

**Delta LTMS
Management Committee Briefing Packet**

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(In association with Anchor Environmental)**

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- Overview of Delta LTMS activities for National Dredging Team/Regional Dredging Team (NDT/RDT) Annual Meeting (10/29 to 10/30)
- Delta LTMS Project Fact Sheet

Introduction

The Delta Long-Term Management Strategy (LTMS) stakeholders have been meeting formally now for approximately two years, during which time significant progress has been made towards a more streamlined approach for managing dredged material within the Delta. The purpose of this briefing packet is to provide the Management Committee with an update on the group's progress in lieu of a face-to-face meeting. As a reminder, the overall directives for the Delta LTMS are as follows:

- Examine and coordinate dredging needs and sediment management in the Delta to assist in maintaining and improving channel function (navigation, water conveyance, flood control, and recreation), levee rehabilitation, and ecosystem restoration.
- Work cooperatively to develop a sediment management plan (SMP or LTMS) that is based on sound science and protective of the ecosystem, water supply, and water quality functions of the Delta.
- Consider regulatory process improvements for dredging and dredged material management so that project evaluations are coordinated, efficient, timely, and protective of Delta resources.

Milestones Completed to Date

The conceptual development flow chart presented in Figure 1 outlines the expected overall process for developing and implementing the LTMS Sediment Management Plan for the Delta. To date, the Delta LTMS work groups have accomplished the initial project tasks, as shown by the vertical dashed line in Figure 1. The project schedule shown in Figure 2 provides a more detailed view of the overall project tasks and their inter-relationships presented in the form of a Gantt chart. Again, a vertical line demarcates the current progress to date. The remainder of this section briefly describes the key milestones completed since the Management Committee last met in May of this year.

(1) Technical Work Group Formation

Two of the four proposed Technical Work Groups were formed during the spring and early summer of 2007. The Dredging, Disposal and Reuse Permitting Technical Work Group was initiated in April and since then has met on a monthly basis. Tremendous progress has been made towards meeting their primary goal of developing methods for streamlining the Delta permitting process. The group successfully conducted a Value

Stream Analysis to look for ways to make the Delta permitting process more efficient; began assembling example Joint Permit Applications from other regions of the country to consider for use in the Delta; and began discussions on the framework for a regional permitting group comprised of regulators from the Delta.

The Testing Protocols Development Technical Work Group was initiated in June of 2007 and has also met on a monthly basis. The group has compiled and reviewed the various testing protocols for dredged materials in the Delta; they are currently comparing them to regional screening guidelines to assess their suitability for future use. The goal of this process is in part to identify any data gaps that can be filled through conducting field and/or laboratory studies. Additionally, the possibility of performing pilot studies for upcoming projects is being pursued.

(2) Draft Sediment Quality Database

Since the last Management Committee meeting in May, the sediment quality database has been fully populated with all available sediment, water and biological data for the Delta. The draft database is currently in review and will be finalized later this year.

(3) Permitting Value Stream Analysis

On August 16th, the Permitting TWG conducted a one-day Value Stream Analysis (VSA), facilitated by Dr. Aaron Allen, North Coast Branch Chief, Los Angeles District Regulatory Division. The VSA was successful in mapping the permitting process for Delta projects and concluded with an action plan for formation of a multi-agency task force for permitting in the Delta. The group has had several follow-on meetings since the August 16th VSA, and is in the early stages of creating and editing a Joint Permit Application for dredging in the Delta, as well as taking initial steps towards formalizing the DMMO-type group, including recording details on upcoming projects and examining the process of recently approved O&M projects.

(4) GIS-Based Mapping Database

To assist the Technical Work Groups with specific project tasks such as discussions about appropriate study area boundaries, potentially affected groundwater basins, regulatory authority boundaries, etc, a GIS-based database has been initiated. All GIS capable data available from the IWG agencies for the Delta is being collected and loaded into a single database capable of producing maps showing various site features.

Examples have been prepared and can be found on the project's website at

<http://www.deltatms.com/maps.htm>.

Key Tasks in Progress

This section briefly describes those tasks in progress that we anticipate will be complete and ready for Management Committee review and approval at the next meeting.

(1) Protocol Development Technical Work Group Items

The Testing Protocols Development Technical Work Group is in the process of reviewing and comparing the available testing protocols for various dredge material placement and reuse scenarios against agency characterization and screening requirements to identify data gaps for future study. Using this information, they will then develop draft work plans for technical studies to fill the data gaps. In the original Work Plan developed for the Delta LTMS, the tasks identified for this working group consisted of reviewing the available literature and making recommendations for specific tests to be used when characterizing dredge materials for disposal or reuse in the Delta. As the group completed the initial tasks, they discovered several data gaps in the available testing protocols that could be filled by conducting pilot studies. Therefore, the Protocols TWG members are also re-writing their Work Group directives to better match the group's modified approach for meeting their objectives, including developing scopes of work for pilot tests.

(2) Permitting Technical Work Group Items

The Dredging, Disposal, and Reuse Permitting Technical Work Group participants are currently focused on two main tasks: developing a Joint Permit Application (JPA) for use in the Delta; and creating the framework for a DMMO-like permitting group for the Delta. The current thought process is that the permitting group would be an informal, ad-hoc, group that comes together when dredging projects are brought forward (e.g., Los Angeles CSTF), rather than a more formal group that meets on a set schedule (e.g., San Francisco DMMO).

(3) Final Sediment Quality Database

A draft Delta-wide sediment quality database has been delivered to the USACE for technical review. Once the data quality has been verified, the database will be presented to the larger stakeholder group for comment. At that point, the database will be finalized for the near future, but will likely be updated as additional data points become available.

(4) Coordination with the Corps/EPA National Dredging Team

As the newest members of the National Dredging Team, the LTMS Stakeholders will attend the national conference later this month (October 29/30) in Emeryville. A brief overview of activities for the Delta LTMS has been prepared for the meeting attendants

and is attached to this packet. Also attached, is a brief project overview flyer that has been distributed at previous conferences to provide those unfamiliar with the project more details on its history and objectives.

Administrative Update

The following section provides an update on the non-technical, management aspects of the Delta LTMS.

(1) Project Funding & Schedule

As with 2007, the Delta LTMS (formally known as the Pinole Shoal Management Study) has not been fully funded for 2008. A project capability of \$2 million has been reported, but Federal funding for 2008 will likely be approximately \$500,000. As of October 1, the USACE does not have an authorized 2008 budget and is currently operating under a Continuing Resolution Authority. The expected funding level is significantly below what is needed to achieve the initial targeted completion date of December 2009 for the Sediment Management Strategy document. As such, the overall project schedule will likely slip accordingly until additional funds can be secured. The approximate completion dates for future tasks based on the group's current information is presented in Figure 2, and assumes that the project capability will be fully funded. The group is currently researching supplemental funding sources and has identified at least one program at the Department of Water Resources that may be able to fund some of the planned pilot studies to test alternate dredged material characterization protocols.

(2) Approval Items for December MC Meeting

The re-scheduled Management Committee meeting is targeted for sometime in early December. As of October 1, the IWG members expect to bring forward the following items for Management Committee review and approval at that meeting:

- Draft Joint Permit Application for use in the Delta
- Draft framework for the creation of the DMMO-like permitting group for Delta dredging projects
- Revised directives for the Testing Protocols Technical Work Group
- Draft work plan(s) for pilot studies to fill testing protocol data gaps.

Critical Next Steps

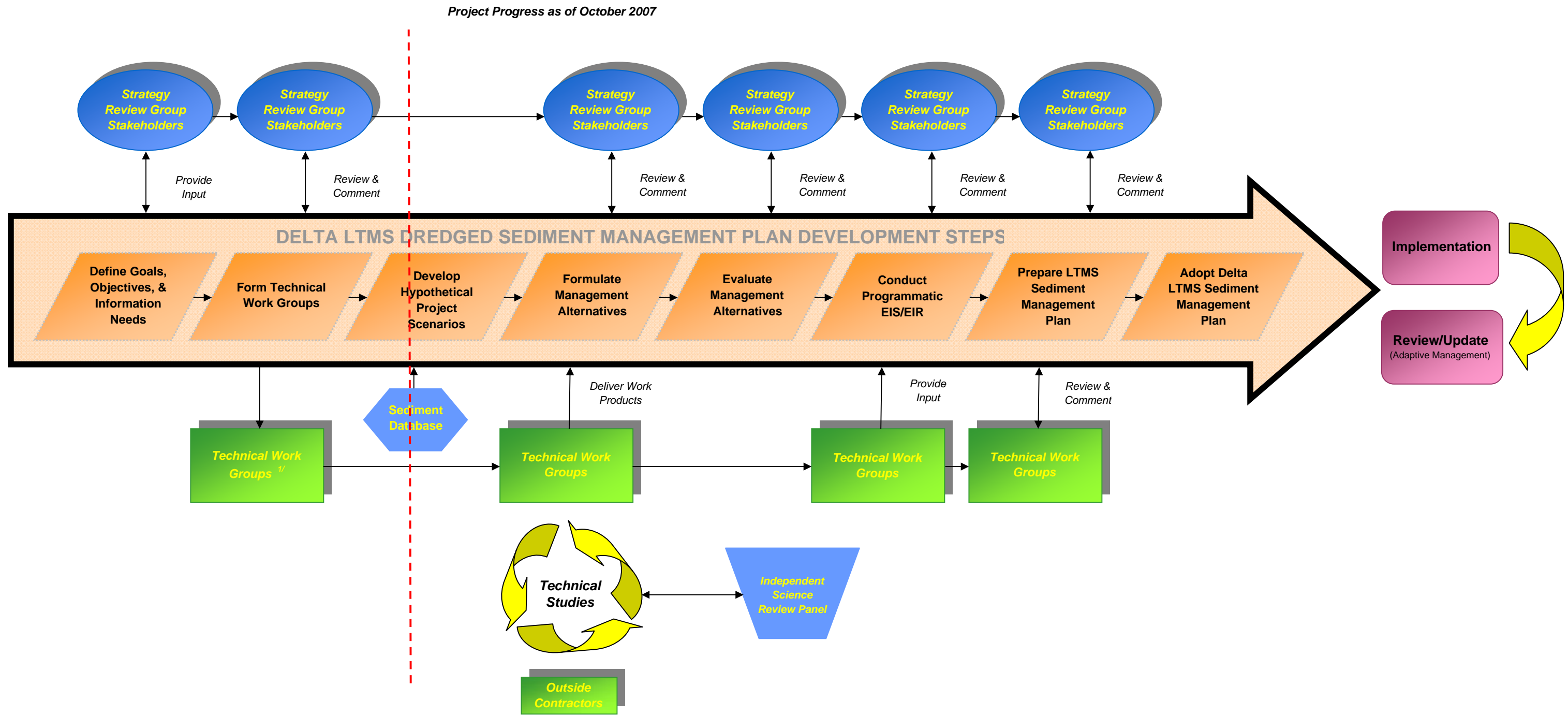
With the expected completion of the active tasks described in Section 3 by the end of 2007, the following tasks represent the critical next steps for initiation in 2008:

- Kick-off the remaining two Technical Work Groups (Programmatic Biological Assessment Development & Regional Disposal and Alternative Development) in

early 2008. These two work groups are somewhat dependent on the work being conducted by the Protocols and Permitting Work Groups and, hence, have been purposely delayed until early next year.

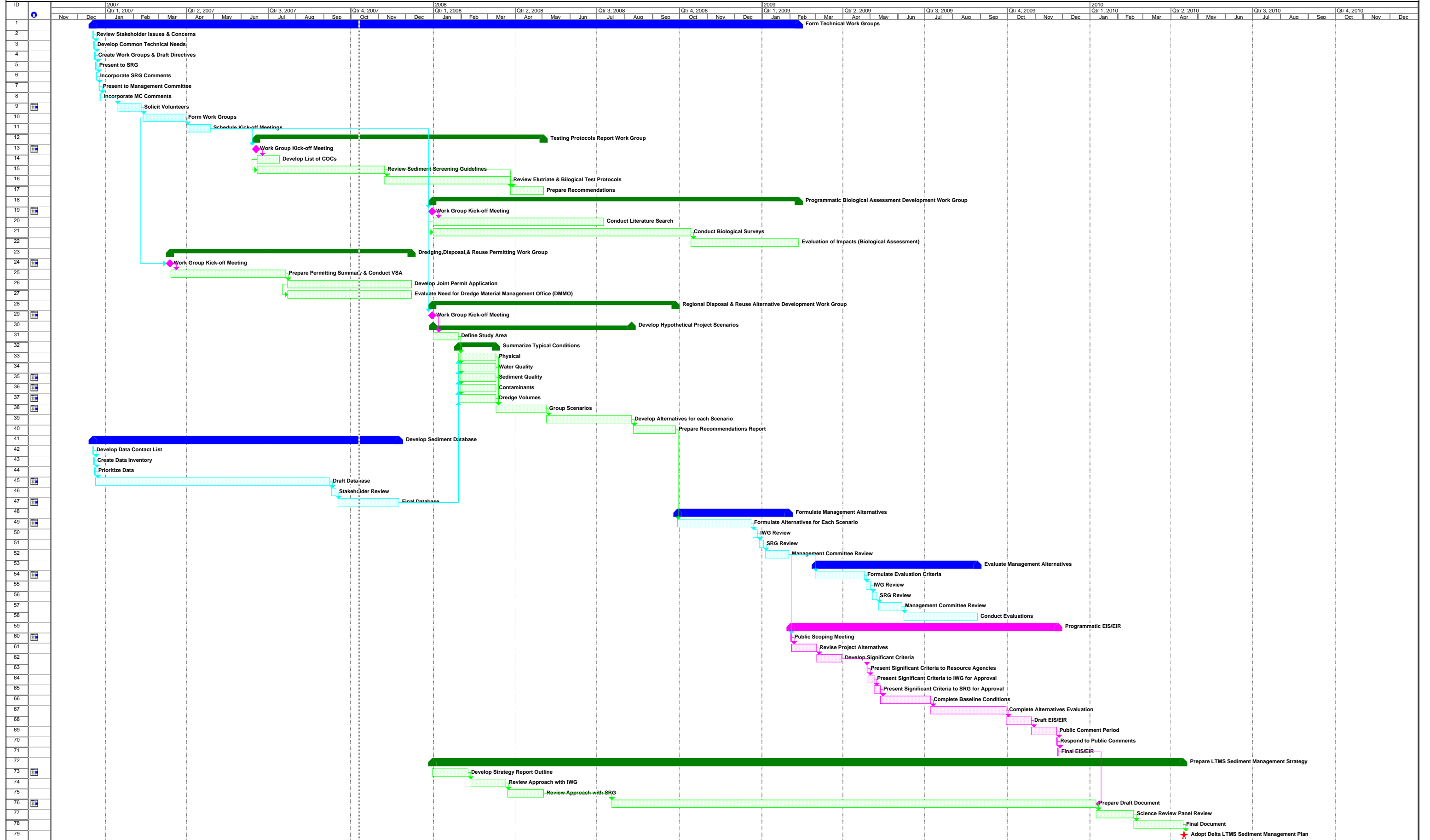
- Begin the preparation of a programmatic biological assessment for the Delta
- Develop hypothetical project scenarios for applying dredge material management alternatives
- Summarize typical Delta conditions for each of the project scenarios
- Develop a suite of feasible alternatives for disposal and reuse considering the range of hypothetical project scenarios
- Complete the formation of a DMMO-like Delta permitting group and Joint Permit Application to coordinate and streamline the agency consultation and review process.
- Consider the development of Regional General Permits for small dredgers and typical reuse scenarios (e.g., excavation of material from existing port placement areas and reuse as levee base material).
- Begin developing an outline for the Sediment Management Strategy Report to help focus the stakeholders in visualizing what the final deliverable will look like as well as to identify key components not currently in progress.

Figure 1 - DELTA DREDGED SEDIMENT LONG-TERM MANAGEMENT STRATEGY (LTMS) DEVELOPMENT PROCESS



Footnotes: ^{1/} Ex: Work groups include Scientific Technical Studies & Permitting Coordination Activities

Figure 2 - Delta LTMS - Sediment Management Plan Project Timeline



Attachments

1. Overview of Delta LTMS activities for National Dredging Team/Regional Dredging Team (NDT/RDT) Annual Meeting (10/29-10/30)
2. Delta LTMS Project Fact Sheet

RDT Name: Delta Dredge Sediment Long-Term Management Strategy

Issues/Areas of Focus: The Sacramento and San Joaquin River Delta is the hub of California's two largest water distribution systems – the Central Valley Project (CVP) operated by the U.S. Bureau of Reclamation (Reclamation) and the State Water Project (SWP) operated by the California Department of Water Resources (DWR). Maintaining high quality water in the Delta is critical for drinking water supplies, agricultural irrigation, and ecosystem function. More than 1,100 miles of levees protect the water conveyance functions, ecosystem, and land uses on Delta islands. The Sacramento and San Joaquin River channels provide important waterborne commerce access to the Ports of Sacramento and Stockton. In recent years, conflicts about levee rehabilitation, dredging, and placement of dredged sediments have been increasing. There is an ongoing need to dredge Delta channels for navigation, water conveyance, flood control, and levee maintenance. At the same time, there are increasing regulatory concerns about the potential impacts to water quality and the ecosystem from levee work, dredging activities, and dredge materials placement and reuse.

In the last several years, agencies (Federal, State, and local), the public, political leaders, and the media have become increasingly concerned about the urgent need for levee rehabilitation in the Delta. Sediment management and reuse from dredging activities is a potential source of material for Delta levee rehabilitation. At the same time, the Delta environment is showing signs of major stress and dysfunction, as evidenced by the rapid decline of pelagic species in recent years. Concerns about the complex and sensitive environment in the Delta have resulted in stringent regulatory requirements for dredging and sediment reuse and placement in the Delta. These two apparently conflicting objectives, protection of the Delta environment and increased dredging and sediment reuse and placement, highlight the need for better coordination and management of Delta dredging and sediment management and reuse requirements. In late 2004, local sponsors of Delta dredging projects and the U.S. Army Corps of Engineers (Corps) met to explore the feasibility of developing a long-term management strategy (LTMS) for dredging and dredged materials placement or reuse in the Delta.

Activities: Current activities for the Delta LTMS stakeholders include participation in technical and management level meetings to evaluate and refine the characterization and permitting process for Delta dredging and disposal projects. Four technical working groups have been formed (regional dredging and reuse permitting, testing protocols review, programmatic biological assessment development, and disposal and reuse alternative development) to address the science and policy side of the issues and specific work products are already in development. A project website has also been developed to keep stakeholders informed and to share project-related work items and notes.

Challenges: The development of the Delta LTMS poses several challenges, both geographically and technically. The Delta study area encompasses over

Delta LTMS Overview

1500 square miles of rivers, lakes, and deepwater shipping channels, most of which are protected by man-made barriers of one form or another. There are at least seven distinct groundwater basins that either drain into or are adjacent to the Delta study area, upland land uses range from farming to shipping, and brackish water is pushed all the way from San Francisco Bay into parts of the Delta.

Objectives for 2008: Objectives for the Delta LTMS participants in 2008 include: (1) completing the development of Joint Permit Application for dredging, disposal and reuse in the Delta; (2) creating a DMMO-like permitting agency group; (3) releasing a sediment quality database developed for the Delta; (4) kicking off two additional technical work groups to address topics related to developing a suite of feasible disposal and reuse alternatives and developing a programmatic biological assessment for the Delta; (5) conducting pilot studies to refine testing protocols for evaluating Delta sediments; and (6) developing a Delta-specific guidance manual for testing and evaluating dredge materials for disposal and reuse alternatives.

Participants: Includes representatives from the following agencies & organizations:

- U.S. Army Corps of Engineers (Sacramento and San Francisco districts),
- U.S. EPA Region 9,
- State Water Resources Control Board (State Water Board),
- Central Valley Water Board,
- California Department of Water Resources,
- California Bay-Delta Authority,
- Delta Protection Commission,
- NOAA Fisheries, Southwest Region
- U.S. Fish & Wildlife Service, Pacific Region
- California Department of Fish & Game
- Reclamation Board
- Reclamation Districts
- Contra Costa, Sacramento, Solano, Yolo, and San Joaquin Counties
- North, Central, and South Delta Water Agencies
- The Ports of Sacramento and Stockton
- Bay Planning Coalition

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Delta Long-Term Management Strategy (LTMS) Fact Sheet

The LTMS for the Delta is the result of a cooperative interagency/ intergovernmental program established by the U.S. Army Corps of Engineers (Corps); U.S. Environmental Protection Agency (EPA), Region 9; U.S. Fish and Wildlife Service (USFWS); National Marine Fisheries Service (NMFS); State Water Resources Control Board (SWRCB), Central Valley Regional Water Quality Control Board (CVWB); California Department of Water Resources (DWR), California Bay-Delta Authority (CBDA), Delta Protection Commission. Federal and State agencies that have regulatory and proprietary responsibilities for sediment evaluation and management in the region will constitute the standing members of the Dredge Material Management Office (DMMO). This office will be the nexus for coordination of permitting and managing sediment.



regional and other guidance manuals into one "umbrella" document, allowing consistent evaluation of dredging projects across the Delta. The resulting regional Sediment Management Plan (SMP) will be technically applicable throughout the Delta for dredging and disposal of sediments.

Who should use the LTMS and SMP?

The LTMS and SMP will be designed to help anyone who wants to develop a better understanding of methodologies for assessing and characterizing sediments and determining appropriate disposal options. The LTMS members will write a Sediment Management Plan to assist regulators, permittees, stakeholders, trustees, and the public.

How will the LTMS and SMP help me?

The LTMS and SMP will provide consistent guidance for addressing sediment and dredged material characterization. While it is understood there may be a need to deviate from the LTMS or SMP procedures because of regulatory requirements for specific programs, the LTMS and SMP will provide a comprehensive "toolbox" of assessment techniques and methodologies that have been reviewed and approved by regional and national experts in this field. It is recognized that individual regulatory programs (e.g., Comprehensive Environmental Response, Compensation and Liability Act [CERCLA]) may have specific additional requirements other than those that may be specified in this LTMS and SMP. Therefore, if there is a chance the project could fall into another regulatory program; early coordination with the Delta LTMS/DMMO may be beneficial.

If seeking a dredging permit, levee maintenance or managing a cleanup site, this Program will provide sampling, testing, and analysis strategies that can reduce uncertainties about the actions a regulator may require. Reducing uncertainties can help with project scheduling, financial planning, and project management decisions. As a member of the public, this Program can help determine what information regulators generally require in sediment management decisions. Finally, with the context set by this LTMS and SMP and the openness and transparency of the continuous improvement process, the public will have enhanced access to regulatory decision-making regarding sediments.

It will also aid in the coordination between permitting regulators and resource agency staff. By developing a programmatic and consistent approach to dredging and disposal of sediments, potential impacts to resources can be identified and avoided. Standard requirements will be developed based on a Programmatic Biological Assessment to minimize federal, state, and regional staff time for standard dredging and levee maintenance projects. By providing consistent evaluation framework based on sound science both regulators and the public can avoid lengthy consultations and focus their time and effort on more complex projects with higher risks to resources.

The LTMS Program represents an expansion toward a broader sediment management program throughout the Delta. The procedures used in development of a Sediment Management Plan will be derived from, and inspired by, similar regional programs, including the successful Puget Sound Dredged Disposal Analysis (PSDDA) program for the Puget Sound region of the state of Washington, Grays Harbor/Willapa Bay Dredged Material Evaluation Procedures Manual, Portland District Corps Dredged Material Tiered Testing Procedures, and Regional 1998 Dredged Material Evaluation Framework (DMEF) and those being developed in Los Angeles and San Diego.

Dredging is necessary to maintain waterways and harbors used for waterborne commerce and water-related industry shipping, new port and marina construction, and environmental restoration projects. In addition to federal navigation project-related dredging, a number of ports, maritime industries, and private interests perform dredging and dredged material disposal. Commercial navigation and recreational boating are important factors to the economic well-being of the Delta. Dredging and disposal may also be a component of habitat restoration activities that can occur as governmental- or nongovernmental-sponsored projects. Dredging in the region has been a commonplace activity historically and will be an ongoing necessity for the foreseeable future under a variety of regulatory, environmental restoration, and cleanup programs. Cost-effective sediment management is essential to the environment and economy of the region. Periodic dredging, including new work and maintenance dredging, is necessary to maintain the navigability of our waterways. Beneficial uses of sediment, including erosion and flood control and use as fill material, are an attractive option for placement. The Sediment Management Plan that will be developed under LTMS will provide the tools for assessing the need for various management actions.

The LTMS Program will facilitate communication, coordination and resolution of dredging issues among the agencies with jurisdiction for dredged material management. To accomplish this LTMS will focus on consolidating the existing

Delta Long-Term Management Strategy (LTMS) Fact Sheet

Why is an LTMS and Sediment Management Plan being prepared?

The need for this Program was identified and supported through many joint meetings of the participating agencies and other interested parties from federal and state agencies and regional Port authorities. The result of these meetings was to develop a strategy to develop the scope for preparing an overall plan and process for the management of sediment within the Delta.

The LTMS program and developing guidance documents will assist each agency and their staff by streamlining the permitting process, provide consistency and accuracy in characterizing sediments for various disposal options including habitat restoration, assist in allocation of disposal and determining suitability for each disposal option.

The appropriate assessment of sediments and dredged material is a critical component to all dredging or sediment assessment/disposal management activities regardless of whether the project is for maintenance of a navigation channel or levee maintenance. Therefore, the responsible agencies for permitting as well as the dredgers identified a need to develop a Sediment Management Plan (SMP) for the Delta. This SMP will be a technically valuable resource for use by all responsible agencies, trustees, and the public throughout the Delta for characterization and managing sediment. It will also provide useful guidelines for a variety of regulatory and restoration programs that address sediment characterization and disposal issues.

The SMP will include a discussion of management alternatives. The goal of the manual is to provide the technical and regulatory bases for publicly acceptable guidelines governing environmentally safe assessment and characterization of sediments, thereby improving consistency and predictability in dredged material/sediment management. The establishment of these evaluation procedures is necessary to ensure continued operation and maintenance of navigation facilities in the region, minimize delays in scheduled maintenance dredging, reduce uncertainties in regulatory activities, and evaluate suitability for levee maintenance. These guidelines will ensure consistency in evaluation among the various programs and agencies that regulate sediment. The LTMS documents will address the development of a comprehensive evaluation framework governing sediment sampling, testing, and test interpretation for determining the potential risk of in-place sediments, as well as evaluating the suitability of alternative management options.

This Program will ensure adequate regulatory controls and public accountability for the characterization and management of sediments. The most reliable, recognized, and cost-effective sampling and analysis procedures for appropriately characterizing sediments that are also protective of the ecosystem will be identified. Chemical and biological tests and interpretation guidelines will be evaluated for the purposes of this guidance document. Application of these tests and guidelines should provide suitable information to determine management (disposal) options. Some tests may also be useful in evaluating the chemical/biological effects of dredging activities.

The Sediment Management Plan will be consistent with federal and state regulations and, in most cases, the techniques described will be useful as part of the "toolbox" of methods available for sediment and dredged material characterizations. Nothing in this LTMS Program alters or limits agency responsibilities, or imposes mandatory

requirements beyond existing statute or regulation. This LTMS is relevant to dredging and levee maintenance-related activities. It will provide an evaluation framework for sampling, sediment testing, test interpretation, and disposal allocation of sediments. For dredging projects, it provides the basis for evaluating the suitability for disposal options. For levee maintenance projects, it will support the evaluation of the potential risk of in-place sediments and tools to evaluate the sediments based on disposal sites.

What additional information will the LTMS and SMP provide to assist regulators and resource agency staff?

The LTMS and SMP will be living documents. They will provide a structure and process available to update and incorporate advances in scientific, engineering, and regulatory fields, easily adaptively managing significant changes and additions such as:

- A consistent approach for characterizing in-place sediments as well as proposed dredged material,
- Draft sediment screening levels,
- Draft information on the chemical analyte lists that will need to be evaluated in different parts of the Delta,
- Updated information on the appropriate analysis of sediment both chemical and biological testing,
- A framework for addressing bioaccumulation, including a process for deriving scientifically defensible bioaccumulation triggers for tissues and sediments,
- A framework for identify species of concern and appropriate windows for dredging or placement of material
- A tiered process for assessing and managing sediment , consistent with regional and National Guidance, and
- Additional editorial changes and clarifications.