

SECTION 2

This section provides information and guidance regarding three new initiatives by the Civil Works Integration within USACE to make the budget formulation more streamlined, our investments more cost effective and to bring our budget into line with Administration overall goals and objectives. The new initiatives follow.

1. Watershed Informed Budgeting Overview.

a. Intent. In February 2007, the National Academy of Public Administration released a report entitled Prioritizing America's Water Resources Investments. This report was chartered by the House Appropriations Energy and Water Subcommittee and it validates the Corps implementation of performance-based budgets, watersheds and coastal system perspectives, and long range asset planning.

b. Watersheds and Coastal Systems. A watershed or coastal system-informed budget development approach ensures that investments are integrated into a whole that preserves or enhances performance and sustainability by operationalizing the principles of Integrated Water Resource Management for BY budget items requested in the budget (Investigations, Construction, and O&M) will include the USGS Hydrologic Unit Code (HUC) sub-region codes. These codes can be found at: <http://water.usgs.gov/GIS/huc.html>. A list of 52 Systems has been developed for O&M (see TABLE III-5-1).

c. Watershed Principles. Watershed studies are planning initiatives that have a multi-purpose and multi-objective scope and accommodate flexibility and collaboration in the planning process. Possible areas of investigation include flood risk management activities, ecosystem restoration, navigations, water supply and recreation.

d. Stakeholders' Perspectives. Contributions from stakeholders and Corps leadership should be used to help frame the program performance-based budgeting concept. Stakeholders' perspectives must be considered, and the legitimate input on project priorities should inform the budgetary process.

e. Geospatial Data and Systems. Key to successful implementation of the Watershed Principles will be the sharing of data internally and with others

2. Watershed Informed Approach to FY 2016 Budget Development

a. Intent. FY 2016 is the third year for the Watershed Informed budget development approach. The current budget method is unsustainable: costs are rising as budgets stay flat; the Corps needs to better explain and defend its; and the current budget method is short-ranged, one-year at-a-time, in identifying project requirements.

The intent of watershed-informed budget development is to build the capability to make better informed decisions about how the Corps invests in the national water resource infrastructure by evaluating projects in their watershed context, identifying

interdependencies with non-Corps federal projects and incorporating stakeholder priorities. This approach, which uses a wide range of existing data, is capable of supporting long-range goals using the paradigm of “Value to the Nation” (VTN) accompanying condition and risk for budget prioritization and defense.

b. Goals. The FY 2016 pilots will be more extensive and cover a majority of the Corps’ projects as well as involve every District. The goals for this year’s pilots are threefold:

(1) To compare the results of this year’s pilots at the watershed level with the results of the performance-based budget.

(2) To insure that budget personnel within each District are trained in the watershed-informed budget development process.

(3) To confirm the process to develop a ranked list of projects at the MSC and national level, as a precursor to full implementation across all the watersheds with Corps’ projects in FY 2017.

c. Overview. To ensure that the results of the pilots are comparable and able to meet the goals above, all districts will use a similar process to develop and complete the FY 2016 pilot submissions. Lessons learned from the efforts in FY 2014 and FY 2015 have resulted in a standardized process and enterprise tools to support the overall purpose of this effort, in order to develop a “Value to the Nation” score that will be used in the future defense of the Corps’ budgets. This “Value to the Nation” score is one major difference between the watershed-informed budget approach and the traditional performance-based budget approach. Other differences in approach include:

(1) Use of existing data collected by the Districts (including CWIFD and OMBIL) to develop “Value to the Nation (VTN)” scores for each watershed and its projects.

(2) Consideration of stakeholder input into calculations of these “Value to the Nation (VTN)” scores to help align Corps’ priorities with local and regional watershed objectives, when possible.

(3) Consideration of a wide range of project performance data and watershed performance data, as inputs in developing “Value to the Nation (VTN)” scores for each watershed and its projects.

(4) Analysis of project interdependencies and interactions (Corps to Corps and Corps to non-Corps federal projects) within a watershed or coastal system, as an input to develop “Value to the Nation (VTN)” scores for each watershed and its projects.

(5) Creation of a prioritized list of Corps projects within a watershed that can be compared across business lines, watersheds, and regions in terms of “Value to the Nation (VTN)” scores for each watershed and its projects. For the FY 2016 watershed-

informed budget development pilots, the watersheds and coastal systems have been preselected through a process considering district and regional input to insure that all Districts are represented and they include a majority of the Corps projects. These watersheds and coastal systems were also selected to ensure standardized outcomes and effective comparisons between large and small watersheds, inland watersheds versus coastal systems, and watersheds with large, mature stakeholder communities versus small stakeholder groups.

d. Definitions:

(1) A “watershed-based budget” is defined as a sustainable, five-year set of prioritized and VTN project-level investment options. Development of these investment options must include collaboration with local, state, federal, Tribal and non-government organizational stakeholders, thus providing the broad-based support and leveraging of all resources in the watershed and coastal system activities that will be proposed for Federal funding each year.

(2) A “watershed-informed budget” is defined as set of prioritized investment options for the USACE that take into consideration the interdependencies of projects in the watershed, enabling the Corps to make better informed decisions about how it invests in the national water resource infrastructure. While collaborating with others, USACE retains Civil Works budget decision-making authority and responsibility. This approach, which uses a wide range of existing data, is capable of supporting long-range goals using VTN scores, as well as condition and risk determinations, for budget prioritization and defense. Each pilot budget should be developed in parallel with the normal budget development process, but must not impact the MSC FY16 budget submission scheduled for 15 June 2014. As this year’s pilots will result in USACE budget only, this effort will not result in a watershed-based budget.

(3) “Watershed” is a geographic area which drains to a common river or body of water. Looking at water resource infrastructure and activities is called watershed management. Watershed management takes a comprehensive look at natural and man-made functions of the hydrologic system and impacts to that system. Business lines such as Flood Risk Management or Hydropower should not be considered as separate systems, since they are simply a part of the overall functions within a particular watershed. A “watershed” can also reflect a jurisdictional, political, or other boundary such as an Operations and Maintenance Basin authority. MSCs and Districts have been given a defined list of watersheds and coastal systems which will be used for the FY 2016 submittals.

(4) “System” is an area with a common function, such as a coastal system, navigation system or an ecosystem. A system boundary is not a true drainage boundary, but does have hydrological function considerations. The term “watershed” will be used throughout this budget EC, and will refer to both watersheds and coastal systems.

e. Purpose. Through the watershed-informed budget submittals, MSCs will enhance the justifications of their watersheds' and projects Value to the Nation (VTN) due to shrinking resources. Re-thinking how best to prioritize and finance water resource investments for the 21st century has become a necessity, given the fiscal restraints the Nation is currently facing and will continue to face for the foreseeable future.

(1) Value to the Nation. Value to the Nation is defined broadly as improving economic growth, protecting the environment, and providing for the social well-being of the Nation. The following National Objectives are specific categories that define what constitutes Value to the Nation. These Goals provide the framework within which the National Objectives, which are now measurable, are placed. These National Objectives are essential for developing FY 2016 watershed-informed budgets. However, they have not been formally approved by the Administration for use in the FY 2016 Budget. Dialogue with Army and the Office of Management and Budget is occurring to confirm/update them.

(2) The current National Objectives include:

(a) supporting national defense at home and abroad;

(b) recapitalizing, operating and maintaining water resource infrastructure and a reliable waterborne transportation system to provide maximum benefits to the nation;

(c) developing, restoring, and protecting the nation's waters, wetlands, and related natural resources;

(d) reducing the risks of flooding and building the nation's response capabilities to extreme events;

(e) improving energy, water, and petroleum efficiency, and reducing greenhouse gas emissions toward agency-defined targets;

(f) doubling exports from FY 2010 to FY 2015; and

(g) providing reliable, renewable hydropower benefits to the nation.

(3) Stakeholder Engagement. Input from other Federal agencies, states, local agencies and Tribes will be critical in the development of baseline watershed assessment, identification of watershed priorities and development of a 5-year investment plan. Districts will engage governmental and non-government stakeholder organizations to solicit input on the location and attributes of their projects within the watershed and the value of the Corps projects in relation to stakeholders' projects from the stakeholders' perspectives. This input will ensure that Corps activities are integrated with other stakeholder activities in the watershed and will increase the overall effectiveness of funding available at federal, tribal, state, local and non-governmental stakeholder levels.

(a) Recent White House memoranda recognize the importance and value of the appropriate use of all forms of collaborative problem solving and conflict resolution. Federal departments and agencies should ensure they effectively explore opportunities for collaboration in their planning and decision-making processes to address different perspectives and potential conflicts.

(b) While collaborating with others, USACE retains Civil Works budget decision-making authority and responsibility. Collaboration enables decision-makers to consider any consensus that may have been reached among the interested and affected stakeholders, furthering the lead agency's ability to make informed and timely decisions.

(c) The collaborative process can offer USACE many benefits, including Better Information; Fairer Processes; Better Integration of Processes; Conflict Prevention; Improved Fact-Finding; Increased Social Capital; Easier Implementation; Enhanced Environmental Stewardship; and Reduced Litigation.

f. Watersheds selected for FY 2016 Watershed-Informed Budget Development.

(1) Methodology for Identifying Draft Pilot Watersheds for Watershed-Based Budgeting. The overall objective of the selection process was to select a portfolio of watersheds that allowed analysis of the majority of the USACE budget, the majority of the of projects and studies, and the majority of the population served by USACE. In addition, the draft pilot watersheds had to include at least one watershed in each of the USACE Districts. The draft pilot watersheds do not represent a final selection and will need to be revised upon further input from the USACE Districts, Divisions, and Headquarters.

The base dataset for the analysis was the FY15 proposed budget work packages. Using these datasets, for every 4-digit HUC, total proposed budget, number of USACE projects/studies, and population based on 2010 Census were calculated. Based on these initial lists, the draft pilot watersheds were selected. The intent was to select a diversity of watersheds that had large requested budgets, large number of projects/studies, and/or population. In a few cases, a larger 2-digit HUC was used because a larger system within the District made more sense from the watershed perspective. The names for the 2-digit HUCs were names assigned by the NRCS. For most other cases, 4-digit HUCs were used. In a few cases, a few 4-digit HUCs were used together.

(2) Table 4 below identifies the watersheds and coastal systems selected for the FY 2016 pilots.

TABLE 4
WATERSHEDS AND COASTAL SYSTEMS SELECTED
FOR THE FY 2016 BUDGET PILOTS



Pilot Watersheds for
Watershed-Based Bud

g. FY 2016 Watershed-Informed Budget Development Approach. MSCs and Districts will use the standardized requirements outlined below to develop their watershed-informed budget for the watersheds selected for the FY 2016 pilots. Table 1 above identifies the watersheds and coastal systems selected for the FY 2016 pilots.

h. FY 2016 Watershed-Informed Budget Development Requirements. Districts will follow a standard process for developing the watershed-informed budget for each of the pilots listed above. This is a critical issue that, combined with the list of watersheds above, will insure effective comparisons between watersheds and establish procedures for development of ranked lists at the MSC and national level. The end product for these pilots will be a prioritized list of projects across all 27 watersheds that can be compared with the results of the standard performance-based process. The generic steps for the process are identified below and specific information has been promulgated through the scheduled training that began in December 2013 and will continue through May 2014.

(a) Develop Logic Model and Causal Map. The logic model and causal map is updated and developed with input from Business Line Managers and will be vetted with watershed budget POCs during “deep dive” workshops. The logic model refers to how different USACE programs, projects, and activities (PPA) affect the watershed Value to Nation scores. Illustrations 10, 11, 12, 13 represent the Logic Model Causal Maps for the Flood Risk Management, Ecosystem Restoration, Hydropower, and Water Supply Business Lines show the results of the process of translating performance data into Value to the Nation metrics that link to the top level criteria for the National Objectives.

(b) Collect and Verify Data (attribute, performance, location). Review list of projects from WISDM to make sure corps investments in a pilot watershed are being represented in terms of missions, location, and performance.

(c) Identify Project and Work Package Performance Data. To guarantee an accurate geo-spatial reference, each work package must have an OMBIL Site ID. Performance and attribute data will be identified for each project and work package in the watershed that reports an OMBIL Site ID.

(d) Network Model. The Network model recognizes watershed investments as a system and the ability of Corps investments to leverage watershed objectives have value. Projects are evaluated based on their ability to enhance watershed system robustness, geo-spatial interdependencies, and their ability to align with watershed objectives while meeting Corps' Civil Works missions.

(e) Tools and Support. The Integrated Budget Evaluation Tool (IBET) will support the development of FY 2016 Budget Pilots. This tool facilitates implementation of an effective process to produce a 1-N ranking of work packages. The Water Infrastructure Data Manager (WISDM) will also be available to support geo-spatial analyses during the FY 2016 Pilots.

(2) The required output from each of the proposed watershed pilots will be a prioritized list of projects and a prioritized list of work packages with a unique data element for each work package indicating its "VTN."

(3) Funding Level Definitions. The establishment of well-defined funding levels will enable wise investment decisions across business lines and watershed and coastal systems. Funding levels must fully describe what is attained, relative to the requirements and outcomes for achieving the National Objectives. Proposed funding for each funding level must be based on requirements and outcomes. These outcomes must support/align with the National Objectives in a demonstrable and defensible way. This demonstrated support /alignment will be included in the MSC's briefing on their budget. MSC's may consider applying the already-developed national business-line strategies and performance measures to their MSC "as a demonstrable and defensible way." This approach must ensure that investment decisions are based on the highest performing, highest priority projects within the watersheds and coastal systems that contribute towards achieving the established priorities of the watersheds and coastal systems. The following is a general description of the funding levels:

(a) Level 1. Level 2 is the Baseline funding level to accomplish the minimum level of effort necessary (i.e., critical life safety, priority projects/studies, priority business lines) to maintain benefits that contribute to obtaining the National Objectives for the watersheds and coastal systems.

(b) Level 2. Level 2 consists of the additional budget items above Level 1 funding that should consist of logical, HIGH PRIORITY items of work that contribute to the National Goals/Priorities for the watershed and coastal system. The basis for adding items of work will be demonstrable beneficial impact resulting from accelerating project completion and/or improved performance, such as cost savings achieved by combining work items OR MORE EFFICIENTLY FUNDING COMPLETION. For O&M projects, the cumulative of Level 1 and 2 cannot exceed 90 percent of the average 5-year average for the watersheds and coastal systems.

(c) Level 3. Level 3 consists of the recommended funding level of effort/requirements for specific studies and projects within the watersheds and coastal systems to meet the

watershed and coastal system priorities relative to the National Objectives.

(d) Level 4. Level 4 is the Capability funding level for studies and projects to fully meet the watershed's and coastal system's priorities relative to the National Objectives. The capability funding level is the amount that can be accomplished within the BY, and not based on individual study or project capability funding levels.

TABLE 5

Watershed Pilot Funding Levels



Watershed Pilot
Funding Levels.xlsx

(e) Ranking Criteria. To ensure the highest priority work is identified, budget items should be based on the performance components and ranking criteria shown in each Business Line Appendix, and documented in the reference memorandum that will allow the development of a performance based budget that can be prioritized across Business lines and Accounts.

(f) Five Year Plan. In order to formulate long-term funding strategies, a Five Year Plan is required. The plan must be based on out-year requirements to meet the watershed and coastal system priorities relative to the National Objectives, using the paradigm of "Value to the Nation" (VTN) in addition to project condition and risk for long-term prioritization. The Five Year Plan is to be documented for each study and project funding requirements by Funding level to document the out-year requirements. It is to include a recommendation on new start studies, project/study phases, and new start construction projects.

(4) Submission Requirements for Watershed-Based Budget Pilots. The following requirements outline steps involved in developing the watershed-based budget for each watershed.

(a) Initial Watershed Data Assessment & Review

- Initial Internal Preparations – Develop project list for inclusion in budget; Develop map of existing Corps projects within selected watershed; identify key local watershed plans and stakeholders;
- Internal Workshop – Review watershed map, projects, local priorities & needs, Corps roles; draft initial Value to the Nation arguments with specific language showing how projects meet National Objectives (e.g. project prevents \$40B in flood damages, restores remaining 2% of coastal wetlands, etc.) and, record arguments using a logic

model or causal map; Use VTN arguments to prioritize Corps activities within the watershed and discuss 5 year work plan.

- Collect and Consolidate Data – create single map of federal and non-federal projects in watershed and develop options for describing linkages between projects (e.g. hydrology, ecology, demographics); distribute map and possible linkages for stakeholder review; revise as necessary.

(b) Stakeholder Input – Input from other Federal agencies, states, local agencies, other stakeholders and Tribes will be critical in the development of baseline watershed assessments and identification of watershed objectives to ensure integration with stakeholder activities from a watershed perspective. Stakeholders will provide information about non-Corps projects, activities and assets with geo-referenced information. The goal is to determine watershed objectives and identify the non-Corps projects, activities and assets that support these watershed objectives. Objectives of the stakeholder process include:

- Familiarization of stakeholders with USACE's watershed budgeting process and the role of stakeholder input.
- Determination of watershed objectives from existing watershed council documents, or stakeholder workshops. Districts will engage stakeholders through a workshop or other interactive process during the development of the watershed-based budget.
- If a stakeholder engagement is not possible district must designate a watershed program manager who will use best professional judgment to determine watershed objectives and identify non-corps projects, assets and activities
- Discussion of a 5-year work plan that includes linkages between Corps and non-Corps projects.
- Documentation of efforts to support viable watershed relationships, as well as how stakeholder input was obtained and how this input shaped the overall watershed and coastal system prioritization.
- Notation of the existence or not of a watershed plan, its breadth and depth, and level of acceptance by watershed stakeholders, and if level of stakeholder engagement matches the level of complexity in the watershed.
- Documentation of how USACE projects support watershed goals and objectives, including, if possible the amount of other federal or non-federal funds leveraged by USACE funds, or the quantitative achievement of other local goals (e.g. habitat restoration, jobs, etc) produced by USACE funds.

- Documentation of the historic and current level of USACE and other federal participation in stakeholder groups and the level of integration of USACE projects and activities into the watershed plan.

ILLUSTRATION 10

Logic Model and Causal Map for Flood Risk Management Business Line



Illustration 10 Flood
Risk Management Logi

ILLUSTRATION 11

Logic Model and Causal Map for Ecosystem Restoration Business Line



Illustration 11
Ecosystem Restorator

ILLUSTRATION 12

Logic Model and Causal Map for Hydropower Business Line



Illustration 12
Hydropower Logic Moc

ILLUSTRATION 13

Logic Model and Causal Map for Water Supply Business Line



Illustration 13 Water
Supply Logic Model an