needs to frame the value of historical ecology in a positive, rather than apologetic light. Managers should be able to convey, What are we trying to enhance for society? There is a positive value to wetland recovery, and historical ecology supports this work.
- It's not clear whether "historical ecology" or "creating wetlands" are the best terms. "Reconciliation ecology" might be better because it highlights that we are trying to reconcile what existed historically with what exists now and what's desired in the future.
 - New language is needed. There are existing regulatory terms like "baseline". Consider terms like "enhancement" or "betterment."

The facilitator drew a simple image on the whiteboard that illustrated how historical ecology might fit within the TIME project and the group's work:

Historical ecological information → Potential ecological services → Values/desired services → Choice

The group commented that reconciliation would need to occur between the potential and desired services; that there are emerging considerations; and that the final choice should be informed by the charge of the WMG and the larger vision and strategic plan.

After lunch the facilitator explained that he was going to focus the group on a small number of topics that were critical to the assessment. If time permitted the group could discuss any of the remaining questions, however.

B. Visualization Tools

The group discussed tools to visualize and communicate complex ideas around wetlands restoration and ecosystem services. The group discussed what would constitute a valuable visualization tool and identified the following characteristics:

1. has broad appeal and easy accessibility, and thus increase engagement
2. makes the complex simple
3. illustrates before and after examples (ex: photographs)
4. contributes to a sense of place
5. communicates the dynamism of wetland systems
6. educates and shifts public and regulatory expectations around things like the range/distribution of system dynamism (e.g., natural and human availability, and associated thresholds, triggers, indicators)

Examples of ways to enhance accessibility include the use of Google street view and enhancement of WRP website and social media presence. A suite of tools is desired, e.g., “swamp view”, fly-arounds, educational materials.

C. Value and Commitment

The group discussed the fundamental importance of the TIME project generating clear value for the participating agencies, and the need to obtain executive commitment to the project early on in the process and maintain this throughout. The group noted situations where value remains unclear and executive commitment remains weak, as a starting point for identifying what this group will do differently. Situations with unclear value and commitment included:

1. protracted and discontinuous communications (compared with periodic email updates, even if activity is minimal)
2. unclear negotiation space (i.e., an undefined or ambiguous scope of work with no clear list of issues that will or will not be addressed) and decision-making process (i.e., who is the final decision-maker, how and when will decisions be made)
3. weak project management; and
4. unclear involvement or missing key people in a process.

These pitfalls were noted and the conversation moved to the question of successful buy-in. Strategies for success included:

1. clear links to values and priorities (mission, goals, objectives), including the public, agencies, stakeholders, and the Board of Governors
 - a. For example, using regional science and archetypes to answer, Why this, here now?
2. consistent messaging that communicates the likelihood of success and justifies spending
3. awareness of fiscal limitations and anticipation of competition, and corresponding justification of spending with realistic costs and sections of the budget
4. establishing partnerships and collaboration that increase efficiency (e.g., making joint requests for ecosystem services projects that create multiple benefits)
5. locally-relevant presentation of a problem and clear local benefits
6. regional/greater-than-local benefits
7. implementing or completing existing plans that may align with strategic initiatives or regional packaging (e.g., “leadership intent”), including inter-agency alignment
8. regular interaction with the public and agencies at various stages of the process – key agency people need to be briefed and helped to follow the project
9. demonstration of actual results and associated metrics, including the size of a project and mitigation benefits
10. a clear path for post-project implementation after the WMG is no longer involved, including monitoring and evaluation, as part of the plan.

The group noted that certain terms have specific meanings in an agency or regulatory context, such as “baseline” and “restoration.” The group needs to clarify in its work and communication efforts how it is using terms that have more than one meaning. At the end of the day, it is less important to establish a single universal definition than it is to be clear about how terms are being used.

D. Future Focus

The group discussed the importance of adaptive management as a way to address events and changing ecological conditions that affect the long-term success of a project. Adaptive management was distinguished from situations where the goals and objectives of a project itself change over time. This was captured in the assessment question, Should the TIME decision-making framework focus on current issues, or what’s coming down the road?

- Malibu Lagoon was offered as an example of a restoration project that was redone over time.
- The work of many managers is shifting from acquisition to restoration, and acreage costs are increasing.

The group discussed whether creating “self-maintaining” wetlands was a feasible and realistic goal.

- One member noted that Southern California is not a pristine landscape, and that the wetlands will always exist in a context of invasive species and anthropogenic influences. The space and ability to return to entirely “natural” processes does not exist.

- Project monitoring and maintenance were suggested as components that should either be included in a project, or added as a follow-on project.
- It was suggested that regardless of whether a system can become “self-maintaining,” the goal is less intensive maintenance over time. A better term for this might be “enhance resiliency.”

E. Integration with WRP WMG

Ms. Goodrich reiterated that TIME has a regional focus with application at TRNERR, and is intended to support the work of the WRP WMG (an intended user). The group then discussed the nexus between TIME and WRP work products, including the regional strategy.

- Information gained from TIME, and the corresponding decision-making framework, can inform regional priority setting based on historical ecology and archetypes.
- It can also help the group develop a proactive vision for the region’s wetlands, a corresponding strategy and more focused leadership, and more specific RFPs and work plans (what is desired, where, in what timeframe).
- TIME should also help with determining whether and how far upstream wetland restoration efforts should venture (i.e., linkages to the watershed), as well as how one might approach wetlands that are part of highly altered systems (e.g., the Los Angeles River) or are more “natural.”

The group stressed the need for a clear work plan that identifies how the TIME project does or does not overlap and support the WRP Regional Strategy.

- The group requested identification of complementary products and a timeline showing when and how these parallel efforts would be coordinated and inform each other.
- It was noted that the ecosystem services workshops should help identify key services that agencies value, and thus help clarify the desired outcomes of regional wetland restoration and support revision of the Regional Strategy, even though these are not the same effort.
- It was suggested that the TIME project should also help to identify project priorities based on data.

7. Issues Assessment Next Steps

The facilitators will host a consultant focus group in conjunction with the Headwaters to Ocean (H2O) Conference in May in San Diego, as the next step in the issues assessment.

Subsequently, the facilitators will conduct group interviews with the regional WRP Task Forces, including a joint Santa Barbara/Ventura meeting and San Diego/Orange County meeting. After the facilitators have completed all the interviews and synthesized the data, they will present the final findings to the WMG and the Board of Governors. At the same time, the TIME project team will work with the Coastal Conservancy staff and share with the WMG a project schedule that includes workshops, deliverables, and coordination with the development of a Regional Strategy.

8. Attendance

1. Shirley Birosik, LA RWQCB
2. Gabriel Buhr, CCC
3. Slader Buck, USFWS
4. Joan Cardellino, Coastal Conservancy
5. Bryant Chesney, NMFS
6. Megan Cooper, Coastal Conservancy
7. Wanda Cross, Santa Ana RWQCB
8. Cori Farrar, Army Corps of Engineers
9. Dorian Fougères, CCP
10. Greg Gauthier, Coastal Conservancy
11. Kristen Goodrich, TRNERR
12. Karina Johnston, SMBRC
13. Shawn Kelly, WRP
14. Carolyn Liebermann, USFWS
15. Moira McEnespy, Coastal Conservancy
16. Shea O'Keefe, NRCS
17. Peter Perrine, WCB (by telephone)
18. Bruce Posthumos, SD RWQCB
19. Luz (Torres) Quinnell, SGRWC
20. Larry Smith, Army Corps of Engineers

MEETING SUMMARY - TIME Issues Assessment
Consultant Focus Group
Catamaran Resort Hotel, San Diego, CA
May 30, 2013

1. Meeting Synopsis

A group of wetlands restoration consultants met on May 30, 2013, to participate in a group interview for the issues assessment of the Temporal Investigations of Marsh Ecosystems (TIME) project, an effort to synthesize information from the past, present, and future to steer wetlands recovery in Southern California. Facilitation was provided by the Sacramento State, Center for Collaborative Policy (Center), a TIME project team member.

The two broad collaborative objectives of TIME are to:

- gain an understanding of stakeholder needs in estuarine management through an issues assessment, and
- to create a typology of the ecosystem services provided by Southern California tidal wetlands.

The applied science objectives are to:

- conduct a historical ecology study of the Tijuana River Valley, with external support from National Oceanic and Atmospheric Association (NOAA),
- create models to track shifting services over time, and
- develop tools to disseminate and visualize models.

This meeting sought stakeholder perspectives to refine research questions, supporting the collaborative objective. The group interview included discussions of topics such as restoration planning and design, implementation, prioritization, and decision-making. Discussions are summarized below.

2. Action Items

1. TIME project staff should consider incorporating the US Army Corps of Engineers list of minimum restoration standards and design guidelines to serve as a guide and to hold agencies accountable.
2. Kristen Goodrich will contact the Coastal Commission for guidelines for restoration project design.

3. Welcome and Opening Remarks

Dave Ceppos, Associate Director with the Center, opened the meeting by reviewing the agenda, conducting introductions, and inviting introductory remarks by Kristen Goodrich, Tijuana River National Estuarine Research Reserve, Coastal Training Program Coordinator. He also opened the floor for questions about the project.

4. Project Refresher

Ms. Goodrich briefly described the TIME project including the National Estuarine Research Reserve System Science Collaborative (NSC) as a funder of collaborative projects for the NERRS; project goals and components (refer to TIME handout); a synopsis of the project timeline; and the Issues Assessment process, which is the first step in the project.

5. Presentation of Preliminary Findings

Mr. Ceppos and Ms. Goodrich described the desired outcomes of the TIME project, which include a decision-making framework informed by a range of southern California coastal stakeholders, and complimented by an ecosystem services assessment, a historical ecology study, and the development of visualization tools and models. The framework and products will be tested in a case study of the Tijuana River Valley. The framework will be developed based on a synthesis of stakeholder perspectives. Participants asked several questions:

- What is meant by “framework”?
- What kind of decisions might the decision-making framework support—local levels, regional levels, or both?
- What are decision-makers addressing?

This exchange of questions and answers helped to frame the conversation in the context of brainstorming ways to relieve challenges and remove barriers between consultants, projects, clients, and regulatory agencies.

6. Group Interview

Mr. Ceppos facilitated the group interview, moving variously between pre-identified questions, and topics that emerged from participant responses.

A. Restoration Planning and Design

The group discussed the degree to which funding agencies influence project design and the nature of projects receiving funding. Perspectives provided by the participants included:

- There is no consequence for failing to meet restoration goals and metrics; however failing to meet mitigation goals can be punitive.
- Agencies may prefer to have a single wetlands mitigation program versus project-by-project designs. If a single wetlands mitigation program existed, the mitigation impacts should not drive the goals.
- Individual agency priorities can impact projects by forcing consultants to change a site design in order to match the funding agency’s mission. This creates conflicting goals in restoration projects, and sometimes results in outcomes that reflect an agency’s requirements, rather than the most ecologically appropriate designs. Also, the requirements are not always explicit, which can create a “frantic” atmosphere when consultants must make last minute changes.

- This is characteristic of mitigation efforts in Southern California, where projects are sometimes not well matched to a particular site.
- Regulatory agencies are driving projects in different directions with different priorities. There is little cohesion in how restoration designs at one location have effects on the restoration of other locations.
 - The agencies and consultants should partner more to determine common criteria for a diversity of systems considering what is best for each, rather than on a project-by-project basis.
 - There is a lack of partnership between agencies and consultants in the design and implementation of restoration sites. This results in conflicting approaches to site design, rather than the development of common goals and understanding about the needs and habitat capacity of a restoration site.

A participant introduced and discussed the San Francisco Baylands Goals document as a model that has been successful in that it provides San Francisco stakeholders a common language, a common sense of place, and assurances that said goals represent long standing and hard fought agreements that are less subject to arbitrary changes.

The facilitator asked, “Are you addressing a “marketing” factor? A need for a better description of what the Southern California Bight is and serves?

- Participants stated that the San Francisco Baylands Goals memorialized a "sense of place" about the San Francisco Bay and solidified messaging and thought about restoration in that region as activities that are part of a common whole (San Francisco Bay).

After this discussion and reference to the Baylands Goals effort, the facilitator returned the group back to the previous more general topics of the role of funding agencies and regulating agencies on project design. Participants stated the following as common perspectives:

- A restoration plan that is not triggered / influenced by desired mitigation impacts and compliance requirements would be effective. There could be a decision-making group made up of representatives of every agency to deal with large-scale restoration and mitigation. It would be up to the group to identify the needs of each.
- A multi-agency group should be inclusive of other parties such as consultants, to co-determine restoration goals/goals of the plan in which the agency is not making the sole decision about goals. Restoration projects will benefit from multiple organizations identifying shared priorities, rather than single-agency priorities.
- The San Francisco Baylands Goals has provided (not always easily) a shared strategy, set of values, and goals for this "common whole" that has allowed agencies, non-governmental organizations, and consultants to plan / design to, rather than have these same parties subject to overly individualized goals and values.
- The Baylands Goals document has in-turn, provided parties doing restoration work in the San Francisco Bay, a common document, created collaboratively, to point to when individual agencies and others seem to deviate from shared goals. This has essentially

been very helpful in steering decisions and has served as a quasi "decision framework" because it reflects commonly held values, and a lot of work that was spent to write it.

- A set of shared agreements and goals about Southern California coastal restoration should be binding in some way to hold parties accountable to shared approaches.

In general, participants speculated that an effort/product like the San Francisco Baylands Goals might be important to inform / influence restoration in the southern California Bight region because there is a cohesive and common goal.

B. Restoration Implementation

The facilitator asked, "What would an ideal decision-making approach/ project design process look like"?

- Engage agencies to develop a regional restoration plan that includes common goals and is not mitigation driven.
 - Clearly delegate implementation tasks.
 - Regional plan could be supported through an in-lieu fee program, however given the amount of money, the time in which it must be spent should be sufficiently long.
 - Out-of-kind mitigations should be allowable but should describe accountabilities so that the mitigation takes place. On-site / in-kind mitigation is not practical and also not ecologically necessary, particularly if a regional approach is employed that treats the southern California Bight coast as a bio-region, rather than a set of isolated wetland sites.
 - A better structure would be one that allows flexibility, and looks at system restoration from a broader scale, and coordinates people's efforts.
 - Data collected needs to be compatible, and readily applied to decision-making.
- The plan would have to have some consideration for projects already underway; projects can be designed around the plan, but complying with new stipulations halfway through a project would be a burden.
- It is a problem that the Coastal Commission doesn't provide policy guidance for things like sea level rise, yet requires designs based on this.
- Identify all regulations that govern what can and cannot happen in the area.

The group discussed the way they experience how agencies plan. Several perspectives on this topic include:

- Agencies don't always plan for needs (i.e. survival through natural or anthropogenic disasters such as the oil spill in the Gulf of Mexico), environmental decisions, or a mixture of planning strategies based on human and environmental well-being.
- Decisions are being made based on outdated models.
- Each agency prioritizes similar but conflicting restoration goals. Their priorities should be streamlined to clarify the results they want.
- Agency buy-in is critical.
- There is a gap between an agency's "way of doing something" and the improvements that would make ecological sense; restoration to balance functions and services.

The facilitator asked, “What would inform this proposed regional plan?”

The group discussed the usefulness of standard and flexible methodologies that could be established for every restoration effort, and the types of data products that would be necessary / desired to support restoration decisions and implementation. The group shared several ideas including the following:

- A minimum level of data on each site, which can also be considered in a broader regional sense.
- Standardized methodology for data collection and data quality to enhance the utility and applicability of data in the field.
- Conversely, a defined methodology might constrain some consultants. Different models are used for different reasons (i.e. budget).
- Guidance from agencies is necessary, but participants don't want to lose the creative opportunities to prepare creative and ecologically beneficial approaches to site restoration.
- Set ground rules/standards to evaluate current conditions, so that methodologies are consistent and compatible (i.e. Eco Atlas). These must be approached with caution to ensure that ground rules/standards are actually useful.
- Priorities for the region (habitat types, species, etc.) should be based on feasible goals that are arrived at through consensus and with a wide variety of stakeholders. That will give all stakeholders a document they can point to for years to come and know it reflects what the consensus of specialists and affected stakeholders were at a fixed moment in time as means to influence restoration decisions.
 - Consider historical ecology and how it can be used.

C. Restoration Decision-making and Prioritization

After the break, the group began to discuss the topic of decision-making and project prioritization. The conversation included topics such as identifying stakeholders, stakeholder engagement, gaining project support, and interactions among parties, which can present challenges to decision-making and prioritization.

- Stakeholders have, in the past, been excluded from project planning when their opinion is not favored. Marginalizing individuals may have consequences such as stronger, opposition in the future.
- Identifying the range of alternatives was identified as a challenge. Local stakeholder support and input may be necessary to assist in obtaining a full scope of alternatives, knowing that some concessions might be needed eventually.
- Stakeholders could be more agreeable if they feel a sense of ownership to projects.
- There is a lack of follow-through by the agencies and perhaps they are not being held accountable. This could erode trust within the parties involved.
- Characterize what stakeholder engagement really is, and what is desired from the relationships.
- Participants described a lack of trust between stakeholders and consultants that resulted in quick criticism of consultants and questioning where participants are qualified to make decisions and where they're not.

- Elements of power negatively influence transparency and self-preservation.
- Is there hope that regional plan could be a document that resource agencies could refer back to it and accept the fact that they're not getting all their risk removed?
- The current decision-making process appears to be driven by mitigation and individual agency priorities rather than a cohesive set of goals that include consultants as purveyors of the best scientific and ecological guidance, rather than compliant employees.

The group agreed there is a benefit to include people such as non-governmental organizations, and others in conversations similar to this issues assessment focus group.

Ms. Goodrich familiarized the group with the Wetlands Recovery Program Task Forces and informed them of the upcoming Issues Assessment with the Task Forces.

The facilitator asked, "Do restoration projects usually achieve their goals"?

- Generally, most projects meet their goals. Most failures result from not having done enough preconstruction investigations.
 - More attention is being paid to meeting goals during economic hardships.

The facilitator asked, "Where does funding come from now and where do you see it coming from in the future?"

- State Coastal Conservancy. Funding is becoming entirely driven by mitigation and we have to go to Washington for permits. Policy changes from Washington may produce more funding for restoration projects.
- The San Francisco Bay Area has a stronger environmental ethic versus in San Diego where action is perceived to be dependent on governments taking the initial action. Funding seems to flow to them more effectively because they have this vision and shared sense of common goals. That is another deficit of ours in Southern California.
- Future funding may come from multiple places generated through collaboration and partnerships.
 - The decision-making agencies with influence on regulation should be highly integrated in the plan. Every funding project has its requirements synced up at the beginning and everyone stays on board.

The facilitator asked, "Would you still want both decision-making framework and restoration planning goals for the region?"

- A process for meetings would be helpful for making decisions, getting agreement, and moving forward on projects.
- The plan itself will not be the only necessary decision tool. For example, information that gets published by outside parties may be incomplete, over generalized, and easily be misunderstood.

Questions regarding the plan rose again:

- What is the decision that this is supposed to inform? Which projects do decision-makers chose? What funding will they use? What are we informing and whom are we informing?

Ms. Goodrich suggested revisiting the Wetlands Recovery Project (WRP) Regional Strategy and Work Plan and clarifying restoration goals.

The group discussed ecosystem services. They provided the following insights:

- The San Diego area is smaller than the San Francisco Bay Area, with more fragmentation and fewer ecosystem services. As a result, preservation and restoration of existing lands are the typical approaches.
- Ecosystem services are unquantifiable and there is risk posed to future protection if valuation efforts estimate the ecological area lower than expected.

7. Issues Assessment Next Steps

The next steps in the Issues Assessment will include two joint meetings of the Southern California WRP county Task Forces, including Santa Barbara and Ventura Task Forces on June 13th, and the San Diego and Orange County Task Forces on June 28th, with Los Angeles Task Force members having the option of going to either. Summaries will be prepared for each joint meeting, and the final assessment findings will be shared with all participants.

8. Attendance

Chris Nordby - Nordby Biological Consulting
Nick Garrity - ESA PWA
Lindsay Teunis - AECOM
David Cannon - Everest International
Lynette Cardoch - MWH

Bryn Evans - URS
Michelle Mattson - ICF International

Project Team

David Ceppos, CCP
Kristen Goodrich, TRNERR
Cristina Bourassa, TRNERR

Meeting Summary – TIME Situation Assessment
SCWRP Ventura and Santa Barbara County Task Forces Joint Meeting
June 13, 2013, Carpinteria, CA

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1. Meeting Synopsis

The SCWRP Ventura and Santa Barbara County Task Forces met jointly on June 13, 2013 for a special meeting to participate in a group interview for the issues assessment of the Temporal Investigations of Marsh Ecosystems (TIME) project.

The two broad collaborative objectives of TIME are to gain an understanding of stakeholder needs in estuarine management through an issues assessment, and to create a typology of the ecosystem services provided by Southern California tidal wetlands. The applied science objectives are to conduct a historical ecology study of the Tijuana River Valley, with external support from National Oceanic and Atmospheric Association (NOAA); create models to track shifting services over time; and develop tools to disseminate and visualize models.

The purpose of the issues assessment is to better understand stakeholder needs for coastal wetland and estuary management, and use this to design the collaborative process for completing the project. Discussion topics included management challenges and decision-making; project approach, concepts, and framework; and process design. Discussions are summarized below.

2. Action Items

1. Kristen Goodrich will forward the “Beyond the Bathtub” (December 2012) presentation to participants.

3. Welcome and Opening Remarks

Dorian Fougères, from the Center for Collaborative Policy, CSUS, opened the meeting by reviewing the agenda and inviting introductory remarks from Kristen Goodrich, Coastal Training Program Coordinator for the Tijuana River National Estuarine Research Reserve (TRNERR) and Cristina Bourassa, Graduate Student Intern with TRNERR. Rachel Couch, State Coastal Conservancy, and Shawn Kelly, Southern California Wetlands Recovery Project also welcomed participants and thanked them for attending. Mr. Fougères concluded the welcome by leading participant introductions and reviewing the meeting ground rules.

4. Project Refresher

Ms. Goodrich gave a powerpoint presentation and briefly described the TIME project, including the role of the National Estuarine Research Reserve System Science Collaborative (NSC) as a funder of collaborative projects for the NERRS. She reviewed project goals and components; gave a synopsis of the project timeline and the issues assessment process, which is the first step in the project; indicated that the decision-making framework will be applicable to all of Southern California, not only the Tijuana River Valley; and specified the desire to identify integration points between the WRP Regional Strategy and the TRVRT Recovery Strategy.

Participants asked several questions and shared comments:

- Are other decision-making tools currently available related to decision-making and do we know if they are adequate or not?
- What will the ecosystem services piece look like when you're done (e.g., catalogue)?
 - Will you be assigning dollar values to ecosystem services?
- Is this process driven by climate change?
- Is the purpose to require that those who submit proposals use the decision-making framework, and then choosing amongst those projects?
- In terms of a needs statement, there is an abundance of information out there, including future considerations. How do we synthesis all of this information together?
 - There is tension between definitive regional priorities (i.e., a strategy) and opportunities that arise.
 - Some locations receive a disproportionate amount of funding because they had money to start with, and/or there was strong political will to push a project through.
- There is a group at Stanford doing ecosystem services related projects; the TIME team should be cognizant of that effort.
- The Conservancy is preparing to fund a regional Climate Change Vulnerability Assessment.

5. Presentation of Preliminary Findings

Mr. Fougères also gave a powerpoint presentation that included the purpose of the assessment, the assessment process, preliminary findings, and discussion questions.

Participants asked several questions and shared comments:

- What is the general timeline, and how do you balance immediate needs (i.e. built project) versus long-term needs/problems (i.e. climate change)?
 - Similarly, how do we make decisions and on what timeline? How are you defining long-term?
 - Mr. Fougères noted that interviewees probably were thinking about 5-20 years as “long-term”.
 - It was suggested that anything less than twenty years did not allow time for an ecological process to become established, allows for too many barriers to implementation, and that twenty years generates baseline information.
- What is the time frame for historical ecology?
 - Typically this goes back to land grants maps. However, it should extend further to pre-land grants and prior to the arrival of European plants.

6. Group Interview

a. Management Challenges and Decision-Making Questions

1. *How does your organization/agency identify and prioritize wetland restoration projects? What are the critical data and factors that your organization/agency considers?*

- Projects that have multiple beneficial outcomes for multiple species, and projects that benefit listed species should be prioritized.
- The citizens advisory committee (includes general public, ocean and beach users, business hotel) weighs in on priorities and the City of Santa Barbara has to approve that plan.
- We look an affordable project that offers many potential successes.
 - Evaluation, such as species evaluations, determines a favorable project.
 - The long-term sustainability of effort is considered, to avoid duplicating effort through repeated interventions.
 - Affordability and complexity of different projects influences prioritization. Project outcomes may be more obvious with simpler projects.
- Project with lots of public visibility can become an advertising piece for the program, attracting many eyes, and providing marketing and community support for additional projects.
 - Santa Barbara has a fund for such strategic restoration projects, compared with the regulatory agency at county that has been entirely opportunistic.
- There is a need to be able to address competing stakeholders including those who oppose projects through interest-based negotiation.
- At the Coastal Conservancy there are project selection criteria. They look at WRP Regional Strategy, which gives more weight to state consideration than local factors.
 - A holistic strategy with projects that are nested in a greater context would be useful.

2. *What critical needs do you have – and what critical constraints or impediments do you face – when planning for or implementing wetland restoration?*

- Compliance with CEQA and NEPA.
- A good soil profile of contaminants would be helpful, because this dictates the cost of excavating.
- Permitting needs to be streamlined. It is hard to obtain permits from the various agencies if you need multiple permits, because the timing and requirements don't line up, even for similar work.
 - Permitting processes don't always recognize or adequately differentiate an environmental project's scale or type (i.e. time and cost).
 - A small project can still take a long time and require significant the resources.
 - There is too much time spent in regulatory process versus implementation.
 - Without money to monitor projects, projects must be repeatedly redone. There should be a more long-term, comprehensive approach such as funding large projects versus small projects.
- Current agency-driven approaches to planning are reactive rather than proactive. This is highly limiting and not desirable.
 - Organizations often do not have enough information about their project's regulatory requirements before engaging in the permitting process, and thus they may be surprised and feel overwhelmed.
- Political support for priority projects is needed.
- There is not enough money for maintenance. It is difficult to find a funder for long-term and voluntary restoration projects, or monitoring.
- In addition to immediate needs and questions, the project could support future decision-making on difficult issues that involve significant uncertainty and challenge established wisdom, such as whether to support the transfer of genetic material or fauna across wetlands under conditions of climate change.
- Private property limits restoration. For example grant funds can't be used on private property (e.g., for invasive species removal). This constrains the available space for conservation.
- Ongoing coordination between agencies that are responsible for projects would be helpful because issues could be addressed faster, and on a regular basis.

3. *What approaches have been most helpful to planning and implementation? Conversely, what approaches have not worked well and should be avoided?*

- A helpful approach has been to invite agencies to and involve them to participate in a technical advisory committee on projects. They become advocates and see things the project team doesn't, allowing the project to moves faster.

- The Santa Barbara district attorney is environmentally conscientious and created the environmental crimes task force team. The team brings all regulators to the table (federal, state, county, and fire departments). This has improved how they deal with justifications as a team. It is voluntary.

The facilitator asks, “What is the role of county in pulling this together?”

- An informal, non-threatening, information-exchange forum enhanced dialogue and education between agencies and stakeholders, allowing stakeholders to feel more comfortable with regulatory agencies. They were able to break down walls and assist each other to find solutions.
 - Having had this foundation, when a new issue is approached there is less pressure and more information is readily shared.
4. *How would you characterize the coordination, planning, and implementation between city and county agencies and non-government organizations, and state and federal agencies and organizations? If you feel this should be strengthened, are there strategies and/or tools that could improve these joint efforts?*
- There must be a point person who keeps track of the overall process, moving the process forward, and providing oversight as a liaison between individuals.
 - In Carpinteria a watershed plan was developed and includes a checklist of priority restoration projects (i.e., steelhead runs). This served as a platform for teaching people about the importance of wetlands.
 - Private business is often an overlooked asset, and should be tied into these projects.
 - It was suggested to contact Andy Brooks, Director of the Carpinteria Salt Marsh Reserve, about this effort.
 - The Comprehensive Nutrient Management Plan (CNMP), a USDA Natural Resources Conservation Service process, was cited as an example of a consensus based forum that has been mutually beneficial for parties involved by reducing risk.
 - A person who has the trust of community members can secure agency cooperation. For example, leaders of agricultural associations and private property owners.
 - The framework should include a contingency disaster plan with a model for reacting to different situations, opportunities and issues.
5. *What are the current and/or anticipated opportunities to acquire funding for wetland restoration in your area?*
- Environmental restoration projects could be reframed to engage the business community. Ecosystem services become very relevant in this conversation.
 - Volunteer support can provide project support (e.g., the San Diego zoo offered free admission in exchange for volunteering). Disneyland and REI offer programs like this.

- Most funders require partnerships, so there must be a willingness to partner and potentially combine funds.

Ms. Goodrich provided an overview of the WRP Regional strategy in preparation for the next set of questions.

b. Approach, Concepts and Framework

The facilitator chose to take question 6 and 7 together, in consideration of the time.

6. The project leaders advocate the use of the Millennium Ecosystem Assessment definition of “ecosystem services.” How do you see this definition complementing or conflicting with your organization/agency’s approach to wetland restoration?*

7. Do you feel there is adequate characterization of ecosystem services of Southern California coastal wetlands and estuaries? If not, what needs to be clarified or better described to have adequate characterization? The facilitator paraphrased the question and asked, is the concept useful?

- Ecosystem services do not seem to allow people to see nature as inherently important, without a price tag.
- Currently there is insufficient information to assign dollar amounts to ecosystem services. However, similar techniques are effective with private property owners when issues like flooding are discussed.
 - People begin to care when they hear about fires or floods; there is a window of opportunity in which to act before they forget. There is a chance for agencies to be more tightly coordinated to anticipate these windows of opportunity.
 - The case needs to be made to explain ecosystem services by finding key areas and promote stewardship of the resources.
- Restoration goals should be approached cautiously if ecosystem services are being considered, so as not to overlook other opportunities such as building saltmarsh, inland wetlands, and riparian zones, which could provide large benefits in relation to flood control.
 - The City of Seattle did a cost benefit analysis, and found that it was cheaper to do restoration than to invest in physical infrastructure.
- It was suggested to contact Judith Kildow, Stanford, as a potential resource related to ecosystem services. Another resource is Santa Barbara National Center for Ecological Analysis and Synthesis (NCEAS) and Frank Davis is a point of contact. Contact information can be obtained from attendees, Mr. David Hubbard or Mr. Bob Thiel.
- Ecosystem services are a good way to expand the range of considerations, but should not be the only strategy for prioritizing restoration. A restoration road map,

with a toolbox of strategies and an overarching plan, is necessary to prevent isolation or too much focus on any one factor.

- State-of-the-art valuation techniques should continue to be developed.
- Sometimes the value of services will be less than that of alternate uses (e.g., hotel development). This is dangerous as it reduces the value of the wetland to those things that can be quantified, and for this reason the approach should be used cautiously.
- Collaboration with department of education for programs with high schoolers is an approach for outreach.

8. *What issues should a decision-making framework address? At what scale(s) should the framework operate? Should it focus on current issues, or what's coming down the road?*

The group agreed that this question had been sufficiently addressed by earlier comments.

9. *What visualization tools would be helpful in your planning and implementation work?*

- A sea level view that shows shoreline habitat shifts would be helpful.
- The group speculated that the tool should be sufficiently complex. For example, the NOAA Sea Level Rise viewer is limited in its complexity. Visualization tools should not make things too generic.
 - With regard to impacts from climate change the tool needs to be immensely practical.
 - Illustrating groundwater dynamics in the context of climate change would be useful, particularly in relation to ecosystem services;
- Certainty will not be achieved, as neither wetlands science or climate change are exact sciences. Caution should be taken to avoid marginalizing potential collaborators.
- Participants speculated the challenges of obtaining and sharing data and information. Some of their perspectives on this include:
 - There is a lack of information that identifies who has what data and how it can be obtained. A clearinghouse or a data repository would be helpful, even though some people will still be reluctant to make their data available.
 - A gap analysis could be conducted to find out what's missing and improve existing data. The Nature Conservancy has undertaken similar work and developed an online visualization tool.
- It will be important to identify the difference between tools and models, understanding that certain tools are used for certain things (it was noted that there was discussion of this distinction at the recent Headwaters to Ocean (H2O) Conference).
 - Outstanding questions for clarification include determining where this visualization tool/model fits in the process, as well as the best use of resources.

- Such tools could help to explore and illustrate possible responses to stressors, and support informed decision-making by identifying opportunities and trade-offs.
- Two reference tools were noted:
 - University of California Santa Barbara and the spatial analysis and planning tool MarineMap.org, run by Will McClintock
 - Ecosystem-based Management tools network online
- Two suggestions were made about what the decision-making framework could include:
 - Grants proposals that help guide and articulate how projects are supported by the framework
 - Decision trees and/or check lists for different considerations
- The tool could be piloted by looking at restoration projects in Southern California and seeing how the framework would assess them and the choices made.

10. How should the framework be integrated with existing Southern California Wetlands Recovery Project elements? (e.g., the WRP work plan, regional strategy, Wetland Manager's Group)

- The WRP Regional Strategy has not been implemented to the extent people thought it would when it was formed. The Coastal Conservancy could use that as a mechanism to choose whom to fund, but there are multiple agencies involved.
 - The message of the decision-making framework needs to be clear. For example, "To be considered for funding by the WRP, project staff must fulfill many requirements without promise of receiving funding." Although this is time consuming, if a project isn't on the work plan, the Conservancy doesn't consider the merits of a project equally or adequately vetted.
- Similar to comments expressed earlier, clear and common priority projects should be identified to avoid redoing old projects. For example there are multiple projects in the watershed trying to address very similar problems. Even through the projects that are highest priorities are known, participants still feel stuck in a reactive role, waiting for projects to be funded.
- There is concern that the outdated solutions are being applied to new problems. The decision-making framework should create a paradigm that will encourage or force attention on these new threats, despite the uncertainties and hard choices that these raise. Such questions include choosing one species over another, or debating the need to hold species in captivity because habitat is gone.
 - It would be helpful to structure a decision tree or thought process on how we're going to handle new threats. We can anticipate the types of decisions we are likely to have to make in the future. This may be an opportunity to think long-term, regionally, and outside of the box, to arrive at new, potentially unconventional solutions.

- For example, it would be helpful to have a decision-making framework to make effective decisions of opening and closing mouths of extremely important estuaries
 - Wetlands are free now, but we'll have to pay in perpetuity for the benefits they provide if we lose them.
- In addition to natural resources that are robust and resilient, attention to the public perception of separation from the natural worlds needs reconciliation; humans are part of the natural world. Actions should be taken because they make sense.

c. Process design

11. *The project approach involves understanding how coastal estuaries worked historically, how they've changed, and how they are likely to evolve in the context of climate change and other drivers. Which of these three elements of this are likely to have the most value for your organization or agency?*

12. *How else can the project ensure it has value for your organization/agency and executives?*

13. *What stakeholders, if any, need to be more involved in restoration planning or implementation efforts? What stakeholders are typically overlooked?*

- | | |
|--|---|
| <ul style="list-style-type: none"> • Agricultural commissioners • Businesses (Real estate, Oil, Gas, Power) • Chambers of Commerce • Regional Water Quality Control Board • UC System • Resource Conservation Districts • Land Trusts, like Ojai Valley Land Conservancy • Airports: LAX, John Wayne, SAN • Ports: LA, Long Beach, SD • Federal: Federal Emergency Management Agency, Army Corps of Engineers • State: California State Association of Counties, League | <ul style="list-style-type: none"> of California Cities, American Planning Association California Chapter • Local: County and City – Los Angeles, Santa Barbara: Planning, Public Works, Public Health, Flood Control, Parks, Recreation, Watershed Protection, Emergency Management, Vector Control, Supervisors • Special Districts (LAFCO): Reclamation, Water, Sanitation • Parks: State, County, National • Military: Pendleton, Vandenberg, Navy • The Nature Conservancy |
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14. *What are the most effective ways to ensure public understanding and buy-in?*

- The public perception of restoration projects may be opposite the business community’s perspective. We often look for the interests of the environment but there’s economic value, too. These projects also provide jobs and are similar to conducting a business. The value of the jobs and activities associated with implementing restoration plans should not be overlooked.
- Social media can play a role by broadcasting pictures of people doing restoration in amazing and unique places.

7. Issues Assessment Next Steps

A joint meeting for the San Diego and Orange County SCWRP Task Forces will be held on June 28th, with Los Angeles Task Force members having the option to attend at this location (they were also invited to attend in Carpinteria). A meeting summary will be distributed and, when complete, the final assessment findings will be shared with all participants.

8. Attendance

- | | |
|--|--|
| 1. Andrea Adams-Morden, City of Carpinteria Steward | 13. Erin Maker, City of Carpinteria |
| 2. Erin Brown, South Coast Habitat Restoration | 14. Sheri Mayta, Estero Natives Nursery |
| 3. Rachel Couch, State Coastal Conservancy | 15. Ken Owen, Channel Islands Restoration |
| 4. Rosi Dagit, RCD of the Santa Monica Mountains | 16. Derek Poultney, Ventura Hillside Conservancy |
| 5. Eric Friedman | 17. Martin Ruane, US Navy |
| 6. Elihu Gervirtz, Biological Consultant | 18. Lisa Stratton |
| 7. Mauricio Gomez, South Coast Habitat Restoration | 19. Bob Thiel |
| 8. David Hubbard, Coastal Restoration Consultants | 20. George Thomson, City of Santa Barbara |
| 9. Matt James, Coastal Restoration Consultants | 21. Valerie Vartanian, Naval Base Ventura County |
| 10. Shawn Kelly, Southern California Wetlands Recovery Project | 22. Damon Wing, Ventura County, Supervisor Linda Parks’ Office |
| 11. Dan Klemann, Ventura County Planning Division | |
| 12. Natasha Lohmus, Fish & Wildlife | |
| | TIME Project Team |
| | 23. Cristina Bourassa, TRNERR |
| | 24. Dorian Fougères, CCP |
| | 25. Kristen Goodrich, TRNERR |

Meeting Summary – TIME Situation Assessment
SCWRP San Diego and Orange County Task Forces Joint Meeting
June 28, 2013, Carlsbad, CA

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1. Meeting Synopsis

The SCWRP San Diego and Orange County Task Forces met jointly on June 28, 2013 for a special meeting to participate in a group interview for the situation assessment of the Temporal Investigations of Marsh Ecosystems (TIME) project.

The two broad collaborative objectives of TIME are to gain an understanding of stakeholder needs in estuarine management through an issues assessment, and to create a typology of the ecosystem services provided by Southern California tidal wetlands. The applied science objectives are to conduct a historical ecology study of the Tijuana River Valley, with external support from National Oceanic and Atmospheric Administration (NOAA); create models to track shifting services over time; and develop tools to disseminate and visualize models.

The purpose of the issues assessment is to better understand stakeholder needs for coastal wetland and estuary management, and use this to design the collaborative process for completing the project. Discussion topics included management challenges and decision-making; project approach, concepts, and framework; and process design. Discussions are summarized below.

2. Action Items

1. Greg Gauthier will revisit the Wetlands Recovery Program video on the value of wetlands as a potential future communication tool for the public.

2. Brian Collins, USFWS Refuges, can provide more information related to wildlife monitoring networks.

3. Welcome and Opening Remarks

Dorian Fougères, from the Center for Collaborative Policy, CSUS, opened the meeting by reviewing the agenda and inviting introductory remarks from Kristen Goodrich, Coastal Training Program Coordinator for the Tijuana River National Estuarine Research Reserve (TRNERR) and Cristina Bourassa, Graduate Student Intern with TRNERR. Jeff Crooks (TRNERR), Julio Lorda (TRNERR), Brian Collins (US Fish and Wildlife Refuges), and Greg Gauthier (State Coastal Conservancy and Southern California Wetlands Recovery Project, SCWRP) provided additional remarks. Mr. Fougères concluded the welcome by leading participant introductions and reviewing the meeting ground rules.

4. Project Refresher

Ms. Goodrich gave a power point presentation and briefly described the TIME project, including the role of the National Estuarine Research Reserve System Science Collaborative (NSC) as a funder of collaborative projects for the NERRS. She reviewed project goals and components; gave a synopsis of the project timeline and the issues assessment process, which is the first step in the project; indicated that the decision-making framework will be applicable to Southern California, including but not limited to the Tijuana River Valley; and specified the desire to find out how participants see wetlands recovery in Southern California, and what they envision the framework looking like.

5. Presentation of Preliminary Findings

Mr. Fougères also gave a power point presentation that included the purpose of the assessment, the assessment process, preliminary findings, and discussion questions.

Participants asked several questions and shared comments:

- Is TIME aimed at regional planning or providing tools for regional projects?
 - The TIME decision-making framework will support the SCWRP Regional Strategy, and should also help for local planning efforts.
- Where is high-level planning succeeding, and where are monitoring efforts or on-the-ground projects doing well?
 - Successful monitoring efforts noted by the group included New River Wetlands near the Salton Sea, and Santa Monica Baykeeper and their work on the Marine Life Protection Act.

6. Group Interview

A. Management challenges and decision-making

1. *What are the critical factors that your organization/agency considers when prioritizing and choosing wetland restoration projects?*
 - Prioritizing and choosing wetland restoration projects considers several factors. Participants mentioned the following:
 - Public trust resources, such as wetland species or migratory species;
 - Availability of critical information necessary to determine feasibility and potential barriers such as cost, cultural use, and historical land use
 - Whether there is a persistent problem;
 - The intended lifetime of a potential project is evaluated for availability of sustained support, and success in terms of maintaining the wetland's appearance and function over time; and
 - The potential for projects to mitigate impacts as identified under CEQA.

The facilitator asked if any participants were involved in Integrated Regional Water Management (IRWM) efforts, based on state bond funding from Propositions 84 and 1E.

- Projects may be prioritized if there are temporary windows of opportunity, based on public support and momentum to address a particular concern or threat. To better take advantage of these opportunities, responses and resources should be coordinated.
2. *What critical needs do you have, and what critical constraints do you face, when planning for or implementing wetland restoration?*
 - Long-term goals and a direction to focus planning efforts that encompass a collection of ongoing projects should be clearly defined, keeping in mind that environmental systems function on geological time scales.
 - Lag time between a funding award and corresponding project implementation constitutes a significant challenge. This manifests in terms of declining public support, loss of project momentum, increased costs, and decreased access to project sites. Windows of opportunity and capacity in various geographic regions should be sequenced strategically to overcome this challenge.
 - There is a limited period of time in which funding is available; however project ideas may not be fully developed by the deadline. Yet, when ideas are ready, the steps to get to implementation are time consuming (reviews, approvals, contracts).

- Some restoration sites include infrastructure that requires maintenance and access roads, and this creates competition for space despite allowances for restoration. [Note: this was written feedback provided prior to the meeting]
- Identify and make available common scientific assessments of watershed characteristics and ecosystem functions, thereby reducing the time needed and costs for individual restoration efforts. Basic biology and hydrology constitute the linchpin of restoration, including planning for different sea level rise and climate change scenarios.
- Human and societal dimensions should be integrated into the planning process to reduce time to implementation. Agencies may be able to increase capacity to mitigate major upstream inputs into wetlands by improving biological literacy in watershed communities.
- When constraints for wetland restoration are high and the environmental conditions are deteriorating, crisis may create opportunities for response.
- Regulatory agencies should continuously coordinate efforts, create common outcomes and priorities, clarify jurisdictions, and increase transparency.

3. *What approaches have been most helpful to restoration planning and implementation?*

- Collaborative efforts should include non-profit organizations, provide equal access to information, and provide opportunities to set goals collectively. This approach should also help ensure stability despite changing agency staff.
- Permitting on a project-by-project basis is cumbersome, expensive, time-consuming and inefficient. The watershed-wide permitting (Army Corps RGP-41) and Program-style Stream-bed Alteration (1600) permitting, like the San Diego River Conservancy has done for the entire San Diego River watershed, is an efficient way to permit many projects within the watershed. [Note: this was written feedback provided prior to the meeting]

4. *How would you characterize the coordination, planning, and implementation between city and county agencies and non-government organizations, and state and federal agencies and organizations? If you feel this should be strengthened, are there strategies and/or tools that could improve these joint efforts?*

- Coordination and planning breaks down when agencies are not adequately funded. Relationship-building opportunities, such as focused meetings, are needed.
- Agency relationships could be strengthened if there was commitment to cooperatively prioritize projects and reach jointly defined and agreed upon priorities. Success may be promoted by highlighting benefits obtained by each agency and agency partners, including common benefits.

- Participants perceive a lack of accountability amongst regulatory agencies, as a result of their distributed authority, competing interests, and different funding.
 - The balance between structure and freedom to try new approaches should be strengthened by employing agency staff who are not committed to the status quo, and are able to be creative and work with multiple agencies.
 - Agencies and restoration experts can function well with a certain degree of friction based on their knowledge of opportunities, law, and a passion for the resource that is contributed by wetlands restoration experts.
- Compliance with application requirements after receiving grants can be more time consuming than expected, if new application requirements become necessary on short notice. [Note: this was written feedback provided prior to the meeting]

5. *What are the current and/or anticipated opportunities to acquire funding for wetland restoration in your area?*

- Perhaps a new bond or a public benefit fee.
- Philanthropic grants.
- Increasing competition may offset opportunities.
- A watershed-based approach to funding is needed, including a champion with an understanding of the agency process.
 - Participants cited an Army Corps of Engineers pilot project in Santa Ana, CA with a watershed-based budget.
- Grants are written to advance narrow agency goals. It would be preferred to have a more flexible process that coordinated goals for mutually beneficial outcomes.
- Project selection may be guided by an overarching framework and set of common goals.
- Regarding IRWM efforts, these take significant resources to complete the applications. The process is also protracted. These are geared toward water agencies, not non-government organizations.
 - The third round of IRWM Implementation Grant funding is expected in early 2015.

B. Approach, Concepts, and Framework

6. *The project leaders advocate the use of the Millennium Ecosystem Assessment definition of “ecosystem services.” How do you see this definition complementing or conflicting with your organization/agency’s approach to wetland restoration?*

- There is a gap between ecologist’s understanding of ecosystem services, and the mainstream population’s understanding, partly because ecologists are more aware of system functions. In contrast, the public’s awareness of ecosystem services may increase through first-hand experiences, such as with an environmental disaster.
- Knowledge about ecosystem services can be used to raise awareness of and educate the public about the importance of wetlands, engage the public, and attract or steer the attention of funding organizations. In some cases, this knowledge can help elected officials assess the return on public investments.
- Wetlands functions ought to be restored by reducing the volume and velocity of urban runoff being funneled through our narrow canyon stream corridors to reduce erosion. [Note: this was written feedback provided prior to the meeting]
- Monetizing ecosystem services for outreach purposes may be helpful to increase engagement, but is technically challenging and may also be limiting if “value” becomes synonymous with “service”, thus giving little weight to intrinsic values of nature.
- Focusing on restoring a single species, like the Endangered Species Act requires, contrasts with focusing on multiple services and benefits.
- An alternative approach could be to focus on a broader “systems view”, and focus communication on general processes that have the largest impacts (e.g., wetlands as fish nurseries).
- Knowledge transfer should be a two-way exchange, and include listening to stories from people’s experiences with the environment, and learning from the public about their values and interests.

7. Do you feel that adequate characterizations of the ecosystem services provided by Southern California coastal wetlands and estuaries exist? If not, what needs to be clarified or better described to have adequate characterizations?

- The Wetlands Recovery Program video on the value of wetlands should be revived for future communication with the public, because it had a surprisingly strong impact on resource managers about the importance of their work.

8. What issues should a decision-making framework address? At what scale(s) should the framework operate? Should it focus on current issues, or what’s coming down the road?

- The framework would ideally consider both current and future habitat conditions and needs, and include a long-term temporal perspective for geographic regions.

The facilitator asked, “What is an optimal time-step”?

- The framework must consider how built infrastructure will be affected by the development of natural features over time, including additional changes that result from climate change effects. For example, changes in water availability, migratory species and blooming periods, ocean acidification, and how materials move in the system (sediment) may be exacerbated by and present risks to humans.
 - Adaptive management decisions such as flood control or wetland removal must be considered in this context.
- At the same time, certain ecological patterns must be maintained daily and into the future, such as migratory species and pathways that rely on healthy wetlands. Therefore, a holistic approach and suite of restoration tools that build on prior work are important.
- The decision-making framework needs to be implemented collaboratively, and thus should include a collaborative process for decision-making and/or other procedural agreements.

Questions 9 and 10 were taken together in the interest of time.

9. What visualization tools would be helpful in your planning and implementation work?

and

10. How should the framework be integrated with existing Southern California Wetlands Recovery Project elements? (e.g., the WRP Regional Strategy, Work Plan, and/or Wetland Manager’s Group) Greg Gauthier reviewed the purpose of the SCWRP Regional Strategy.

- Visualization tools must be designed at the appropriate levels of detail for various audiences, and ideally be both simplistic in design and powerful in function.
- They should be linked to relevant global data networks such as those that exist for species and hazards (e.g. SFEI’s EcoAtlas, California Rapid Assessment Method (CRAM Assessment), and a Water Quality Guide); to oral history information and old photographs; and to LiDar data.
- Geographical Information Systems (GIS) can be too technical in design for some users and should be approached with caution. GIS needs

improvements in order to be used as a tool for communicating concepts and for interpretation.

- National Oceanographic Atmospheric Administration (NOAA) has a Digital Coast Hazard Mitigation Plan that includes: siting, siting impacts from sea level rise, available training, and oral histories including photos.
- Additional resources include: Caltex/Gel satellite imagery, Marine map (includes percent cover, an important element for stakeholders), and Seasketch.org.

C. Process Design

11. *The project approach involves understanding how coastal estuaries worked historically, how they've changed, and how they are likely to evolve in the context of climate change and other drivers. With these components in mind, how can the project ensure it has value for your organization/agency and executives?*

- The project must be able to show options to decision-makers and the public.

12. *What stakeholders, if any, need to be more involved in restoration planning or implementation efforts? What stakeholders are typically overlooked?*

- Urban planners
- Parks and recreation departments
- Infrastructure and utility (power) companies
- Water and wastewater authorities
- Disadvantaged communities
- Environmental justice communities
- Interests who want to use wetlands for non-restoration purposes (e.g., developers)
- Regional Water Quality Control Board

13. *What are the most effective ways to ensure public understanding and buy-in? Has your Task Force chosen to develop a regional identity, and why or why not?*

- Newport Bay is promoting a watershed way of thinking to create a sense of place and community.
- Stakeholders and community members should have a stronger sense of place and connection within their watersheds. Restoration efforts should include artist communities; utilize place-branding services; and connect with disadvantaged communities to strengthen local identity, and to foster pride in and access to wetlands.
- Ways to increase and ensure public understanding and buy-in include connecting upstream habitats to downstream rivers and oceans, and linking

project outcomes to child educational curricula with visual tools, projects, and speakers.

7. Issues Assessment Next Steps

The final situation assessment findings collected from all focus groups will be completed and shared with Task Force members. This final report will inform the upcoming workshop series, the second stage of the TIME project.

8. Attendance

1. Kurtis Baron, WEST Consultants
2. Carly Bott, no affiliation provided
3. Slader Buck, USFWS Refuges
4. Brian Collins, USFWS Refuges
5. Howard Cork, Resident, Newport Bay Conservancy
6. Stacie Fejtek, UCLA Environmental Science and Engineering
7. Richard Gardner, South Orange County Watersheds
8. Doug Gibson, San Elijo Lagoon Conservancy
9. Lauma Jurkevics, DWR Southern Region
10. Kim Koplín, Bolsa Chica Land Trust
11. Jim Peugh, San Diego Audubon, Friends of Famosa Slough, San Diego River Park Foundation
12. Bruce Posthumus, San Diego Regional Water Quality Control Board, WRP Managers Group
13. Luz Quinell, San Gabriel and Lower Los Angeles River and Mountains Conservancy
14. Rebecca Schwartz, San Diego Audubon, Conservation Program
15. Krista Sloniowski, Newport Bay Conservancy
16. George Sutherland, Trout Unlimited

TIME Project Team

17. Cristina Bourassa, TRNERR
18. Jeff Crooks, TRNERR
19. Dorian Fougères, CCP
20. Greg Gauthier, SCC
21. Kristen Goodrich, TRNERR