Expert Panel Workshop
Summary Report

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Overview

Purpose of Expert Panel

The purpose of the Coastal Rail Resiliency Study (CRRS) expert panel session was to engage with academic and professional experts from various disciplines including coastal geomorphology, marine biology, geotechnical engineering, and coastal engineering and document their input regarding the CRRS. The panel experts were selected based on their previous work and knowledge of the various disciplines related to coastal challenges in the region. The CRRS is underway to assess a seven-mile stretch of the coastal rail line to minimize passenger rail service disruptions. The workshop occurred between December 3 and 4, 2024.

Desired Goals

The goal of the expert panel session was to elicit feedback from the group to identify any further measures needed to safeguard the south Orange County coastal rail line in place for the foreseeable future, which is estimated to be several decades out. Through informative presentations and collaborative discussions with academic and professional experts, the session sought to:

- Provide experts with a background and history of the rail line, previous emergencies that have led to passenger rail service disruptions, and the four reinforcement area projects to proactively protect the coastal rail line
- Provide an overview of the existing seven typical sections and concepts that are part of the short- to medium-term study
- Gather feedback on whether OCTA could have taken a different approach in addressing the previous emergencies; the initial assessment and short- to medium-term study
- Document expert feedback, questions, concerns, etc.

Panel Format

The expert panel was a two-day in-person session that consisted of presentations, discussions, and a site visit. Jeff Ball, the Chief Executive Officer of the Orange County Business Council (OCBC), served as the facilitator for the session to guide dialogue and create a collaborative discussion that led to meaningful and productive insights. During the two-day session, OCTA shared background information on OCTA's role in the LOSSAN corridor, past rail closures, and impacts and challenges of changing environmental conditions. OCTA also provided an overview of the CRRS multi-phased approach, reviewed the initial four reinforcement areas, and conducted a site visit to key locations – San Clemente State Beach, Casa Romantica, and Mariposa Point. In addition, OCTA discussed ongoing regional efforts, reviewed draft alternative concepts, and short- to medium-term solutions.

Materials

Panelists were provided with informational print materials including:

- Itinerary
- Factsheet
- Initial Assessment Technical Memo
- August 29, 2024 Staff report, presentation, and attachments to OCTA Board
- Copies of presentations
- Study area map handout
- Typical sections 1-7 handout

Panel Details

MEETING DETAILS	Holiday Inn Express, San Clemente, CA Tuesday, December 3, 2024 | 10:00 AM – 5:30 PM Wednesday, December 4, 2024 | 9:00 AM – 3:00 PM
Project Team	Six Presenters: Darrell E. Johnson, Rose Casey, Dan Phu, Rob Klovsky (HDR), Gheorghe Rosca (HDR), and Avi Shah (HDR) One Coastal Frontiers Representative: Russel Boudreau (Coastal Frontiers) Three Outreach Consultants: Maria Yañez-Forgash (AA), Nancy Verduzco (AA), and Keven Michel (AA) Three additional project staff in attendance
Moderator	Jeff Ball, OCBC
Panelists	• Adam Young, Scripps Institution of Oceanography • Wenkai Qin, NV5 • Lawrence Honma, Merkel & Associates • James Gingery, Keller West

Discussion

PREVIOUS EMERGENCY WORK

After learning about the previous emergency work, panelists were asked if OCTA should have done things differently with previous emergencies. See below for key takeaways.

A. Key Takeaways

- An observation from one of the panelists indicated the riprap at Cyprus Shore may function as a mini jetty and accumulate sand. There is no “one time fix” – maintenance and monitoring will likely be a part of any solution.
- Moving forward, OCTA should consider riprap greater than 6-ton in size, as this provides greater stability.
- The OCTA team indicated Cyprus Shore is the only known ancient landslide in the study area but will have an expert/certified geologist review stereoscopic photographs and old geologic maps. Consider a risk ranking system.

REINFORCEMENT AREAS

Panelists also had an opportunity to discuss the four reinforcement areas. Below is a summary of key takeaways.

A. Key Takeaways

- OCTA should assess the existing conditions to establish baseline biological resources conditions of the project area. These would include assessing the terrestrial and marine resources.

- OCTA should assess the baseline sand profile conditions and geotechnical risk factors with the bluffs.
- Consider modifying the armoring so that it would be covered with sand. This reaffirms OCTA's plan to place sand as a self-mitigating measure of the armoring actions.
- Panelist noted it is unusual to see such a wide variance in beach width in a small area.
- Panelists offered to conduct peer reviews of key studies.

SHORT- TO MEDIUM-TERM SOLUTIONS

OCTA conducted a robust discussion of the short- to medium-term concepts, which consist of a menu of bluffside, beachside, and rail concepts. These concepts were used to apply to each typical section throughout the seven-mile stretch of the study area. Below are key takeaways received during this discussion.

A. Key Takeaways

- OCTA consultant provided an overview of the short- and mid-term concepts, a panelist suggested that OCTA consider habitat friendly concrete blocks in the lower portions of the engineered revetment. The panelist noted the Port of San Diego had piloted this method and it was approved by Coastal Commission. OCTA should also consider sand dunes, where feasible.
- Consider out of kind fee contributions or contribute funding to other agencies' efforts to mitigate for potential impacts. OCTA should consider self-mitigating project features or components. This should be the theme for any of the proposed armoring actions that are part of this effort. Note, OCTA will be responsible for additional monitoring activities.
- A panelist suggested that OCTA consider opportunities to repurpose materials from the inland side of the rail line.
- The group engaged in a good discussion on the feasibility of grouting methods. It's important to keep in mind whatever solutions are being looked at, they would not impede groundwater movement/flow. The group agreed that horizontal drains are the most efficient dewatering method versus any vertical drainage system.
- A panelist suggested OCTA undertake a comprehensive biological and cultural assessment of the study area.
- Discussions ensued regarding the benefits of engineered revetment vs. seawall; the panelists recognized that seawalls have a smaller footprint but deeper foundation and reflect wave energy. Therefore, riprap may be easier to permit than seawalls. A panelist noted seawalls can be challenging with dewatering, concerned with existing materials (i.e., riprap) that would make constructing a seawall difficult.
- The group discussed the necessary height and challenges related to elevating the rail line.
- A panelist suggested that OCTA consider looking at a rail bridge concept, similar to what has been implemented in New South Wales, Australia (Sea Cliff Bridge - Stanwell Park | VisitNSW.com).
- A panelist inquired if there is a potential to include a trail on top of seawalls. Additional discussions ensued regarding integrating self-mitigating project components.
- OCTA should consider artificial reef, breakwater, and other sand retention measures. Reefs have co-benefits with wave dissipation.
- OCTA should put more emphasis on monitoring and having current data. This will help in understanding the baseline conditions and aid in comparing post-construction conditions, which

may be a requirement of the Coastal Commission. This data is needed for the bluffs which would include augmenting existing LiDAR data for certain areas of the bluff.
- There is no “one size fits all” solution and OCTA should consider sand retention features along with sand nourishment and sand dunes.
- Need to consider a program of solutions for each segment, clearly define who the lead is for those efforts as well as improvements that would be implemented/funded by others.
- OCTA should perform baseline biological resources survey on both land and offshore areas.

NEXT STEPS

Rose concluded the panel session by thanking panelists for their participation and insightful feedback. She summarized key points and shared next steps, including the following:

- OCTA will synthesize insights from the panelists.
- OCTA will look to augment how we evaluate the various concepts as they head into the evaluation process.
- OCTA will share the concepts with the Project Development Team, which is comprised of the cities of San Clemente, Dana Point, and San Juan Capistrano, County of Orange, State Parks, and others.
- OCTA will present these concepts to the OCTA Board early 2025 and then consider the general input in the process.
- OCTA will look into establishing a baseline for the biological resource conditions of the project area.
- OCTA will look into assessing the baseline sand profile conditions and geotechnical conditions of the bluffs.
- OCTA will have check-ins with the public as the study progresses.
- OCTA will follow up with panelists to see if they’re interested in doing a peer review of certain technical studies.