

# Civil Works 101

**Becky Moyer**  
**Chief, Planning & Policy**  
**Southwestern Division**

**27 August 2015**



US Army Corps of Engineers  
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US Army Corps of Engineers

# CIVIL WORKS DISTRICT AND DIVISION BOUNDARIES



Puerto Rico and the Virgin Islands

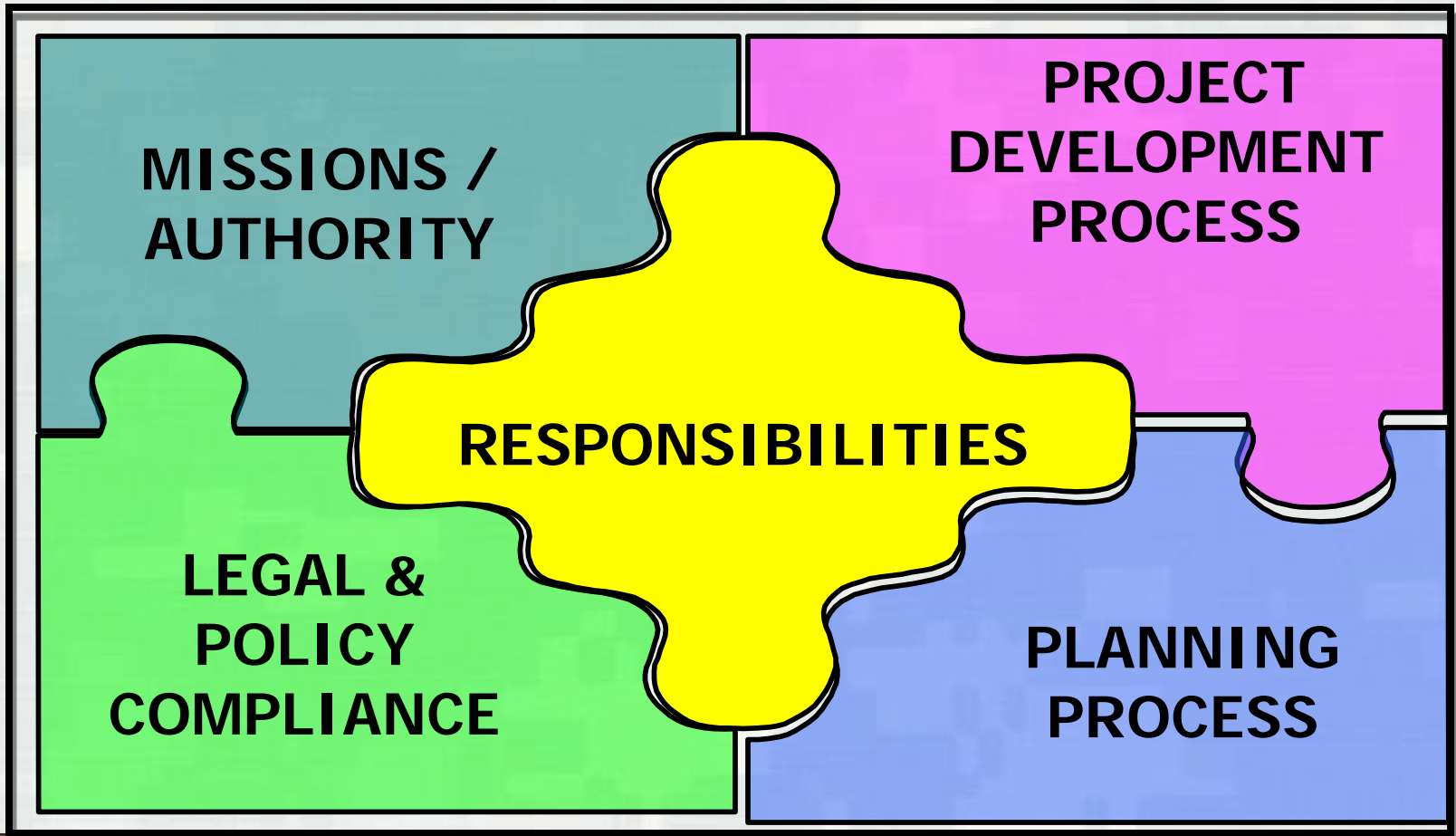
**PACIFIC OCEAN DIVISION**

|          |           |
|----------|-----------|
|          |           |
| Honolulu | Anchorage |

**LEGEND**

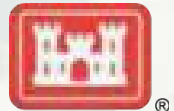
|  |                       |  |                   |
|--|-----------------------|--|-------------------|
|  | National Headquarters |  | Division Boundary |
|  | Division Headquarters |  | District Boundary |
|  | District Headquarters |  | State Boundary    |

# The Civil Works Puzzle



# USACE Civil Works Missions

- USACE was created in 1775 to support the Revolutionary War.
  - Civil Works mission began in 1824 with navigation on the Mississippi & Ohio Rivers
  - Missions are defined by Legislative Br. (Congress) and Executive Br. (President)
- Missions Include:
- Navigation
  - Flood Damage Reduction
  - Ecosystem Restoration
  - Hurricane & Storm Damage Reduction
  - Hydropower
  - Recreation
  - Water Supply

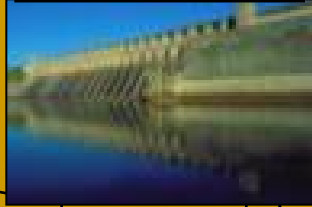


# ***USACE Contributions to the Economy and the Environment***

**Recreation areas:  
370 M Visitors/yr  
Generate \$18B  
in economic  
activity,  
500,000 jobs**



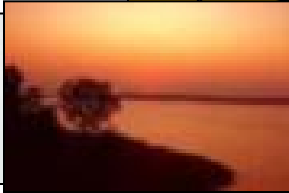
**1/4 of Nation's  
Hydropower:  
\$1.5B + in  
power sales**



**12,000 miles of  
Commercial Inland  
Waterways  
transport goods at  
1/2 the cost of rail or  
1/10 the cost of  
trucks**

**926 Shallow &  
Deep Draft  
Harbors**

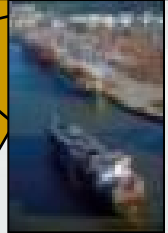
**#1 Federal Provider  
Of Outdoor Recreation  
54,879 Miles Of Shoreline  
at USACE Lakes**



**Stewardship of  
11.7 Million Acres  
Public Lands**



**~12,700 Miles of  
Levees**



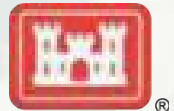
**137 Major Environmental  
Restoration Projects**



**US Ports & Waterways Convey > 2.2 billion Tons Commerce  
Corps Maintained Ports Provide Strategic Deployment Capability  
Harbor Maintenance Trust Fund collects \$1.3 billion revenue**

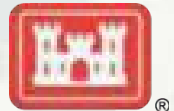
# How A USACE CW Project Is Born

- Problem Perception
- Request For Federal Action
  - ▶ Authority and Appropriations
- Study Problem & Report Preparation
- Report Review and Approval
- Project Construction Authorization
- Project Implementation



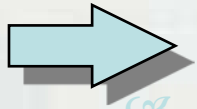
# WHO CAN BE A NON-FEDERAL SPONSOR?

- *A sponsor is...an entity that has*
- *the legal and financial capability to provide*
- *the cash and real estate requirements*  
*needed for a project.*



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# Who can be a Non-Federal Sponsor?



## SPECIFICALLY A SPONSOR CAN BE:

- ☞ State
- ☞ County
- ☞ City or Township
- ☞ Borough
- ☞ Native American Tribe
- ☞ Port Authority
- ☞ Water District
- ☞ Levee Boards
- ☞ River Basin Authority
- ☞ Non-Profit Entities (with the consent of the affected local government)

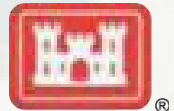
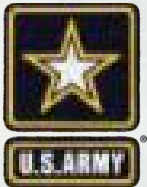


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# CW Studies & Projects - “It Takes Two to Tango”

- Authorization: Permission and guidance on the conduct of an activity or program. USACE needs separate authorization for a study and project construction.
- Appropriation: Approval to obligate and expend funds for an authorized activity or program. USACE CW projects are funded via annual “Energy & Water Development Appropriations Act”.



# Sources Of Study Authority

## SPECIFIC STUDY AUTHORITIES

- House Transportation & Infrastructure Cmte. Resolution
- Senate Environment & Public Works Cmte. Resolution
- Water Resources Development Act
- Other legislation

## DELEGATED STANDING AUTHORITIES

- Section 216, 1970 River & Harbor & Flood Control Act
- Section 2, 1958 Fish & Wildlife Coordination Act

## CONTINUING AUTHORITIES (Small Projects)



# Continuing Authorities

| <u>§</u> | <u>PURPOSE</u>                        | <u>FEDERAL COST<br/>LIMIT (\$M)<br/>Project / Program</u> |
|----------|---------------------------------------|---|
| 14       | EMERGENCY SHORE/STREAM PROTECTION     | 5 / 20  |
| 103      | BEACH EROSION CONTROL                 | 5 / 30  |
| 107      | NAVIGATION                            | 10 / 50   |
| 111      | MITIGATION OF SHORE DAMAGE            | 10 / 10   |
| 204      | ECOSYSTEM RESTORATION WITH DREDGING   | 10 / 50   |
| 205      | FLOOD DAMAGE PROTECTION               | 10 / 50   |
| 206      | AQUATIC ECOSYSTEM RESTORATION         | 10 / 50   |
| 208      | SNAGGING / CLEARING FOR FLOOD CONTROL | 0.5 / 7.5   |
| 1135     | PROJECT MODIFICATION FOR ENVIRONMENT  | 10 / 25   |



# STUDY AUTHORIZATION PROCESS

- Local officials ask Corps for assistance
- If no existing authority, locals ask congressional delegation for study authorization.
- Member asks House T&I or Senate E&PW Committee to authorize study.
- Committee asks Corps for information.
- Committee adopts study resolution.

Resolutions only authorize review of a prior study.  
New study can be only be authorized in law (e.g., WRDA).



ASA(CW)  
Provides  
Guidance  
(Jan)

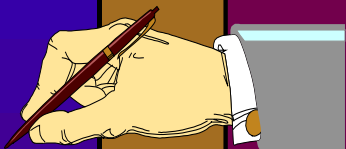
HQ Requests  
Legislative  
Proposals  
(Mar)

Field Offices  
Submit  
Proposals  
(May)



# USACE Civil Works Legislative Process

Start  
Finish



President Signs  
WRDA Legislation  
(Oct)

Member Requests  
& Congressional  
Hearings (Mar - May)

Committee  
Action on Bills  
(May - Sep)



HQ Review & Approval  
(May - Jul)

USACE Proposals  
to ASA(CW) (Aug)

Army Proposals  
to OMB (Oct)

OMB  
Review  
(Oct - Feb)

Army Legislative  
Program to Congress  
(Feb)



# EXAMPLE STUDY RESOLUTION LANGUAGE

**“Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That the Secretary of the Army is requested to review the report of the Chief of Engineers on the Comprehensive Flood Control Plan for Ohio and Lower Mississippi Rivers published as House Document 1, 75<sup>th</sup> Congress, 1<sup>st</sup> Session, and other pertinent reports to determine whether modifications to the recommendations contained therein are advisable to address the need for flood damage reduction, environmental restoration and protection, and for other purposes in the Duck Creek watershed in Guernsey, Monroe, Noble, and Washington Counties, Ohio.”**



# EXAMPLE PROJECT AUTHORIZATION LANGUAGE

## TITLE I - WATER RESOURCES PROJECTS (WRDA 1999) SEC. 101. PROJECT AUTHORIZATIONS.

(a) PROJECTS WITH CHIEF'S REPORTS. - The following projects for water resources development and conservation and other purposes are authorized to be carried out by the Secretary substantially in accordance with the plans, and subject to the conditions, described in the respective reports designated in this subsection:

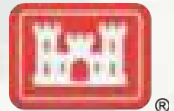
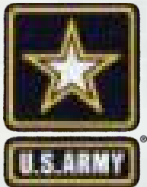
(3) SAND POINT HARBOR, ALASKA. - The project for navigation, Sand Point Harbor, Alaska: Report of the Chief of Engineers dated October 13, 1998, at a total cost of \$11,760,000, with an estimated Federal cost of \$6,964,000 and an estimated non-Federal cost of \$4,796,000.



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# Section 7001: Annual Report

- Identifies proposals for new study authorizations, new project authorizations, and modifications to existing project or feasibility study authorities.
- Based, in part, on annual requests from non-federal interests.
- Secretary “certifies” proposals meet WRRDA criteria
- Proposals that don’t meet criteria are included in an appendix



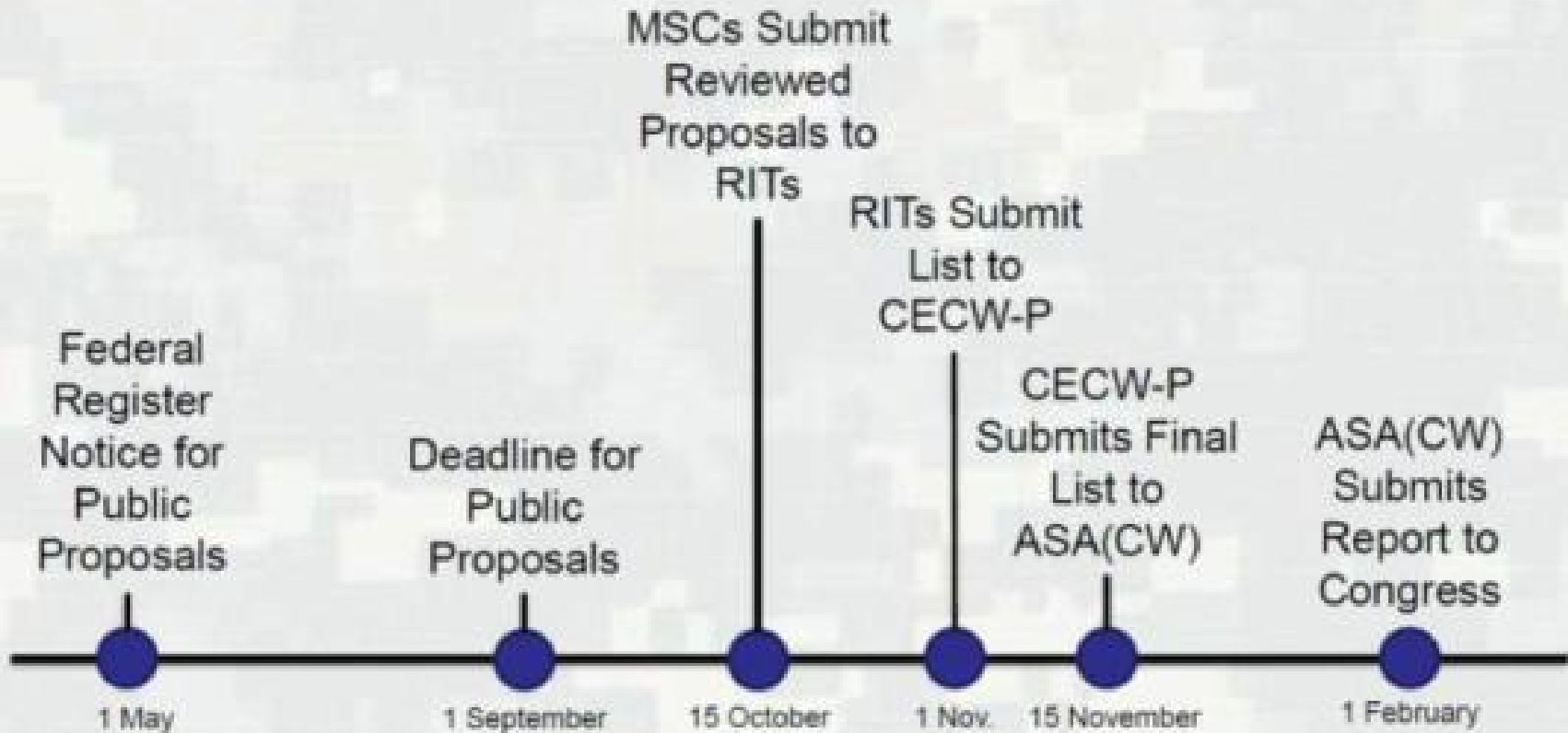


# Criteria for Inclusion of a New or Modified Study or Project

- Related to USACE authorities and one or more of the core missions
- Required to have specific congressional authorization
- Has not been previously congressionally authorized
- Has not been included in a previous annual report (under 7001) **AND**
- Able to be carried out by the USACE, if authorized

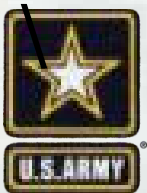


# Sec. 7001 Annual Report Timeline



# Information on Each Submission Includes:

- Sponsor Name(s)
  - Study or Project Purpose
  - Estimated cost (fed and non-fed)\*
  - Anticipated monetary and nonmonetary benefits\*
  - Letter or statement of Support
  - Financial capability of sponsor
- \* Costs and benefits estimated to extent practicable



# APPROPRIATION

Definition: Approval to obligate and expend funds for an authorized activity.

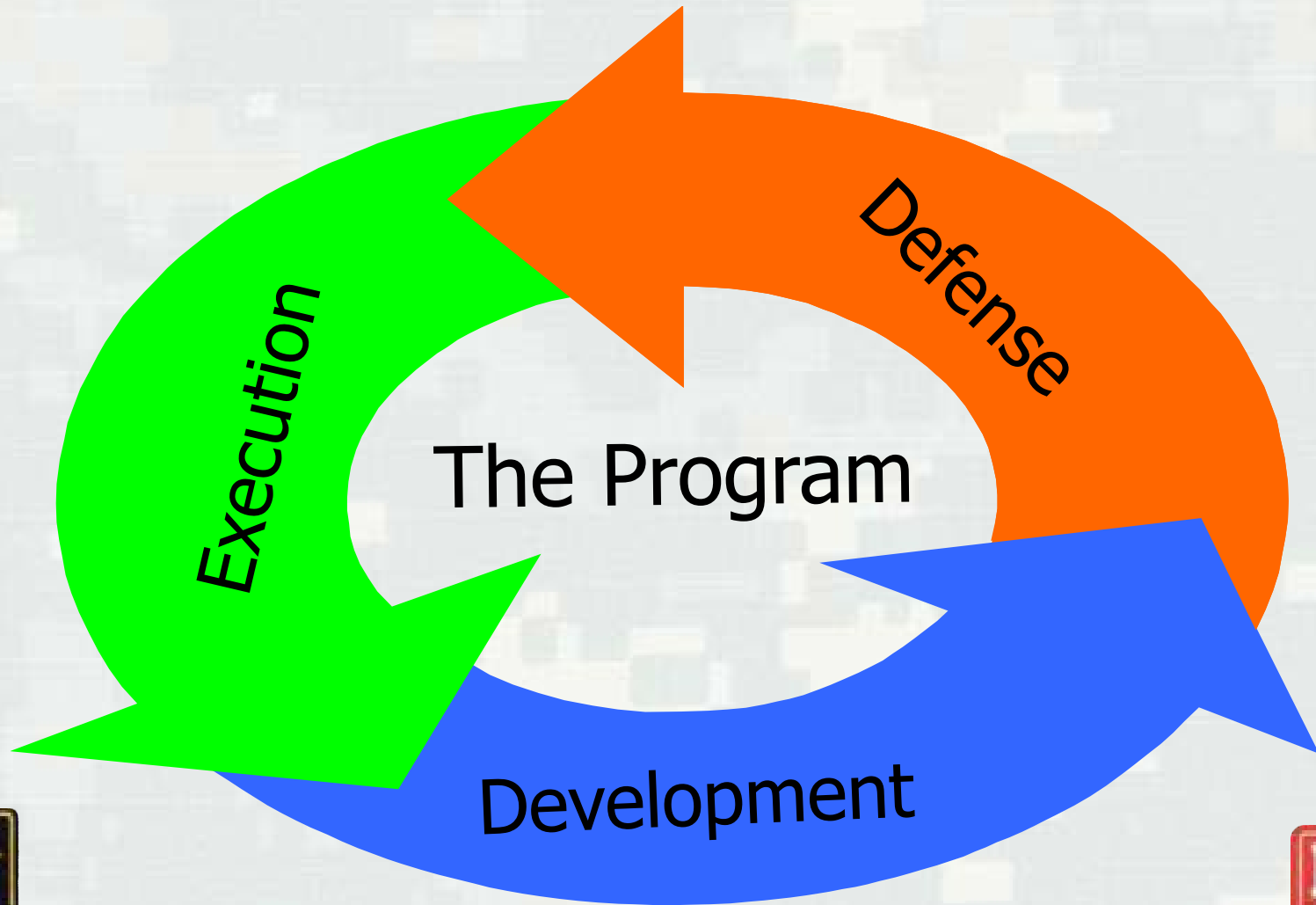
*(e.g., money for gas)*

- 12 Appropriations Acts fund the U. S. Government
- Corps Civil Works appropriations are in the Energy and Water Development Appropriations Act



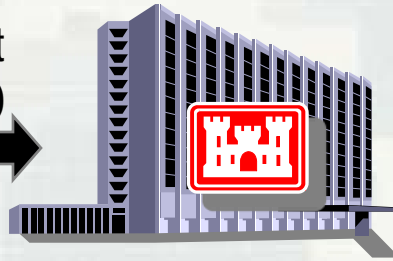
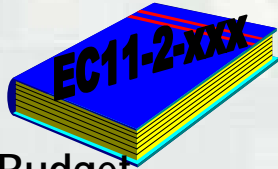
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# THREE PHASES OF THE CIVIL WORKS PROGRAM



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HQ Provides Budget Guidance ( Mar )



HQ Review & Approval ( May - Jun )



Field Offices Develop Program Requirements ( Mar - Apr )

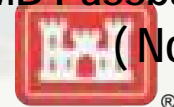


Budget Presented to Sec. Army ( Jul - Aug )

Budget Submitted to OMB ( Sep )



OMB Passback ( Nov )



President's Budget to Congress ( Feb )

Cong. Hearings ( Mar - Apr )



Appropriations Bills ( Jul - Sep )



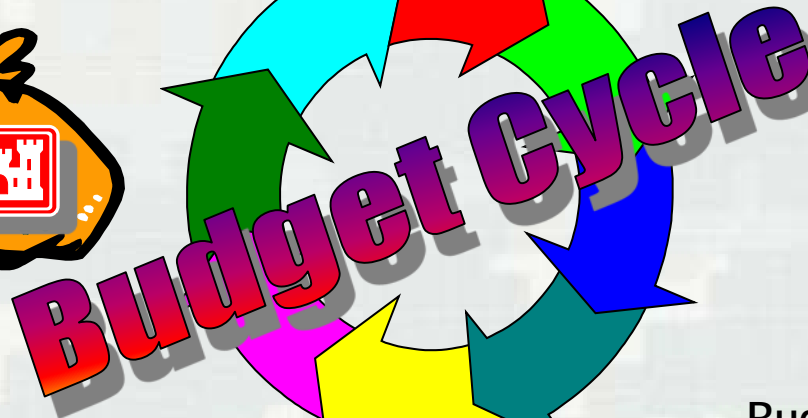
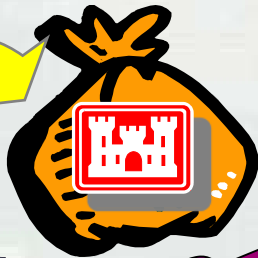
Budget Resolutions



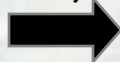
President Signs Approp. Bill ( Sep - Oct )



Funding Alloc. To Field Offices ( Oct - Dec )

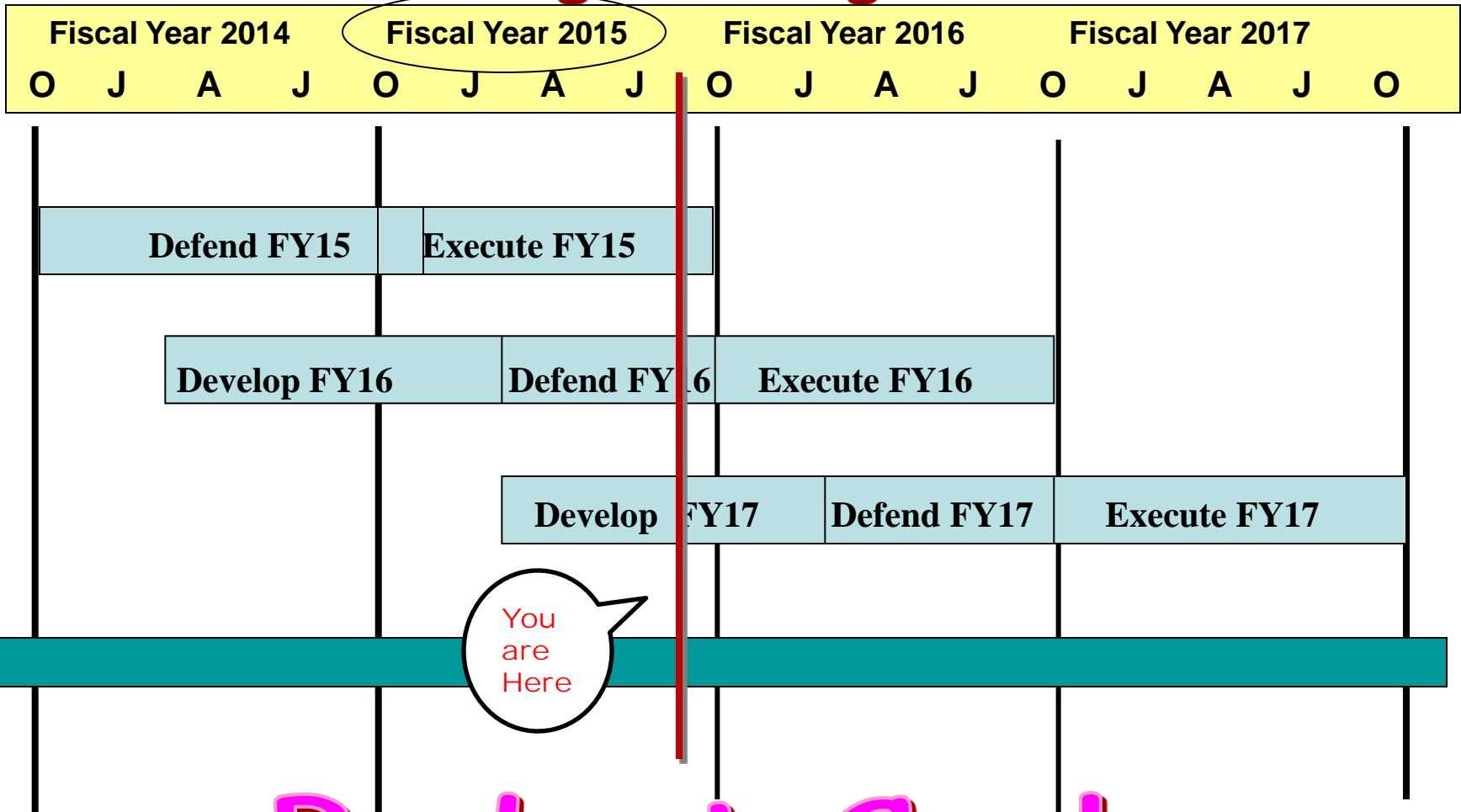


OMB Provides Budget Guidance ( Jan )





## CW Programming Timeline



## Budget Cycle

# Phases Of Civil Works Project Development

## Specifically Authorized Projects

- Feasibility Planning
- Preconstruction Engineering & Design (PED)
- Construction
- Operation & Maintenance



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# Feasibility Planning Phase

Produces the feasibility report which is the vehicle for recommending project authorization.

Requirement is \$3million/ 3 years.

## REQUIREMENTS {§905(a) WRDA 1986}

- Describe benefits & detriments of alternatives considered and scope of recommended plan
- Describe Federal & non-Federal participation
- Present views of public, State & Federal agencies
- 50% non-Federal cost {§105 WRDA 1986}; may be in-kind services



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# Preconstruction Engineering & Design (PED) Phase

PURPOSE: Complete detailed studies and designs needed to award 1<sup>st</sup> construction contract.

PRODUCTS INCLUDE:

- Design / Engineering Documentation Reports
- Plans & Specifications for 1<sup>st</sup> contract
- Reevaluation Reports (GRR, LRR, PAC)
- Economic Updates
- Supplemental Environmental Compliance Documents (SEIS, SIR, EA)

Part of Project Cost; 25% non-Federal Financing

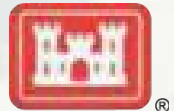


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# Construction Phase

PREREQUISITES: Project authorization and appropriation of Federal construction funds.

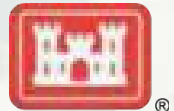
- Award of 1<sup>st</sup> construction contract requires Federal and non-Federal appropriations, real estate, and execution of Project Cooperation Agreement
- USACE continues design, prepares plans and specifications for subsequent contracts.
- Contractors build the project
- USACE administers contracts, inspects work, oversees safety requirements.
- Sponsor participates; accepts completed work.



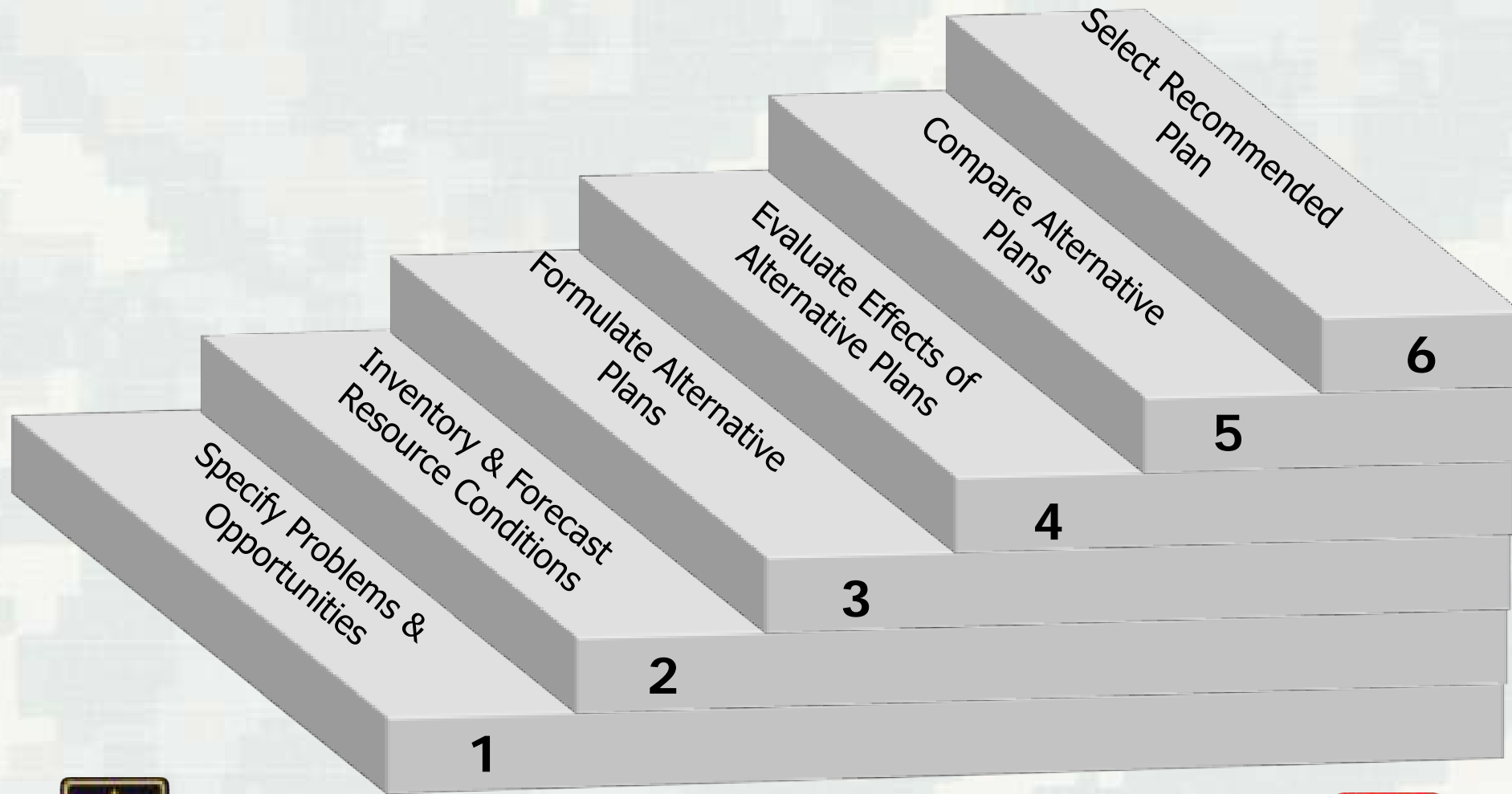
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# (OMRR&R) Operation & Maintenance Phase

- Non-Federal Sponsor responsibility except for navigation projects, dams < WRDA '86.
- USACE conducts periodic inspections and notifies Sponsor of deficiencies.
- Scope is defined in OMRR&R Manual:
  - ▶ Operation - actions required to function
  - ▶ Maintenance - routine & preventative work.
  - ▶ Repair - of minor damage, wear & tear.
  - ▶ Rehabilitation - to assure structural integrity.
  - ▶ Replacement - of obsolete, worn-out features.



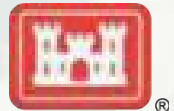
# P&G's Six Step Planning Process



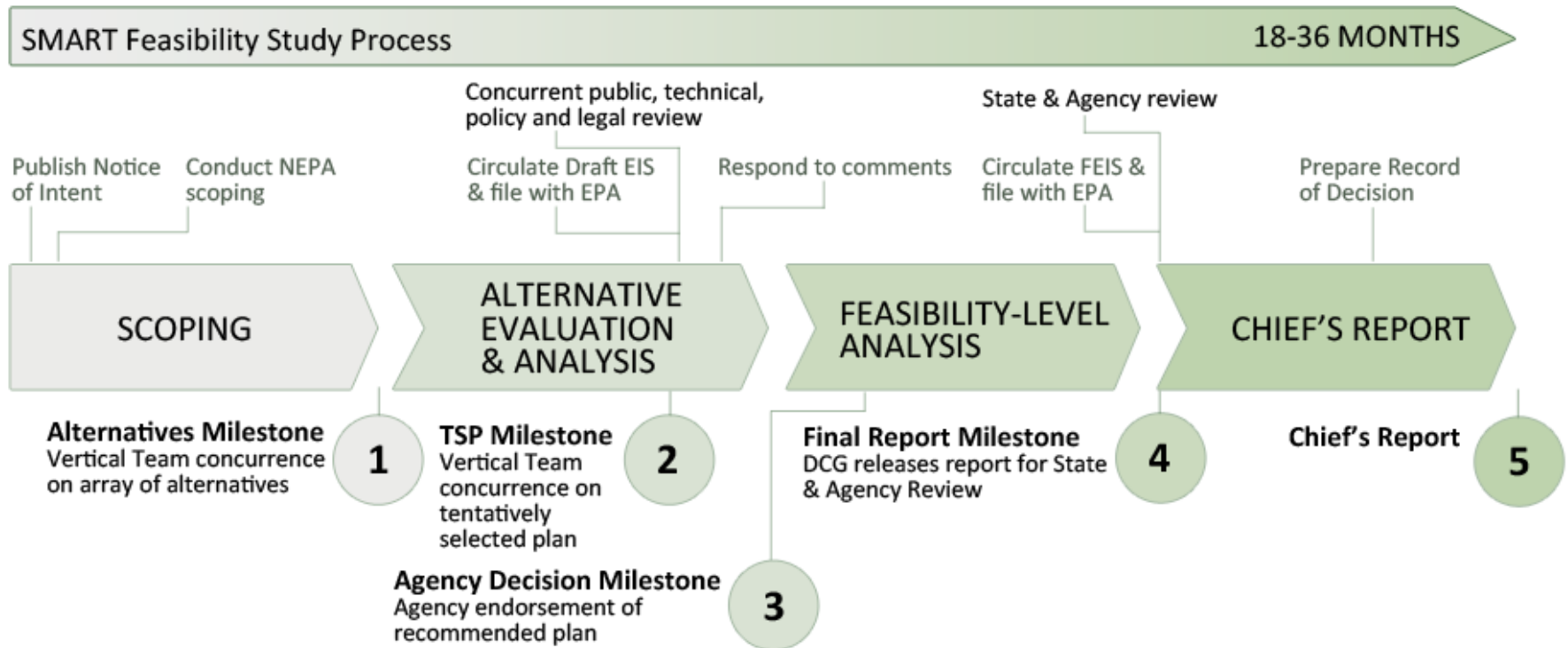
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# SMART Planning

- Focuses on incremental decision making in a progressive 6-step planning process
- Identifies next decision to be made and manages uncertainty in making it
  - Only collect data needed
  - Make decision
  - Move on to next decision
- Incorporates quality engineering, economics, real estate and environmental analysis
- Fully compliant with environmental law (NEPA, etc...)
- Includes public involvement



# SMART Feasibility Study Process



- Apply critical thinking throughout the study
  - Develop the Feasibility Report as you go

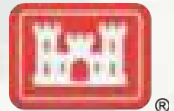
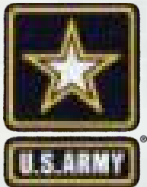
• Target Completion: No more than 3 years for Chief's

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Report



# And ... the “3x3x3” Rule

- Under \$3M total
- Within 3 years
- Using 3 levels of enhanced vertical teaming
- WRRDA 2014, Section 1001



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# Planning Toolbox and SMART Guide

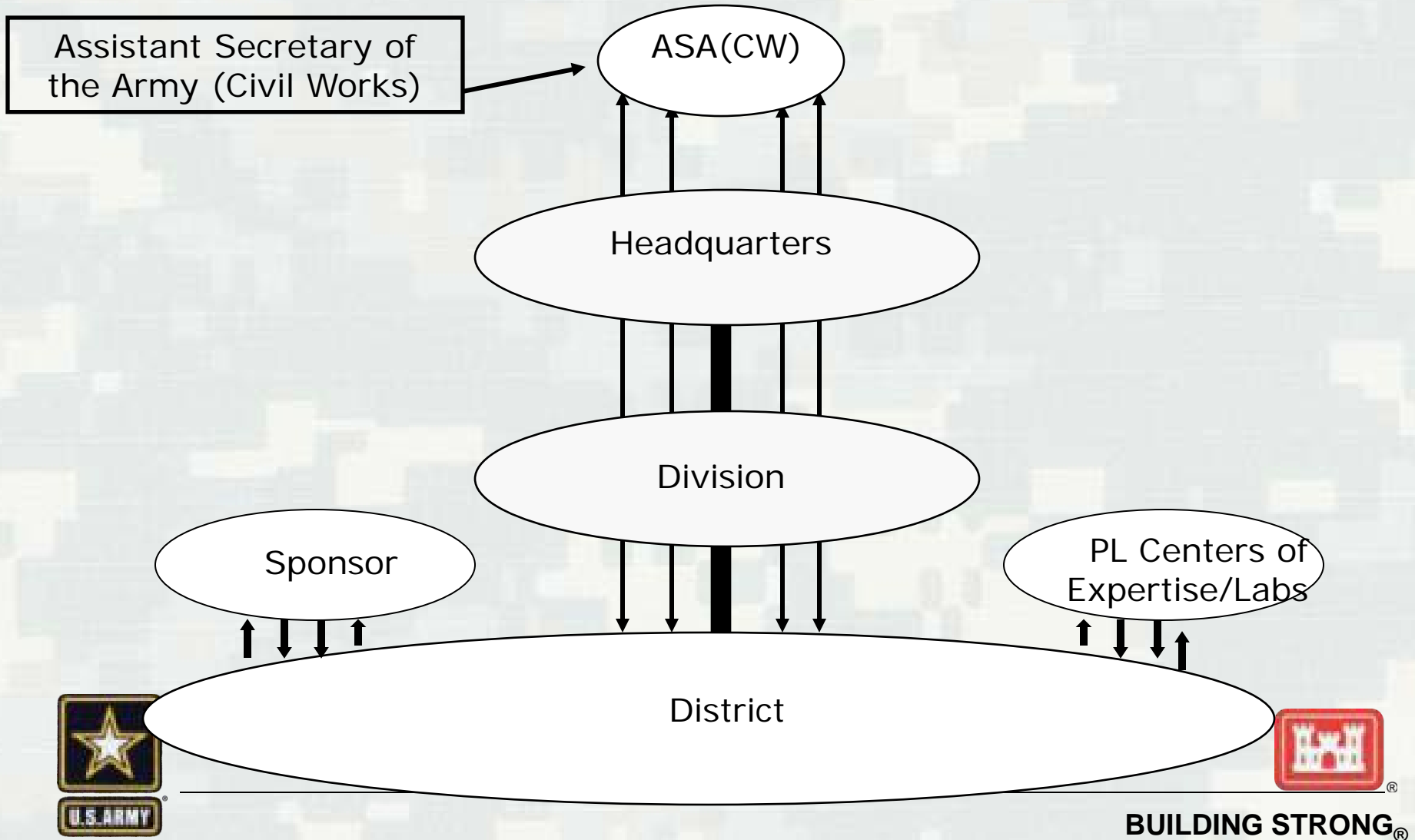
Published online at [www.corpsplanning.us](http://www.corpsplanning.us) – allows for timely content updates

- Planning guidance
- SMART Planning Tips & Tools
  - Tips for Highly Effective Studies
  - Business Line Guides
  - Risk Register Template
  - Decision Log
  - Report Synopsis Example
  - 100-Page Report Example
  - Review Primer
  - And more!



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# USACE Vertical Project Delivery Team (PDT)



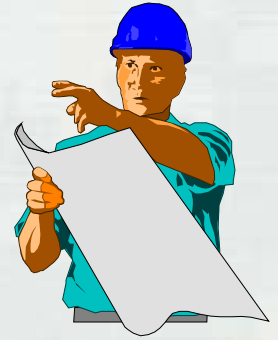
# District Horizontal PDT Elements



Programs & Project Management



The Team



Construction



Operations & Maintenance



Engineering



Planning



Real Estate & Counsel



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# District and Division Responsibilities

## DISTRICT

- Develop technically sound CW products and projects consistent with law and policy; on schedule; within budget.

## DIVISION (MSC)

- Assure quality of District products.
- Manage regional CW program; prioritize resources
- CAP Program Management



# Sponsor's Roles & Responsibilities

- Communication – needs, preferences, constraints
- Decision-making – go / no go
- Cost sharing
  - ▶ Feasibility – 50% (cash or in-kind)
  - ▶ PED – 25% cash
  - ▶ Construction - % varies, credit for LERRD's
- OMRR&R – forever
- PDT Member



# Sponsor's Roles & Responsibilities

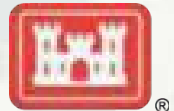
(cont'd)

- Political activities
  - ✓ Building state and local coalitions
  - ✓ Campaigning for tight state revenues
  - ✓ Working closely with Congressional Delegations
  - ✓ Participating in national associations
  - ✓ Engaging HQUSACE and ASA(CW)



# Non-Federal Cost Sharing

| <u>PROJECT PURPOSE</u>                | <u>COST SHARING (PERCENT)</u> |
|---------------------------------------|-------------------------------|
| Navigation                            | 20 %; depth 20'               |
| ♦ Harbors (includes<br>10% repayment) | 35 %; 20' < depth ≤ 45'       |
| ♦ Inland                              | 60 %; depth > 45'             |
|                                       | 50 % (IWTF)                   |
| Flood Control                         |                               |
| ♦ Structural                          | 35 % ≤ [5% cash + LERR] ≤ 50% |
| ♦ Nonstructural                       | 35 %                          |
| Hurricane & Storm<br>Damage Reduction | 35 %                          |
| Ecosystem Restoration                 | 35 %                          |
| Sec.1135 & 204                        | 25 %                          |



# Non-Federal Cost Sharing (continued)

| <b><u>PROJECT PURPOSE</u></b> | <b><u>COST SHARING (PERCENT)</u></b> |
|-------------------------------|--------------------------------------|
| Hydroelectric Power           | 100 %                                |
| Water Supply                  |                                      |
| ♦ Municipal & Industrial      | 100 %                                |
| ♦ Agricultural                | 35 %                                 |
| Recreation                    |                                      |
| ♦ Navigation                  | 50 %                                 |
| ♦ Other                       | 50 % of Separable Costs              |
| Aquatic Plant Control         | 50 %                                 |





# Initiating a Water Resources Project

*Local perception of water resources problem or opportunity*

*Contact local USACE District Office*

*Existing Authority to Investigate*

*No Current Authority to Investigate*

*Congressional Authority for Study*

*Potential Sponsor submits "Letter of Intent" to District*

*District requests funding in the President's budget and / or local sponsor requests Congressional delegate for Appropriations funding*

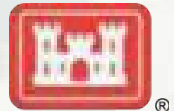
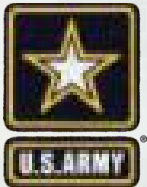
*When funding is appropriated, USACE District initiates study*



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# Implementing a Single Phase Feasibility Study

- All feasibility studies subject to “3x3” rule – expected study duration of 3 years; total study costs \$3 million
  - ▶ 3x3 compliant Feasibility Cost Share Agreement (FCSA) will be used to initiate study
  - ▶ Exemption process in place for complex and large scale studies that cannot meet 3x3 target, and considered after initiation of study
- Study work does not begin until FCSA is signed
- The Project Delivery Team (PDT) will develop a 3x3 compliant Project Management Plan (PMP) – or exemption request - by the Alternatives Milestone
- SMART Planning Process reinforces risk-informed decisions and early vertical engagement



# The Study Begins with the FCSA

- The feasibility study starts – and 3-year clock starts – when the Feasibility Cost Sharing Agreement (FCSA) is signed
  - ▶ Sponsors should work with local USACE District representatives to understand 3x3 model FCSA and importance of study's first 90 days
- What's new with the model FCSA (2015 update)
  - ▶ No Project Management Plan (PMP) is developed before FCSA is signed
  - ▶ Both USACE and the Sponsor assume some risk in agreeing to a general 3x3 compliant scope without a PMP
  - ▶ The time and cost estimates for the study PMP will be developed and verified during the Scoping phase



# Questions?

Becky Moyer  
Chief, Planning & Policy  
Southwestern Division

27 August 2015



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