

# CORPS MAINTENANCE DREDGING PROJECT INTERNAL PROCESS WALK-THRU

U.S. ARMY CORPS OF ENGINEERS  
SAN FRANCISCO DISTRICT

CMANC FALL MEETING  
OCTOBER 14, 2022

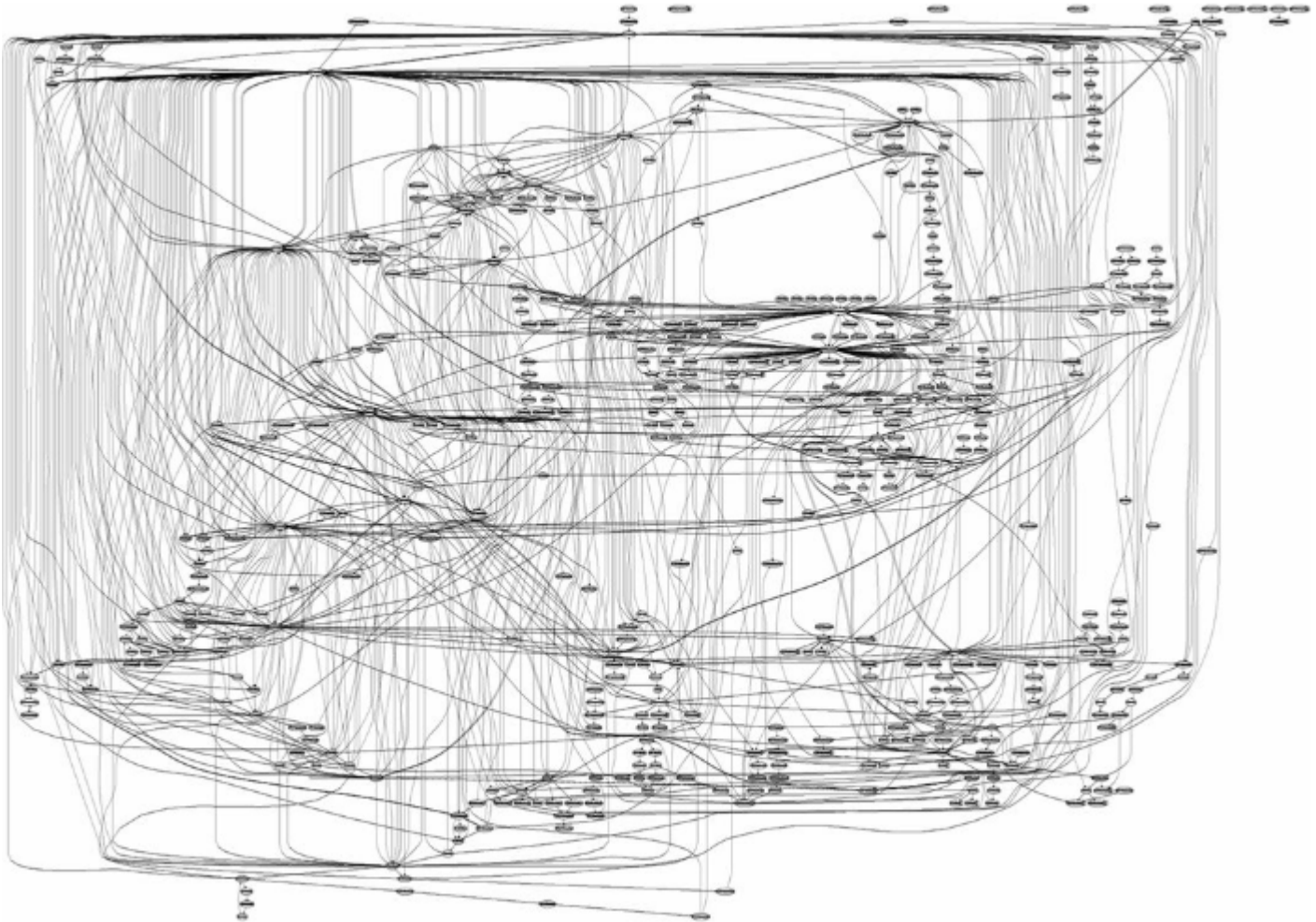
Al Paniccia  
Chief, Navigation Branch  
San Francisco District



US Army Corps  
of Engineers®

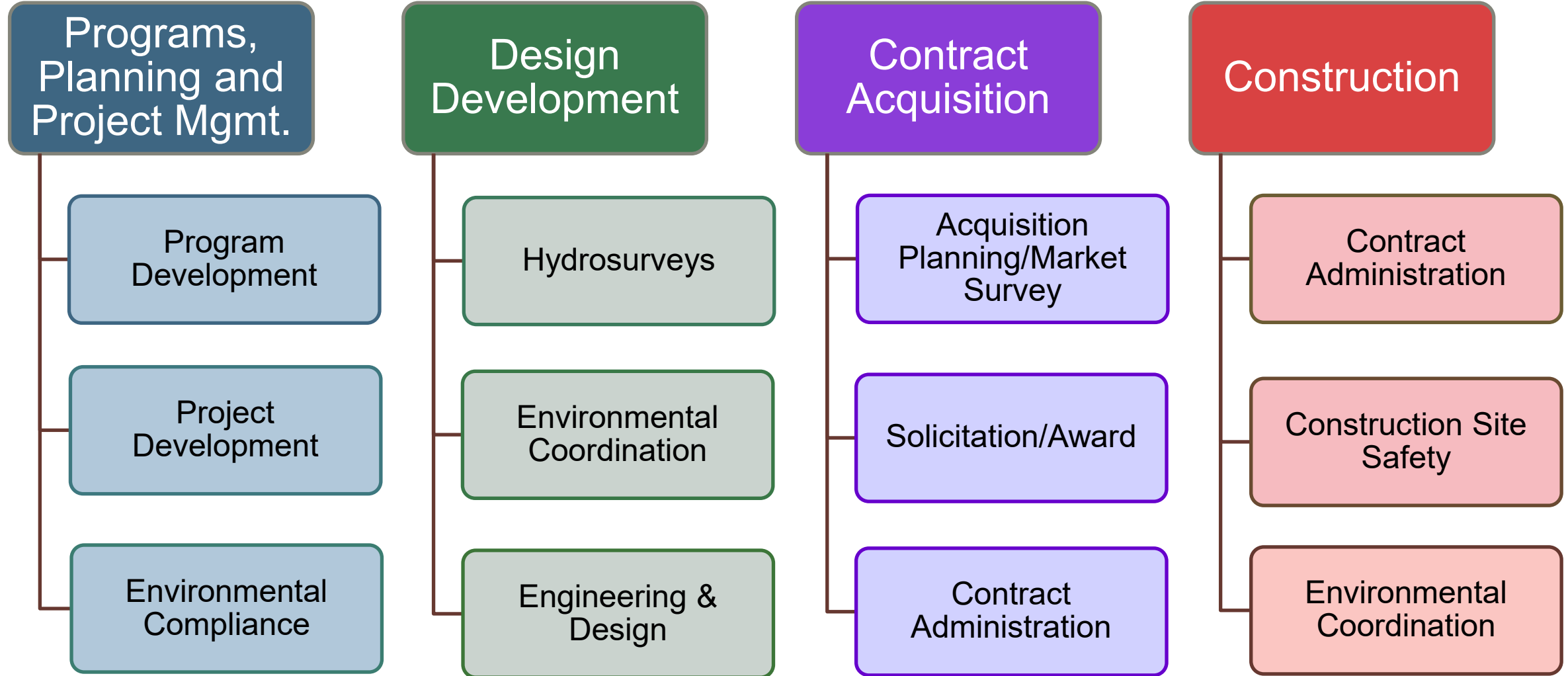


# OUR PROCESS



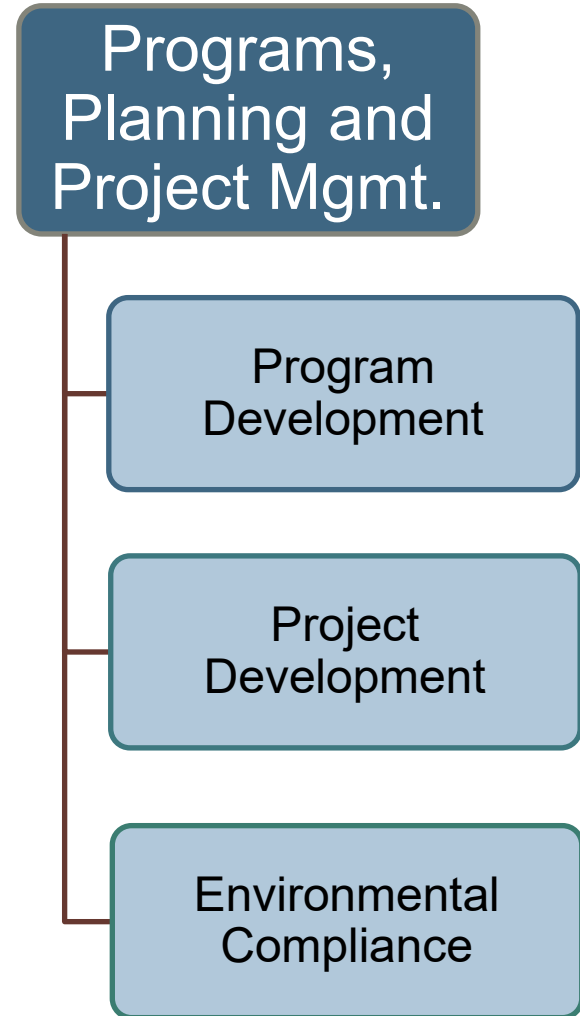


# DREDGING PROJECT PROCESS BREAKDOWN



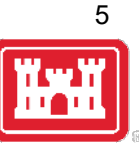


# PROGRAMS, PLANNING AND PROJECT MANAGEMENT





# PROGRAMS, PLANNING AND PROJECT MANAGEMENT DIVISION



## ❑ PROGRAM DEVELOPMENT

- ✓ Develop, Defend, and Execute the Budget
  - Annual budgets, workplans, supplemental and emergency requests
  - Ensuring strict adherence to “work packages” (which can be perceived as a constraint when we get into execution of our work)

## ❑ PROJECT DEVELOPMENT

- ✓ Manage Project Development & Execution
  - Project Managers lead “Project Delivery Teams” through various development processes in order to deliver a specific project and product for internal and external stakeholders.
  - Develop Project Management Plans & P2 Sched: Roadmap to project execution.
  - PM is the lead champion for the project from receipt of funds through the planning, environmental, design, and contracting phases to culminate in a contract award.

## ❑ ENVIRONMENTAL COMPLIANCE

- ✓ Enable Project Execution
  - NEPA (EA) (10 yr)
  - ESA/EFH (BiOp)  
(Change Driven)
  - CZMA (CD) (5 yr)
  - CWA 404 (WQC) (5 yr)
  - DMMP (20 yr)

**Budget  
Scope  
Schedule**



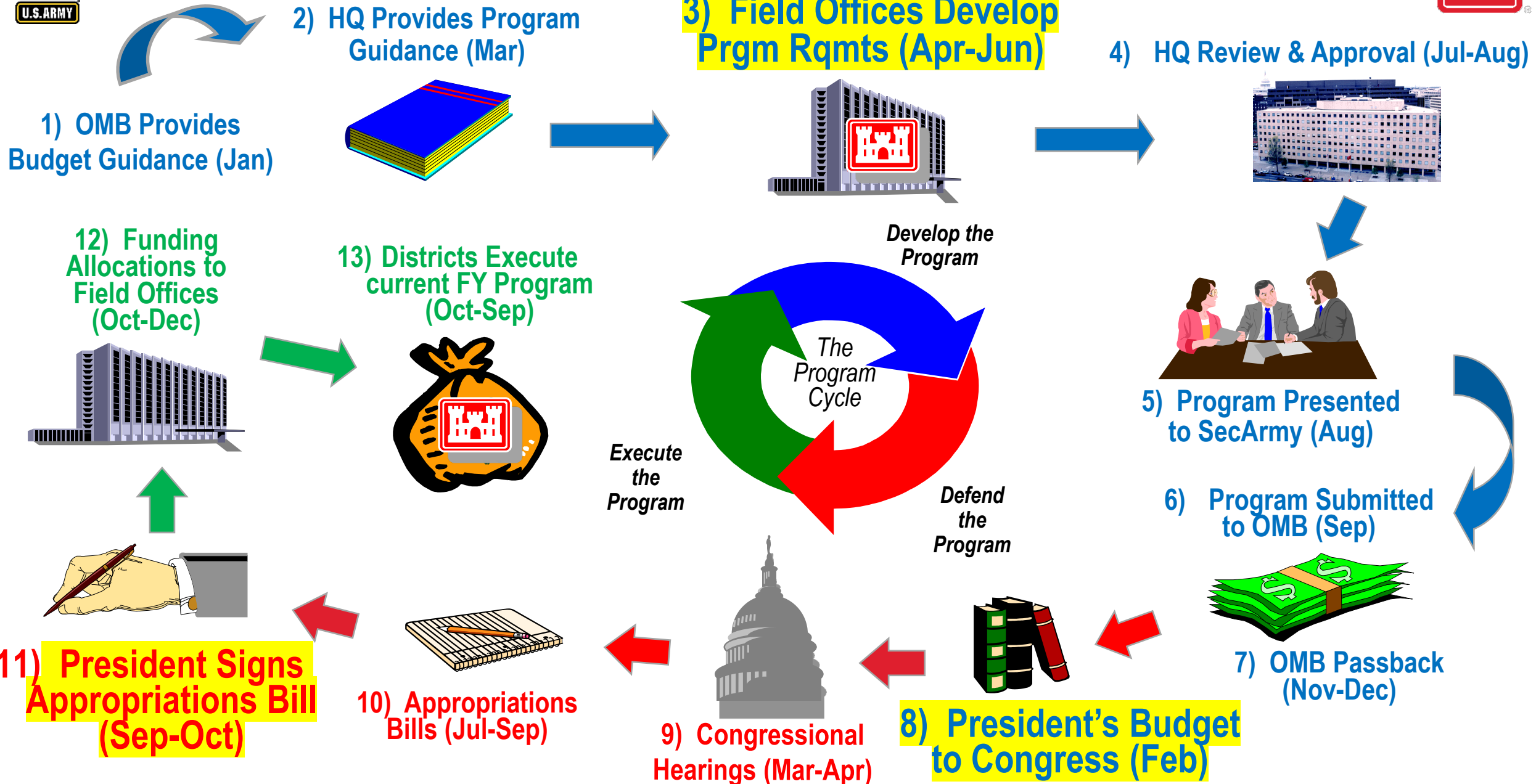
# THE BUDGET PROCESS



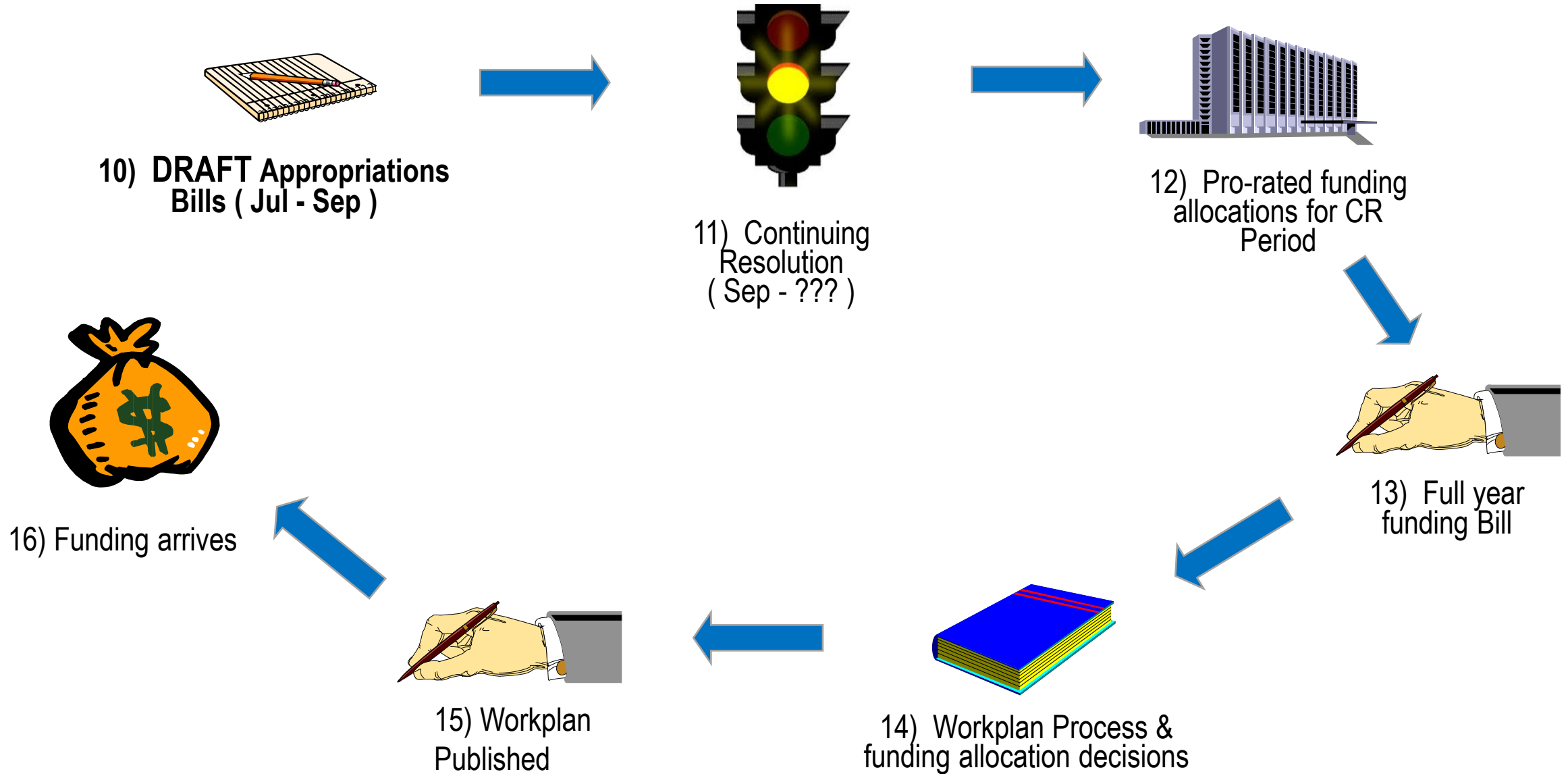


# HOW A DREDGING PROJECT GETS FUNDED

7



# WORKPLAN DEVELOPMENT







# THE BUDGET MULTIVERSE



## ☐ Develop Phase

- ✓ Development of the President's Budget, for the Budget Year (BY).
- ✓ Typically starts in December of the Fiscal Year two years prior to the year being developed (e.g., FY24 Budget Development starts in December 2021 (FY22))
- ✓ Ends when the President's Budget is released (by law, first Monday in February prior to the Fiscal Year – FY24 would be released in February of FY23)

## ☐ Defend Phase

- ✓ Defense of the President's Budget, for BY-1
- ✓ Typically starts just before the President's Budget is released (to prepare the Chief for Testimony)
- ✓ Ends with passage of the Appropriations Bill (FY23 Energy & Water Appropriations Bill)

## ☐ Execute Phase

- ✓ Execution of the FY Appropriations
- ✓ FY23 begins 1 October (2022)
- ✓ FY23 ends 30 September (2023)



## PROGRAM AND FUNDING TIMETABLE

[illegible]

# DEVELOP

**DEC** CW-IFD OPENS FOR ENTRY  
**FEB** INITIAL OMB CEILING AND COST ESTIMATE UPDATE  
**MAR** PROGRAM AND BUDGET ENGINEER CIRCULAR FINAL  
**APR** PROGRAM SUBMISSION  
**JUN** OMB CEILING REVISION  
**JUL** HEADQUARTERS PROGRAM REVIEW  
**AUG** ASA(CW) REVIEW  
**SEP** OMB SUBMISSION AND OMB HEARINGS  
**NOV** OMB PASSBACK  
**FEB** PRESIDENT'S BUDGET

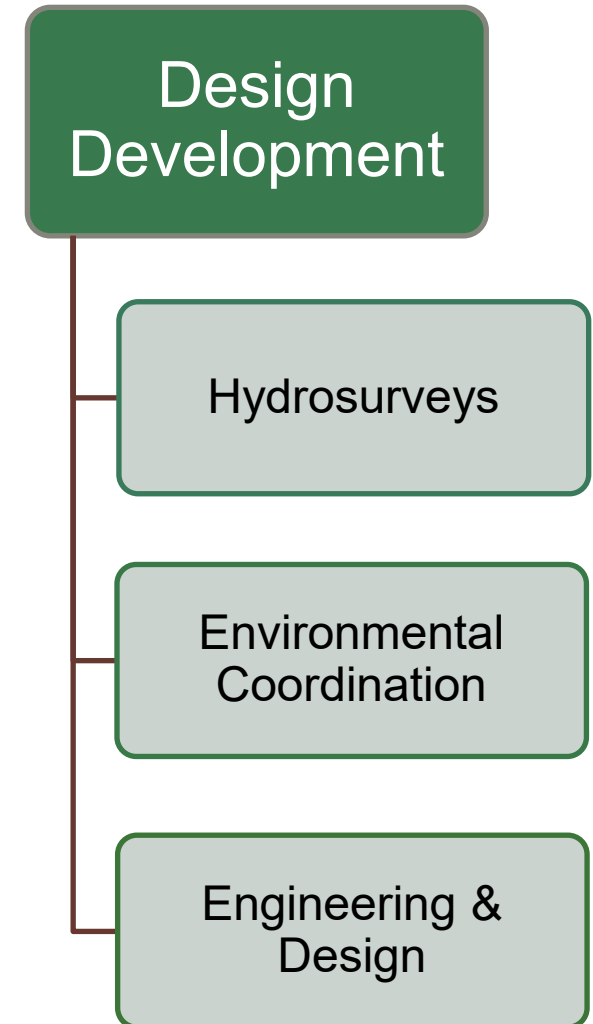
## DEFEND

**MAR** ASA (CW) AND CORPS APPROPRIATIONS  
HEARINGS  
**JUN** HOUSE APPROPRIATIONS BILL  
**JUL** SENATE APPROPRIATIONS BILL  
**AUG** CONFERENCE

## EXECUTE

**SEP** APPROPRIATIONS ACT  
**OCT** APPORTIONMENT, WORK ALLOWANCES, AND  
IMPLEMENTATION PLANS  
**DEC-JAN** SCHEDULES OF OBLIGATIONS AND  
EXPENDITURES (2101)  
**EOY** REVIEW PROGRESS AND REPROGRAM FUNDS  
AS NEEDED

# DESIGN DEVELOPMENT

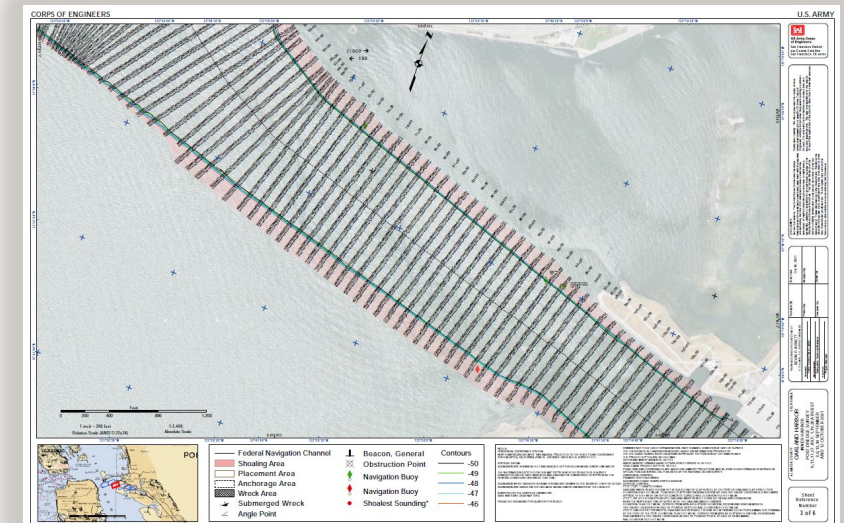
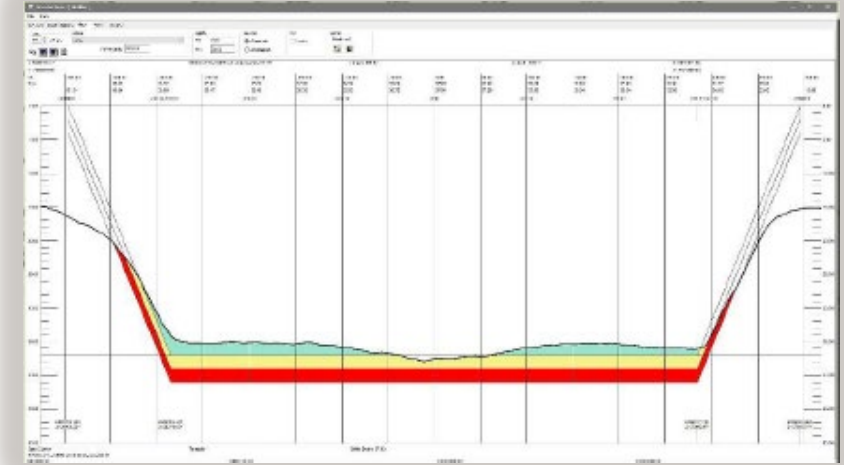




# HYDROSURVEY

# HYDROSURVEYS

- The survey group provides hydrographic survey support for the Navigation mission
  - Supports 39 Federal navigation channels and associated dredge disposal sites – very busy schedule.
  - Provides bathymetric plots and dredge quantity computations.
  - Key inputs to all dredging solicitations (condition surveys.
  - Provides Before Dredge (BD) and After Dredge (AD) surveys to support contract administration.
  
- Fleet of 3 survey vessels all with multibeam sonar systems
  
- Additional aerial and topographic mission
  - Topographic surveys of jetties & breakwaters.





# ENVIRONMENTAL COMPLIANCE



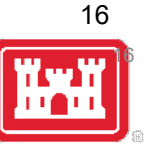


# GOVERNING FEDERAL ENVIRONMENTAL LAWS & REGULATIONS

Law	Permit/ Approval	Agency	Existing
NEPA	FONSI or ROD	USACE	2015-2024 EA / FONSI
CWA 401	401 Water Quality Certification	RWQCB	2020-2024
CZMA	Consistency Notification	BCDC	2020-2024
ESA / MSFCMA	Biological Opinion Incidental Take Statement (ITS) / EFH Conservation Recommendations	NMFS/ USFWS	-LTMS BO/ITS (2015) and EFH Consult (2011)  - Individual Project BOs from USFWS
Multiple	Sediment Suitability Determination	DMMO Agencies	By project (annual)
CZMA & CWA 401	Episodic Approval	BCDC/ RWQCB	By project and episode
MPRSA	Concurrence for Ocean Disposal	EPA	By project and episode



# GOVERNING FEDERAL ENVIRONMENTAL LAWS & REGULATIONS



- National Environmental Policy Act (NEPA; 42 U.S.C. § § 4321 et seq.)
- Clean Water Act (CWA; 33 U.S.C. § § 1257 et seq.)
- Coastal Zone Management Act (CZMA; 16 U.S.C. § § 1451 et seq.)
- Endangered Species Act (ESA; 16 U.S.C. § § 1531-1544)
- Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA; 16 U.S.C. § § 1801 et seq.)
- Marine Protection, Research and Sanctuaries Act (MPRSA; 33 U.S.C. § § 1401 et seq.)
- USACE operations and maintenance (O&M) dredging implementing regulations (33 C.F.R. Parts 335-338)



# ENVIRONMENTAL WORK WINDOWS

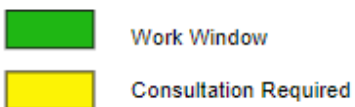


- Established through consultations with resource and regulatory agencies to avoid/minimize potential adverse effects on species and habitats.
  - Work windows are designed to avoid or minimize the overlap of dredging and disposal with the presence of a species or a sensitive life stage of a species in a specific area
- Outside the environmental windows, dredging and disposal activities are restricted to protect species and habitats
  - Dredging outside of the windows requires additional restrictions or ESA consultation.

# ENVIRONMENTAL WORK WINDOWS

Site	Species	Jan 1-15	Jan 16-31	Feb 1-15	Feb 16-28	Mar 1-15	Mar 16-31	Apr 1-15	Apr 16-30	May 1-15	May 16-31	Jun 1-15	Jun 16-30	Jul 1-15	Jul 16-31	Aug 1-15	Aug 16-31	Sep 1-15	Sep 16-30	Oct 1-15	Oct 16-31	Nov 1-15	Nov 16-30	Dec 1-15	Dec 16-31
SF Bay Bridge to Sherman Island	Chinook Salmon and Steelhead																								
Carquinez Bridge to Collinsville	Delta Smelt Water ≤ 10' (1)																								
	Delta Smelt Water >10' (1)																								
Napa and Petaluma Rivers, Sonoma Creek	Steelhead																								
Napa River	Delta Smelt																								
North SF Bay & San Pablo Bay shallow berthing areas	Dungeness Crab																								
Richardson Bay North and South Bay	Pacific Herring																								
Waters of Marin County from the Golden Gate Bridge to Richmond-San Rafael Bridge	Coho Salmon																								
Berkeley Marina to San Lorenzo Creek within 1 mile of coastline	California Least Tern																								
Central Bay	Pacific Herring																								
South of Highway 92 Bridge (San Mateo-Hayward)	California Least Tern																								
In Areas with Eelgrass Beds	California Least Tern																								
Baywide in Areas of Salt Marsh Habitat	Ridgway's Rail																								
Baywide within 250 feet of Salt Marsh Habitat	Ridgway's Rail																								
In and Adjacent to Salt Marsh Habitat	Salt Marsh Harvest Mouse																								
Within 300' of known roost site	California Brown Pelican																								

Source: (USFWS, 1999; USFWS, 2004a; NMFS 1998)



LTMS MAINTENANCE DREDGING WORK  
WINDOWS BY AREA AND SPECIES

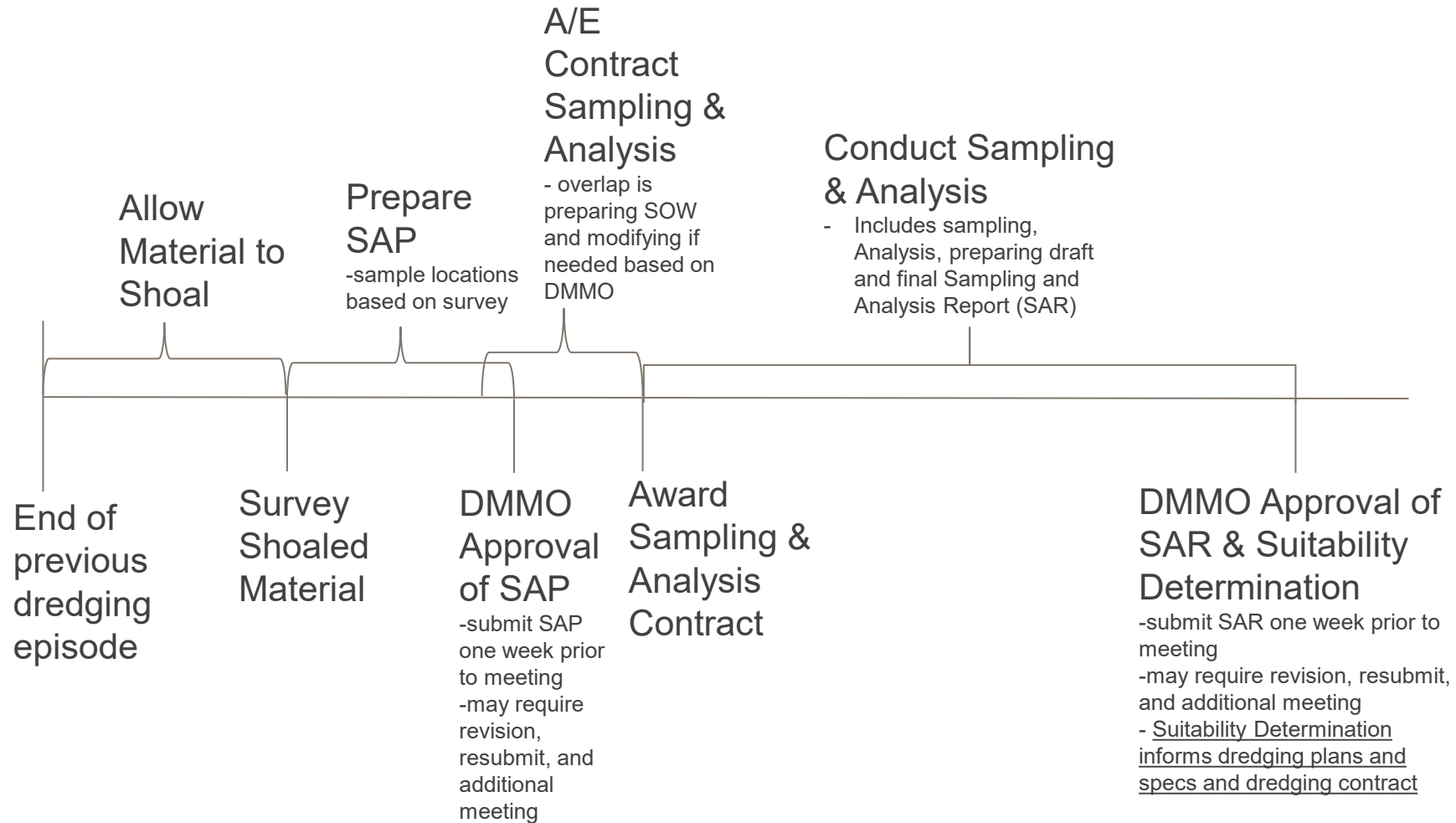
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# DREDGE SEDIMENT SAMPLING AND TESTING

- Every year, each dredging project needs to obtain a suitability determination from the Dredged Material Management Office (DMMO).
  - DMMO makes their determination after the applicant provides sediment testing results in the form of a Sampling and Analysis Report (SAR).
  - The testing results determines where the material can be placed – in-bay, ocean, beneficial reuse, landfill. Other limitations to material placement may apply. For example, not all material can go in-bay even though it may be suitable because of established volume limitations.
  - The suitability determination is a key piece of information that affects the development of the plans & specs and dredging contract.
- Guidelines for testing are found in the Inland Testing Manual, Upland Testing Manual, and Ocean Testing Manual.
- Different levels of testing (Tier I vs. Tier III) are required in different years.
  - Tier III testing is the most comprehensive testing scheme and is required every 3 years.
  - Tier III testing takes significantly more time and effort and tends to push project schedules to the right.
  - Timing for Tier III testing of specific projects is intentionally staggered so that not every project is impacted by the longer testing timeline in any given year.

# TYPICAL TIER III SAMPLING AND ANALYSIS PROCESS

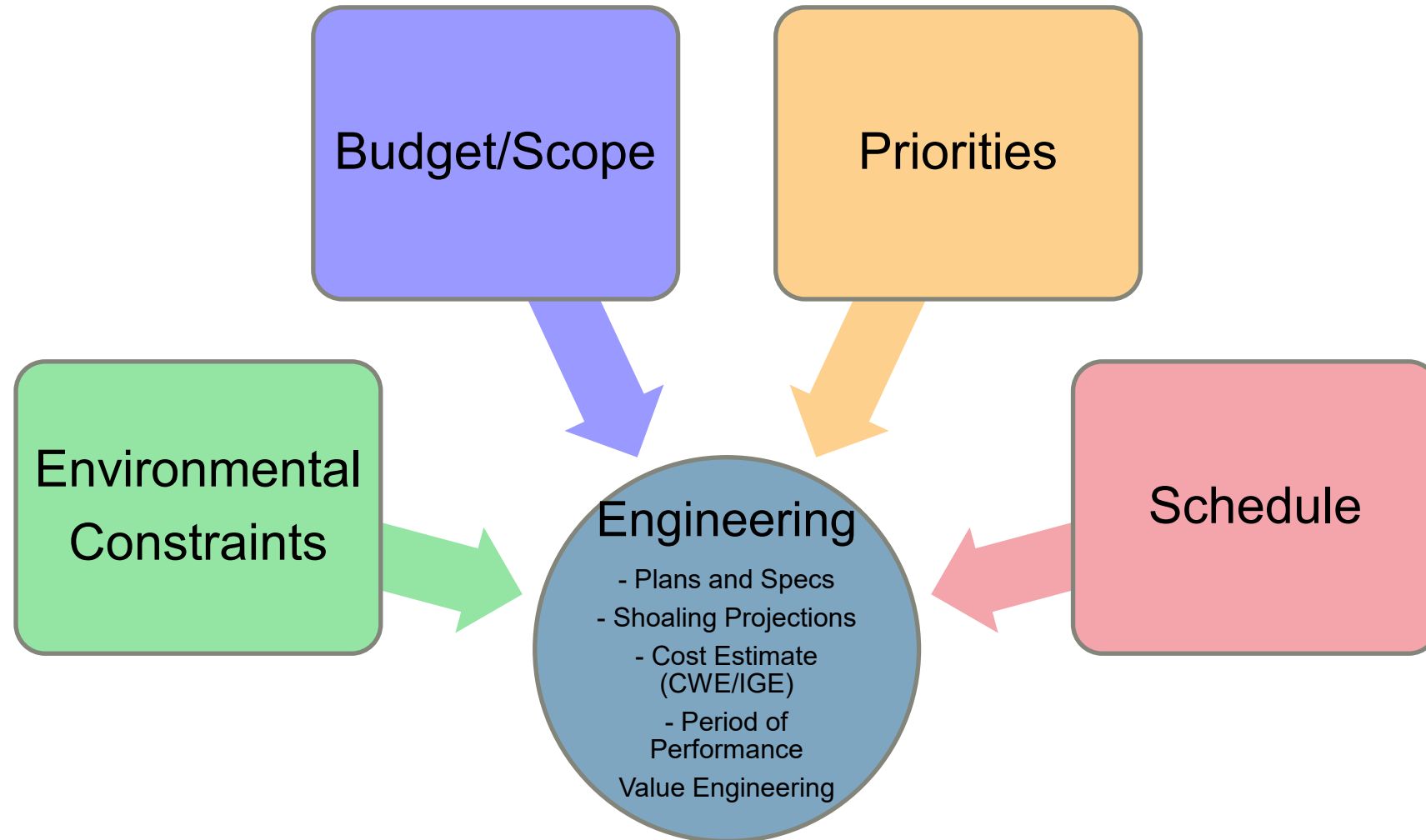




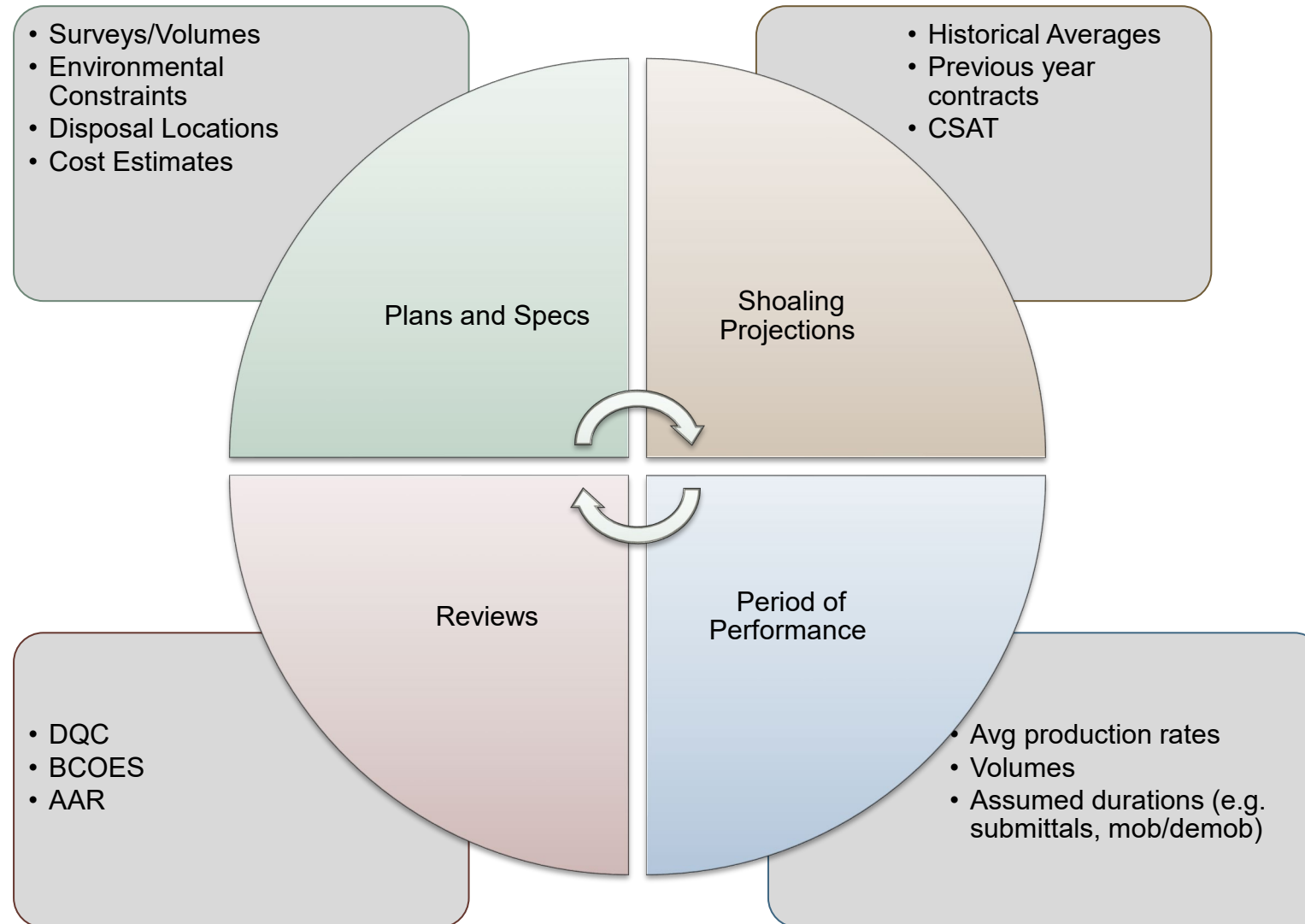


# ENGINEERING & DESIGN

# ENGINEERING CONSIDERATIONS



# DREDGING ENGINEERING PROCESS





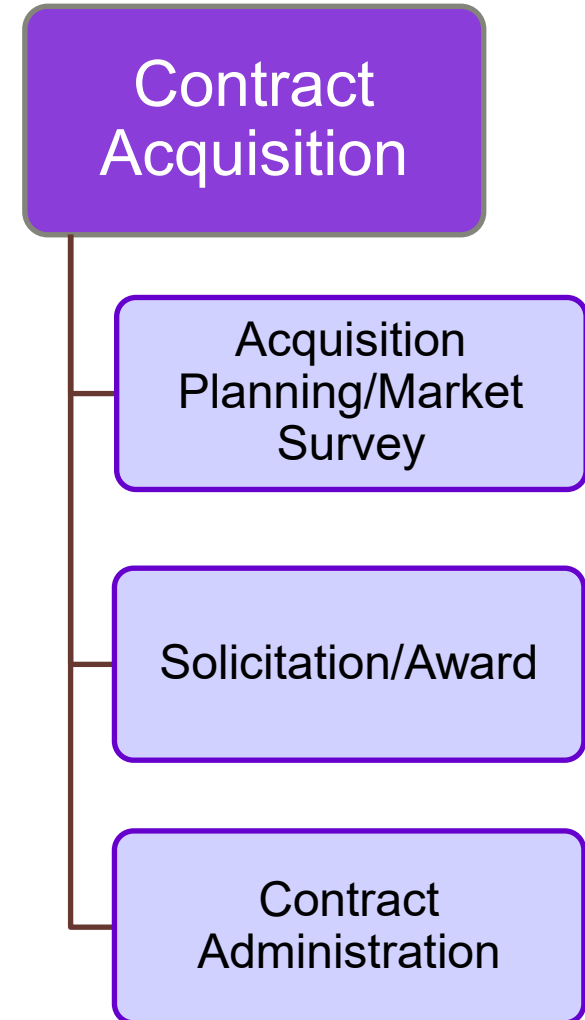
# ENGINEERING TIMELINE



Example Year: Dredge in 2023

Time Frame	Sequence of Steps
October 2022	Step 1: 65% Plans and Specs <ul style="list-style-type: none"><li>- Initial shoaling projections (based on previous year)</li><li>- Update standard information in P&amp;S</li><li>- Initial BCOES and DQC review</li></ul>
November/December 2022	Update plans and specs to 90% (environmental, contracting, civil, cost)
January/February 2023	Condition Survey – updated shoaling projections  2 <sup>nd</sup> BCOES Review Address comments – update plans and specs
March/April 2023	BCOES Certification Legal Sufficiency Review Receive final environmental restrictions – incorporate into contract
April/May/June 2023	Solicitation <ul style="list-style-type: none"><li>- Respond to RFIs/Amend Solicitation</li><li>- Contract Awards</li></ul>

# CONTRACT ACQUISITION





# ACQUISITION PLANNING/MARKET RESEARCH





# ACQUISITION PLANNING/MARKET RESEARCH

- Acquisition begins each year with the District Acquisition Strategy Board (DASB).
  - The DASB is an annual leadership agreement to collectively plan for executing the District's contract requirements.
  - This agreement seeks to develop a strategy that maximizes the District's resources through a thoughtful analysis of capability, constraints, and human capital.
  - This business process is led by the Contracting Team and represents a federal acquisition requirement to perform annual contracts planning (FAR 7).
- Market Research generally follows the DASB and is intended to gather basic market information (FAR 10).
  - What's the right market?
  - What are the industry capabilities?
  - Who is interested in the work?
  - What are the industry expectations/norms?
  - Are there interested Small Businesses capable of accomplishing the work?
- Market Research is typically accomplished through a "Sources Sought Announcement" in sam.gov.



# SOLICITATION/AWARD



# SOLICITATION/AWARD

## ☐ Prepare Front End

- The Front End Specifications delineate the rights and responsibilities of the parties involved in the contract, as well as their subcontractors and the way in which the contract will be administered.
- Contains Pricing Schedule and information on when bids are due.
- Combined with Technical Specification prior to final BCOES.

## ☐ Solicit contract opportunity on sam.gov

- Dredging contracts are typically Invitation for Bid (IFB) Firm Fixed Price contracts (FAR 14).
- 15-day pre-solicitation announcement. 30-day solicitation period.
- Opportunity for bidders to review contract and submit RFIs.
- Gov't responds to questions and may amend solicitation and extend Bid Opening date.

## ☐ Open Bids

## ☐ Review Low Bid for Awardability

## ☐ Award Contract



# SOLICITATION/AWARD

## AWARD is based on the following criteria:

Responsiveness + Lowest Price (fair and reasonable) + Responsibility

### **Responsiveness is:**

Providing a bid in accordance with the solicitation (bid guarantee/on time).

### **Lowest Price is:**

Pricing determined as fair and reasonable; accounting for unbalancing.

### **Responsibility is:**

Reviewing the company's past performance, resources, and capability.



# CONTRACT ADMINISTRATION

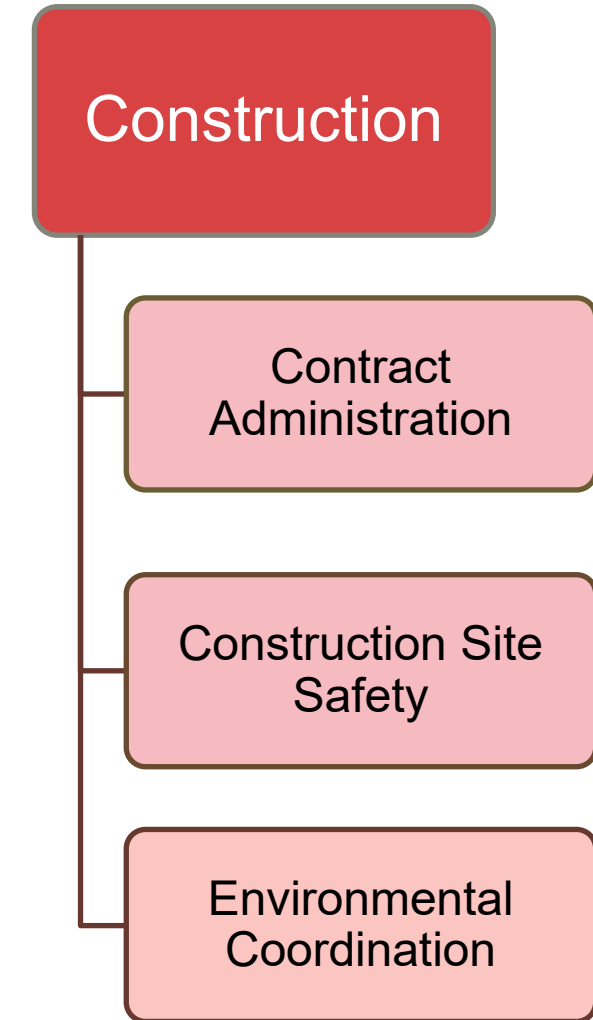


# CONTRACT ADMINISTRATION

- ☐ Begins after Contract Award.
  - Contract Division oversees all contract activities.
  - Day-to-day contract administration performed by Construction Branch (next slide).
  
- ☐ Monitor contractor performance
  - The Contracting Officer receives period reports from Construction Branch concerning contract progress and potential issues.
  - Contract modifications >\$500K require Contracting Officer approval.
  - May terminate contracts for convenience or default.



# CONSTRUCTION





# CONTRACT ADMINISTRATION & OVERSIGHT



## ☐ Submittal Review, Acceptance and Approval

- Preconstruction Submittals (Safety, Quality, Environmental, Equipment)
- Sediment Disposal Logs
- Schedule & Schedule Updates

## ☐ Safety Oversight

- USACE Safety and Health Requirements Manual, EM385-1-1
- Coast Guard
- OSHA

## ☐ Quality Assurance

- Daily Quality Assurance Reports
- Three-Phase Inspection Process
- Boat-to-Boat Calibration & Ride Along

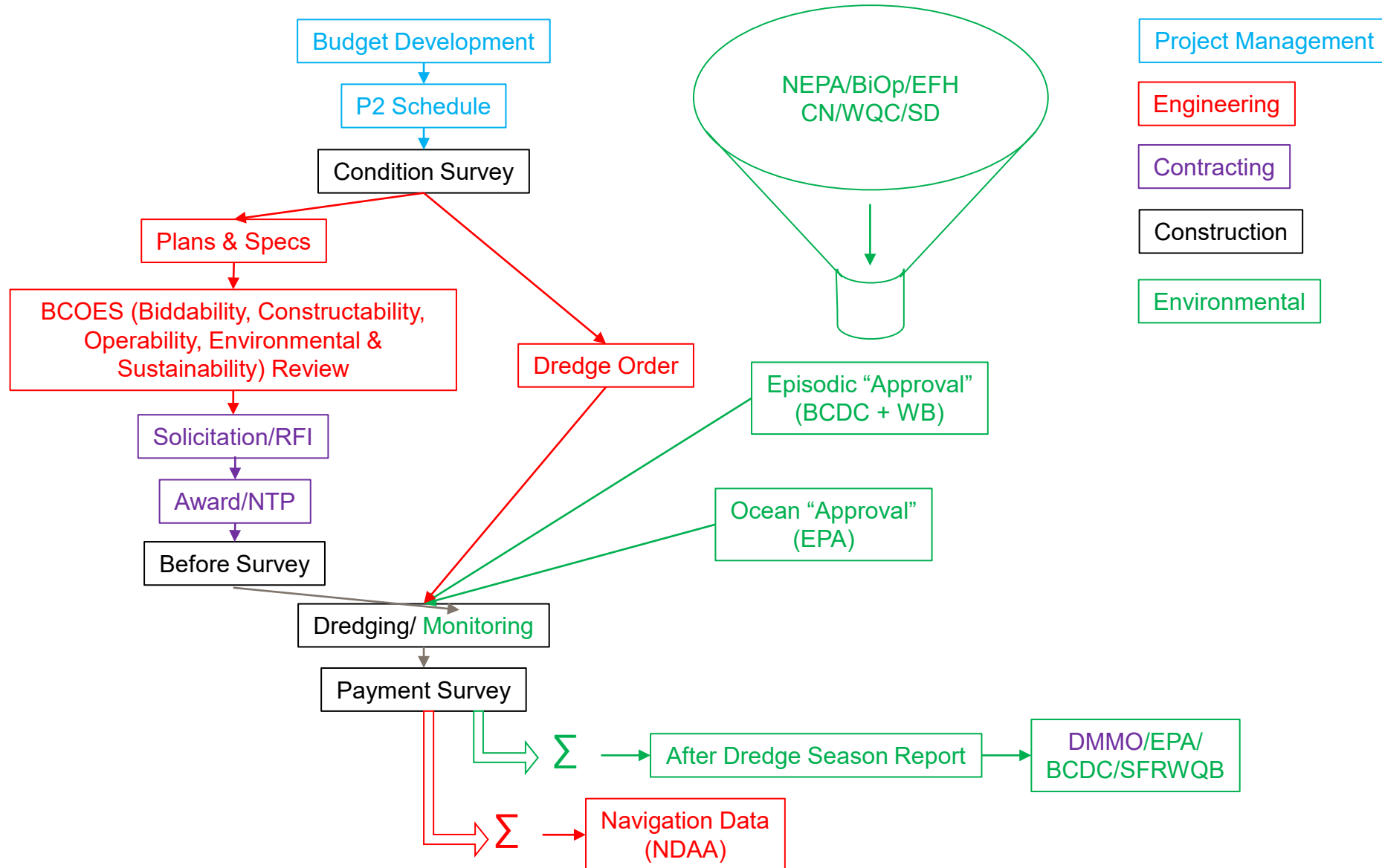
## ☐ Progress Payments

- BD & AD Survey Data Analysis

## ☐ Contract Modifications

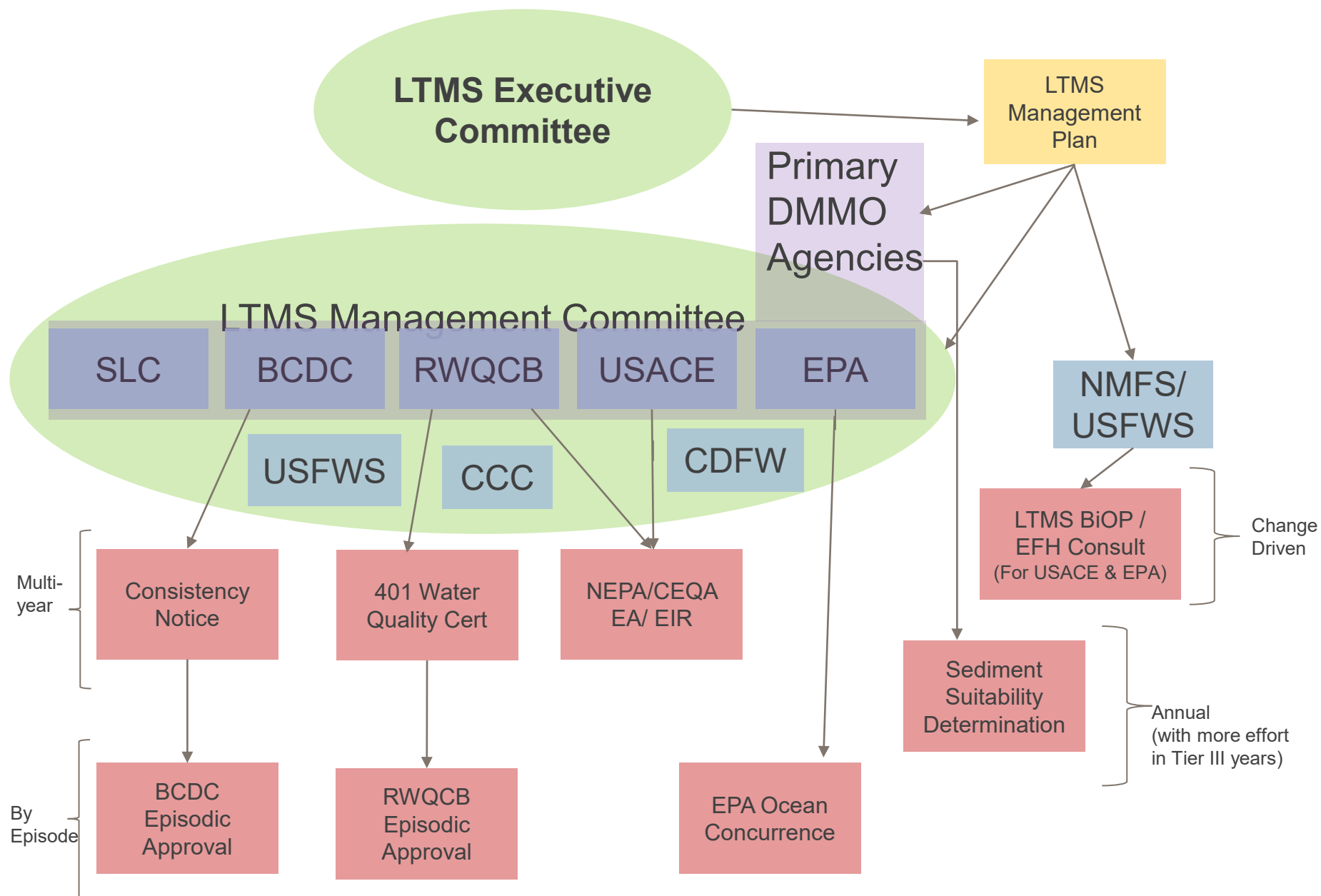
- Quantity Adjustments
- Changes to Dredge Prism
- Changes to Disposal Requirements

# DREDGING PROJECT PROCESS



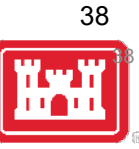


# BACKUP SLIDES





# LONG TERM MANAGEMENT STRATEGY (LTMS) PROGRAM



-Long Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region

- Cooperative effort; based on existing law and policy of LTMS agencies

-Provides strategy for dredging and disposal of dredged material over a 50-year period starting in 2000

-LTMS Executive Committee, LTMS Management Committee, LTMS Program Manager Team

-LTMS Goals

- Reduce in-bay disposal, Increase beneficial reuse and disposal at SF DODS
  - 20% In-bay / 40% Beneficial / 40% DODS
  - 12-year step down from 2000-2012 to achieve 1 million CY in-bay (with 250,000 CY contingency) per year (based on three year average)



# ACQUISITION CONSIDERATIONS

Based on a market assessment, we have decisions to make.

These decisions typically consist of the following elements:

- Customer/Stakeholder expectations?
- Environmental Constraints?
- Available Funding?
- Understanding quality, cost, and time considerations
- Small Business participation? (FAR 19)
- Type of Procurement? (FAR 13, 14, 15)
- Acquisition Mandates



# MARKETPLACE

For San Francisco District's Navigation Program (Annual Dredging), here's what we know and how we plan:

## **MARKET CONDITIONS:**

- + Small Marketplace consisting of Large and Small Businesses
- + Highly competitive market (same companies competing every year)
- + Historical Small Business usage and demonstrated capability
- + Environmental constraints require performance windows

## **APPLICATION:**

- + Small Business set asides required every year (SB approval)
- + Seek fair distribution of USACE opportunities for both Large and Small Businesses
- + Create clear and equitable procurements utilizing Federal Acquisition Regulations
- + Build stewardship w/marketplace to address and resolve issues = learn from our mistakes