

4.0 PROPOSED METHOD TO ACCOMPLISH THE WORK

The project team understands the importance of developing the SCOUP program as an integral part of the California Coastal Sediment Management Master Plan. The criteria, protocols, and templates created for this project will set the ground work for the permitting of the program. The level of detail provided during the development of the protocols and templates will ensure the validity of CEQA/NEPA document prepared for this program. Our proposed method is outlined below for each task as presented in the Request for Proposal (RFP). We will prepare a master document that lays out protocols, templates, and operations plans in a way that is understandable by lay staff. It can be a step-by-step set of instructions and decision points similar to a cookbook to implement projects. A proto-type exists for BEACON that can be used by SANDAG. Three meetings with SANDAG and DBAW staff are assumed total, combined with two separate presentations to the Shoreline Preservation Committee, or SPC (with one serving as the hearing for the CEQA document). The meetings with SANDAG and DBAW staff will be scheduled on the same days as the SPC to maximize efficiency.

TECHNICAL APPROACH

Task 1 – Development of Sediment Characterization and Comparison Protocols

1. Physical Characterization - The project team will develop guidelines for the physical characterization of sediment at potential source sites and receiver beaches. The protocols will address sampling methods, locations, frequency, and seasonal timing. Sampling will be specified in three-dimensions, and will be standardized across jurisdictions.
2. Sampling requirements will be specified consistently between source and receiver sites to enable an “apples-to-apples” comparison, and will be developed with input solicited from the USEPA, USACE, California Coastal Commission, and the State Water Quality Control Boards
3. The team will specify how to characterize receiver locations ranging from offshore, nearshore, and beach at multiple sample depths. Input from agencies will be critical to gaining consensus on the approach that can be applied statewide.
4. The appropriateness of developing a composite grain size characterization will be considered for receiver sites. Blending of sediments will not be considered as an acceptable method for obtaining suitable opportunistic beach fill sediments. Through the permitting process of other Opportunistic Beach Fill programs, M&N has discussed this issue with the resource agencies and it is not considered an acceptable practice for opportunistic source material.
5. Chemical Testing - The project team will develop guidelines for chemical testing of potential opportunistic source material. The checklists developed for Carlsbad, San Clemente and BEACON will be reviewed and refined to include a more regional approach to chemical testing. This checklist proposes a tiered approach as defined by the USEPA Inland Testing Manual criteria as well as other sources. Other local agencies are now proposing to perform a minimum of bulk chemistry testing of all sources as part of their opportunistic beach fill programs.
6. Biological Testing - The project team will investigate and develop guidelines for the biological characterization of potential source material and when biological testing may be appropriate. The appropriate methods for conducting vegetative surveys are dependent upon the species of

interest, habitat location, and project goals. Invasive species such as *Caulerpa* are of particular concern because where these species have become well established they can cause significant ecological and economic impacts. Native vegetated areas are generally considered to be sensitive habitats because these vegetated areas are typically highly productive, limited spatial extent, they diversify habitat space increasing biodiversity, and often are nursery areas for many fish and invertebrate species.

7. Seasonal influences on sampling receiving beaches will be determined and appropriate sampling protocol determined. Our team's extensive understanding of local seasonal changes will help to determine this specific requirement.
8. Blending of source materials is typically not permissible according to resource agencies. The group will consider this option and discuss with the agencies, but we believe it may not be possible.
9. Natural Sediment Input - A summary of the estimated natural sediment input to the Oceanside Littoral Cell will be developed using published information (including work by Gary Griggs at U.C. Santa Cruz) to provide a sense of the impact of a proposed opportunistic nourishment project to the sediment budget as well as define the characteristics of the natural sediment sources.

Deliverable: Sand Compatibility Testing Protocols

Task 2 – Development of Template for Use Of Less-Than-Optimum Sand Sources

M&N has been the consultant for the Opportunistic Beach Fill Programs (OBFP) for Carlsbad, San Clemente, and BEACON (Ventura and Santa Barbara Counties). For each of these programs, criteria have been established for the use of finer-grained sediments for use as opportunistic beach fill material and technical reports have been prepared. Our team will utilize these previous studies, and work performed by the Santa Cruz Harbormaster on a similar project, for this task in developing a planning template for consideration of less-than-optimum sediment sources. Our approach will be to specify the abbreviated template for use of optimum sands first as a baseline, then develop the template for use of less than optimum sands second. Specifics for each subtask are outlined below:

1. Permitting issues - The project team will develop a template that will identify a streamlined project approval process. We will identify potential permits and qualifying project parameters that may reduce the number or extent of permits or approvals necessary. Coordination with the DBAW PPR project team will occur to maximize effectiveness. For this task, the team will consider the following potential permits and agency requirements:
 - U.S. Army Corps of Engineers (USACE), Sections 10 and 404 Permit;
 - U.S. Environmental Protection Agency – Advisory to the USACE;
 - Regional Water Quality Control Board, Section 401 Certification;
 - California Coastal Commission, Coastal Development Permit, Local Coastal Programs;
 - California State Lands Commission, Lease of State Lands;
 - State Department of Parks and Recreation, Encroachment Permit;
 - California Department of Fish and Game, Streambed Alteration Agreement;

- United States Fish and Wildlife Service, Section 7 Consultation; and
- Local Agency Permits and Approvals (e.g., grading and construction permits).

These requirements will be considered and included where applicable in the template. Where necessary, agency representatives (e.g., USEPA staff and others as appropriate) will be contacted to seek clarification on potential requirements. Thresholds and issues for each of the permits and agencies will be identified. In this way, the template will be used to provide screening criteria for individual replenishment projects and sites.

2. Checklist elements – The team will develop a comprehensive checklist that can be used as a determination process for potential source material. Similar checklists have been developed by M&N for the other OBFs outlined above and in the RFP. These will be used to the greatest extent possible for the SANDAG SCOUP
3. Small project/Large project checklists - The team will incorporate lessons-learned from the other OBFs on small-scale projects vs. large-scale projects and apply those into a checklist for potential source materials.
4. Points of concern and possible data needed – The team will identify what tests, data collection, etc., will be needed to determine if potential source material is suitable under the parameters established in this study.
5. Level of monitoring dependent on marine resources – Recommendations for assessing the cross-shore and along-shore dispersal of the nourishment material will be developed using lessons learned while monitoring the 12 receiver beaches nourished as part of the Regional Beach Sand Project. The type and level of monitoring that should be considered during and/or after sand placement will be included based on available information on marine resources in the project vicinity, potential impacts, and consideration of different types of source sands.
6. Sediment movement patterns - Cross-shore and along-shore sediment movement patterns in the Oceanside Littoral Cell will be assessed using profile data collected under the auspices of the SANDAG Regional Beach Monitoring Program. Particular emphasis will be placed on the fate of the Regional Beach Sand Project material placed in Spring 2001.
7. Impacts to visual feeders (birds, fish) - Mitigation strategies will be developed to avoid and/or minimize impacts from burial, turbidity, and sedimentation from placement of an opportunistic project.
8. Current usage of dredged material for beach fill - The team will investigate dredging projects in the San Diego County area and to what extent these projects have resulted in a beach fill project.

Deliverable: Templates for Use of Optimum and Less-than-Optimum Sands

Task 3 – Identification of Opportunistic Sand Sources, Receiver Sites, and Placement Options

1. Identification of potential sand sources – The project team will review the other OBFs and potential sand sources available identified for those programs. These will be evaluated for

applicability in the San Diego region and other potential sand sources will be identified. A similar task was completed for the San Diego RBSP under SANDAG.

- Identify and analyze potential receiving beaches - M&N developed a receiver site evaluation matrix for the BEACON (Ventura and Santa Barbara Counties) OBFP as presented below. A similar matrix will be created for the SANDAG SCOUP that will identify criteria applicable to the San Diego region with the focus on the Oceanside Littoral Cell (and able to be tailored for use at other regions as well), including the biological and environmental elements. The optimum receiver sites will be identified. The constraints analysis will be based on the checklists developed under Task 2, including considerations of proximity of beaches to known sensitive resources, potential impacts, use of less-than-optimum sands, and sand placement options. Work performed by Melanie Coyne for the Coastal Commission will be reviewed and applied if appropriate, as well as SANDAG’s data base of nearshore habitat. A priority ranking tool for beach nourishment will be provided. In addition, mitigation strategies identified in Task 2, as well as seasonal restrictions, that have the potential to reduce impacts to below a level of significance will be considered.

Types of available information on marine resources that will be considered include, but may not be limited to, the SANDAG Nearshore GIS Data Base, the San Diego Regional Beach Sand Project EIR/EA, Regional Sand Retention Strategy Project constraints map, draft Encinitas and Solana Beach Shoreline Protection EIS/EIR, the DBAW website, U.S. Navy habitat resource maps, recent kelp maps, recent locations of endangered species occurrence, and other readily

BEACON EVALUATION MATRIX POTENTIAL PLACEMENT SITES																		
County	Placement Site ^(1,2)	Need ⁽⁴⁾		Construction Access ^(2,3)		Proximity to Sources (Flood Control Basins, Landslide Areas) ^(3,4)		Environmental Sensitivity ^(5,6)		Stockpile Location ^(2,3)		Beach Use ⁽⁷⁾		Proximity to Existing Creek Mouth ⁽⁸⁾		Total Score	Rank	Existing Profile ⁽⁹⁾
Santa Barbara County	Ellwood Beach	2	8	2	6	3	9	2	6	1	2	2	4	1	1	36	9	Yes
	Goleta Beach	3	12	2	6	3	9	1	3	3	6	3	6	3	3	45	2	No
	East Beach	2	8	2	6	2	6	2	6	3	6	3	6	1	1	39	7	Yes
	Summerland	2	8	3	9	3	9	2	6	1	2	2	4	2	2	40	6	Yes
	Santa Claus Lane	2	8	3	9	3	9	2	6	3	6	2	4	2	2	44	3	Yes
	Ash Avenue	3	12	2	6	3	9	1	3	1	2	3	6	3	3	41	5	Yes
	Rincon	2	8	2	6	2	6	2	6	1	2	2	4	3	3	35	10	No
Ventura County	Oil Piers	3	12	3	9	2	6	2	6	3	6	2	4	1	1	44	3	No
	Solimar Beach	2	8	3	9	3	9	2	6	1	2	2	4	1	1	39	7	Yes
	Emma Wood	2	8	3	9	3	9	1	3	3	6	2	4	2	2	41	5	Yes
	Surfer's Point	3	12	2	6	3	9	2	6	3	6	3	6	3	3	48	1	Yes
	Pierpont Beach	3	12	2	6	3	9	2	6	1	2	3	6	2	2	43	4	Yes
	Santa Clara River	2	8	2	6	2	6	1	3	3	6	3	6	3	3	38	8	Yes
	Oxnard Shores	3	12	2	6	2	6	2	6	1	2	3	6	2	2	40	6	Yes
	Hueneme Beach	3	12	3	9	2	6	2	6	3	6	2	4	1	1	44	3	Yes
		High = 3 Medium = 2 Low = 1	Truck and Rail = 3 Truck Only = 2 No Access = 1	0-5 Miles = 3 5-10 Miles = 2 10-15 Miles = 1	Low = 3 Medium = 2 High = 1	Yes = 3 No = 1	High = 3 Medium = 2 Low = 1	<1 Mile = 3 1-3 Miles = 2 3-5 Miles = 1										

available habitat maps.

3. Placement techniques and options – M&N also developed placement techniques for the other OBFPs. These techniques, along with our knowledge of beach nourishment construction practices, will be reviewed and techniques that are applicable to this program will be outlined.
4. Costs and Funding Sources – Expected costs associated with disposing opportunistic material to the beach will be investigated by M&N and funding sources that may be available to offset these costs will be investigated by the team. The team will review work completed by Dr. Philip King on economics of use of sand for beach nourishment to maximize understanding of cost implications. We will also consult with DBAW's PPR team to identify potential additional funding sources.
5. Tests and placement options for source-receiver combinations - M&N will analyze each optimum receiver site against the protocols and guidelines developed in Tasks 1 and 2 to develop the tests necessary and placement options that are possible for each source-receiver combination.
6. Recommendations for sediment testing to source only - M&N has been procuring permits for the other OBFPs and has worked with the resource agencies closely in regard to the possibility of source material testing only. Typically, resource agencies require testing of both source and receiver site sediments to ensure compatibility. We will apply our lessons-learned with the other OBFPs in developing recommendations on when it is and is not applicable to test the receiving beach for compatibility.
7. Stockpile area feasibility – Potential stockpile areas will be investigated for temporary storage of fill material. M&N has identified stockpile areas for the other OBFPs and will incorporate our analysis procedures to the SANDAG SCOUP for identifying such areas locally.
8. Develop Draft Generic Plan for Statewide application – All of the analysis and findings outlined in the above tasks will be combined into a draft plan for implementing an opportunistic sand program in other California regions and statewide. Our view of this plan is one that is technically sound, but presented in a simple way that can be understood by the less technically-oriented agency staff (generalists). It can be similar to the operations plan prepared for BEACON. This draft plan will be presented for review to the DBAW Project Manager, SANDAG, the Advisory Committee, and the SANDAG Shoreline Preservation Committee. Comments received from the presentation will be incorporated into a final plan.

Deliverables:

- List of Sediment Sources, Receiver Beaches, and Temporary stockpile areas.
- Placement Techniques for Receiver Sites
- Draft and Final Master Plan Documents for a Generic Opportunistic Sand Program

Task 4 – Develop a Project Description

The project team will develop the project description for CEQA/NEPA analyses. The project will be designed to obtain surplus sand from all potential construction, development and maintenance (e.g., harbor dredging, wetlands restoration, highways) projects in the region and place it on designated receiver beach site as nourishment. The project description will provide all the project components

necessary for a CEQA/NEPA analysis such as the location and size of the receiver beach, amount of sand to be imported, characteristics of imported sand, location and size of proposed stockpiles, method of stockpiling, equipment to be used, transportation management features (e.g., flagmen and signage), transportation routes, construction timing, project duration, and required agency permits and approvals.

Deliverables:

- Proposed Project Description for the Oceanside Opportunistic Sand Program.

Task 5 – Preparation of a CEQA/NEPA Document

The team will prepare the CEQA and NEPA documentation for the project. This scope of work assumes that the environmental document will be a joint Mitigated Negative Declaration (MND)/Environmental Assessment (EA). The team will complete an Initial Study of Environmental Significance, information currently available from SANDAG, other published documents, our understanding of the project area, and interviews with local staff and service providers. Specific format requirements dictated by SANDAG will be followed; if no formatting preferences are provided, the team will follow the general format provided by Appendix G of the CEQA Guidelines.

Potential issue areas associated with the proposed project include the following:

- Biological Resources
- Hydrology and Water Quality
- Geology and Soils
- Land Use and Planning
- Traffic and Circulation
- Noise
- Air Quality
- Recreation

Technical analysis will be performed by the team. It is assumed that impacts to the following environmental issue areas will not be significant, and that these conclusions can be supported with minimal analysis: agricultural resources, population and housing, hazards and hazardous materials, mineral resources, public services and utilities, aesthetics, and cultural resources.

The team will attend one public meeting in support of this task and respond to public comments on the Draft MND/EA. Once public and agency comments are received, a Final MND/EA will be developed. It is assumed that the comments received on the MND/EA will be minor in nature, and will not require additional technical analysis in order to respond. It is assumed that SANDAG will be responsible for reproduction, mailing, and circulation of the MND/EA and any required noticing.

Deliverables:

- Draft and Final CEQA/NEPA documents.

MANAGEMENT APPROACH

Budget and Schedule – M&N is dedicated to meeting project budgets and schedule requirements and keep SANDAG progressing toward their goal. Our methods of meeting these conditions are to establish a project work plan whereby all staff and subconsultants have distinct tasks, budgets, and milestones to meet to keep the project on track financially and on schedule. We monitor the project progress weekly and regularly meet personally or by teleconference to communicate, report, and resolve issues. We chart the project progress through its lifespan with gantt charts and modify

them to adapt to changes as they arise. M&N also has an electronic accounting system of daily time reporting for work by staff that enables us to monitor progress instantly. These tools equip us to keep the project on track throughout. Our record of success at meeting schedules and budgets is self-evident.

Quality Assurance/Quality Control - M&N team has an established formal quality assurance/quality control (QA/QC) framework that will be followed to promote the highest quality work possible. The primary goal of the proposed project is to create protocol for opportunistic beach fill operations that can be implemented throughout the San Diego region and applied statewide. M&N operates under the requirements of a Quality Control Manual that sets the requirements for internal QA/QC. The plan requires a QA/QC plan to be prepared at the outset of the project identifying the staff responsible to perform the review, the documentation to review, and the review dates. It requires a portion of the project budget to be allocated to the review, and allows for an internal review audit to occur on any project at any time. The QA/QC process for this project will involve the following elements:

- Independent overview of conclusions made previously by others;
- Verification of data at source or duplication of data, whenever possible;
- Comparison of data or report conclusions with other similar projects or situations, in particular the reference systems for each project alternative;
- In-house checking of all design input data, with particular reference to units and calibration parameters;
- Peer review of concepts, technical work elements and work products by specialists with experience in similar projects or conditions; and
- Senior executive review of all primary conclusions and recommendations.

All project managers must adhere to this requirement for every project. This process has formally been in place at M&N for nearly 10 years and works well to identify potential errors or faulty assumptions and methods. Our designs have been successfully constructed and our work has withstood the highest level of scrutiny by "blue ribbon" panels due to this QA/QC procedure.

SCHEDULE

The project will be completed with a Draft CEQA/NEPA document within six months from Notice-to-Proceed (NTP) as tentatively indicated in the RFP. Finalizing the CEQA/NEPA document also requires time that does not appear to be included in the tentative RFP schedule. Our assessment is that this schedule is reasonable and will be met by this team with the exception of the Final CEQA/NEPA needing to extend beyond the six month finish date in the RFP. Preparing these deliverables can be done quickly and efficiently due to our recent experience preparing them for other local agencies. Assuming that Notice-to-Proceed is issued on October 1, 2004, the schedule is shown below and indicates the following:

- Testing protocols by mid-November;
- Non-optimum sand templates being complete by mid-November;

- Lists of sediment sources, receiver beaches and stockpile sites done by mid-January;
- Appropriate placement techniques done by mid-January;
- The generic opportunistic program plan by mid-January;
- The project description done by mid-January;
- The Draft CEQA/NEPA document distributed for public review by April 15, 2005; and
- The Final CEQA/NEPA document is to be completed within four weeks after public comments are received on the public review draft.