USACE UPDATE FOR THE AMERICAN ASSOCIATION OF PORT AUTHORITIES

Thomas P. Smith, PE, SES
Chief, Operations and Regulatory
U.S. Army Corps of Engineers
Washington, D.C.
2 October 2019

Agenda:
• Leadership
• Budget/Appropriations
• Revolutionizing USACE
• Challenges
• Opportunities
• Questions
Historic Budget and Appropriations Trends

- **Appropriation Trends**
  - FY 2019 Appropriation: $6,998M
  - FY 2020 Budget: $4,827M

- **Budget Trends**

**CIVIL WORKS INVESTMENT TRENDS – REGULAR $**
(EXCLUDES $17.4B (FY 18) + $3.26B (FY 19) SUPPLEMENTAL FUNDING)

- **Historic Appropriations**
  - INVESTIGATIONS
  - O&M
  - REGULATORY
  - MR&T
  - GENERAL EXPENSE
  - CONSTRUCTION
  - FC&CE
  - HC&CE
  - ASA(CW)
  - HISTORIC APPROPRIATIONS
FY 2019 Civil Works Appropriation

Total: $6.998 Billion

by Account

Construction $2,183M
FUSRAP $150 M
Operation & Maintenance 3,739M
FUSRAP $120 M
Regulatory $198 M
Miss River & Tribs $368 M
Investigations $125 M

by Business Line

Navigation, Coastal $2,046 M
Navigation, Inland $1,249 M
Emergency Management $40 M
Water Supply $12 M
Flood Damage Reduction $1,965 M
Hydropower $218 M
Recreation $260 M
Environmental $610 M

** Includes Office of Asst. SecArmy (Civil Works)
<table>
<thead>
<tr>
<th>Year</th>
<th>Investigations</th>
<th>Construction</th>
<th>O&amp;M</th>
<th>MR&amp;T</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 20 Approp</td>
<td>*** No FY20 Appropriation Bill as of October 2, 2019 ***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY 20 Budget</td>
<td>$14</td>
<td>$625</td>
<td>$1,635</td>
<td>$34</td>
<td>$2,308</td>
</tr>
<tr>
<td>FY 19 Approp</td>
<td>$41</td>
<td>$816</td>
<td>$2,365</td>
<td>$74</td>
<td>$3,296</td>
</tr>
<tr>
<td>FY 19 Budget</td>
<td>$14</td>
<td>$176</td>
<td>$1,706</td>
<td>$33</td>
<td>$1,930</td>
</tr>
<tr>
<td>FY 18 Approp</td>
<td>$39</td>
<td>$757</td>
<td>$2,207</td>
<td>$94</td>
<td>$3,097</td>
</tr>
<tr>
<td>FY 18 Budget</td>
<td>$19</td>
<td>$310</td>
<td>$1,717</td>
<td>$52</td>
<td>$2,098</td>
</tr>
<tr>
<td>FY 17 Approp</td>
<td>$38</td>
<td>$644</td>
<td>$1,937</td>
<td>$51</td>
<td>$2,670</td>
</tr>
<tr>
<td>FY 17 Budget</td>
<td>$22</td>
<td>$348</td>
<td>$1,527</td>
<td>$37</td>
<td>$1,934</td>
</tr>
<tr>
<td>FY 16 Approp</td>
<td>$37</td>
<td>$580</td>
<td>$1,946</td>
<td>$47</td>
<td>$2,610</td>
</tr>
<tr>
<td>FY 16 Budget</td>
<td>$25</td>
<td>$321</td>
<td>$1,563</td>
<td>$38</td>
<td>$1,947</td>
</tr>
</tbody>
</table>
Recent Robust Congressional Investment
Making a Difference

- Recent Civil Works Appropriations: Historic Levels of Public Infrastructure Investment ➔ Tremendous Impacts on the Ground

- Between FY17 – FY19 Appropriations and FY 20 President’s Budget:
  - Invested $16.5B in Construction, + $6B Matching Sponsor Funds
  - 16 New Construction Projects Started
  - 43 Ongoing Construction Projects Funded to Completion (i.e. Olmsted L&D; Lower Mon L&D, etc)
  - Allowed Acceleration of Other Important Ongoing Projects
  - Enabled Record Levels of Investment for Critical Operations and Maintenance Activities on Corps Infrastructure

- Investment Results: Reduced Risks, Improved Infrastructure Performance and More Positive Economic Impacts for the Nation
### U.S. Army Corps of Engineers (Civil Works) Appropriations

(Thousands of dollars. We have changed the presentation of the FY20 request to assign HMTF and IWTF funding to individual accounts (Construction, MRS, O&M) as was done in prior years.)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigations</td>
<td>121,000</td>
<td>123,000</td>
<td>125,000</td>
<td>77,000</td>
<td>135,000</td>
<td>154,880</td>
<td>+29,880</td>
<td>+19,880</td>
</tr>
<tr>
<td>Construction</td>
<td>1,876,000</td>
<td>2,085,000</td>
<td>2,183,000</td>
<td>1,244,000</td>
<td>2,337,000</td>
<td>2,795,148</td>
<td>+612,148</td>
<td>+458,148</td>
</tr>
<tr>
<td>Mississippi River System</td>
<td>362,000</td>
<td>425,000</td>
<td>368,000</td>
<td>215,000</td>
<td>350,000</td>
<td>368,000</td>
<td>0</td>
<td>+18,000</td>
</tr>
<tr>
<td>Operation and Maintenance</td>
<td>3,149,000</td>
<td>3,630,000</td>
<td>3,739,500</td>
<td>2,872,000</td>
<td>3,923,000</td>
<td>3,798,972</td>
<td>+59,472</td>
<td>-124,028</td>
</tr>
<tr>
<td>Regulatory Program</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
<td>200,000</td>
<td>210,000</td>
<td>200,000</td>
<td>0</td>
<td>-10,000</td>
</tr>
<tr>
<td>Former Nuclear Sites Cleanup*</td>
<td>112,000</td>
<td>139,000</td>
<td>150,000</td>
<td>0</td>
<td>155,000</td>
<td>200,000</td>
<td>+50,000</td>
<td>+45,000</td>
</tr>
<tr>
<td>Flood Control / Coastal Emergencies</td>
<td>32,000</td>
<td>35,000</td>
<td>35,000</td>
<td>27,000</td>
<td>37,500</td>
<td>35,000</td>
<td>0</td>
<td>-2,500</td>
</tr>
<tr>
<td>Expenses</td>
<td>181,000</td>
<td>185,000</td>
<td>193,000</td>
<td>187,000</td>
<td>203,000</td>
<td>193,000</td>
<td>0</td>
<td>-10,000</td>
</tr>
<tr>
<td>Office of the Asst. Secretary</td>
<td>4,764</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total, USACE (Civil Works)</strong></td>
<td><strong>6,037,764</strong></td>
<td><strong>6,827,000</strong></td>
<td><strong>6,998,500</strong></td>
<td><strong>4,827,000</strong></td>
<td><strong>7,355,500</strong></td>
<td><strong>7,750,000</strong></td>
<td><strong>+751,500</strong></td>
<td><strong>+394,500</strong></td>
</tr>
</tbody>
</table>

**Portion of Appropriation from HMTF**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,301,000</td>
<td>1,399,000</td>
<td>1,550,000</td>
<td>965,000</td>
<td>1,697,000</td>
<td>1,670,000</td>
<td>+170,000</td>
<td>-27,000</td>
</tr>
</tbody>
</table>

*The Budget proposes that the Energy Department take over funding for cleaning up former nuclear weapons production sites - the Corps would still conduct the work, but DOE would then reimburse the Corps for all expenses - so no appropriations for this account are being requested in the Corps budget.

Summary reported by https://www.enotrans.org/article/senate-panel-oks-7-75b-for-corps-of-engineers-in-fy20/
START AND FINISH PROJECTS FASTER

ACCELERATE PROJECT DELIVERY

1. Project Delivery Strategies
2. Acquisition Processes and Tools
4. Innovation

LEVERAGE NEW TOOLS/PROCESSES

1. Alternative Financing Tools
   - WIFIA Loans
   - P3 Pilot Program
2. Civil Works Budgeting
3. Funding Flexibilities

STREAMLINE; ELIMINATE DUPLICATION

1. Environmental Reviews and Permits
2. Mitigation
3. Permitting Processes
4. Regulation Reform

REVOLUTIONIZE USACE CIVIL WORKS
USACE Navigation System

Provide safe, reliable, efficient, effective and environmentally sustainable waterborne transportation systems for movement of national security needs, commerce, and recreation.

- U.S. Marine Transportation Industry Supports ~ $2 Trillion in Commerce Annually
- More than 48% of Consumer Goods Bought by Americans Pass Through Harbors Maintained by Corps.
- Over 1.3 Billion Short Tons of Foreign Goods Moved Through U.S. Ports/Waterways in 2015
- Over 900 Million Short Tons of Domestic Goods Moved Thru U.S. Ports/Waterways in 2015
- 15% of U.S. Domestic Freight Carried by Water
- 239 Lock Chambers at 193 sites
- 13,000 Miles of Coastal and Deep Draft Channels
- 12,000 Miles of Commercial Inland and Intracoastal Waterways
- 1,067 Coastal, Great Lakes and Inland Harbors
- 40 States are directly served by USACE Channels & Waterways

Provide safe, reliable, efficient, effective and environmentally sustainable waterborne transportation systems for movement of national security needs, commerce, and recreation.

- U.S. Marine Transportation Industry Supports ~ $2 Trillion in Commerce Annually
- More than 48% of Consumer Goods Bought by Americans Pass Through Harbors Maintained by Corps.
- Over 1.3 Billion Short Tons of Foreign Goods Moved Through U.S. Ports/Waterways in 2015
- Over 900 Million Short Tons of Domestic Goods Moved Thru U.S. Ports/Waterways in 2015
- 15% of U.S. Domestic Freight Carried by Water
- 239 Lock Chambers at 193 sites
- 13,000 Miles of Coastal and Deep Draft Channels
- 12,000 Miles of Commercial Inland and Intracoastal Waterways
- 1,067 Coastal, Great Lakes and Inland Harbors
- 40 States are directly served by USACE Channels & Waterways
Post-Panamax Port Projects/Studies

Legend:
- Construction Underway (7)
- Study/PED Underway (15)
- Authorized/Not Complete (14)
- Current Depth

Harbor Maintenance Trust Fund – Vital to Coastal Ports

Last Updated: 19 Aug 2019
CONSTRUCTION IN FY 20 BUDGET

$10 M or more. Actual funding for these and other projects to be determined in FY 20

Numbers in circles = $million budgeted
### Lower Mississippi River Forecast Center

**Historic High Water Duration = Historic Shoaling**

#### Consecutive Days Above Flood Stage

<table>
<thead>
<tr>
<th>Forecast Location</th>
<th>Record (Days/Year)</th>
<th>2019 (Days/Period)</th>
<th>2011 (Days)</th>
<th>1973 (Days)</th>
<th>1927 (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cairo, IL</td>
<td>156 2019</td>
<td>156 Feb 8th – Jul 13th 59</td>
<td>97</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>Memphis, TN</td>
<td>65 1927</td>
<td>39 Feb 19th – Mar 29th 35</td>
<td>64</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Arkansas City, AR</td>
<td>197 1927</td>
<td>94 Apr 16th – Jul 19th 44</td>
<td>72</td>
<td>197</td>
<td></td>
</tr>
<tr>
<td>Greenville, MS</td>
<td>155 2019</td>
<td>155 Feb 17th – Jul 21st 46</td>
<td>71</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>Vicksburg, MS</td>
<td>185 1927</td>
<td>162 Feb 17th – July 28th 48</td>
<td>83</td>
<td>185</td>
<td></td>
</tr>
<tr>
<td>Natchez, MS</td>
<td>215 2019</td>
<td>215 Jan 4th – August 6th 53</td>
<td>90</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Red River Landing, LA</td>
<td>227 2019</td>
<td>227 Dec 27th – August 10th 59</td>
<td>95</td>
<td>152</td>
<td></td>
</tr>
<tr>
<td>Baton Rouge, LA</td>
<td>211 2019</td>
<td>211 Jan 6th – August 4th 79</td>
<td>99</td>
<td>135</td>
<td></td>
</tr>
</tbody>
</table>

**DATA PROVIDED BY U.S. ARMY CORPS OF ENGINEERS**

**Numbers in Red are records for this year**

**Data as of August 12th, 2019**
NAVIGATION CHALLENGES 2019

SOUTHWEST PASS

TENN-TOM

UPPER MISSISSIPPI – Lock #1

MKARNS:

Webbers Falls
Growing dredging requirements and increasing cost present strategic risk.
OLMSTED LOCKS & DAM
Importance of Inland Waterways to U.S. Agriculture
Analyzing Three Investment Scenarios
August 2019

America’s Heartland Requires a Reliable Transportation Corridor

Density of U.S. Corn and Soybean Production Areas in Proximity to the Navigable Waterways on the Mississippi River System Depicted in Map
CAPITAL INVESTMENT OPPORTUNITIES

Gulf Intracoastal Waterway - Calcasieu Locks - Brazos Floodgates - IHNC - Bayou Sorrel

Illinois Waterway L&Ds - LaGrange - Peoria - TJ O’Brien - Dresden Island

Upper Mississippi L&Ds - 25, 24, 22, 21, 20

Upper Ohio L&Ds - Montgomery - Emsworth - Deshields

Ohio River L&Ds - JT Myers - Greenup - Marmet

Three Rivers
Purpose: to solicit and secure a base hopper dredging capability for the SWP during periods of typical high demand, thereby:

- Reinforce our priority on SWP navigation
- Provide predictability to our enterprise program,
- Enable better communication with our stakeholders, and
- Provide clarity on a critical part of our program to our dredging partners.
REGIONAL DREDGE DEMONSTRATION PROGRAM

Significant—and occasionally even historic—storm events continue to occur across the nation, impacting critical Federal commercial navigation projects throughout the United States. Those impacts have been particularly acute across the Gulf Coast region as significant and prolonged shoaling patterns resulting from these recurring storm events continue to degrade Federal navigation channel conditions and adversely impact commercial deep draft navigation. The goal of the Regional Demonstration Program is to minimize disruption to the delivery of the dredging mission, and of the vital cargo which depends on execution of this mission across the Nation, as a result of the significant shoaling in the Gulf region.

The combination of extensive additional shoaling from recurring storm events on top of significant routine annual dredging demands have resulted in high utilization rates for U.S. Hopper dredging assets in recent years, including both industry and Corps dredges. High hopper dredge utilization rates have resulted in limited dredge availability for nationally significant dredging projects in recent years, in some cases critically impacting the acquisition process, particularly in the case of the Southwest Pass of the Mississippi River Baton Rouge to Gulf project. Corps dredging operations are typically planned, executed, and funded on a project-by-project basis, in an incremental fashion, on an annual cycle. To respond more effectively to critical national dredging requirements resulting from these significant recurring storm events, in combination with routine annual dredging demands, the Corps shall execute a multi-year dredging demonstration program within the Central Gulf Coast Region.

Key features of the program will explore innovative ways of executing dredging in a logical, sequenced manner, unconstrained by more traditional project-specific, account-specific, or single year restrictions. The demonstration program will leverage multi-year funding and will propose to test new approaches and concepts for constructing and maintaining deep draft harbors and waterways in a more flexible and efficient manner. The program will also seek efficiencies and cost savings by evaluating the region as a system in order to properly determine when combining work across multiple deep draft commercial navigation projects, across years, or across Construction and Operations & Maintenance (O&M) accounts is appropriate. Considering the increasingly common recurrences of annual requirements for emergency dredging at the Southwest Pass, as well as the uncertainty that this response places on other dredging projects being executed by the U.S. Nopper fleet across the entire Gulf Coast and Eastern seaboard, the Corps shall establish a regional demonstration program, focused on the central Gulf Coast. By including the Mississippi River Baton Rouge to Gulf (Southwest Pass) and other nearby Gulf Coast commercial navigation projects, goals of the program will include being more responsive to dredging demands within the region, while minimizing disruption to critical construction and maintenance dredging requirements enterprise wide.

To demonstrate the described multi-year efficiencies, the Committee recommends $525,000,000 in a Regional Dredge Demonstration Program funding pot in the Construction account to be used for deep draft navigation projects in the Gulf of Mexico, between Louisiana and Florida. Further, additional funding has been recommended in the O&M account to support the Gulf of Mexico demonstration projects.

—Improved project schedules/faster construction execution at the demonstration projects;
—Fewer disruptions to other projects across the enterprise due to emergencies at the Southwest Pass (putting dredges off projects);
—Fewer or no bid busts (bid higher than the Independent Government Estimate by 25%) for the demonstration projects;
—Reduced cost per cubic yard at the demonstration projects and/or across the enterprise for hopper dredge contracts;
—Efficiency of contract award process at the demonstration projects; and
—Fewer “no bid” responses at Mississippi River Baton Rouge t
Selected Navigation Activities

- Dredge Scheduling/Optimization/ Dredge Data Pilot
- Regional Dredge Contracting*
  - SWP 2020
  - Proposed Demonstration Program
- USACE Reserve Fleet:
  - Dredge McFarland Recapitalization
  - Management and Operations Review
- Beneficial Use of Dredge Material
- Federal Standard
- Capital Investment Strategy
- Subchapter M Implementation

*USACE has regional contracts for dredging in several regions, this item refers to expanded approaches
THANK YOU