

Address the professor
as "Your Excellency".



Lesson 7

Operation And Maintenance (O&M)

Topics

- Objectives of the O&M mission
- Background, authority, inventory, etc.
- Development of O&M program
- Defense of O&M Program
- Management during execution year
- Remaining items (programmatic)

O&M Authority

- Legislation authorizing specific projects
- Accompanying Corps reports (Chief's Report)
- Generic legislation

Inventory - 1,327 Projects

- Navigation
 - ❖ 926 harbors (299 deep + 627 shallow)
 - ❖ 12,000 miles, 28 designated inland waterways (241 lock chambers)
- Flood Damage Reduction
 - ❖ 383 major lakes & reservoirs
 - ❖ 8,500 miles of levees (Corps constructed or controlled)
 - ❖ 270 projects under construction (specifically authorized by Congress, for FY 2008, of 504 projects)
- Hydropower
 - ❖ 75 projects (350 generating units)

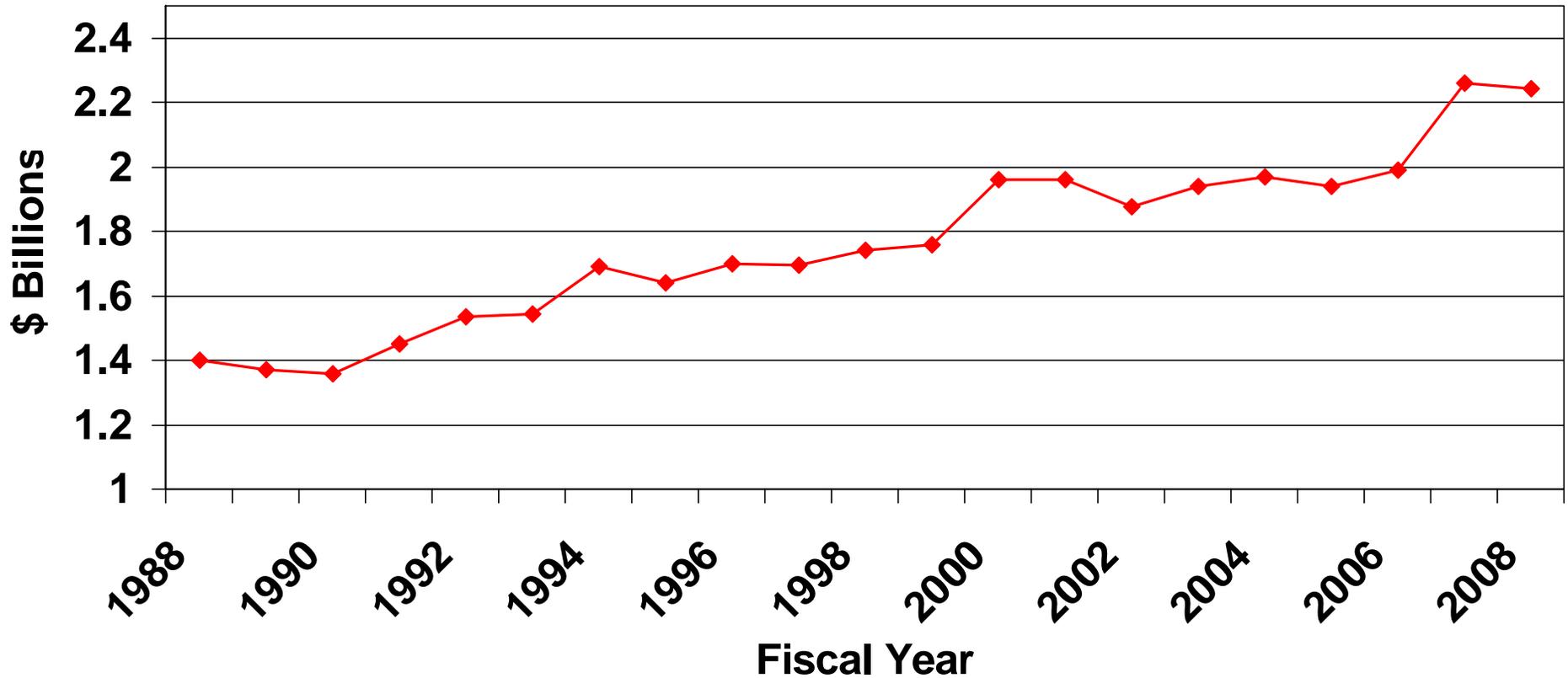
See Handout (“Gee Wiz” Tables)

Annual O&M Benefits

- 2.59 billion tons of commerce on ports & waterways
- \$20.1 billion average annual damages prevented
- \$6.48 Prevented vs. Expended
- 70.9 billion kilowatt-hours produced annually by hydropower
- 372 million visits; Visitors spend \$18 billion at Corps projects
- Steward of 12 million acres of public land & water

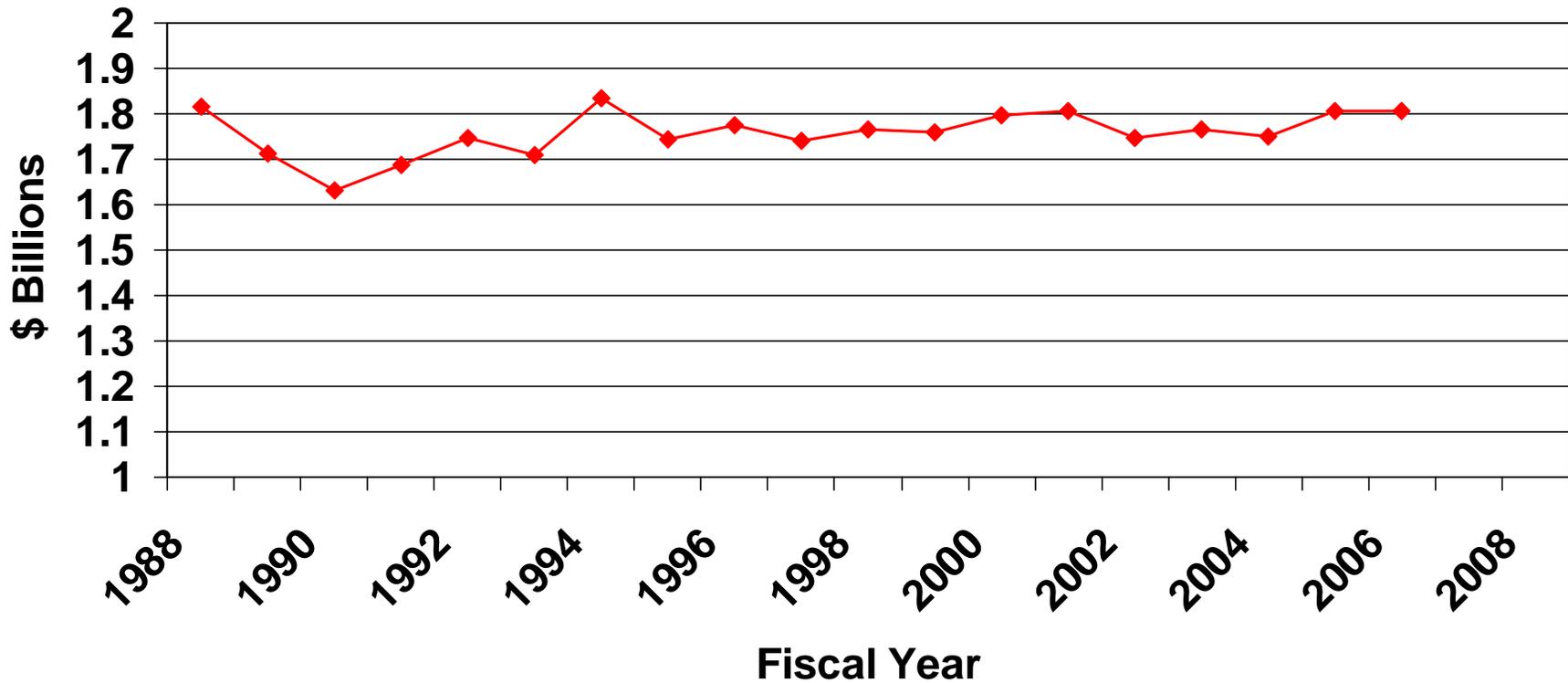
O&M Appropriations

Actual \$ (without supplemental funding)



O&M Appropriations

1999 Constant \$ (with all adjustments)
FY 2006 Appropriations



Offsets to the O&M Appropriation (from FY 09 President's Budget)

- Harbor Maintenance Trust Fund \$729M
- Inland Waterways Trust Fund \$10M
- Special Recreation Use Fees \$37M

Program Development *Topics*

Business Functions

Performance Measures

Funding Increments

Budget process

Business Programs

Navigation

Flood Damage Reduction

Hydropower

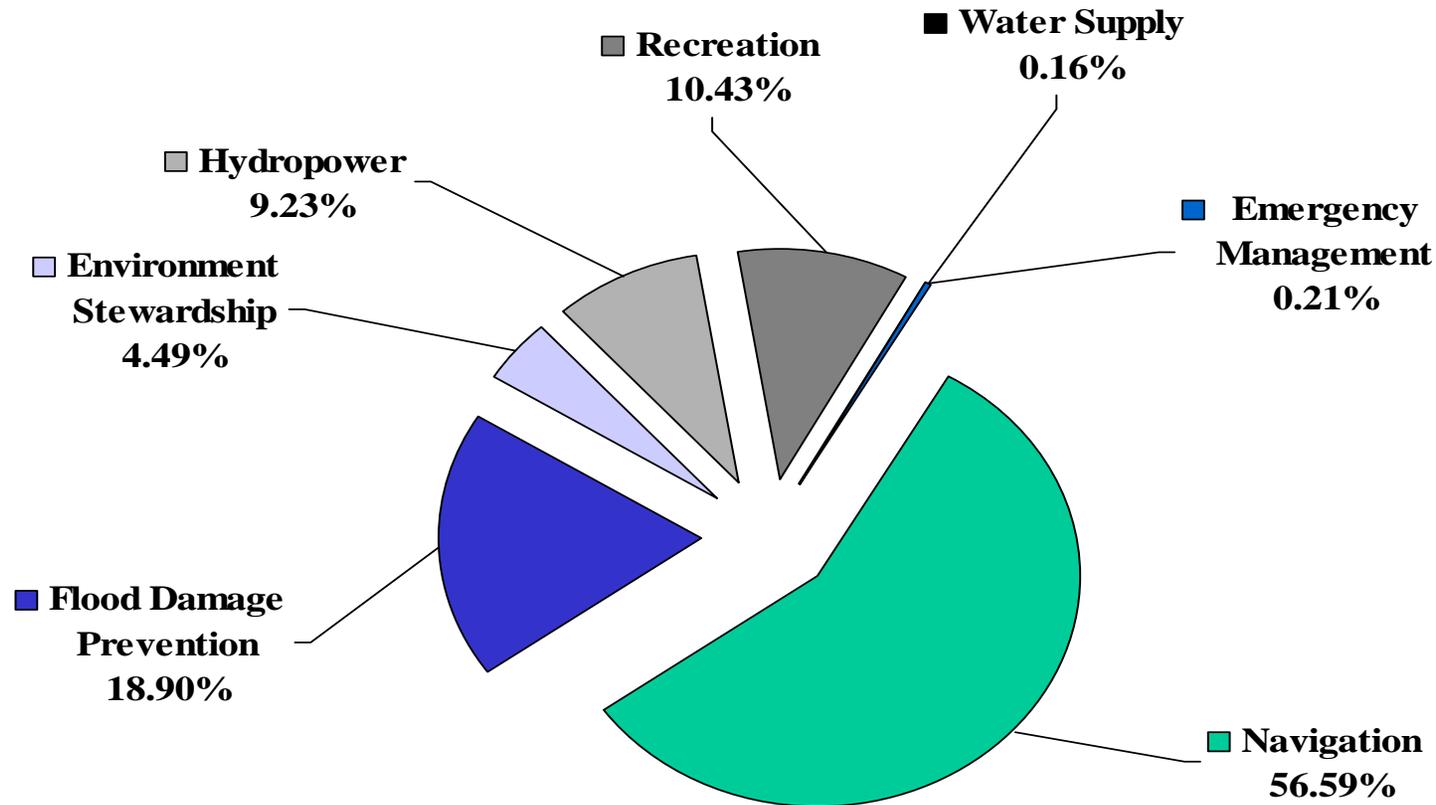
Environmental Stewardship

Recreation

Water Supply

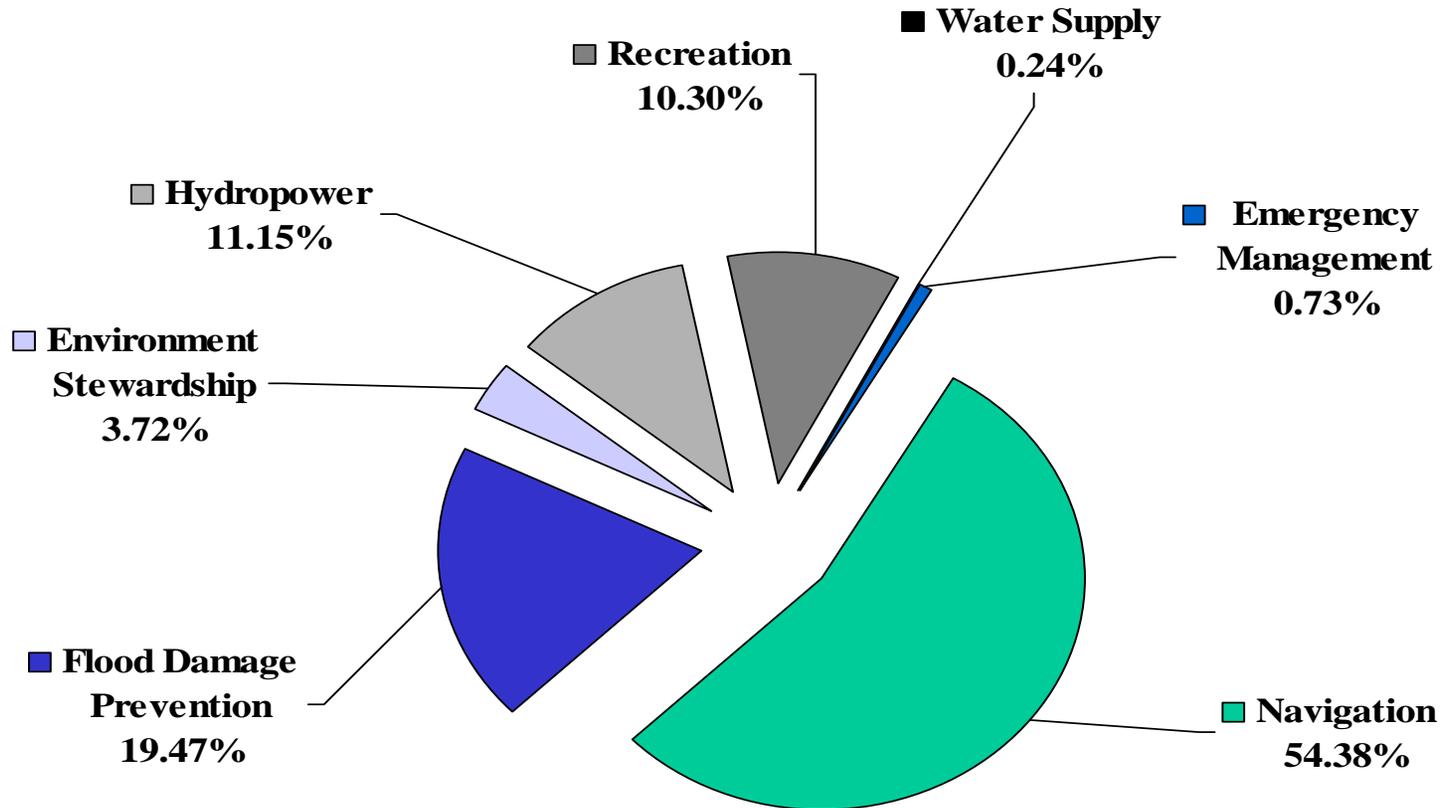
Emergency Management

O&M Business Functions Enacted FY 2008 Funding



Total \$2.244 Billion
(from Omnibus Conference report net of S&S &
Rescission)

O&M Business Functions FY 2009 President's Budget



Total \$2.475 Billion

O&M Objectives

- (1) **Established Criteria** is defined as the standard with specific guidelines which are formulated by the Administration which clarify and describe "justified levels of service."
- (2) **Justified Level of Service** is defined as the delivery of a supportable and defensible amount or degree of project benefits consistent with authorization, use, and administration policies.
- (3) **Least Cost** is defined as the lowest amount of expense that a prudent manager would select, balancing between short and long term economics and considering overall availability of resources.

Program Objectives & Performance Measures

Navigation

- Program Objective 1: Invest in Navigation Infrastructure when benefits exceed costs.
- Performance Measures:
 - ❖ Remaining BCR
 - ❖ Annual net benefits

Program Objectives & Performance Measures

Navigation

- Program Objective 2: Support sustainable regional, basin-wide or watershed planning & activities in partnership with others.
- Performance Measure:
 - ❖ Percent of projects recommended in Chief's Reports that apply watershed principles

Program Objectives & Performance Measures

Navigation

- Program Objective : Operate & manage Nav Infrastructure for Justified Levels of Service in terms of availability to commercial traffic of high-use Nav Infrastructure.
- Performance Measure:
 - ❖ Percent of time navigation infrastructure with high levels of commercial traffic sustains its functional purpose

Program Objectives & Performance Measures

Hydropower

- Provide reliable power; Provide peaking power; Maintain capability to provide power efficiently.
- Performance Measures:
 - ❖ Forced outage rate
 - ❖ Physical condition/failure risk index

Program Objectives & Performance Measures

Hydropower

- Program Objective: Ensure projects perform to meet authorized purposes and evolving conditions. (Applies to Joint Activities at multi-purpose projects.)
- Performance Measures:
 - ❖ None identified for Joint Activities at this time

Program Objectives & Performance Measures

Flood Damage Reduction

- Program Objective 1: Invest in flood and coastal storm damage reduction solutions when benefits exceed costs.
- Performance Measure:
 - ❖ Remaining BCR (project specific measure)

Program Objectives & Performance Measures

Flood Damage Reduction

- Program Objective 5: Operate and maintain Corps infrastructure to ensure that designed levels of flood protection are realized.
- Performance Measures:
 - ❖ Percent of time flood & coastal storm damage reduction infrastructure sustains functional purpose
 - ❖ Percent of projects maintained at design level

O&M Program Development

- Identify individual items of work (work packages)
- Aggregate work packages by project line items (Ops, Maintenance, etc.)
- Place project line items (or work packages) into appropriate Funding Increment
- Rank all line items (or work packages)

Former/Old Funding Levels

- Baseline (for annual recurring work performed every year)
- Non-Deferrable (for variable, non-recurring & non-annual work, to meet performance goals, judgment call)
- Deferrable (for needed variable, non-annual work but not essential in program year, prevents further deterioration & assures long-term viability)
- Maintenance/Repair Beyond Ability (MRBA)

(NOTE: Baseline and MRBA levels were eliminated for FY 04 cycle)

“New” Initial Funding Level

- 75% of 5-Year Average President’s Budget (at the MSC level, not by district or BL)
- Includes Projects and Activities (ICW, PCS, etc.)
- Increment 1 (Critical Routine) & Increment 2 (Critical Non-Routine) included in Initial Level for minimum O&M requirements
- Legal Responsibilities

O&M Category/Class/Subclass Codes

Activities	Category/Class/ Subclass Code	
	O&M (903)	MR&T (908)
Navigation	100	410
Channels & Harbors	110	
Locks and Dams	120	
Flood Control	200	420
Reservoirs	210	
Channel Improvements, Inspections And Miscellaneous Maintenance	220	
Multiple Purpose Power	300	
Protection of Navigation	400	
National Emergency Preparedness Program	500	

Funding Increments

- O&M Can have up to 5 Funding Increments
- Consistent for All Business Lines
- Additional Increments are performance based, a demonstrable beneficial impact (additional outputs, improved reliability)
- Each Business Program has specific performance criteria
- Last Increment equals Capability

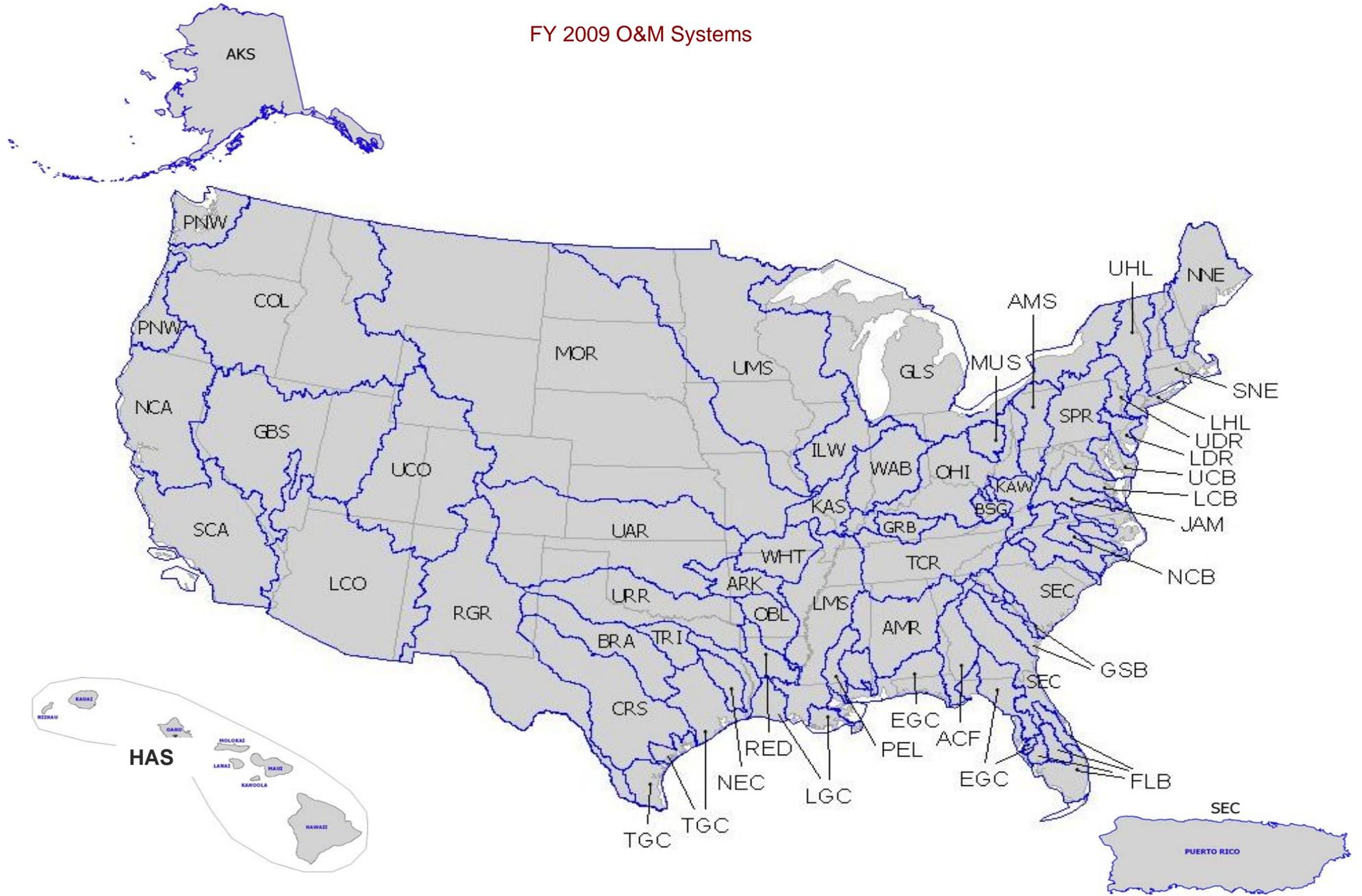
Watershed or Systems Budgeting

- **A watershed or systems budgeting approach for O&M was adopted to formulate PY.**
- **The O&M budget is presented on a watershed/systems basis.**
- **21 Regions in FY08 Budget Cycle.**
- **54 Systems Developed for FY09 Budget Cycle (52 Systems for FY10).**
- **During PY the O&M program will be managed by watershed and business line program, rather than primarily project-by-project.**
- **The budget will organize budget information for O&M activities by river basin and by mission area, continuing to set the stage for improved management of Civil Works assets in PY and more systematic budget development in future years.**

WATER RESOURCES REGIONS



FY 2009 O&M Systems



FY10 O&M Systems

- AMR Alabama - Mississippi Basin
- AKS Alaska System
- AMS Allegheny and Monongahela Rivers
- ACF Apalachicola-Chattahoochee and Flint Rivers (ACF)
- ARK Arkansas River
- BRA Brazos River System
- CRS Colorado River System
- COL Columbia River System
- EGC Eastern Gulf Coast
- FLB Florida Basins
- GSB Georgia- South Carolina Basins
- GBS Great Basin System
- GLS Great Lakes
- GRB Green and Barren Rivers
- HAS Hawaii System
- ILW Illinois Waterway
- JAM James River
- KAW Kanawha River
- KAS Kaskaskia River
- LGC Louisiana Gulf Coast
- LCB Lower Chesapeake
- LCO Lower Colorado System
- LDR Lower Delaware
- LHL Lower Hudson - Long Island
- LMS Lower Mississippi River
- MOR Missouri River
- MUS Muskingum River
- NEC Neches System
- NCB North Carolina Basins
- NCA Northern California System
- NNE Northern New England
- OHI Ohio River
- OBL Ouachita-Black Rivers
- PNW Pacific Northwest System
- RED Red River
- RGR Rio Grande System
- SCA Southern California System
- SEC Southern East Coast
- SNE Southern New England
- SPR Susquehanna and Potomac

FY10 O&M Systems continued

- TCR Tennessee and Cumberland Rivers
- TGC Texas Gulf Coast
- TRI Trinity River System
- UAR Upper Arkansas River
- UCB Upper Chesapeake
- UCO Upper Colorado System
- UDR Upper Delaware
- UHL Upper Hudson and Lake Champlain
- UMS Upper Mississippi River
- URR Upper Red River
- WAB Wabash River
- WHT White River

Five and Ten Year Development Plans.

- Basic design criteria for water resources improvements generally include estimates of repair and replacement frequency and effective project life.
- Major costs such as generator rewinding and turbine replacement certainly need to be anticipated.
- Construction completion schedules for additional projects coming on line are also prime indicators.

Five and Ten Year Development Plans.

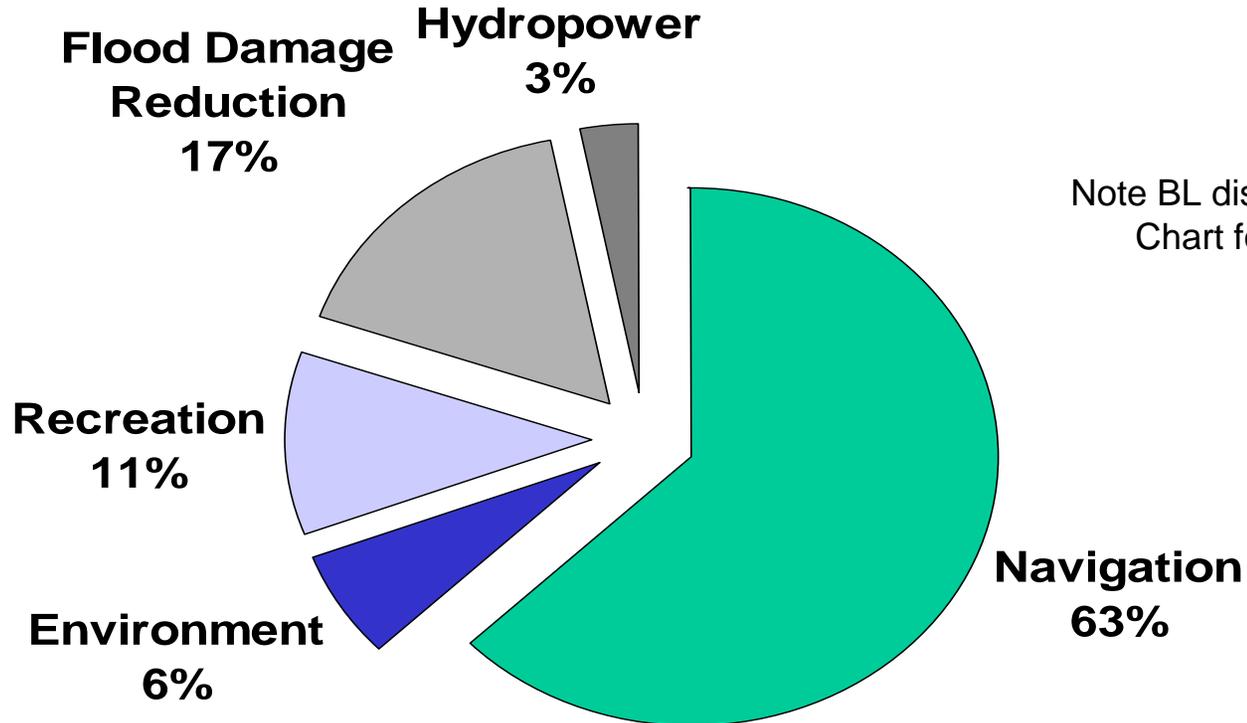
(Continued)

- Many projects in the Corps inventory are long past their design life.
- A strategy to formulate long range maintenance funding plans must take into account contracyclical fluctuations in weather conditions such as hurricanes and other major storms which often impose sudden, unanticipated requirements for maintenance and service restoration.
- Prediction of operational requirements requires consideration of geographic shifts driven by regional trends in commercial activity and other economic factors.
- National priorities for federal investments are subject to frequent and radical fluctuations.
- Accordingly, a project-specific long-range plan will not be submitted, but a recommended plan by business lines will be offered.

Deferred Maintenance

- High Priority Deferred Maintenance
- Other Work to Be Accomplished
- Key to getting additional funds/congressional adds for maintenance
- High Priority Deferred Maintenance by end of FY 08 estimated to be over \$2.2 Billion

Deferred Maintenance



FY 2008 = \$2,225 Million???

FY 2007 = \$1,605 Million

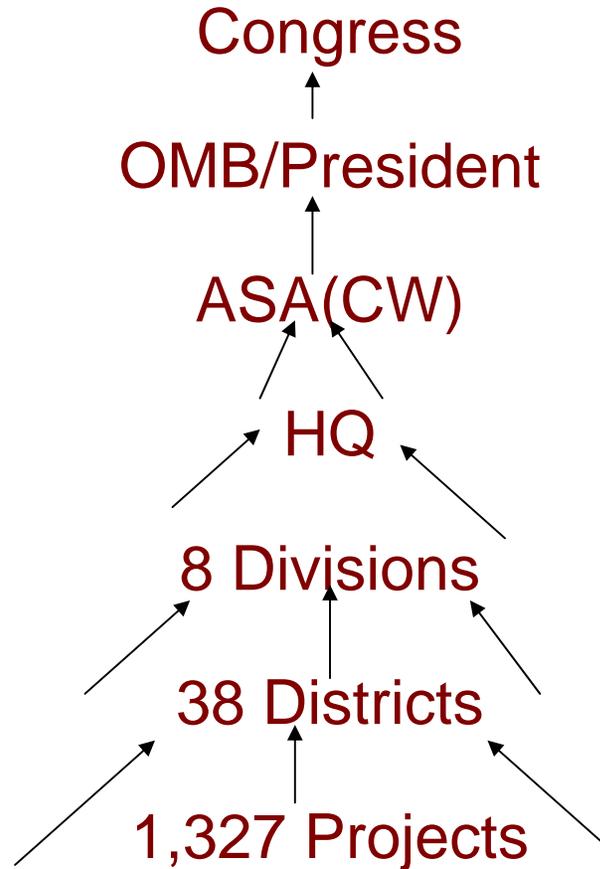
FY 2006 = \$1,847 Million

FY 2005 = \$1,100 Million

FY 2004 = \$1,011 Million

FY 2003 = \$ 884 Million

Budget Process



Project Level

- Develops individual work packages
- Places work packages into proper business functions
- Aggregate work packages into project line items by activity
- Place line item/work packages in proper Funding Increment
- Prioritizes all work
- Completes action in April/May

District Level

- Reviews project level submissions
- Integrates project line items/work packages into prioritized district program
- Submits district program to division in May/June

Division Level

- Reviews district submissions
- Integrates district line items/work packages into prioritized division program
- MSC Submissions to HQ by late June or early July

HQUSACE Level

- Review division programs for national consistency
- Generally maintain division priorities
- Develop CW requirements by Business Programs
- Develop consolidated program consistent with OMB guidance
- Recommendations to ASA(CW) in August

OASA(CW) Level

Office of the Assistant Secretary of the Army for Civil Works

- Reviews O&M in relation to total program
- Adjusts program mix to stay within OMB ceiling
- Submits budget request to OMB by early September

OMB Level

Office of Management & Budget

- Ensures consistency with Administration policies and priorities
- Establishes final amount of budget in coordination with ASA(CW) and Corps
- Transmits President's Budget to Congress in early February

Congressional Level

- Reviews President's Budget request
- Civil Works included in Energy & Water Bill
- One of 13 appropriations bills
- Adds work important to members
- Appropriations bill enacted, goal is by 1 October
- Continuing Resolution if regular bill is late

O&M Management

Topics

- Disciplined flexibility
- Work allowances
- Fiscal performance
- Management procedures
- Results

Program Management

- 1 1/2 years after development
- Requirements changed during interim
- Work Allowances now issued exactly as funds appropriated
- Districts and divisions have limited reprogramming authority within established criteria

Program Management Criteria

- Budgeted work & Congressional adds
- Emergencies
- Budgeted work & Congressional adds that slipped from prior years
- Accelerate work in next year's budget

Work Allowances

- Allocated to districts at start of fiscal year or when appropriations passed (less S&S?)
- No O&M funds remain in HQUSACE
- Requires OMB Apportionment (30 days)
- Mandatory Pro Ration of S&S if appropriate

Program Execution Goals

- Accomplish highest priority work in terms of:
 - ❖ Congressional adds
 - ❖ President's budget
 - ❖ District/Agency Mission
- Achieve 100% obligation and expenditure rate

Management Procedures to Achieve Goals

- Follow reprogramming criteria
- Manage dredging contracts to meet local/regional priorities
- Schedule all available dollars
- Schedule contract work as early as practicable
- Identify surplus funds for next highest priority work

Remaining Items

(PY 2009, Items Not Listed Under States)

- Nationwide programs & activities
- Centralized Procurement
- Not project specific
- Not included in district budget submittals
- No Constituency for Remaining Items (like a project)
- Includes formerly Centrally Funded Items

R&D in Support of O&M

(PY 2009)

- Coastal Inlet Research \$2.48M
- Dredging Research (DOER, DOTS) \$7.47M
- Water Ops Technical Sppt (WOTS) \$0.65M
- Aquatic Nuisance Control Research \$0.69M

PY 2009 Total \$11.29M

Other Nationwide Programs

(PY 2009)

● National Dam Safety Program	\$15.0M
● National Levee Flood Inventory	\$10.0M
● Asset Management/FEM	\$4.75M
● Facility Protection/Security	\$12.0M
● Dredge WHEELER Ready Reserve	\$12.0M
● Actions for Change (O&M)	\$7.74M
● Emergency Preparedness (NEPP)	\$6.0M
● Waterborne Commerce Statistics	\$4.27M
● Inland Waterway Nav Charts	\$3.71M
● National Coastal Mapping Program	\$7.0M
● Budget/Mgmt Support for O&M	\$5.87M
● Other Remaining Items (19)	<u>\$26.52M</u>
Total	\$114.85M

ASK THE PROFESSOR

