

Transforming the Corps of Engineers to Meet Today's Needs

American Association of
Port Authorities

MG John Peabody, P.E.

Deputy Commanding General for
Civil and Emergency Operations,
U.S. Army Corps of Engineers

25 March 2014



USACE Priorities



➤ ***Support the Warfighter***

➤ ***Transform Civil Works***



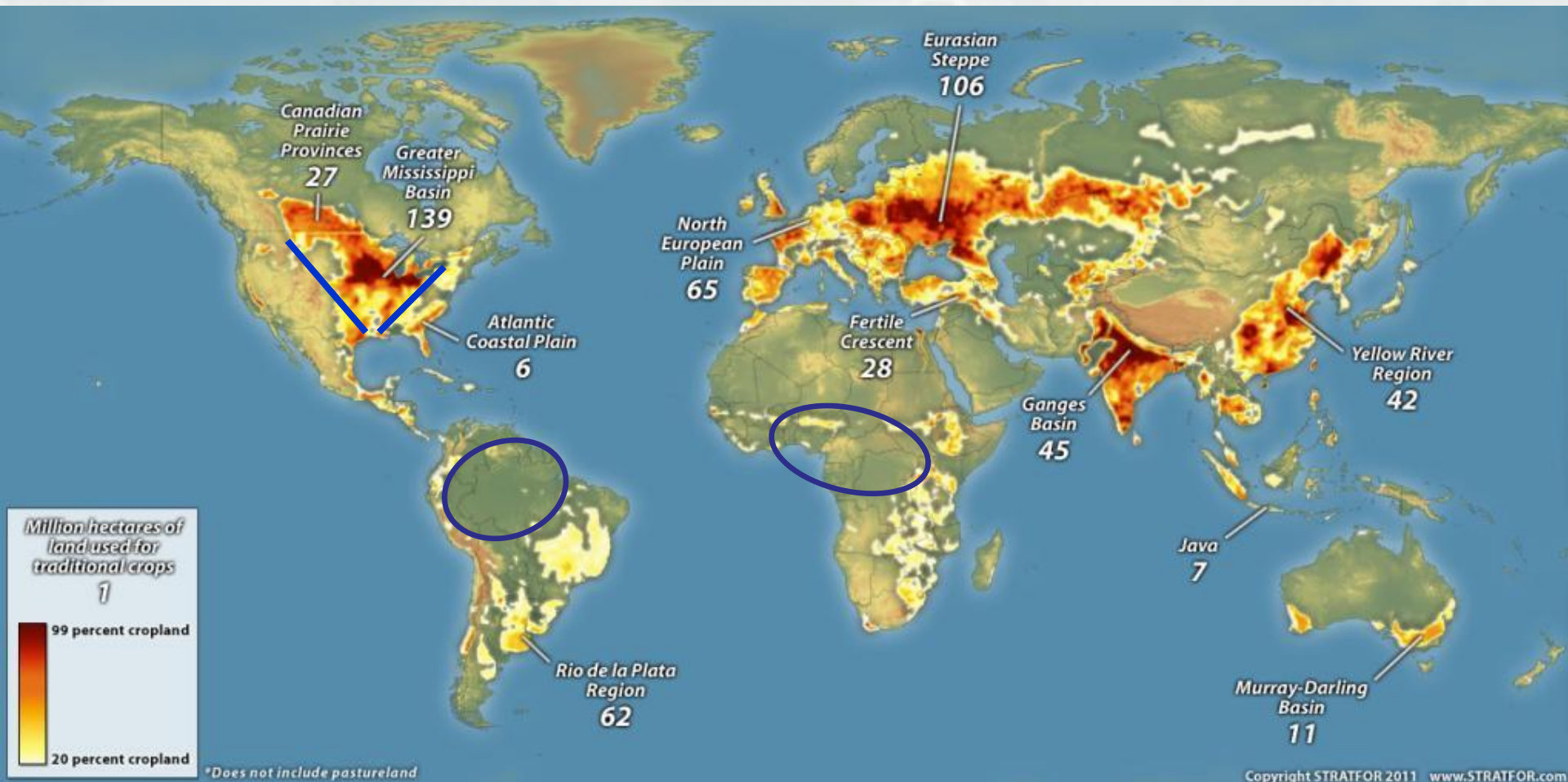
➤ ***Respond to Disasters***

➤ ***Prepare for Tomorrow***

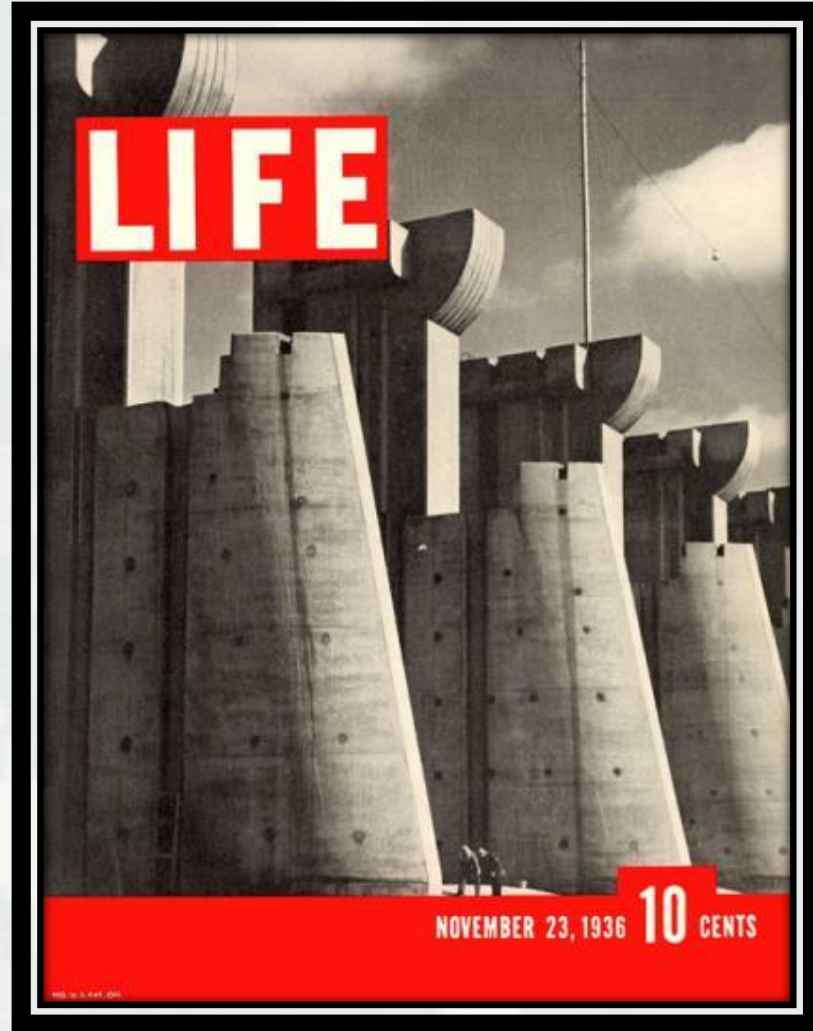


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Global Agricultural Zones and the Basis for US Greatness



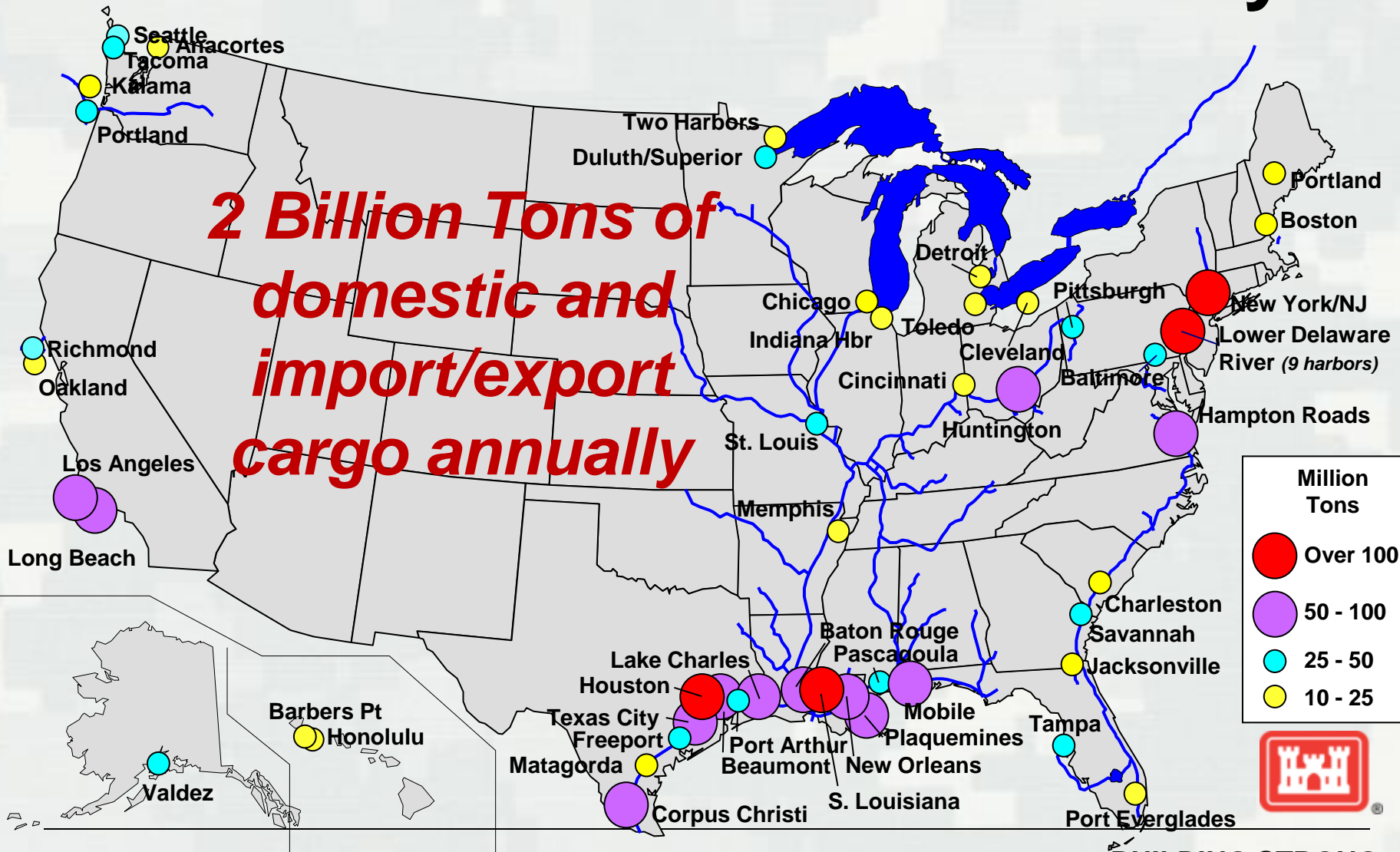
The 20th Century “Golden Age” of Infrastructure Construction



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U.S. Ports and Inland Waterways: Vital to our National Economy

***2 Billion Tons of
domestic and
import/export
cargo annually***



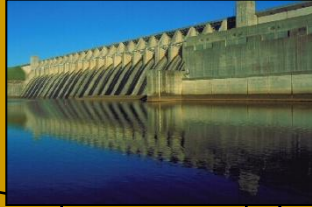
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USACE Contributions to the Economy and the Environment

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



~12,700 Miles of
Levees



Stewardship of
11.7 Million Acres
Public Lands



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

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USACE CW's Economic Benefits & Revenues to the Treasury

2010

**Each dollar spent on the USACE Civil Works program generated
~ \$9.00 in economic benefits and \$2.70 in revenues to the U.S. Treasury.**

Program	NED Benefits (Billions of Dollars)	Net NED Benefits (Billions of Dollars)	U.S. Treasury Revenues (Billions of Dollars)
Flood Risk Management	\$23.1	\$22.5	\$7.3
Coastal Navigation	\$8.7	\$7.9	\$3.3
Inland Navigation	\$7.6	\$7.0	\$1.9
Water Supply	\$6.5	\$6.5	\$0.1
Hydropower	\$2.2	\$2.0	\$1.1
Recreation	\$3.3	\$3.0	\$1.1
Leases and Sales			\$0.1
Total Annual NED	\$51.4	\$48.9	\$14.8

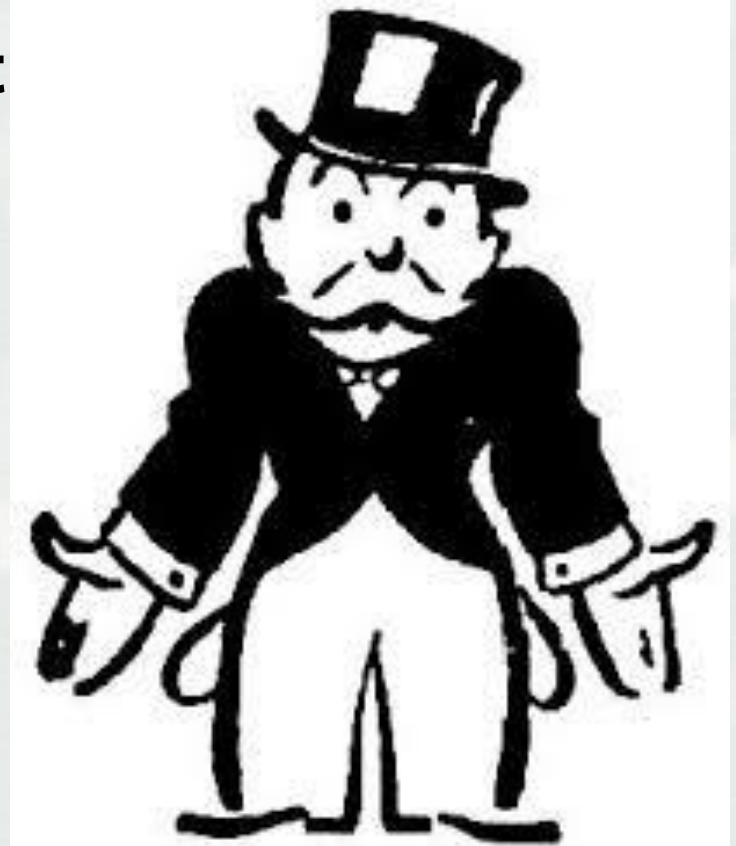
Notes:

- (1) Net NED Benefits represent total NED benefits minus the costs of operations, maintenance, expenses, the USACE Regulatory program, FUSRAP, oversight by ASA(CW) and other USACE Civil Works programs.
- (2) ~~The Benefits and Revenues numbers are not additive.~~

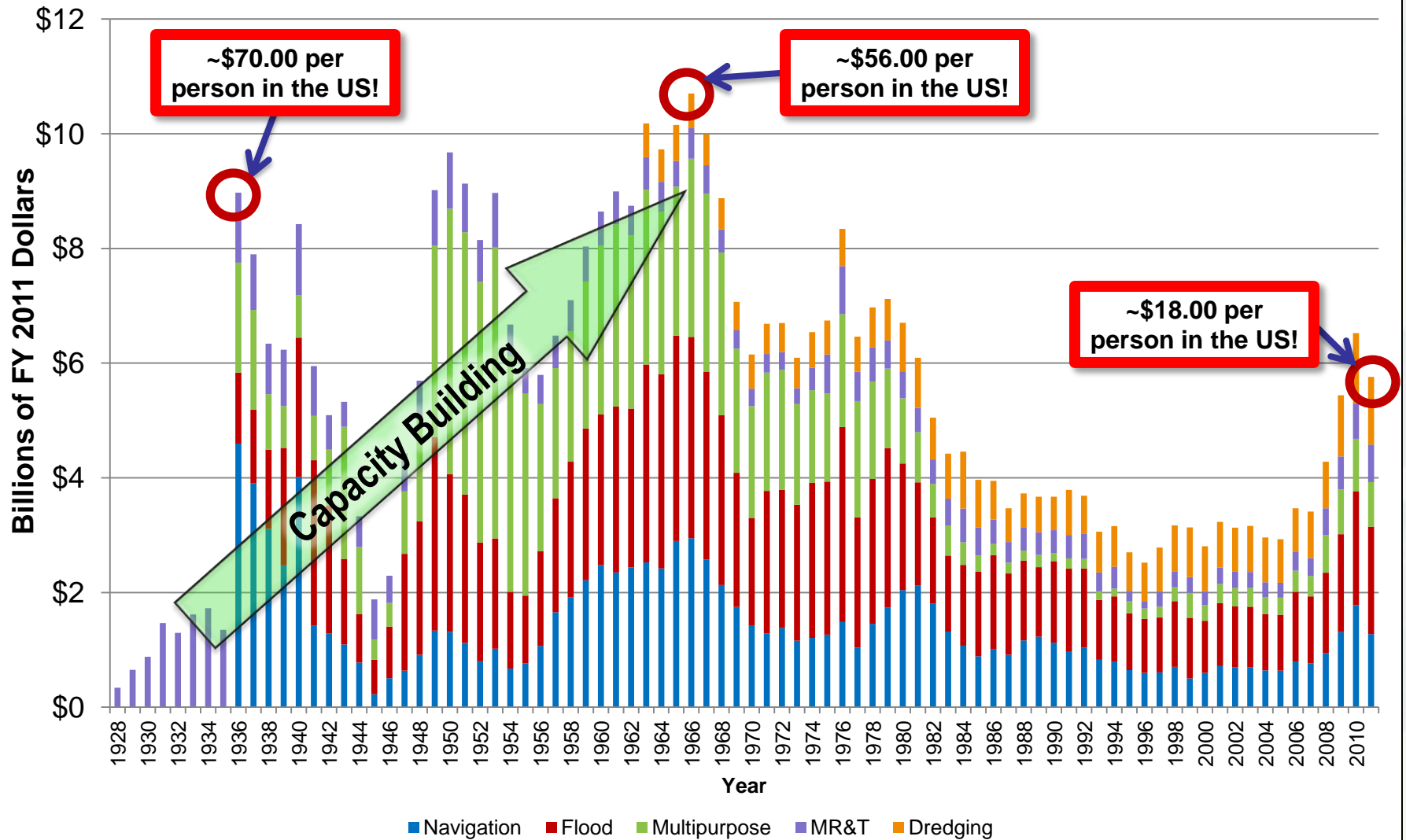


Current Environment

- ▶ **WRDA & Reform**
- ▶ **Non-Earmark Environment**
- ▶ **Budget Cuts**
- ▶ **Travel cuts/meeting attendance**
- ▶ **Downsizing**
- ▶ **Debt Limit**
- ▶ **Governance Turmoil**

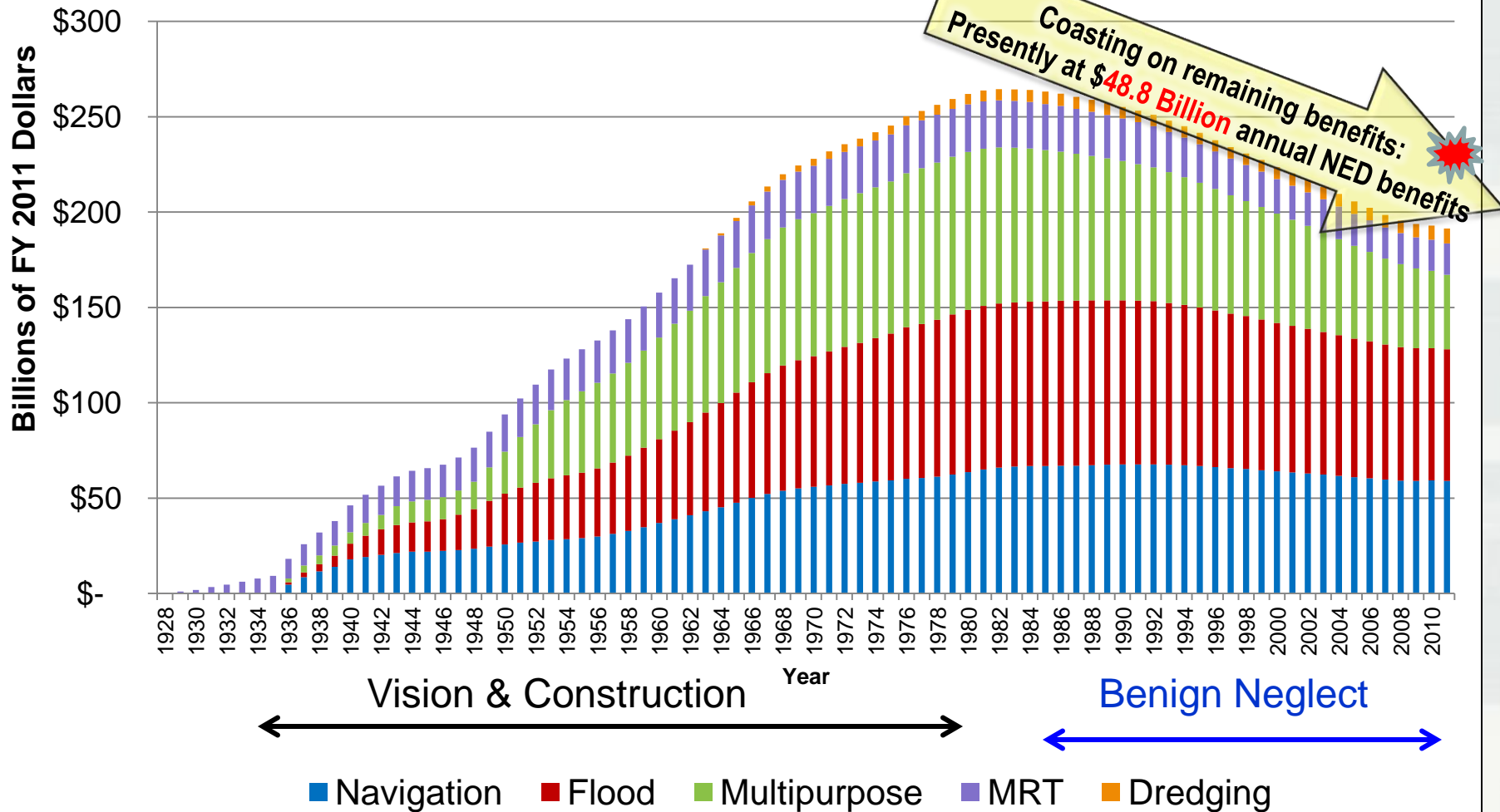


Historical Investments by USACE Functional Category 1928 to 2011



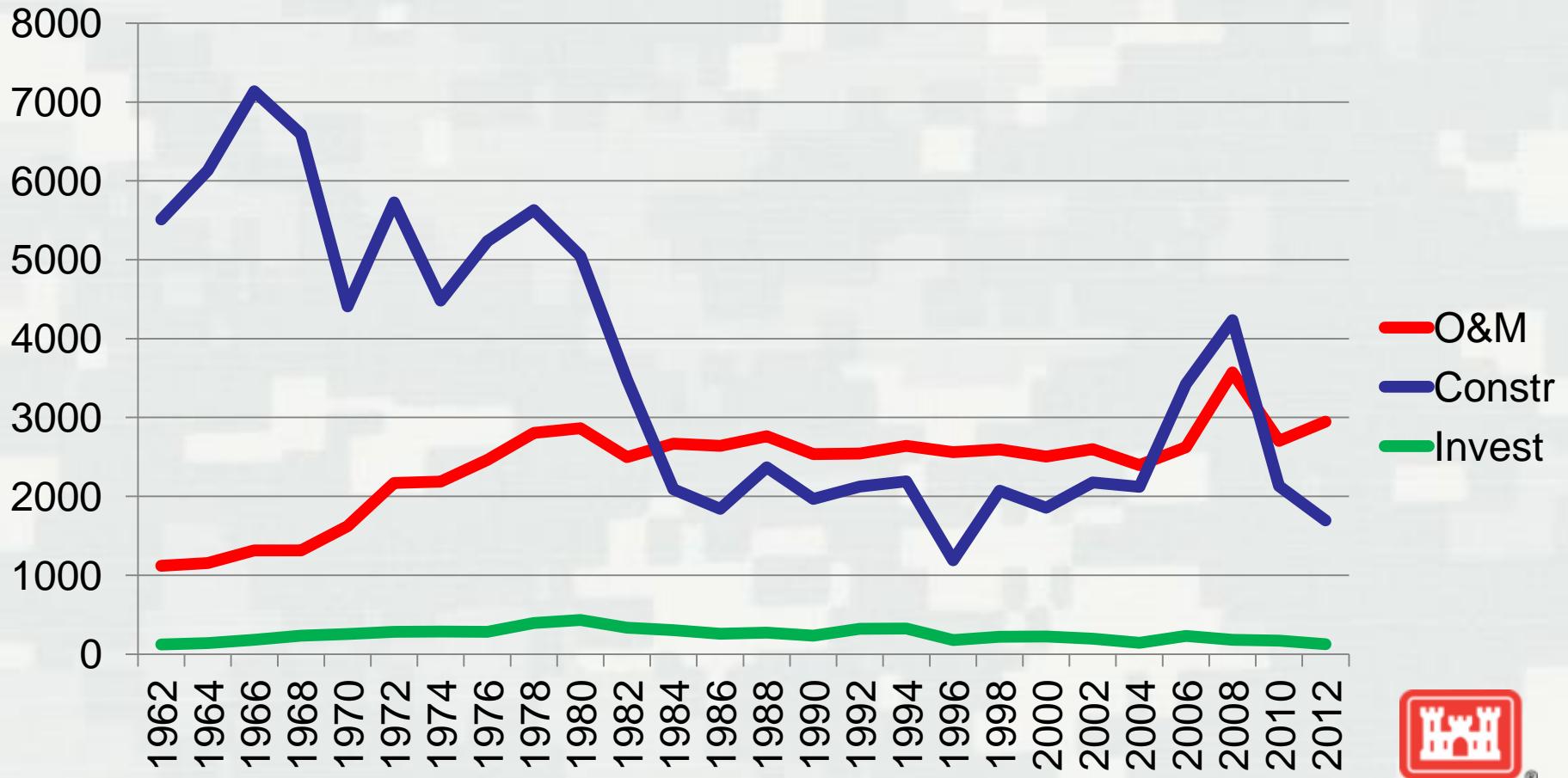
USACE Capital Stock Value by Functional Category 1928 to 2011

1983 Peak ~ \$250B
2009 ~ \$165B



Long Term Civil Works Funding Trends

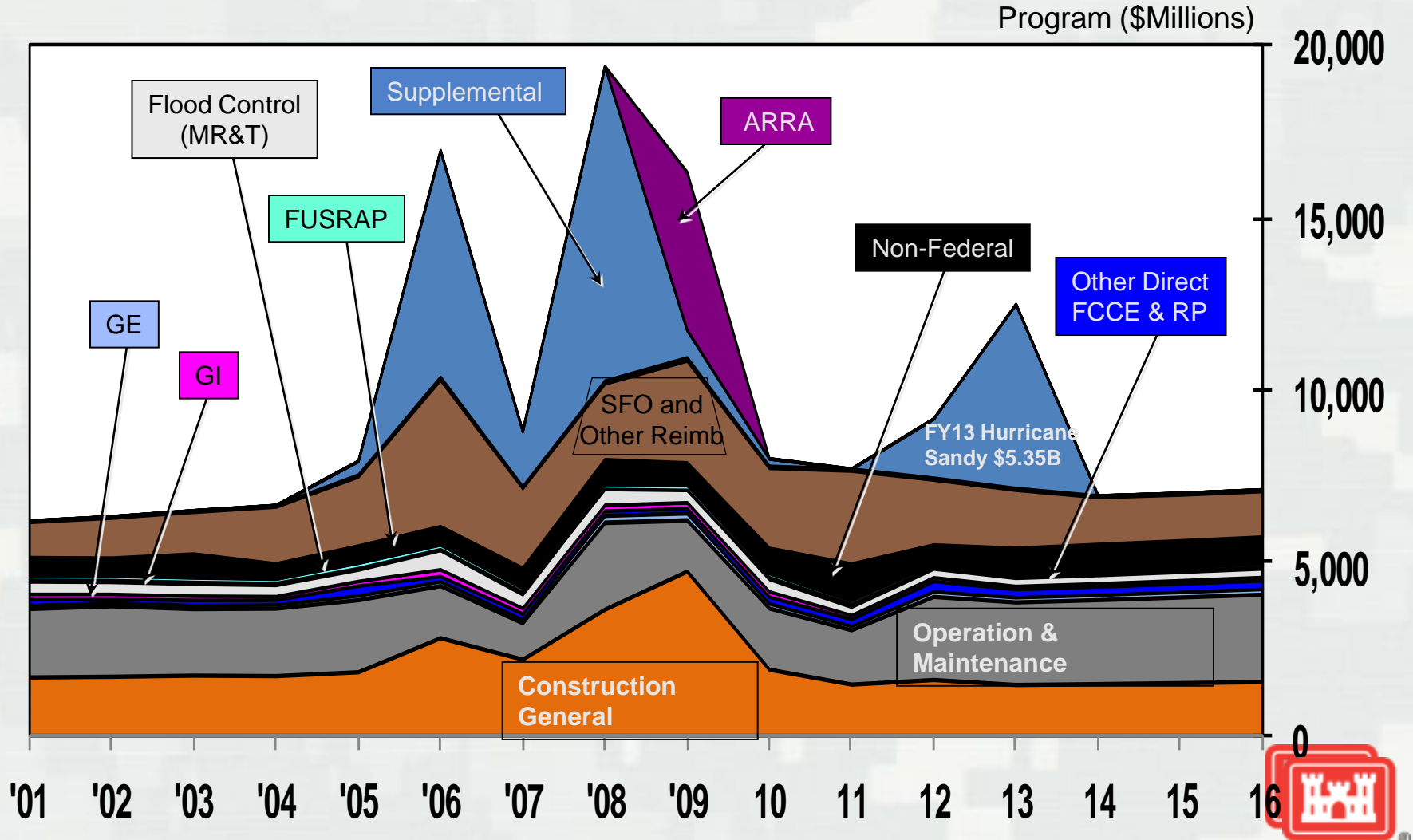
Appropriation (\$Million in 2012 \$)



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Civil Works Program Trends

FY01-16



CW Program (by Account)

(\$ Millions)

Account	FY2013 Budget	FY 2013 Approp. (after Sequestration)	FY2014 Budget	FY 2014 Omnibus Appropriation	FY 2015 Budget
Construction	1471	1587	1350	1656	1125
O&M	2398	2287	2588	2861	2600
MR&T	234	238	279	307	245
Regulatory	205	182	200	200	200
FUSRAP	104	100	104	103	100
Investigations	102	119	90	125	80
FCCE	30	26	28	28	28
Expenses	182	175	182	182	178
OASA (CW)	5	5	5	5	5
Total	4731	4719	4826	5467	4561
Proposed Rescission			-100		-28



Breakouts of \$777M Funding Pots

By Business Program

- Navigation: \$387 million
- Flood Risk Management: \$255 million
- Other Authorized Project Purposes: \$135 million

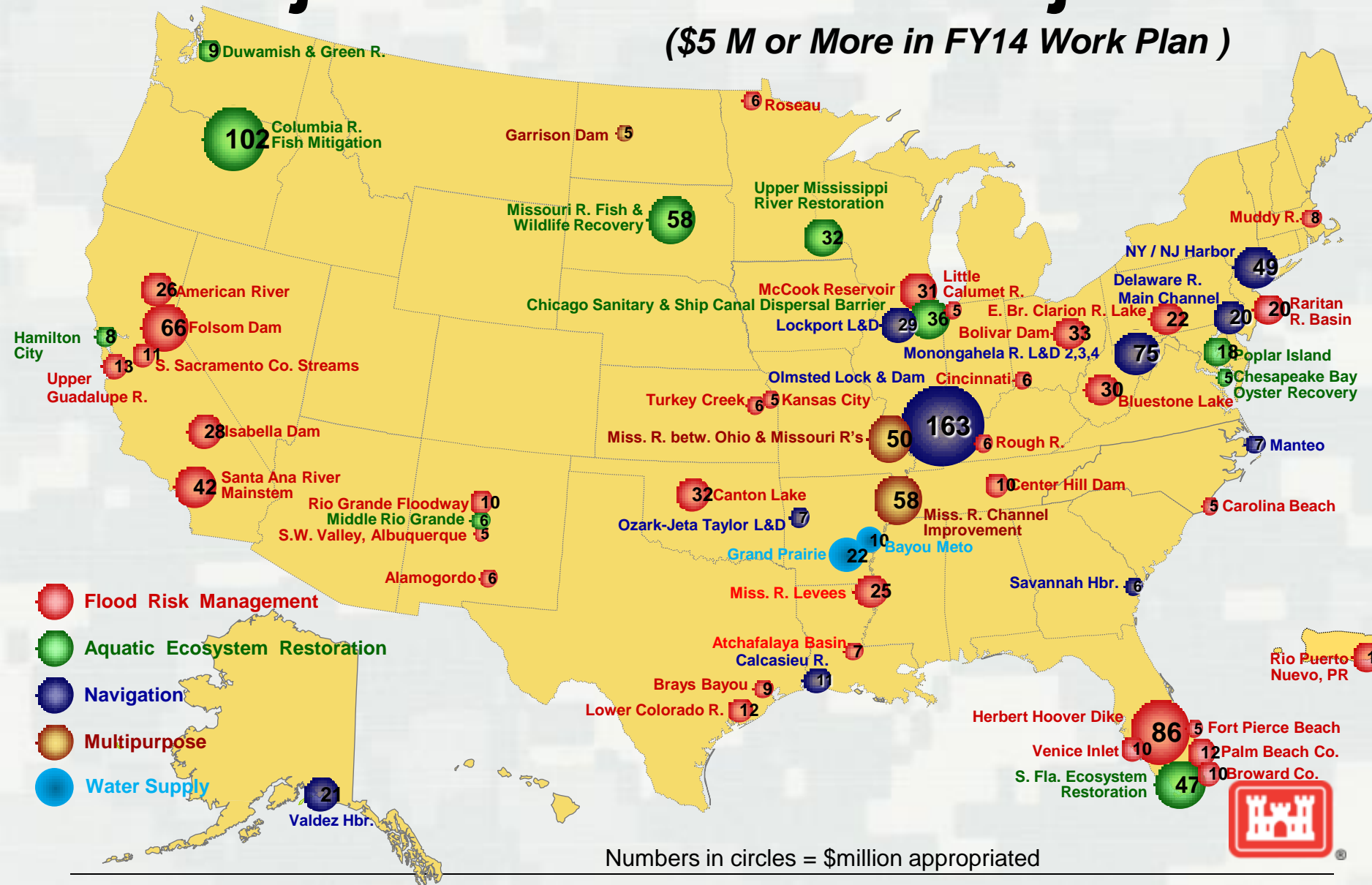
By Account

- Investigations: \$ 41 million
- Construction: \$437 million
- MR&T: \$ 28 million
- O&M: \$271 million



Major Construction Projects

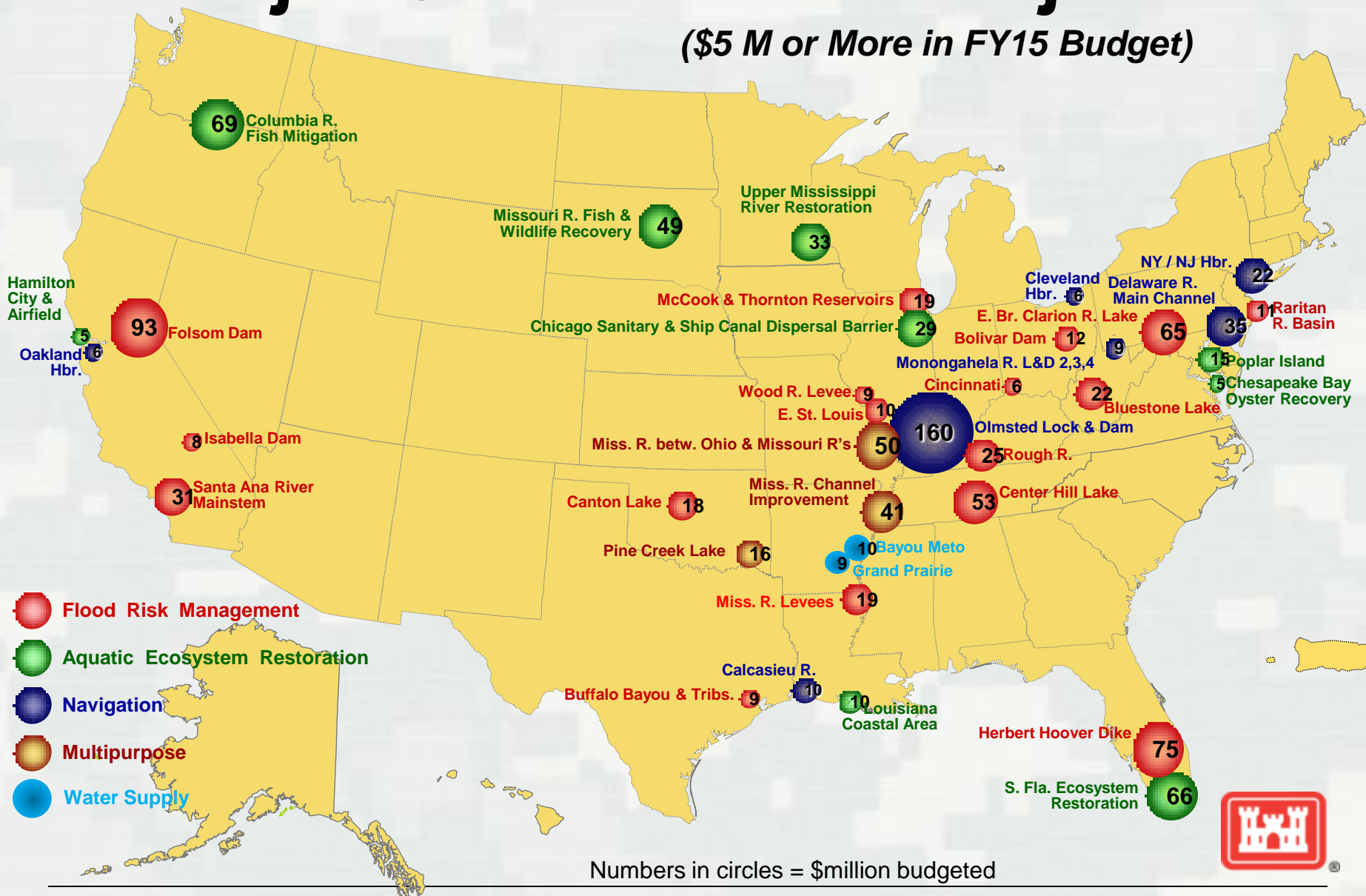
(\$5 M or More in FY14 Work Plan)



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Major Construction Projects

(\$5 M or More in FY15 Budget)



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Moving National Infrastructure Policy

**Senate Water Resources
Development Act (S.601)**
Passed 15 May 2013,
Vote 83-14

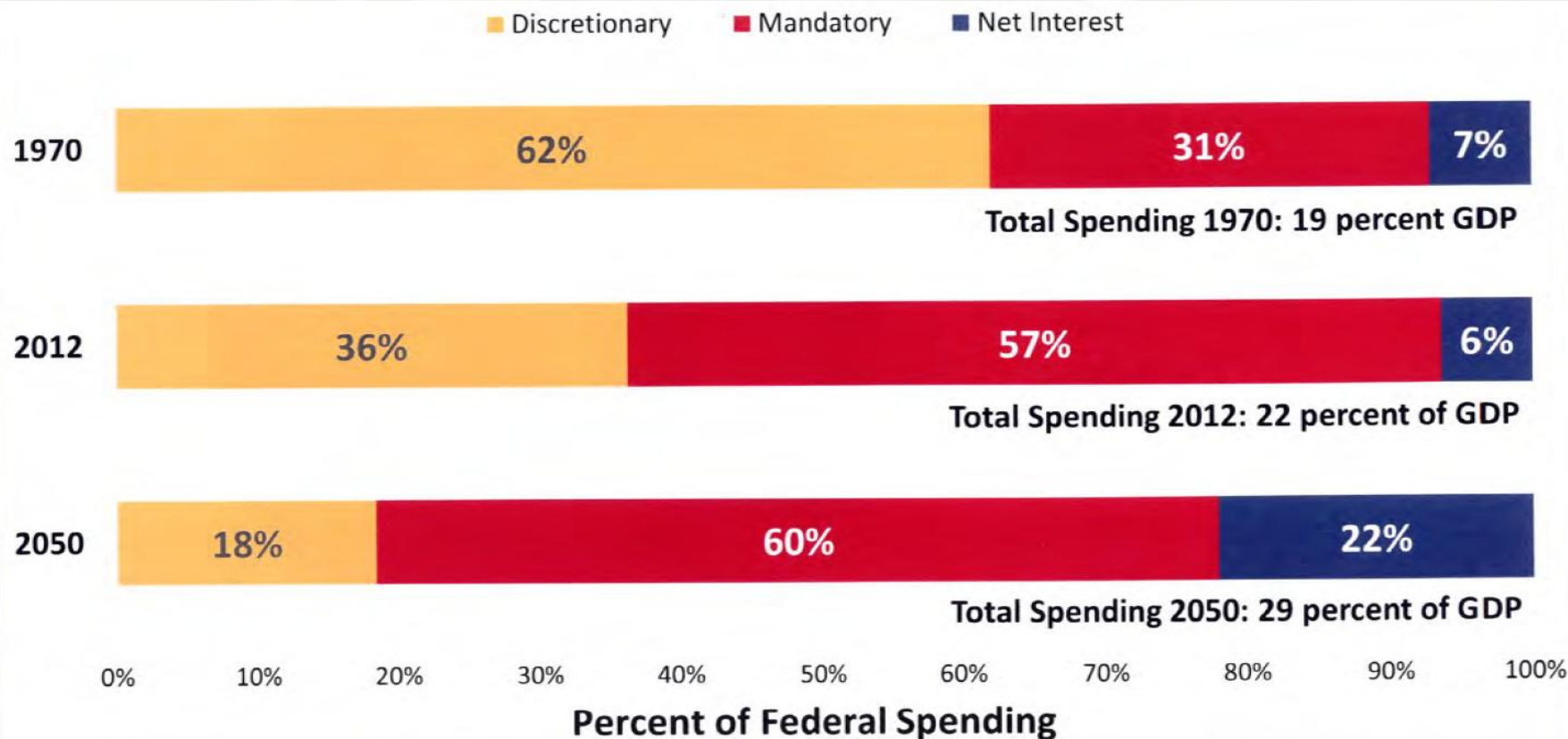
**House Water Resources Reform
& Development Act (H.R. 3080)**
Passed 23 October 2013,
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Reforms:

- Limit feasibility studies to 3 years, \$3 M
- Penalty for agencies failing to render decisions within 180 days of Corps completion of NEPA process.
- Credit for nonfederal entities building flood damage reduction projects
- Pilot program for nonfederal construction
- Minimum annual HMTF spending, moving toward total annual HMTF receipts and interest.
- Use of certified project managers, risk-based cost estimates, acquisition procedures and best management practices.
- Inland Waterways User Board to meet at least twice a year.
- Encourages development of hydropower generation at existing Corps projects.
- Amends the Planning Assistance to States program to include levee safety.
- Re-issued regulations regarding vegetation on levees



Mandatory Spending Crowds Out Everything Else



SOURCE: Data from the Congressional Budget Office, *Updated Budget Projections: Fiscal Years 2013 to 2023*, May 2013; the Congressional Budget Office, *The Long-Term Budget Outlook*, September 2013; Office of Management and Budget, *Budget of the United States Government, Fiscal Year 2014*, April 2013; and Bureau of Economic Analysis.

NOTE: Projections are based on CBO's extended baseline scenario. GDP is based on estimates following July 2013 revision. Mandatory programs include Social Security, major federal health programs, other entitlement programs and offsetting receipts.



Our Nation's Infrastructure GPA:

D+

Roads



Railways



Runways



Rivers



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Aging Water Resources Infrastructure

- Half of Locks 50+ Years Old
- Average Age 62 Years Old

Crumbling lock wall, Lower Monongahela L&D 3, opened 1907



Leaking Miter Gates, Upper Miss Lock 19



Concrete deterioration at Chickamauga Lock and Dam Project, Tenn.



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Lockport Canal, Illinois River



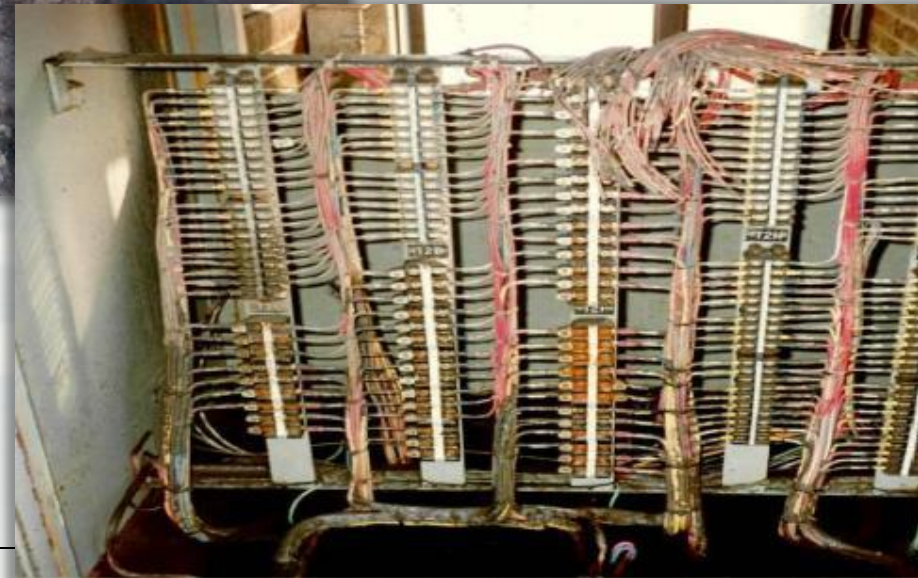
Lock and Dam 27, Chain of Rocks Canal, Mississippi River



Lockport video

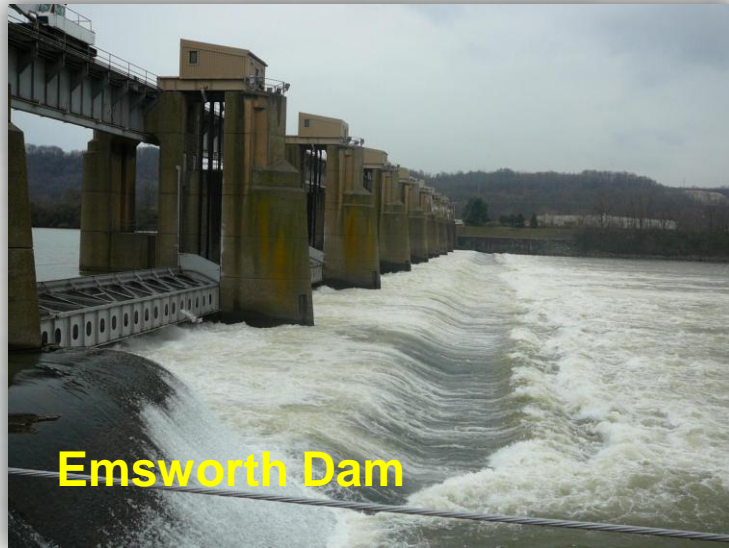


Deteriorating Infrastructure



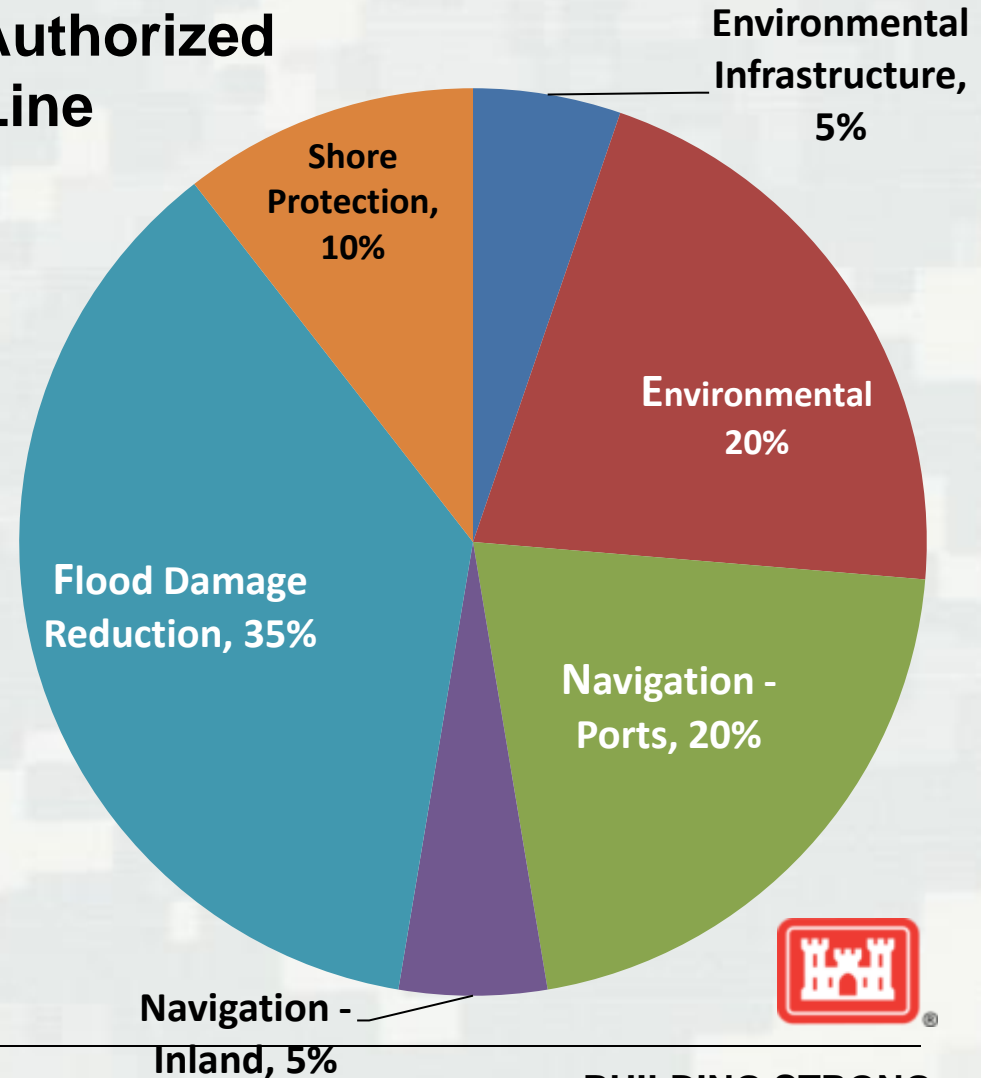
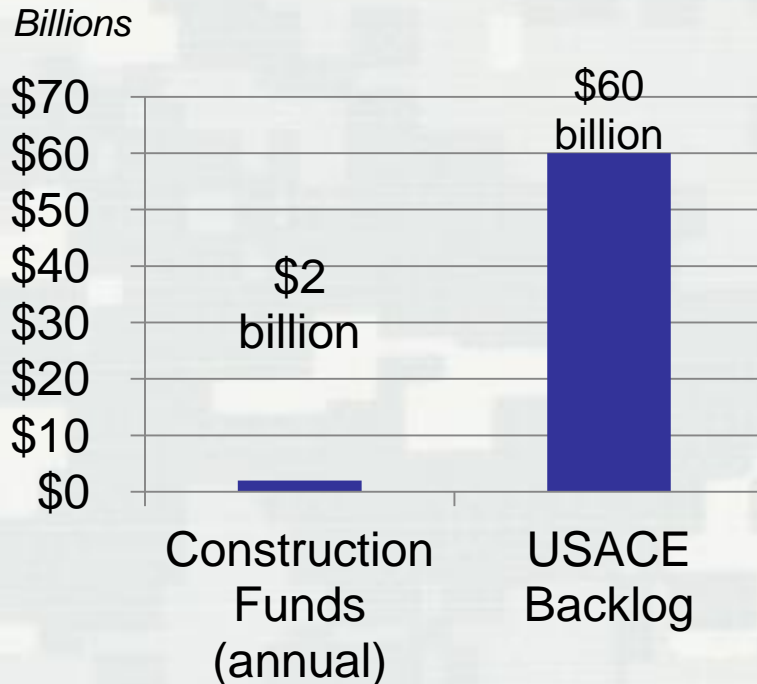
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Critical Reliability Programs Accelerating O&M Pressure



USACE Civil Works Construction Backlog

Backlog of Congressionally Authorized Projects by Business Line

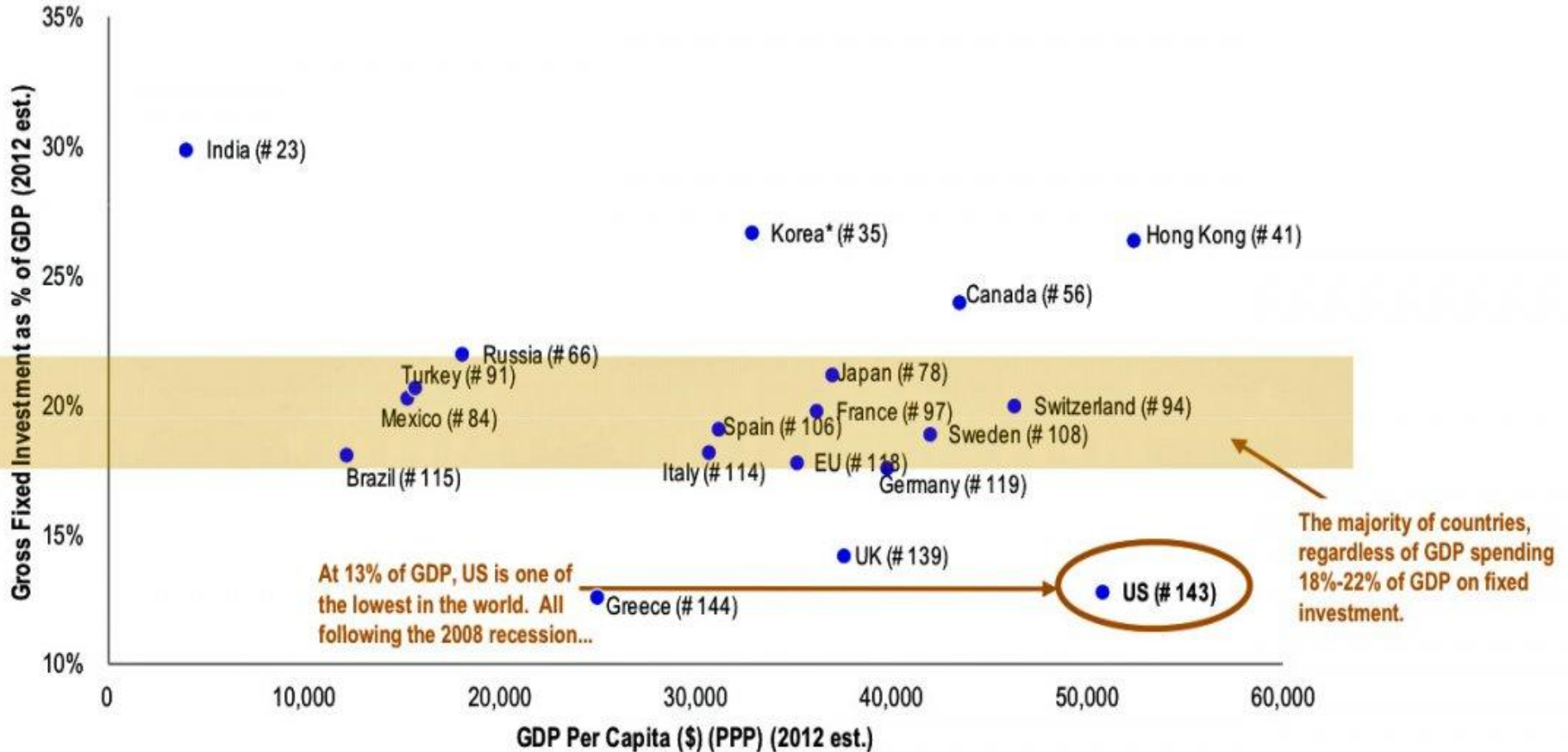


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United States Relative to Other Nations

Figure: GDP Per Capita versus Gross Fixed Investment as a % of GDP: Underinvestment in the US

Estimates for 2012 The rank of Gross fixed investment as % of GDP is in the parenthesis.



Low investment in infrastructure!
(equivalent to Greece)



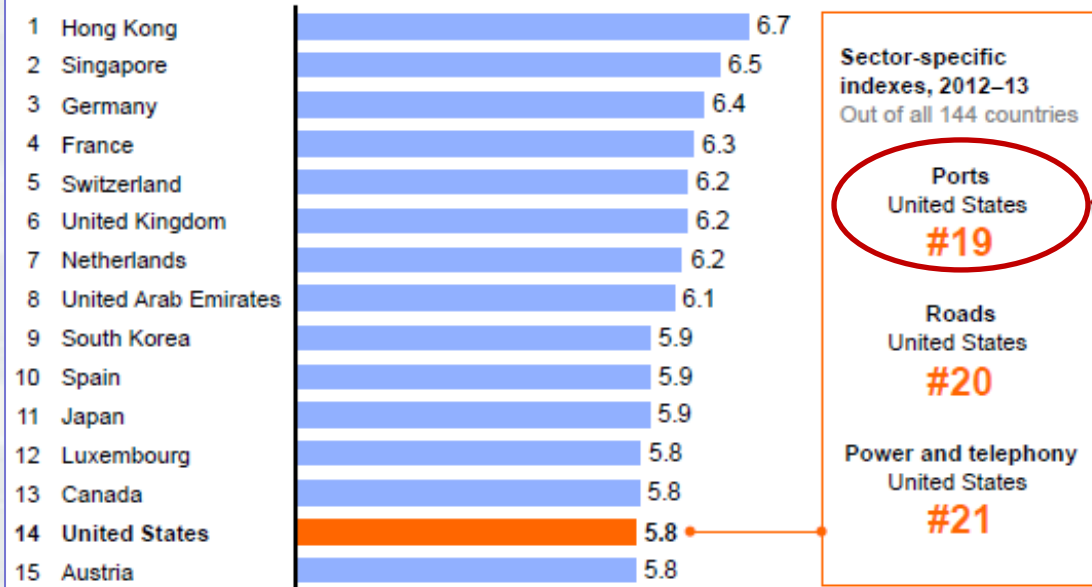
Relative Quality of US Infrastructure

The World Economic Forum ranks US infrastructure behind that of most other comparable advanced nations

Overall infrastructure quality index, 2012–13

Top 15 of 144 countries

Scale: 1 = Extremely underdeveloped; 7 = Extensive and efficient by international standards



SOURCE: World Economic Forum; McKinsey Global Institute analysis

Not even among the top 15!

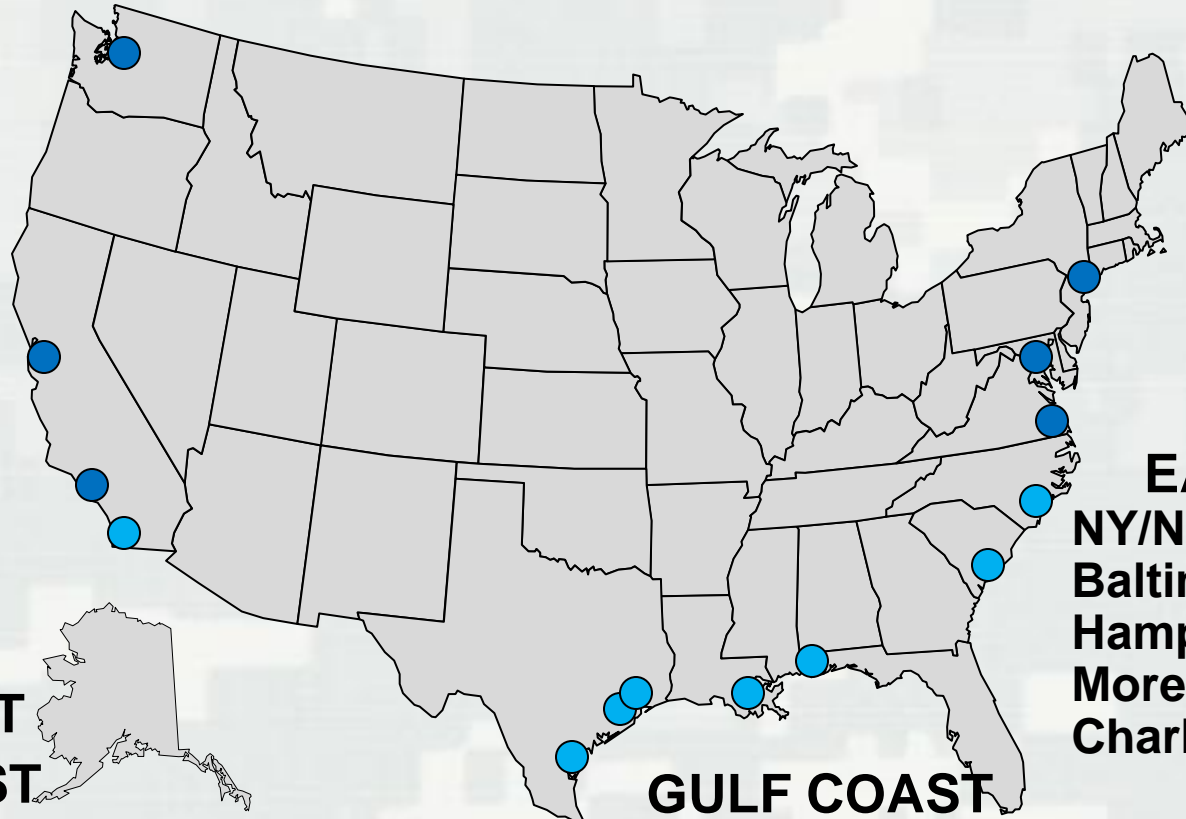


Global Navigation & Inland Waterway Investments

- **China** plans to invest **\$32 Billion** in Yangtze River port & navigation development, 2011-15
- **Brazil** is investing **\$27 Billion** in ports over the next 4-5 years
- The **Army Corps** of Engineers' annual Navigation budget approximates **\$2 Billion**

Ready for the Panama Canal?

U.S. Harbors 45' or Greater



WEST COAST

Seattle/Tacoma (>50')
Oakland (50')
LA/Long Beach (>50')
San Diego (47')

GULF COAST

Mobile, AL
New Orleans
Houston/Galveston/Texas City
Corpus Christi
Freeport, TX

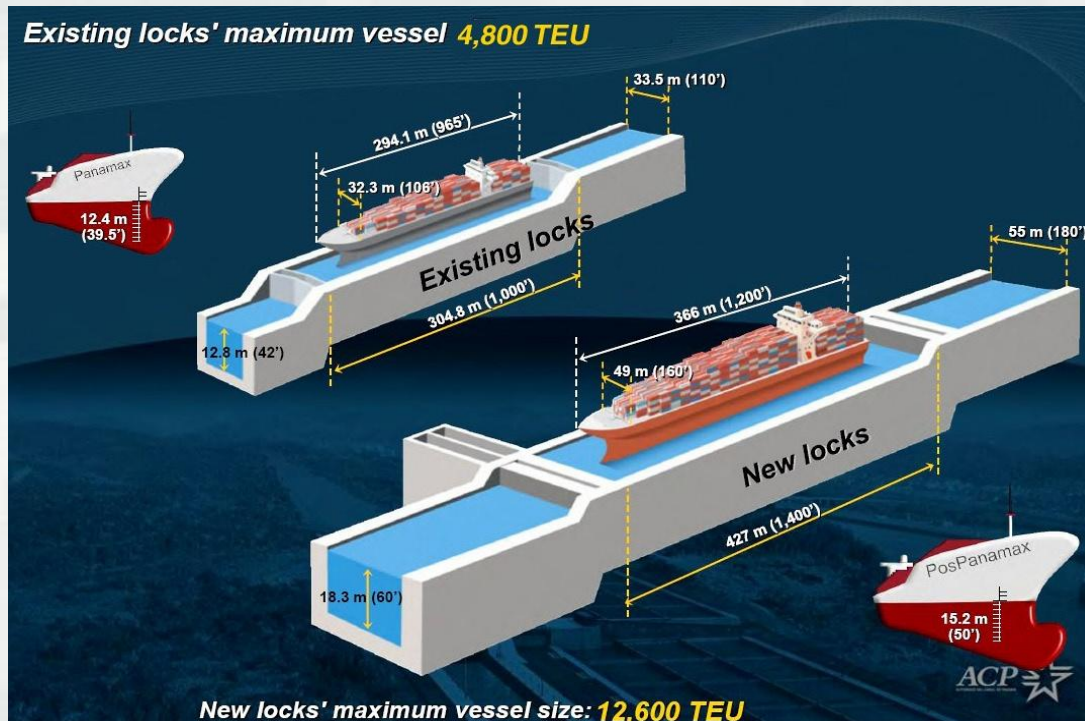
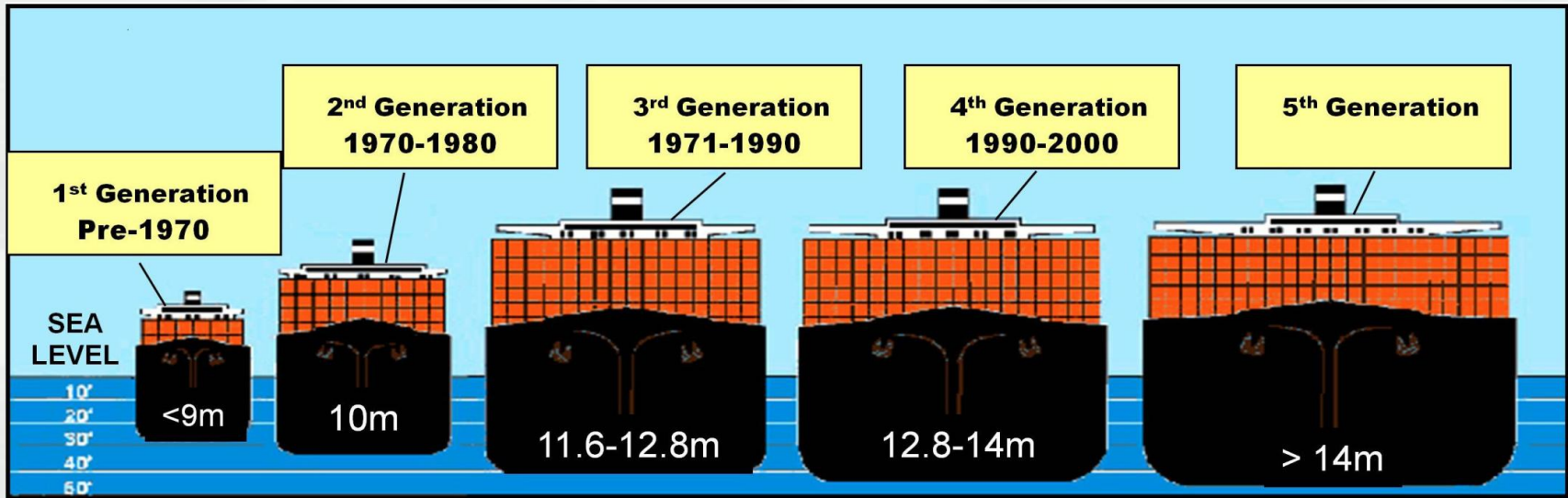
EAST COAST

NY/NJ (50' underway)
Baltimore (50')
Hampton Roads (50')
Morehead City, NC
Charleston, SC



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We Can't Wait



Advance infrastructure projects at 5 East Coast ports:

- NY / NJ
- Charleston
- Savannah
- Jacksonville
- Miami



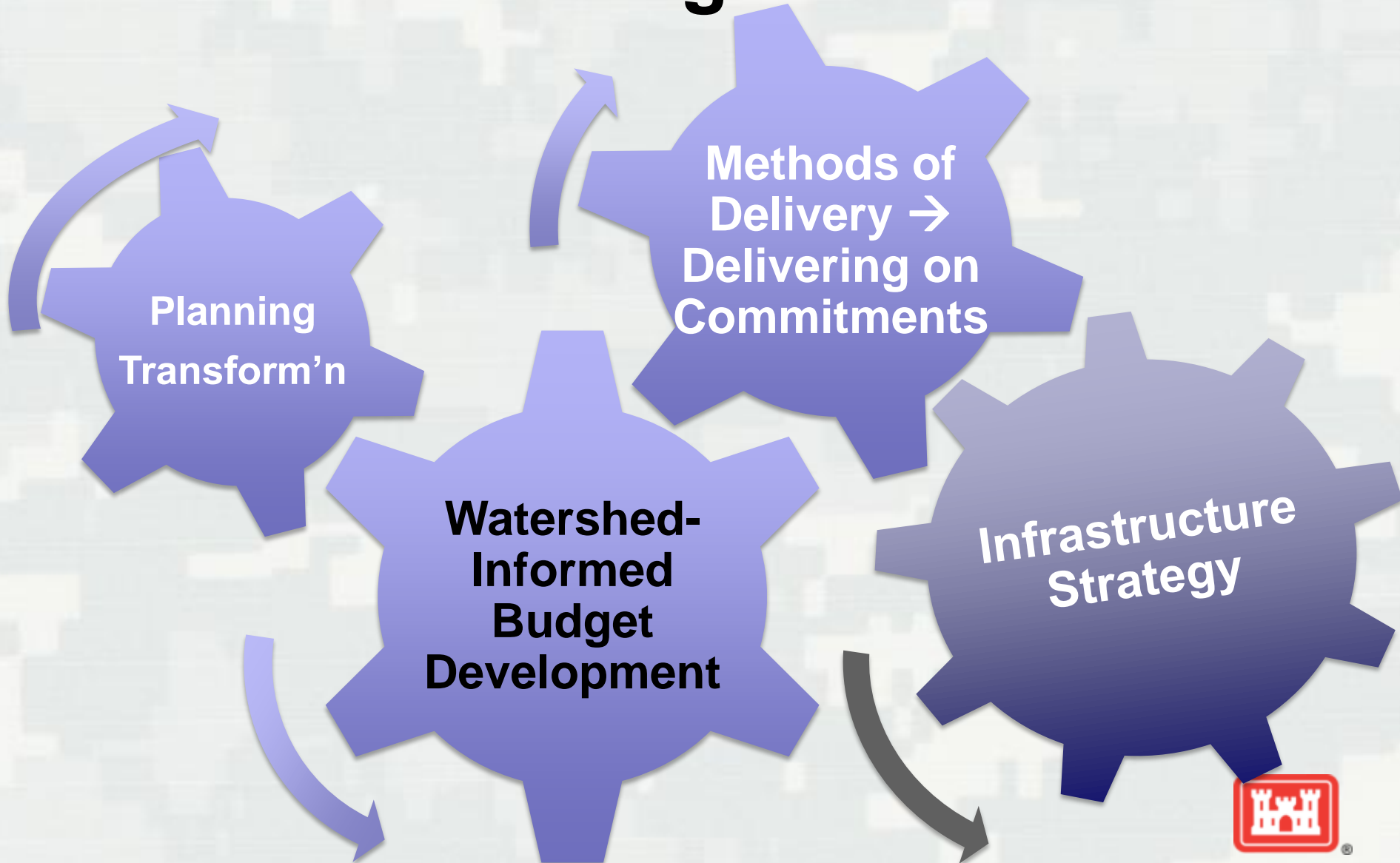
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Harbor Deepening Challenges

- **Study Process:** Difficult and lengthy from study to authorization
- **Funding:** Federal appropriation process uncertainties
- **Dredging:** Escalating costs, placement, environmental mitigation
- **Handling Facilities and Space:** Need expanded cargo handling facilities and improved intermodal connections



Transforming Civil Works



Planning Modernization

Report of the
chief of
engineers U.S.
army

United States
Army Corps of
Engineers

- Determine Federal Interest
- Authorization Backlog
- Follow-on Work

Chief's
Reports

$3 \times 3 \times 3$

Smart
Planning

Education
& Training

Portfolio Management

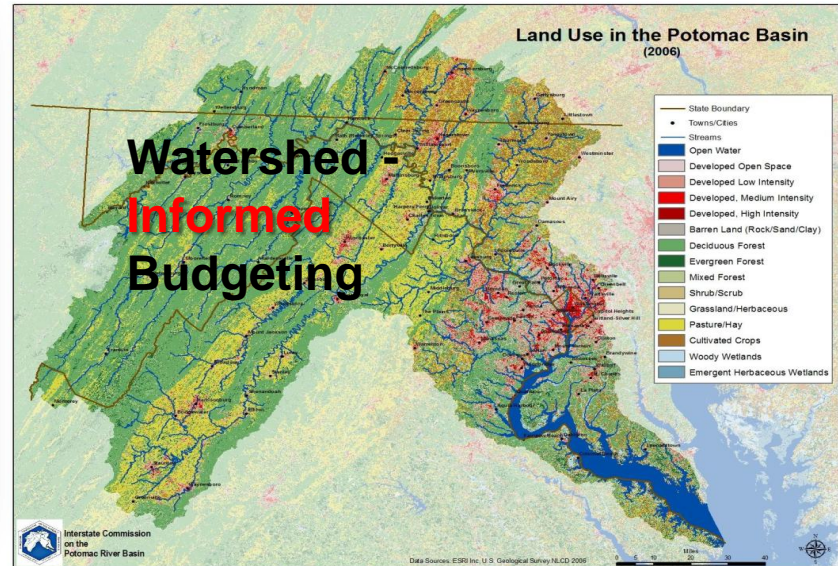
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Budget Development

Engaging Stakeholders



**Watershed -
Informed
Budgeting**



Smart Investments



Management Controls



Methods of Delivery → *Deliver on Commitments*



Infrastructure Strategy

Asset Management

Replacement Value=
\$250 B

Life Cycle Management



Kentucky River Lock #2, in service since 1839

- Accelerate Execution
- Pilots
- Obstacles
- Authorities
- Re-Invent Operations



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Reforms:

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- Encourages development of hydropower generation at existing Corps projects.
- Amends the Planning Assistance to States program to include levee safety.
- Re-issued regulations regarding vegetation on levees



Investment Strategy: Public-Private Partnership Possibilities



- Recreation
- Hydropower
- Harbors
- Flood Risk Management



- Disaster Recovery
- Leveraging *Private and Other Agency Capital*



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Environmental Restoration & Sustainability Program

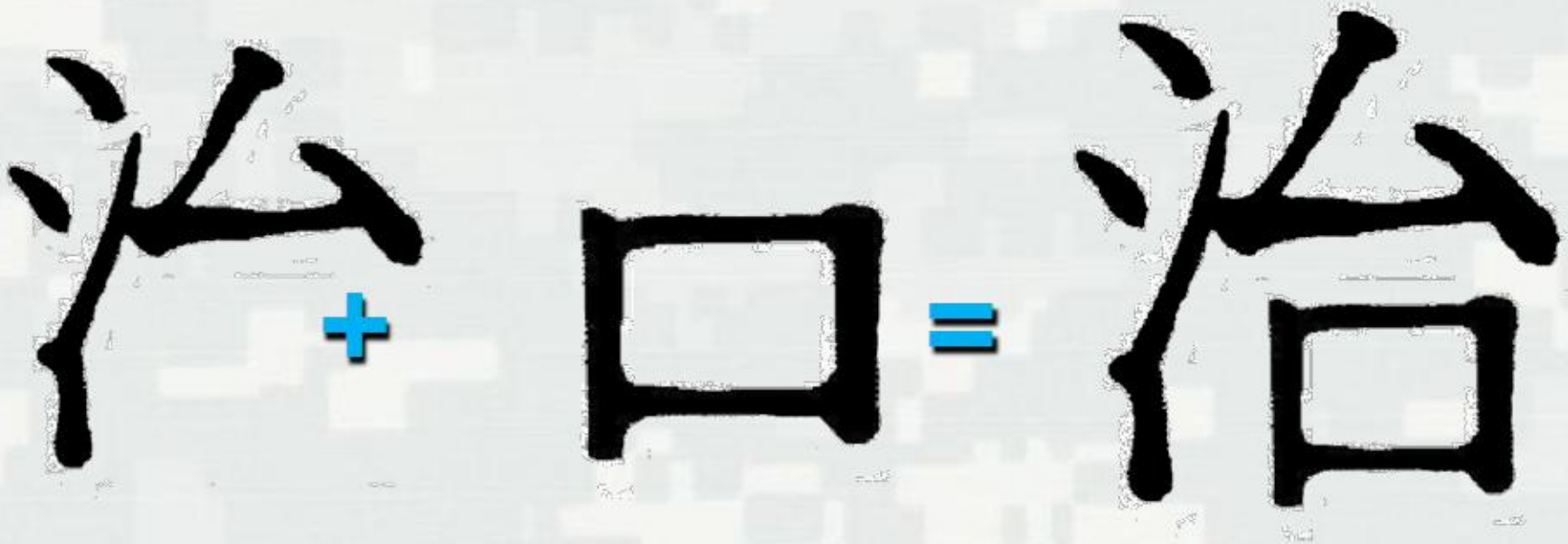


What Can You Do?

- *Tell the Story*
- Help us *Transform Civil Works*
- *Collaborate with ALL Stakeholders* and Beneficiaries of the Civil Works Program
- *Facilitate a Watershed-Informed* approach
- Help the Nation *Prioritize* efforts, programs, and projects
- Support innovative Approaches for *Alternative Resourcing*

Water management (and water reform) is ALWAYS political.....

Ancient Chinese Characters:



River + Dike = Political
Order

USACE Vision

Engineering solutions for our Nation's toughest challenges.

USACE Mission

Deliver vital public and military engineering services; partnering in peace and war to strengthen our Nation's security, energize the economy and reduce risks from disasters.

What will be OUR Legacy?

Questions & Discussion



US Army Corps of Engineers
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FY16 Budget Development Timeline

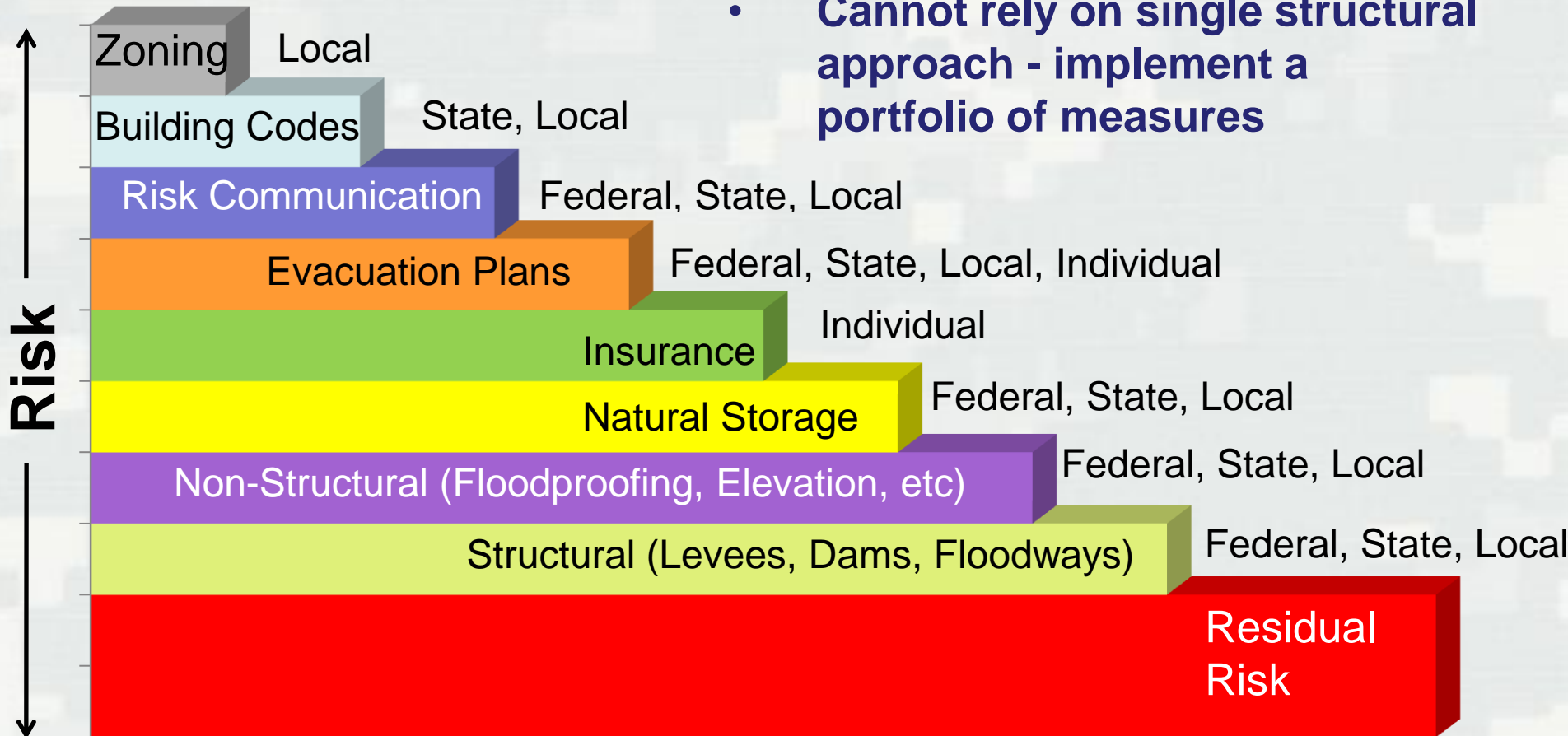
3-17 Jan – Review of draft FY 2016 Budget EC by HQ BLMs, SMEs, Account Managers
27 Jan – FY 2016 Budget EC – Major Changes – BLM briefs to the MSC CWID Chiefs
31 Jan-14 Feb - MSC Review, Update of draft EC, and Coordination w/ HQ BLMs (Phase II)
3-7 Mar – Final draft FY 2016 Budget Development EC to HQ BLM/SMEs/Account Managers for review
7 Mar – Posting of Final draft FY 2016 Budget Development EC on Intranet for MSC/District use
31 Mar – Publish Final FY 2016 Budget Development EC on Internet
14 Apr-16 May - Planning CoP/MSD CWID Chiefs brief Proposed Continuing GI For FY16 Budget
21 Apr-16-May - BLM priority ranking eligibility of GI studies and RI-Investigations by BL
28 May - Planning CoP/BLM LIR for Continuing GI & RI-I applicable Budget Issue Paper to OASA
30 Apr - MSC CWID Chiefs brief Proposal Continuing CG For FY16 Budget
6 May - BLM priority ranking eligibility of CG projects and RI-Construction by BL
27 May - BCR Changes from FY2015 due to OASA(CW)
4 Jun - BLM LIR for Continuing CG & RI-C applicable Budget Issue Paper to OASA
16 Jun - MSC CWID Chiefs brief Proposal O&M For FY16 Budget
16 Jun - Final MSC Budget Submissions Loaded in CWIFD
17 Jun-22 Jul - BLMs Review, Conduct QA, and assign initial Hqs rank by BL
21 Jul - New Starts and Resumptions and Remaining Items for GI and CG briefings
16 Jun-26 Jul - Balance the Crosswalk tables
23 Jul - Pre-Briefing to PID Chief
24 Jul - Pre-Briefing to DCG and C&EO
23 Jul - Review of draft crosswalk before brief to OASA
28 Jul - Submit and Brief Pre-Final Budget and balanced Crosswalk tables to OASA(CW)
NLT 7 Aug - Engagement 1 - Briefing to CCG and MSC Cdrs by ALL on budget submission
13 Aug - Briefing to ASA(CW) on Final Recommended Budget across BLs



Reducing Risk

- **Absolute protection from floods is not possible – must plan for exceedence (Residual Risk)**
- **Cannot rely on single structural approach - implement a portfolio of measures**

Initial Risk

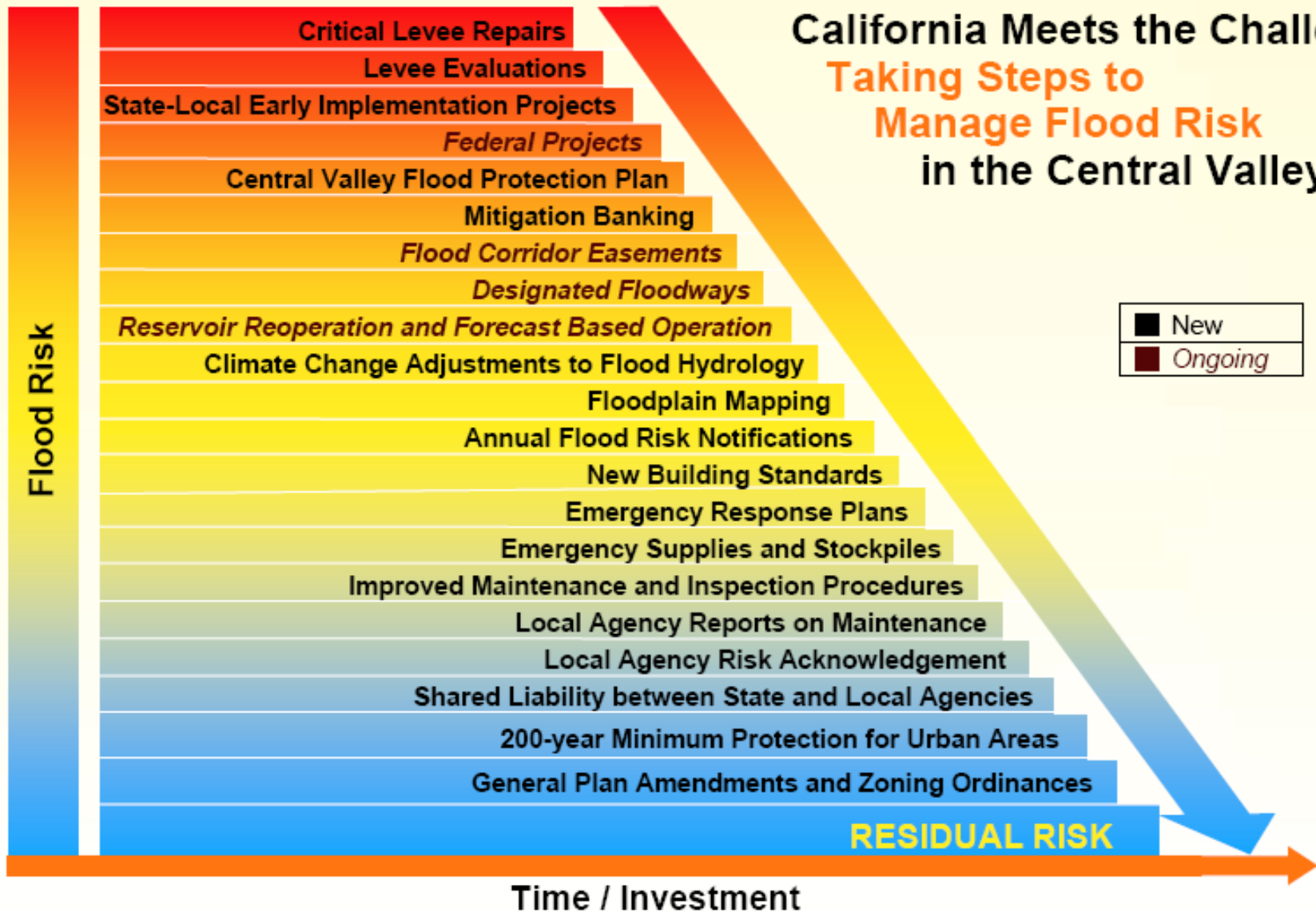


Identify risks and make decisions based on relative risk – recognize not all will get the same protection



INITIAL RISK

California Meets the Challenge:
Taking Steps to
Manage Flood Risk
in the Central Valley



To Meet the Challenges, We Need to Change

- We are in a non-earmark environment
- We have funded too many studies/projects at less than capability
- It takes too long to complete studies and projects
- Sponsors and stakeholders are concerned about timeliness and cost effectiveness
- We need emphasis on importance of quality assurance and quality products



Challenges in CW's Future

- Aging infrastructure: Critical need for robust asset management & a long-term recapitalization program
- Domestic discretionary funding: Need for innovative financing, capital stock divestment, market-based solutions
- No focus on America's infrastructure needs and investment – need to elevate water infrastructure to national level of attention
- Competition for water, including increasing environmental & water supply needs
- Climate change adaptation & water-food-energy nexus

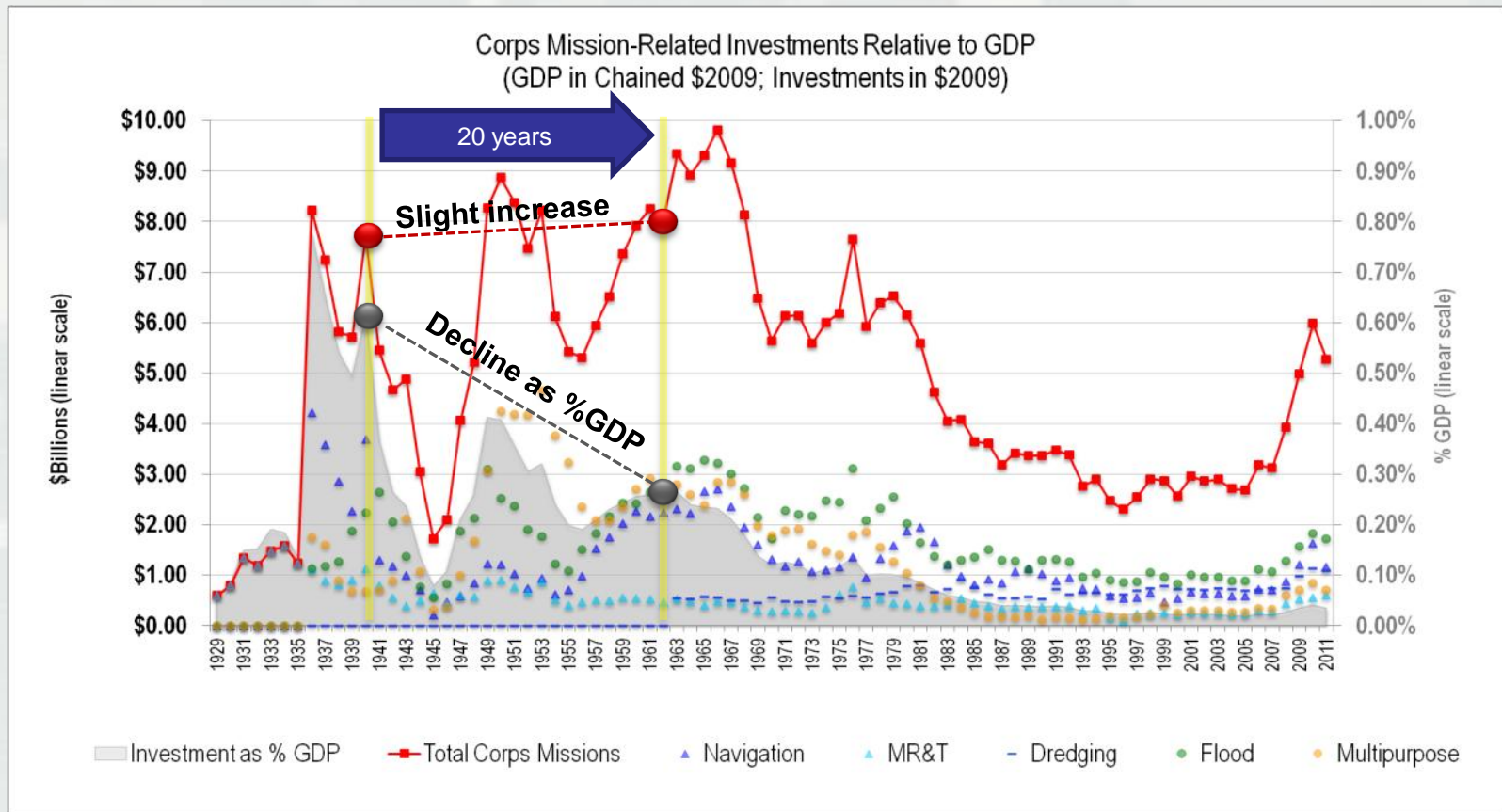


Trends Influencing CW's Future

- **Aging infrastructure**: Critical need for robust asset management & a long-term recapitalization program
- **Major Floods & Lessons learned**: Katrina, 2011 Floods, Super Storm Sandy
- **Focus on sustainability**: IWRM perspective, collaborative planning, revised *PR&G*
- **Climate change adaptation** & water-food-energy nexus
- **Competition for water**, including increasing environmental & water supply needs
- **Intersection of international water security** & USACE OCONUS missions
- **Globalization**: Waterborne trade implications, homeland security & international water resources, expansion of Panama Canal
- **Domestic discretionary funding**: Need for innovative financing, market-based solutions












Corps Mission-Related Investments











More than a tenfold increase in GDP since 1928!
Similar level of investment will not keep pace with GDP.
Decreasing levels of investment magnify the effect.



Implementation of the Capital Projects Business Model

Recommendation	Status	
Project Management Certification	Olmsted team and Lower Mon team certified; KY Lock team working on certification	
Risk-based cost estimates	Updated for Olmsted; Lower Mon scheduled for spring 2014	
Conduct Independent External Peer Reviews of IMTS project	Conducted on Olmsted Post Authorization Change Report and certified cost estimate and will be completed for all future projects and PACRs	
Appoint a board member to each IMTS Project	Rep appointed to Olmsted team; others in progress	
Project status updates to IWUB	Updates provided at each meeting	
Include Board Chairman signature on PMPs	Unable to accommodate per Corps counsel, but participation in meetings ok.	
Evaluate use of Early contractor involvement	To be considered when new projects begin	
Apply Military Construction Principles	Large projects are difficult to fully fund given Civil Works budget constraints	
Establish new start recommendation procedures	Limited applicability at this time given IWTF constraints. Will revisit in FY14 with CPBM update.	

Implementation of the Capital Projects Business Model

Recommendation	Status	
Obtain approval for CPBM model regulation	Awaiting implementation via OPORD	
Create Design Centers of Expertise	Inland Nav Design Center established	
Develop standardized designs	Inland Nav Design Center is developing lessons learned to be used when design work proceeds. Used at small scale by designing similar components for KY and Chick Locks	
Revisit use of continuing contracts-increase threshold to \$50M from \$20M	Requires Congressional legislation. Prohibited by Congress in approps bills from using continuing contract on IWTF projects	
Increase Capital Investment Program Funding to \$380M per year	Limited by IWTF revenues	
Decrease IWTF cost share for major rehabs on all dam projects and major rehab lock projects below \$100M	Requires Congressional legislation; opposed by Administration	
Establish cost-sharing cap	Requires Congressional legislation; opposed by Administration	
Increase waterways fuel tax	Requires Congressional legislation	

USACE Lock Levels of Service

<u>Level</u>	<u>Title</u>	<u>Guideline</u>	<u>Description</u>
1	Full Service	> 1000 Commercial Lockages	24x7, Every Day
2	Reduced Service	500-1000 Commercial Lockages	2 Shifts, Every Day
3	Limited Service	< 500 Commercial Lockages; or > 1000 Recreational Lockages	1 Shift, Every Day
4	Scheduled Service	Limited Commercial and/or substantial Recreational traffic, with a more consistent daytime pattern of lockages	Lockages at set times each day
5	Weekends & Holidays	Little or no Commercial Lockages; > 500 Recreational Lockages	1 Shift per day, weekends and holidays only
6	Service by Appointment	Limited commercial traffic with no consistent pattern of lockages (<500 commercial or recreational)	Commercial Lockages by appointment

Data source: USACE Lock Performance Monitoring System, (LPMS) database; FY 2010 and 2011 average Lockages

Future: 3-year rolling average



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