South OC Beach Coalition Meeting Notes and Summary – March 18, 2026

MEETING TOPICS:
Orange County Coastal Sediment Initiatives: Rail Transport Studies, Shoreline Monitoring, and Offshore Sand Exploration

RAIL TRANSPORT STUDIES

- Presenters and primary contributors: UCI student team (Heather Seed, Kevin Smith), Dr. Sanders (UCI/climate collaboration program), Coastal Frontiers (Greg Hearon),
- UCI student team presentation – Sediment usability assessment (presenters: Heather Seed, Kevin Smith; project convened by Orange County Water District; grant support noted from Supervisor Foley's office)
- Purpose and status:
    - Project objective as described by presenters: to evaluate sediment removal strategies from Prado Dam and along the Santa Ana River, provide sediment to coastal communities that need it, and improve reservoir water quality.
    - Team composition and background: students from UCI's civil/environmental programs.
- Workflow and site types:
    - Workflow categories described: loading sites (where sediment can be accessed), excavation sites (orange on team maps), and unloading sites (green on team maps).
    - Transportation methods under consideration: Main goal of this project is to use rail as the primary transportation method. Presenters also cited trucking, conveyor belts, slurry pipes, barges/boats, and combinations of methods.
- Scenario options and trade-offs:
    - Option A: Excavate → stockpile → transport to a rail spur built on-site. Trade-off: greater upfront infrastructure cost but with greater schedule control.
    - Option B: Excavate → stockpile → rent/use existing nearby rail spur or private railcars. Trade-off: lower upfront infrastructure cost but with less predictable shipping schedule and potential stockpile overflow.

    - Option C: Excavate → direct transfer to an existing rail line. Trade-off: lowest infrastructure cost but reduced schedule control and potentially higher per-unit transport cost because of smaller shipments.
    - Presenters noted: "For economy of scale, larger sediment quantities being shipped will be more cost effective."
- Supporting operational constraints and permitting windows:
    - Environmental permitting constraints mentioned: endangered species (e.g., native fish) and bird species (least Bell's vireo) affecting work windows.
    - Seasonal constraints: storm season (December–February) and nesting season (February–August) narrow the practicable excavation window.
- Interim conclusions and next steps (student team):
    - Presenters stated they are continuing analysis to provide a comparison model between a short distance sand transport compared to multiple train load methods.
    - Next project work: quantify cost/benefit and environmental impacts of unloading methods, develop site plans for each location, and refine transport/logistics modeling.
- Direct quotes from presenters:
    - "we have roughly 1.5M cubic yards of sediment available to us this year."
- Example of past beach placement: the county placement of 60,000 cubic yards of sand resulted in approximately 5000 dump truck trips when using 12 yd dump trucks
- Continue and complete the UCI sediment usability assessment (midterm → final analysis).
- Quantify and compare transport scenarios: (a) direct trucking/pipeline/conveyor to shoreline; (b) use of rail spurs (build vs. rent railcars); and (c) barge/unload scenarios.
- Produce site plans and refined cost and environmental analyses for each candidate excavation/unloading site.
- Further evaluate seasonal/permit windows and species-related constraints to determine feasible excavation windows for each site.

SHORELINE MONITORING/OFFSHORE SAND EXPLORATION

Coastal Frontiers Engineering presentation – Shoreline monitoring and offshore sand-source investigation (presenter: Greg Hearon P.E.)

- Presentation scope: monitoring program results for parts of South Orange County shoreline (Dana Point / Capistrano areas through San Clemente) and status of an offshore sand-source investigation.
- Monitoring program methodology (as presented):
    - Fall and spring beach profile surveys conducted to capture seasonal changes (post-summer and post-winter conditions).
    - Profile transects extend from back beach out to approximately 45 ft depth to capture the full littoral zone to depth of closure.
    - Methods used: traditional surveying above water, nearshore surveying/wading, boat-based sonar offshore; aerial lidar and photogrammetry referenced as complementary datasets; satellite data noted as useful for long-term trends.
- Key findings:
    - Some transects are "at or near historic minimums" in several areas; other areas (e.g., North Beach, some San Clemente transects) are "above average or have gained following Corps of Engineers nourishment.
    - Long-term net change across San Clemente jurisdiction (2001‑2025): reported as a net loss in beach area across the jurisdiction
    - Corps of Engineers nourishment produced measurable short-term increases where material was placed and a later migration of material into adjacent beaches (consistent with District MHTL survey results).
- Offshore sand-source investigation:
    - Phase 1: desktop review and a ten-day vibracore sampling program at identified candidate sites (11 sites identified). Phase 1 sampling produced site suitability conclusions (some sites unsuitable; several sites promising).
    - Presented sand-characteristics metrics: D50 (median grain size)
    - "We typically want to find a site that has fines content less than 20%."
    - Next steps presented by Coastal Frontiers:

- Obtain State Lands permit modification for continued exploration (on agenda for next meeting).
- Modify sampling and analysis plan in coordination with the regional Dredge Materials Management Team (DMMT).
- Execute expanded exploration program probably sometime in June

Prepare reports and deliver results by the end of the year

GRANT FUNDING – OPPORTUNITIES - CONTINGENCIES

- SB 161 (Ocean Protection Council) – track one proposals
- SB 161 – track two implementation projects
- National Fish and Wildlife Foundation – National Coastal Resilience Fund
- California Coastal Conservancy grant application: ongoing/rolling basis for shovel-ready projects.

- Letter of support for SANDAG Regional Beach Sand Project III:
  - Supervisor Foley prepared that letter of support to go out
- SB 161 track two letters of intent:
  - Task: Submit letters of intent for track two implementation projects
- National Coastal Resilience Fund (National Fish and Wildlife Foundation):
  - Task: Submit required letters of interest / full application if invited.
- Coastal Frontiers – offshore exploration next phase:
  - Task: Modify sampling and analysis plan with DMMT, obtain State Lands permit modification, execute exploration program, and prepare reports.
- UCI student team – complete sediment usability assessment (midterm → final):
  - Task: Complete analysis and final project deliverables (quantified transport comparisons, unloading method analyses, and site plans).
- Field observation coordination (Coastal Frontiers transect survey):
  - Task: Coordinate field observation opportunity for transect surveys (Capistrano Bay District requested to observe at Doheny transects in May).

Risk alerts and contingency plans discussed:

1. Limited operational windows for in-river excavation (seasonal and species constraints)

- Issue: Nesting season for certain species (least Bell's vireo/snowy plover nesting roughly February to August) and storm season (December–February) reduces available excavation windows.
- Contingency plan(s) discussed:
    - Develop project schedules that avoid nesting and storm seasons where possible.
    - Prioritize sites and methods that minimize in-river disturbance during sensitive periods.
    - Advance permitting and biological surveys early, to define precise avoidance windows.

2. Variation in sand suitability and heterogeneity of offshore/river-mouth deposits

- Issue: Phase 1 vibracore results identified variable grain sizes and fines content across candidate offshore sites; some sites shown unsuitable while others were promising.
- Contingency plan(s) discussed:
    - Execute expanded, targeted sampling (Phase 2) with the DMMT to isolate suitable deposits (DMMT – Dredge Materials Mgmt Team)
    - Prioritize sites with favorable grain-size metrics (low percent fines) and proximity to project areas to reduce transport costs.
    - Use multi-source planning (combine closer, smaller sources with larger, farther sources) as needed.
    - Complete quantitative comparisons between transport scenarios to select approaches that balance cost, schedule predictability, and community impacts.
    - Consider waterborne transport (barge) where infrastructure exists to reduce truck trips (participants noted existing barge unloading at Port of Long Beach as a potential infrastructure example).

    - Use stockpiling strategies where feasible to decouple excavation timing from shipping schedule.
    - Evaluate waterborne/barge and rail options to reduce truck trips.
    - Consider staging via stockpiles and longer-run bulk transport to reduce local truck movements.

3. Transport method trade-offs (cost, schedule control, community impacts)

- Issue: Options (build rail spur vs. rent railcars vs. direct trucking vs. barge) present trade-offs in cost, schedule control, and community impacts (e.g., number of truck trips, road wear, resident impacts).

4. Public access / recreational impacts at unloading sites (downstream beaches)

- Issue: Unloading/excavation at public beaches affects parking, beach use, and requires permitting; summer seasons are particularly sensitive.
- Contingency plan(s) discussed:
    - Plan unloading work during lower-use seasons where feasible.
    - Coordinate with local jurisdictions to define mitigation measures (access routing, temporary closures, public notices) and stakeholder outreach in advance.

5. Heavy trucking volume for large sand placements

- Issue: Example from speaker: 60,000 cu yds requires 5000 dump truck trips (12 yd trucks); larger volumes would multiply truck impacts.

Additional notes / items for follow-up

- Communications and outreach: public speaker requested broader dissemination of project information via Coalition website and Friday news items; EO reaffirmed website and newsletter use.
- Coalition support letters: members discussed the need for a shared template and ratification process for rapid-response letters; the EO and members requested procedures and templates for future use.