

**US Army Corps
of Engineers®**

**Results-Oriented Performance Measures
for the Civil Works Program**

**REPORT ON PHASE I
(March 1995-February 1996)**

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April 1996

IWR Report 96-R-16

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Results-Oriented Performance Measures
for the Civil Works Program

**REPORT ON PHASE I
(March 1995-February 1996)**

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PREFACE

This report was prepared to document the first phase of a comprehensive initiative to develop results-oriented performance measures for the Civil Works Mission of the United States Army Corps of Engineers. The initiative was undertaken at the direction of Major General Stanley Genega, Director of Civil Works. During Phase I, Don Cluff, Chief of Programs Management Division, provided executive leadership and direction. Dave Kenyon, Chief of the Programs Development Branch, provided general supervision; and Tim Hiltz, Programs Development Branch, was project coordinator. The Program Analysis Division of the Institute for Water Resources (IWR) provided analytic support for the initiative. The IWR project team included Mark Dunning, Chief; Rick Sinclair, project manager; Karla Allred; John Brill; Sandra Remer; Frank Sharp; and Richard Whittington. Kyle Schilling, Director of IWR, provided general management oversight of IWR support. In addition, Ted Kanamine, and Donna Ayres from the Engineer Strategic Studies Center provided meeting facilitation support. Craig Holt, Oregon Department of Transportation; and Ed Joseph, General Accounting Office acted as advisors and provided facilitation support. Jim Davidson, Operations Plan of Improvement project manager, and Dave Lichy, Navigation Data Center, provided important insights and lessons learned from developing results measures in the operations pilot project. Logistical support to conduct and document the proceedings of the many workshops held during Phase I was provided by Planning and Management Consultants, Ltd. Many individuals within the Civil Works community participated and contributed their time, energy, and developmental thinking to the Phase I effort. They are identified in Appendices 1, 2 and 6 of this volume.

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SECTION I. INTRODUCTION

Purpose

In FY 95 the U.S. Army Corps of Engineers Civil Works program began development of program performance measures in response to the Government Performance Results Act of 1993 (GPRA). This report describes the first phase in the development of these measures. It presents the goals of the initiative, the results-oriented performance model being employed, the implementation process, results obtained thus far, lessons learned, and planned next steps in Phase II. The report is primarily intended to serve as a summary reference document for those who have participated in the measures-development process. It is also meant to provide an overview of the goals and methods of the initiative to those within the Corps of Engineers who have not, thus far, been involved in the process. Lastly, the report is meant to provide information and lessons learned to others involved in the development of results-oriented performance measures.

Goal

The Civil Works program wants to ensure that the products and services it provides to the nation are effective in producing desired program outcomes, meet or exceed user and taxpayers requirements, and are produced efficiently. The goal of the results-oriented performance measure initiative is to develop measures that gauge the performance of the Civil Works program in achieving this intended result. This emphasis stands in contrast to existing performance measurement which monitors internal business activities (e.g. how much money has been spent, how many FTEs used, how many reports processed, etc.) but fails to provide information on whether the program is achieving intended results and fails to link activities measured to program results.

Results-Oriented Performance Measurement

Results-oriented performance measurement has gained attention in government as part of the debate over budget deficit reduction and government program accountability, and is evident in a variety of current administrative and legislative efforts. The National Performance Review and Reinventing Government have stressed the importance of focusing agency efforts on program results, customer satisfaction and service quality. The Chief Financial Officers Act, similarly, encourages systematic measurement of the results obtained from the expenditure of public funds. The clearest expression, however, of the results-oriented management philosophy is found in GPRA. GPRA mandates the design and pursuit of "strategic planning and performance measures" to achieve better results from public agencies. Senator Roth, one of the co-sponsors of the legislation (along with Senator Glenn) explained GPRA's intent:

"For the first time, Congress would have to specify what the measurable outcomes of each program should be. It would be compelled to answer the questions: 'Just what is it we expect this program to accomplish? How will we know if it is performing effectively and efficiently?' Those who argue that a program's mission cannot be stated in measurable terms would really be saying, 'We can't tell you

how to determine whether this program works well, but let's fund it anyway and hope for the best.' That response should not be acceptable, and would not be, under this legislation."

GPRA mandates three activities:

- Creation of strategic plans - identifying agency missions and long term goals. The first strategic plan is to be submitted by 30 Sep 97.
- Creation of annual performance plans wherein agencies set performance targets for achieving their long range goals. The first performance plan is due in Fall 1997 and will set performance goals for the FY 1999 budget.
- The submission to the Office of Management and Budget (OMB) and Congress of a yearly performance report presenting the actual performance compared to the preceding year's goals.

GPRA's provisions set the stage for performance budgeting. That is, holding agencies accountable for results, and linking the budget process to performance. GPRA calls for performance budgeting pilot projects in 1998 and 1999 to evaluate the feasibility of incorporating performance budgeting into GPRA. OMB has already begun to move agencies in this direction, requiring the presentation of performance information as part of agency budget submittals.

Operations and Maintenance GPRA Pilot Project

To help prepare the government for GPRA, the law establishes agency pilot projects in FY 1994, 1995 and 1996. Pilot projects will develop and test procedures to comply with GPRA requirements. The Corps Operations and Maintenance (O&M) Program was selected as a GPRA pilot project. The O&M program is roughly half of Civil Works in terms of annual budget and workforce. This program had already undertaken a comprehensive assessment of its business, and had identified performance measurement as a program improvement goal prior to the passage of GPRA. The O&M program identified and adopted an innovative performance measurement approach developed by the Oregon Department of Transportation (ODOT). The experience and insights gained from the O&M pilot project is being used to guide the comprehensive development effort.

SECTION II. CIVIL WORKS PERFORMANCE MEASUREMENT MODEL

The model employed to develop performance measures is an adaptation of the O&M performance pilot process, and is based on the following relationships among key concepts:

-Results are the intended consequences of programs - i.e. what they were established to accomplish. Results can be identified on the basis of authorizing language, Administration policy for a program, and by focusing on the needs and expectations of the "customers" of the products and services produced by the program. **Customers** include the end users of products and services, but may also include broader categories such as the general public or taxpayers.

-Results are achieved through products and services produced by the program.

-Results-oriented performance measures help identify if the products and services are effective and if they are efficiently produced.

-Products and services are **effective** if they are consistent with authorizing language, Administration policy, and meet customer requirements expressed in terms of performance factors such as quality, timeliness, cost, reliability, etc.

-Products and services are **efficient** if they are produced at the least cost (measured in dollars, manpower, or time) for a defined level of quality or performance, usually expressed on a cost per unit basis.

Applying the model essentially consists of two parts: (1) defining the performance "targets", by specifying the results that CW needs to achieve, and (2) developing the measures to tell how well the organization is doing in reaching the target. The first step, that of target definition, is the province of executive leadership. Leaders are responsible for identifying the following concepts:

- CW Mission:** Why CW exists. What CW should achieve.
- Business Programs:** How CW is organized to carry out its mission.
- Business Program Purpose:** Intended program results defined by (or derived from) authorizing language, and administration policies.
- Key Result Areas (KRAs):** Management areas of emphasis in which CW must excel if it is to achieve and sustain results-oriented performance.

In the second part, the process of developing performance measures, program specialists develop measures using the framework developed by leadership. Two types of measures are sought:

-Measures of Effectiveness: Measures which help determine if CW is producing products and services which are fulfilling authorized purposes and which meet customer needs.

-Measures of Efficiency: Measures which help determine if the products and services are being provided with the best use of resources.

The CW performance measure system consists of several organizational levels or tiers. Tier I is the executive leadership level. Tier II is the national program level. Tier III is the district level, and Tier IV is the project level. Each tier below Tier I is expected to create performance measures which help focus performance at that level in ways that are consistent with overall Tier I performance guidance.

Another key feature of the CW model is the reliance on a participative, consensual and iterative process to develop and mature the performance measurement system. In this approach reliance is placed on selecting knowledgeable persons to work in small groups. The use of a collaborative process to discover and develop performance measures contributes to a greater sense of ownership of the measures, and a commitment to making the measurement system succeed. There is also a recognition that the measurement system will evolve over time, and that the process will need to be iterated several times, and experience in using it accumulated, before a results-oriented performance system is fully developed.

A Brief Example

The model can be illustrated by an example derived from the Tier I/Tier II process performed in Phase I, and described in Section II below. One of the nine business programs identified by Tier I for carrying out the CW mission is navigation. The navigation program exists to provide safe, reliable, and efficient waterborne transportation systems for the movement of commerce, national security needs, and recreation. To achieve this intended result, the CW program produces two navigation products and services - harbors and waterway systems. These products and services serve a number of key customer groups: shippers, cargo carriers, military transport/federal agencies, recreational boaters, commercial fishermen, and passenger carriers.

One measure of the effectiveness of navigation products and services in achieving intended results is :

-Percent of waterway availability, defined as miles of waterway closed during an increment of time (weeks, quarterly, annually) because of unscheduled closures divided by total waterway miles. This measure addresses customer needs for reliability and minimized delays.

An example of an efficiency measure is:

-Ratio of time actually required to complete a waterway project to the initial scheduled time. This measure uses time rather than dollars as a unit of cost, and addresses customer needs for timeliness.

SECTION III. KEY ACTIVITIES

Key activities undertaken in Phase I are shown in Figure 1. In addition to the time period encompassing Phase I (March - December 1995), early preparation and background work which led up to the initiation of Phase I is also described.

Preparation and Background Work (October 1993 - March 1995)

The impetus to develop a comprehensive CW results management focus came from a number of sources. First, an Institute for Water Resources (IWR) research workunit to assist in the development of O&M performance measures provided a forum for the broader discussion of application of O&M concepts and approaches to the rest of CW. Second, a goal-setting exercise undertaken by the Acting Assistant Secretary of the Army for Civil Works in the summer of 1994 provided the opportunity to engage CW leadership in discussions about implementing a comprehensive results-oriented management process as part of CW goals. The Director of Civil Works established a CW goal to begin the process of developing results-oriented performance measures in September 1994, and placed the responsibility for doing so with Mr. Don Cluff, Chief of Programs Management Division (CECW-B).

IWR was retained by CECW-B to continue to provide assistance in the development of an approach for developing results-oriented measures. Options and a recommended approach for implementing results-oriented performance measures were presented to the Chief of Programs Management Division in a concept paper in February 1995, and were subsequently approved by the Director of Civil Works in March 1995. The approved approach would draw from and adapt the basic O&M model, would accelerate the development process, would be less resource intensive; and would be oriented toward developing performance measures that enable managers to manage their programs more effectively.

Initial Planning and Kick-Off Meeting

After the decision to proceed with development, CECW-B and IWR began intensive planning for the process. A series of one-on-one interviews was conducted with executives within CW and

Figure 1. Chronology of Phase I Activities

Activity	Date
Preparation and Background Work	Fall '93 - Mar '95
Kick-off Meeting	May '95
Tier I Meeting	Jun '95
Tier II Workshops	Jul '95
Tier I Review	Aug '95
Tier II Verification Workshops	Aug - Sep '95 (Water Supply, Nov '95; EM, Dec '95)
Selection of Performance Measure Proponents	Dec '95
Selection of Program Performance Measures for FY 96 Implementation	Feb '96

in the Office of the Assistant Secretary of the Army (Civil Works) (OASA(CW)), Office of Counsel, Real Estate, and Resource Management to explain results management concepts, the upcoming process, and to obtain executives' input into the overall design of the process. A "rules of the game" meeting was also conducted in April in which executives from DoD, OASA(CW), and General Accounting Office (GAO) were invited to explain what constraints or other factors needed to be included in the process in order to comply with GPRA requirements. In addition, a meeting was held with OMB for the same purpose. Using the information obtained from interviews and meetings, a kick-off meeting with CW executives was held in May to announce the initiation of the overall process, and to lay out the schedule.

Table 1. Civil Works Mission Statement Developed in Tier I Leadership Meeting, June '95

"The Army Corps of Engineers Civil Works mission is to contribute to the national welfare by providing quality authorized water resources and emergency response programs through partnerships."

Tier I

Tier I consists of executives from within CW, as well as from Office of Counsel, Real Estate, Resource Management, Research and Development, and OASA(CW). Additionally, selected leaders from Corps divisions (Major Subordinate Commands or MSC), and district offices were chosen to serve on Tier I based on recommendations received in the one-on-one interviews. The roster of Tier I members is shown in Appendix 1.

Tier I Leadership Meeting (June 1995)

The objective of this meeting was to define the framework for the entire performance measurement effort. Leaders focused their efforts on defining a succinct mission statement, identifying business functions, determining Key Result Areas, and establishing principles to guide the development process. Tier I adopted a consensus model, wherein the group could not move ahead without receiving a "thumbs up" affirmation from all participants. Participants also endorsed an "80%" rule, i.e. agreed not to strive for perfection, but agreed that 80 percent was good enough. In addition, a "parking lot" for issues which could be set aside for later discussion and resolution was established. This allowed progress to continue on the task at hand.

Tier I Accomplishments

CW Mission Statement. Working in small groups, participants developed several mission statements for the CW program. Common themes among the five groups were identified. Revised mission statements were created by the teams focusing on common themes, and a series of mission statements was created and revised by the entire Tier I group. After a number of iterations the group agreed upon the CW mission statement shown in Table 1. This mission statement represented a consensus among Tier I as serving as the basis for orienting CW performance. The mission statement was subsequently modified by the Acting Assistant Secretary for Civil Works to reflect higher order linkages of the Civil Works mission to national security considerations (Table 2).

CW Business Programs. Tier I was faced with several choices regarding how to organize the CW “business” programs which support mission accomplishment. The approach to structuring business programs has profound implications for follow on efforts to develop performance measures. Three business structures were debated:

-by budget funding accounts (General Investigations, Construction General, O&M, etc.);

-by technical function (planning, engineering, construction, O&M);

-by program area (navigation, flood control, etc.).

Each option had pros and cons. Tier I concluded that defining CW business areas on the basis of programs was preferable for demonstrating CW performance given the desired focus on program results and not processes. This was a strategic and critical decision that signaled a departure from conventional practice. After discussion the group identified nine business programs, and developed purpose statements for each. These business programs represent Tier I’s judgment of what needs to be performed to carry out the CW mission. The purpose statements represent Tier I’s views on the intended consequences, i.e., the results, that each business program area should strive to achieve. These are shown in Table 3.

Table 2. Civil Works Mission Statement as Modified by Acting Assistant Secretary of the Army for Civil Works

“The Civil Works mission of the Army Corps of Engineers increases national security by its contributions to the strategic goals of promoting prosperity, enhancing security and promoting democracy. Contributions to each of these goals are made by providing and maintaining quality water resources projects through partnerships.”

Table 3. Civil Works Business Programs and Purposes Identified in Tier I Leadership Meeting, June '95

Navigation

Provide safe and efficient channels and harbors for movement of commerce, recreation and associated activities.

Flood and Coastal Storm Damage Reduction

Save lives and minimize the level of property damage incurred by floods and storms using both traditional and non-traditional measures.

Hydropower

Provide reliable and cost-effective power services to power marketing agencies, Federal Energy Regulatory Commission and others.

Regulatory

Protect the nation's wetlands and navigable waters through the Army permitting process.

Environment

Ensure environmental compliance; manage natural resources; provide for mitigation; provide for restoration.

Emergency Management

Prepare for and respond to natural and national emergencies under Corps, FEMA, and other agency authorities.

Support for Others

Assist other governmental entities to achieve their mission consistent with the capabilities of the Corps.

Recreation

Provide quality public recreation opportunities and experiences compatible with other project purposes.

Water Supply

Provide and manage storage in Corps reservoirs in conjunction with other purposes for beneficial uses.

Key Result Areas. Using the same procedure described above, Tier I developed a number of initial lists of Key Result Areas (KRA's), discussed and grouped them, and ultimately developed the KRA's shown in Table 4. These KRA's are focal points for orienting and measuring performance. In Tier I's judgment, CW will achieve and sustain results-oriented performance by:

-producing products and services that provide a public benefit associated with program purpose (e.g. wetlands preserved), and/or sound public investment principles (e.g. benefit/cost);

-producing CW products and services that satisfy users (customers) by providing quality, by being produced in a timely fashion, within budget, and responsive to customer expectations;

-producing CW products and services efficiently - on time, within cost, at an appropriate cost per unit;

-by creating and maintaining the kind of CW organization that attracts and keeps technically competent workers, and provides a satisfying work environment for employees.

Guiding Principles. Tier I did not have time to address the issue of guiding principles; however, the group delegated the responsibility to Don Cluff to develop these based on those prepared in the O&M process. The principles shown in Table 5 are those used in the O&M process, and were subsequently endorsed by Tier I as CW guiding principles as well.

Tier II

The actual task of developing programmatic performance measures for each of the CW business programs was the responsibility of Tier II business program specialists. Tier I leaders were asked to provide nominations of individuals who were expert in the technical functions of the business program areas, who had a broader "programmatic" perspective as opposed to an individual project-

Table 4. Key Result Areas and Example Attributes Selected by Tier I Leaders, June '95.

1. Program Results and Justification

- Damages prevented
- Acres protected
- Wetlands preserved
- ROI (Return on Investment)
- B/C (Benefit/Cost)

2. Customer Satisfaction (External)

- Product quality
- Customer expectations/involvement
- Responsiveness
- Timeliness
- Cost (Within budget)

3. Management Effectiveness and Efficiency (Internal)

- On time
- Within cost
- Overhead rate
- Cost/unit
- TLM (Total labor multiplier)

4. Technical Competence

- Maintain skills, etc.
- Quality workforce
- Flexibility for future
- Recognize

5. Work Environment

- Safety
 - ACOE (Army Communities of Excellence) Training
 - Diversity - Morale
-

centered focus, and who were creative and forward-thinking. From the list of nominees obtained, Tier II workgroups in each business area were assembled. In order to maintain continuity between Tier I and Tier II, a Tier I “Champion” was identified for each business program to serve in the Tier II business program workgroup. The list of Tier II participants is provided in Appendix 2.

Tier II Performance Measure Workshops (July 1995)

Tier II workgroups worked within the framework established by Tier I. Workshops to develop results-oriented program performance measures were held at the Casey Building over a three-day period. A facilitated process similar to that employed in Tier I was used. The nine business program workgroups met together in plenary session at the beginning, at the one-third, and also at the two-thirds point of the meeting to receive instruction, and to discuss general issues. The rest of the time was spent in separate business program team workshops.

The workshop process used a structured process to derive results-oriented performance measures. Participants first identified the essential products that a program produced. They then identified the customers for the products. Table 6 presents the products and customers identified by each business program workgroup. The third step was to identify customer needs. These three steps set up the structure to derive results-oriented measures. If a measure fell outside or did not align with a KRA it would not be defined as being a program performance measure. Definitions as well as an identification of potential data sources for the measure were developed for each performance measure that met screening criteria.

The Tier II workshop produced a rich discussion and reflection about Corps CW mission, business products and customers. A number of key issues surfaced in all nine workgroups. Primary among these was identifying who the customer was for CW business program products. Agreement was readily achieved on customer identification at the project or service delivery level; however, neither clear understanding nor agreement was arrived at as to who constituted customers at the program level. There was considerable debate about whether Congress, as representative of the broad public interest, was a customer whose needs and expectations needed to be considered. Tier II participants also grappled with whether local sponsors of projects should be considered as customers or as partners, and the role of special interest groups who influence the character and scope of products and programs. The lack of resolution significantly affected Tier II’s ability to identify program results from a national perspective, rather than simply as an additive collection of

Table 5. Guiding Principles Endorsed by Tier I Leaders.

- Results NOT Activities
 - TEAM-based measures NOT individual
 - TEAMS will develop WORKGROUP measures
 - EFFICIENCY & EFFECTIVENESS measures
 - LINKAGE of Performance Measures to National KEY RESULT AREAS
 - CUSTOMER linkage to Performance Measures
 - “Yardstick” NOT “The Answer”
 - Continuous IMPROVEMENT PROCESS
 - ANNUAL review of measures
-

project products and services. A number of other issues surfaced and were discussed during the workshop. These are listed in Appendix 3. Those issues which were not resolved by the end of the workshop were referred to Tier I for resolution.

Tier I Review (August 1995)

Tier I met again in August to review Tier II comments on the business purpose statements, and to provide additional guidance to Tier II to facilitate achieving closure on the development and refinement of program performance measures.

Revised Purpose Statements

Appendix 4 shows the issues raised by Tier II about business purpose statements and Tier I revisions to the statements. Tier I embraced many of the Tier II refinements to the purpose statements; however, in other cases it further clarified its original viewpoint.

Customers

As previously noted, one of the key issues at Tier II had been identifying the customer for program products and services. Some groups had been reluctant to develop measures until they had received further clarification; others had come to their own conclusions, and had created measures based on their decisions. However, there was a general perception among Tier II participants that clarification concerning the definition of customers was needed at the program level. Tier I was advised by the workshop facilitators (Craig Holt, ODOT and Ed Joseph, GAO) to not provide specific guidance to Tier II about who customers were for the business program areas. Based on their experience in working with other agencies, they advised that Tier II workgroups would either debate the correctness of Tier I's pronouncements or develop program performance measures in a mechanistic way. Instead, Tier I developed an

Table 6. Products and Customers of Civil Works Business Programs

Business Program	Products	Customers
Navigation	Harbors, Waterway Systems	Shippers, Cargo Carriers, Military Transport/Federal Agencies, Recreational Boaters, Commercial Fishermen.
Flood & Storm Damage Reduction	Flood and Coastal Storm Damage Reduction	American public as represented by President and Congress
Hydropower	Electrical Energy Capacity	Preferred customers through Power Marketing Agencies
Regulatory	Environmental Protection and Development	General public
Environment	Compliance, Mitigation, Maintenance, Restoration	Public
Emergency Management	Preparedness and Response	DoD, general public, other Federal agencies
Support for Others	HTRW Remediation, Constructed Facilities, Management and Technical Services	Federal agencies, OMB & Congress, international organizations/governments, Indian tribes, private US firms
Recreation	Recreation Facilities, Natural Resources	Visiting public, future generations
Water Supply	Municipal, industrial and agricultural water supply	Local governments, water management districts, other permitted users, companies and utilities

illustration and a series of questions to help Tier II in their further deliberations about questions (Figure 2). The figure indicates that at the program level, customers are those who provide or influence authority, mission and resources. This non-directive approach was taken by Tier I to ensure a deliberative discovery process by Tier II in subsequent work to further screen and refine the programmatic measures. The guidance provided, however, make it clear that Tier I was interested in program performance measures that provide information useful to those who authorize programs and allocate their resources.

Tier II Verification Workshops

The initial Tier II workshops were successful in the creation of program performance measures; however, several additional steps remained: (1) screening against customer needs; (2) screening against implementability criteria (expressed as whether the measures were understood, and whether they provided information that could be used in decision making); and (3) developing performance goals for each measure. Individual business program workgroups were scheduled for one day workshops to complete these requirements. Most workshops were conducted during the August - September timeframe. However, the water supply and emergency management workgroups were not conducted until November and December respectively. Tier II workgroups developed a total of 84 results-oriented program performance measures. Appendix 5 provides a listing of verified performance measures for each business program area. A more complete specification of each measure is provided in each workgroup's team documentation booklets (available from Rick Sinclair, CEWRC-IWR-A).

Selection of Measures for FY 96 Implementation

At the completion of Tier II activities measures were in various states of readiness and useability. Many required data that were either not collected or while collected, were not readily reported. For example, the hydropower measure of unit availability was manually entered in powerhouse logs. Reporting such data will require additional effort.

During the process of sorting and identifying measures for implementation, it became apparent that successful development and use of program performance measures was dependent upon clearly defining "proponents", i.e. a person with managerial responsibilities for the business program. Business programs of hydropower, regulatory, recreation, emergency management, support for others, and the environment areas of natural resources and compliance have such proponents. The business programs of navigation, flood and storm damage prevention, the environmental areas of restoration and mitigation, and water supply do not. Navigation and flood and storm damage

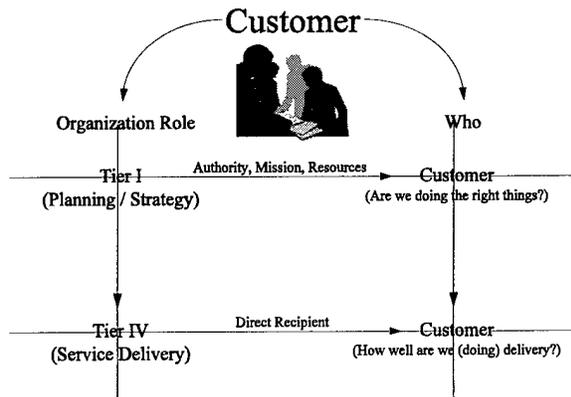


Figure 2. Tier I Guidance on Defining Customers

prevention, moreover, represent the two biggest Corps business programs, accounting for over 66 percent of the CW budget, yet they lack a program proponent who has the responsibility for evaluating the health of the program.

Since there was no person with clear program responsibilities to continue the development and implementation of performance measures for these business program areas the schedule for fielding performance measures bogged down. This problem was solved by the designation of performance measure proponents for all business programs. Appendix 6 identifies program proponents, and their points of contact (working level proponents). Performance measure proponents have the responsibility for the selection of program measures for use in FY 96, and for the further development of program measures within a business program area.

Implementation was defined for FY 96 as the complete specification of measures, writing implementation instructions and deploying measures for data collection, development of baseline information on the measures, and the reporting of the status of baseline creation and baselines at periodic in progress reviews. Determinations of a measure's readiness for implementation were made primarily on the basis of data availability. This was a pragmatic decision reflecting the limited resources available to begin the implementation process. The advantage of this pragmatic selection process was to gain experience in implementing measures. The disadvantage of the selection process was the resulting bias towards management effectiveness and efficiency measures. This bias is not surprising. The Corps is strong in measuring processes and activities, and many of the processes and activities already being measured relate to the focus of management effectiveness and efficiency KRA. Results-oriented measures in the other KRAs will require the most development work to achieve implementation. It will take time to put data collection and reporting systems in place for these newly conceived measures.

Based on the above considerations, proponents identified a "short list" of fifteen measures for implementation in FY 96. The list of measures is shown in Table 7. Appendix 7 provides a more complete definition and specification of these measures. In some cases the measures selected for implementation have been modified from the original Tier II specification so that information could be obtained without overburdening the field. For example, the navigation measure of waterway availability was defined in a way that will require the collection of additional data. However, data are currently collected for the portion of the measure focused on lock availability. In this case it is possible to adopt interim measures for FY 96 use while longer term data collection strategies for the more comprehensive measure are worked out. In other cases, performance measures and data already developed as part of the O&M performance pilot provided a reasonable match with a CW measure. For example, the environmental (natural resources) measure "Percentage of projects in compliance with authorized mitigation" is substantially the same as the O&M measure "Percent of mitigation lands achieving the intent in the authorizing legislation or relevant Corps decision document." In this circumstance, for FY 96 implementation, it makes more sense to implement the O&M measure, and defer the issue of the further development of the CW measure to the next year. Finally, in some cases, proponents determined that Tier II measures were not ready for implementation in their present form. In some of these instances proponents substituted other O&M-derived performance measures for use in FY 96. In the Water Supply business area, where there were no O&M measures to substitute, no FY 96 measures were fielded.

Table 7. Civil Works Results-Oriented Performance Measures Recommended for Implementation in FY 96

Business Area	Measure
Flood & Storm Damage	1. Total annual flood damages and total annual damages prevented
	2. Return on incremental program investment
Navigation	3. Industry delay costs due to unscheduled closures
	4. Unscheduled closures
	5. Lock chamber days available
Hydropower	6. Availability
	7. Percent unplanned outages
Recreation	8. Dollar value of volunteer effort
Environment	9. Percent mitigation lands achieving the intent in the authorizing legislation or relevant Corps decision document
	10. Percent of major findings corrected vs. number identified
	11. Percent of significant findings corrected vs. number identified
SFO	12. Customer satisfaction
Regulatory	13. Percent of all actions completed within established timeframes
Emergency Management	14. Annual cost of readiness in dollars per year
	15. Annual national assessment of emergency management preparedness direct labor compared to CW program direct labor
Water Supply	Measures deferred in FY 96

Proponents will continue with the development of a full suite of program performance measures in Phase II of the CW initiative. These activities will entail reconstituting Tier II groups to refine measures, to develop new measures as needed, and to address the data availability difficulties described above which limited the ability to field measures in FY 96.

SECTION IV. LESSONS LEARNED

Phase I has been a complex and fast-paced effort. This section describes a number of lessons learned from the conduct of Phase I. These insights will be applied to Phase II, and are provided for the benefit of others who may be engaged in the development of results-oriented performance measures. Lessons learned are presented under two categories - findings about results-oriented measures, and findings about the process used to develop measures.

Findings About Results-Oriented Measures

1. Results oriented management is a powerful perspective that promises to have profound impact on the CW program.

A major Phase I “result” of the introduction of the results-oriented management perspective has been the first steps to realign the CW budget by business program area. Chapter 4 of the FY 97 budget memorandum (September 1995) describes the CW program using the business program areas, and presents budget information on this basis. Figure 3 presents the FY 97 budget described using the new framework.

Other changes are likely to come about with the introduction of the business program

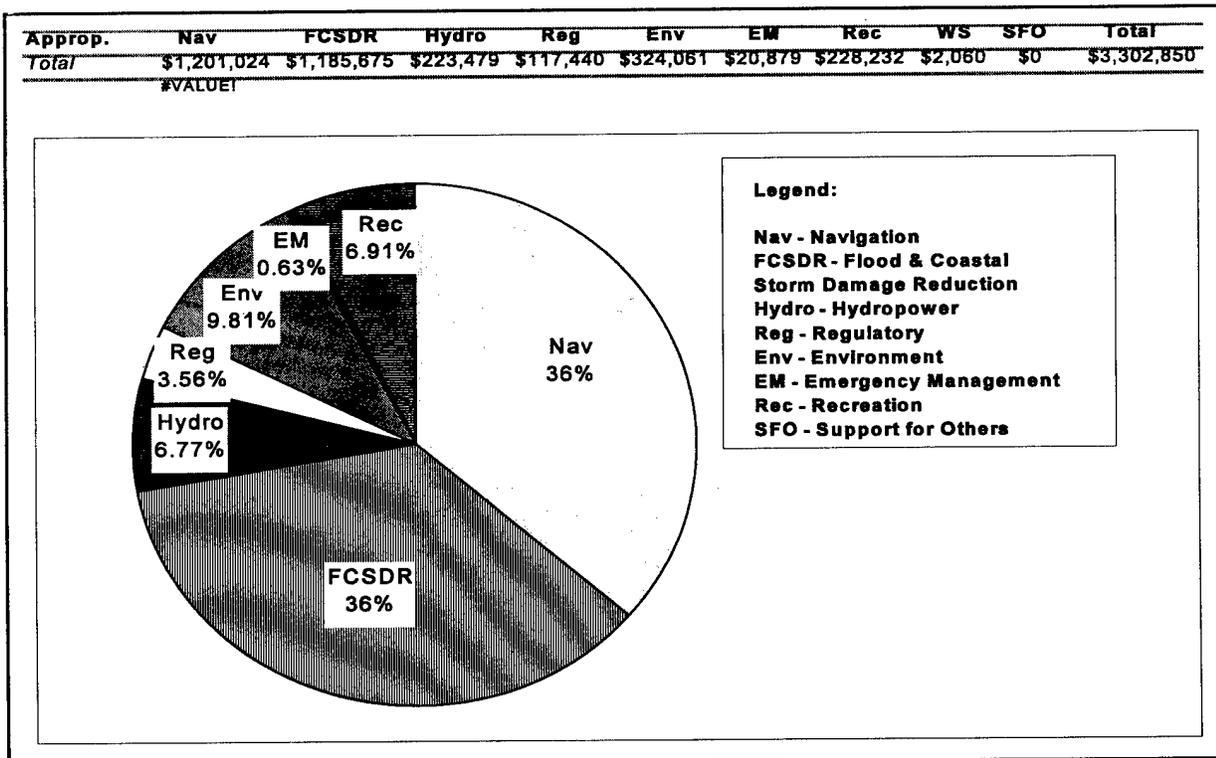


Figure 3. FY 97 Civil Works Budget Displayed by Business Program Areas.

Note: SFO and EM business programs receive reimbursable funding from other agencies; budget amounts shown are under-representations for these areas.

perspective. For example, the Corps CW Research and Development Program is taking steps to organize the delivery of R&D products and services according to the CW business program framework. Currently, CW R&D is conducted within a number of research programs which have been developed to address particular needs. These programs are being grouped according to business area, and research work efforts re-oriented to examine and prioritize how research activities can contribute to improving program results. This illustrates precisely one of the goals of GPRA -- focus on results and not simply activities.

The business program orientation may have other consequences. Currently CW is organized into functional "stovepipes" (planning, engineering, construction, operations, etc.) where responsibilities are technically focused. In recent years the stovepipe organizational structure has been criticized as being too insular and self-contained. The "discovery" that the responsibility for managing the two biggest CW program areas reside across functional stovepipes may further contribute to discussions on alternate ways to organize to best deliver products in CW business programs.

2. Implementing performance measures is difficult.

While the process of creating performance measures is difficult, the work is creative and challenging. The process of implementing the measures, however, is just hard work. Implementation necessitates fully and unambiguously defining the measure, determining data needs and availability, assessing the cost of data collection, and weighing costs against the benefits to be obtained in the use of the measure. Data collection and reporting mechanisms must also be developed. Where data are not available, data definition and reporting standards must be identified, and ways to routinely report and use the information worked out, once again in a cost effective and efficient manner. Those involved in developing performance measures need to recognize that they have only just begun once initial measures have been created.

3. Implementation requires follow-on leadership, resources and priority-setting.

CW followed an accelerated schedule to develop the initial set of results-oriented measures. There was a recognition that follow on work would be needed to resolve technical issues with measures. The expectation was that individual teams would take it upon themselves to carry through with the development and would drive their measures to completion. This did not prove to be the case. Team members returned to their own jobs and to other priorities. In several instances, team leaders of performance measure development teams did not have a program proponent with management responsibilities to pass team work products on to further direct implementation effort. As a result, the further development of measures did not occur where program proponentcy was absent. In retrospect, a complete implementation phase should have been designed in which teams were given the responsibility, resources and priority to complete measures development.

Another significant related finding has been that business programs that have easily identifiable proponents were able to mobilize and move measures toward completion more quickly than were cross-cutting business programs that did not have an easily identifiable proponent. Naming performance measures proponents for all business programs, identifying the completion of measures

as a priority, and providing additional resources for the task has proved to be necessary for bringing Phase I to closure.

Findings About the Process Used to Develop Measures

1. Participation and consensus building are time consuming.

The positive aspect of the participative approach employed to develop performance measures is that it builds positive energy around the concept of performance measurement and invests participants with ownership in the measures, and a greater commitment to their successful implementation. The downside of the approach is that it is time consuming and requires a great deal of time to explore and process individual input. In effect, one individual can prevent a group decision by refusing to move from a "thumbs down" position. Skilled facilitators are necessary to assist the group in moving through such issues, and to keep groups focused and productive.

2. Participative process requires patience and expertise.

The Phase I process employed a "self discovery" model wherein group participants were expected to rely on their own background knowledge and expertise to develop measures. Participants were provided with only process instruction and process assistance. Measures developed thus far are promising, but in keeping with the constraints of the general process employed, are not mature, fully developed measures. There is a need to remind participants and leadership that the iterative, self discovery model being employed works best when groups can gain actual experience in using the results of their deliberations, and can iterate the process a number of times. However, the process may also need to provide greater subject matter analysis and guided facilitation in group deliberations to better focus and facilitate group efforts.

3. The self discovery process needs peer review and critique.

In Phase I no intergroup exchange and critique of measures was built into the performance measures development process. In part this omission was a function of time and cost constraints; however, in part it reflected a reluctance to subject one team's measures to another's scrutiny to emphasize workgroup ownership of performance measures. In retrospect, encouraging such intergroup inspection and critique might have yielded better measures overall, by providing the self discovery process to operate faster and have the benefit of multiple points of view. Future group processes should include time for sharing and critique of measures among business product workgroups.

4. The use of the "80% rule" was vital to the success of the process, but was hard for many engineers and scientists to accept.

There was a tendency to want to go for "perfection" in group activities, and thereby use up additional time, in trying to resolve disagreements over minor issues. Skilled facilitators, and the use of the "parking lot" to capture important, but not necessarily central issues, was essential in keeping participants focused and productive. Facilitators who have familiarity with the Corps and

the business programs further enhance workgroups' staying focused and on track than facilitators not familiar with the technical subject matter under discussion.

5. *It is important to pick the right participants for the workgroups.*

Workgroups need to be composed of participants who:

a. **Have Positive Energy.** The participative self discovery process requires substantial energy and dedication on the part of participants. The process was aided by having persons who, in addition to being expert in CW matters, had an essentially positive outlook on, enthusiasm for, and commitment to CW. Those planning to use a participative, self discovery process should emphasize to participants that the discussion sessions might be intense, require substantive justification of points of view, and necessitate detailed analysis. It also helps not to have substitutions for participants inasmuch as a "group memory" is developed regarding the evolution of a performance measure from workshop to workshop. Adding new members slows down the process.

b. **Reflect the Full Range of Business Program Functions.** The workgroup needs participants with expertise in both product creation and product operation phases of program delivery.

c. **Represent Program Proponents.** As discovered in Phase I, program proponents, i.e. someone with management responsibility for the business program need to be named to address long term implementation requirements. A representative of the program proponent should be on the workgroup to better ensure the smooth transition from the group's development efforts to longer term implementation efforts.

6. *Documenting the group deliberative process was difficult.*

Team meetings used one to two outside persons to serve as "recorders" to take notes of group deliberations and issues considered by the team in arriving at particular conclusions. Notes were assembled into documents to provide a written reference for further group work. It proved to be a difficult task to produce written records of group deliberations which satisfied all team members. Recorders should at a minimum be well versed in the substance of issues being considered by the group. Subsequent phases of the project will explore ways to improve the quality of written documentation provided to teams, to include turning over the responsibility for documentation to the team rather than outside recorders.

SECTION V. NEXT STEPS

Phase I accomplishments have provided a good start on what will be an iterative process to develop a fully mature system for results management of the CW program. The next step in this process will begin with Phase II efforts. The primary goals for Phase II are described below.

Reiterate Tier I

The Tier I leadership team will be reconvened to review the CW mission, business programs and purpose statements, KRAs and guiding principles in light of Phase I experiences.

Reiterate Tier II

Tier II will be formed in a more systematic manner to ensure that participants representing both program development and program operations aspects of program performance are represented in business program workgroups. In addition, program proponents will take greater responsibility in the selection of Tier II participants, and in the conduct of the workshops to review and develop measures. Tier II will review the Phase I performance measures, and will be asked to refine measures, develop new measures where appropriate, and eliminate measures that no longer seem useful.

Establish Performance Goals for Tier II Measures

Performance goals for those measures for which baseline information can be assembled will be established in Phase II.

Institute Tier III

A process to develop district level performance measures consistent with Tier I guidance, and aligned with Tier II measures will be undertaken in Phase II.

APPENDICES

APPENDIX 1 TIER 1 MEMBERS

Tier 1 Members

Name	Organization	Telephone	Fax	Attended Tier I Meeting	
				June	Aug.
Participants					
Bill Augustine	CECW-B	202/761-0109		✓	✓
Don Basham	CEORL-DP	502/582-5602	502/582-5475	✓	✓
Dan Burns	CECW-O	202/761-0109		✓	
Fred Caver	CELMV-DP	601/634-5000	601/634-5796	✓	✓
Don Cluff	CECW-B	202/761-0109		✓	✓
Ed Cohen	CENAD-PP	212/264-7101	212/264-9498	✓	✓
Jim Crews	CECW-O	202/272-1237	202/761-5095	✓	✓
Steve Dola	OASA(CW)	703/695-1376	703/697-3366	✓	✓
Liz Fagot	CERE-ZB	202/761-0109		✓	✓
MG Stanley Genega	CECW-ZA			✓	✓
Larry Hiipakka	CENCD-PP	312/353-6385	312/886-5680	✓	✓
Bob Kaighn	OASA(CW)	202/761-7045		✓	✓
Doug Kamien	CECW-E	202/761-0109		✓	✓

Tier I Members

Name	Organization	Telephone	Fax	Attended Tier I Meeting	
				June	Aug.
Dave Kenyon	CECW-BD	202/761-0109	202/761-4379	✓	✓
Don Kisicki	CECW-I	202/761-0109	202/761-0824	✓	✓
Dominick Lijoi	CEORD-RE	513/684-2221	513/684-3755	✓	
Laura Norman	CERE	202/761-0109	202/761-5191	✓	✓
Bill Roper	CERD-C	202/761-0109		✓	✓
John Rushing	CESAD-PM	404/331-3111	404/331-6762	✓	✓
Dave Sanford	CECW-A	202/761-0109		✓	✓
Kyle Schilling	CEWRC-IWR	202/428-8015	703/428-8435	✓	✓
Bill Scully	CENED-PD	617/647-8111		✓	
Paul Seguin	CETEC-ES	202/761-0109	202/761-1689	✓	✓
Rennie Sherman	CECW-P	202/761-1975		✓	✓
Bill Sorentino	CECW-E	202/761-0109	202/761-1485	✓	✓
Harold Tagatz	CENCS-CO	612/290-5311	612/290-5330	✓	✓
Noel Urban	CEMP-RS	202/761-0109		✓	✓
COL Phil Wagner	CERM-ZB	202/761-0109		✓	✓
Richard Worthington	CECW-A	202/761-0120		✓	

Tier I Members

Name	Organization	Telephone	Fax	Attended Tier I Meeting	
				June	Aug.
Observers					
Mark Dunning	CEWRC-IWR-A	703/428-9090	703/428-8435	✓	✓
Tim Hiltz	CECW-BD	202/761-0109	202/761-4379	✓	✓
Richard Sinclair	CEWRC-IWR-A	703/428-7214	703/428-8435	✓	✓
Dave Mathis	CERD			✓	
Frank Sharp	CEWRC-IWR-A	703/428-6369		✓	
Ed Joseph	GAO	202/512-6492	202/512-4420		✓
Facilitators					
John F. Langowski, Jr.	PMCL	601/549-2832	601/529-3188	✓	✓
Craig A. Holt		503/986-3181			✓
Recorders					
Scott E. Eguires	PMCL	601/549-2832	601/529-3188	✓	
Craig A. Strus	PMCL	601/549-2832	601/529-3188	✓	
Donald W. Hayes	PMCL	618/549-2832	618/529-3188		✓
Judith E. McFarlin	PMCL	618/549-2832	618/529-3188		✓

APPENDIX 2 TIER II MEMBERS

EMERGENCY MANAGEMENT PERFORMANCE TEAM MEMBERS

Name	Position	Telephone #	Fax #
Participants			
*Augustine, Bill	CECW-B	202/761-0191	
*Hahn, Emmett	CELMS-CO-R	314/331-8567	314/331-8615
*Bruzewicz, Andrew J.	CECRL-RR	603/646-4372	603/646-4560
*Dobic, Paul	CECW-OE-D	202/761-0251	202/761-4150
Workshop Support Team			
Ayres, Donna	Facilitator	703/428-6291	703/428-8435
Kanamine, Ted	Recorder	703/428-7126	
Whittington, Richard	Recorder	703/428-6051	703/428-8435

* Attended both the Tier II July 17-19 and December 11 workshop.

ENVIRONMENT PERFORMANCE TEAM MEMBERS

Name	Symbol	Telephone #	Fax #
Participants			
**Johnson, Jim	CENAB-PL	410/962-4900	410/962-4698
*Orth, Ken	CEWRC-IWR-R	703/428-6054	703/428-8435
*Theriot, Ed	CEWES-EV-A	601/634-2678	601/634-3842
**Tornblom, Claudia	OASA(CW)-SACW	202/761-1727	202/761-4389
**Davis, Jonathan A., Jr.	CESAD-CO-O	404/331-6807	404/331-2613
*Day, Kenneth	CESAM-OP-TR	334/694-3724	334/694-4264
*Preacher, James W.	CESAC-EN-PR	803/727-4264	803/727-4260
Workshop Support Team			
Harrington, Keith W.	Facilitator	618/549-2832	618/529-3188
Comiskey, Jim	Recorder	703/428-9068	703/428-8435
Brill, John	Recorder	703/428-6039	703/428-8435
Other Attendees			
Kenyon, Dave	CECW-BD	202/761-8575	
Hiltz, Tim	Project Coordinator CECW-BD	202/504-4936	
Joseph, Ed	Process Advisor	202/512-6492	202/512-6451

* Attended Tier II July 17-19 workshop.

** Attended both Tier II July 17-19 workshop and August 23 workshop.

FLOOD AND COASTAL STORM DAMAGE REDUCTION PERFORMANCE TEAM MEMBERS

Name	Symbol	Telephone #	Fax #
Participants			
**Kaighn, Bob	OASA(CW)	202/761-1213	
**Rooney, Jody	CENCS-PE-M	612/290-5250	612/290-5800
*Burke, Roger A.	CESAM-PD-F	334/694-3809	334/690-2727
**Fitzgerald, Robert	CELMK-ED-HD	601/631-5655	601/631-7231
**Allen, Ron	CECC-J	202/761-0030	
**Fagot, Elizabeth	CERE-ZB	202/761-0483	
**Lauwaert, Alan	CECW-AG	202/761-0125	202/761-8839
*Hiipakka, Larry	CENCD-PP	312/353-6356	312/886-5680
Workshop Support Team			
Sinclair, Richard	Facilitator	703/428-7214	703/428-8435
Ayres, Donna B.	Recorder	703/428-6291	703/428-8435
Allman, Theresa	Recorder		
Other Attendees			
Kenyon, Dave	CECW-BD	202/761-8575	
Hiltz, Tim	Project Coordinator CECW-BD	202/504-4936	
Joseph, Ed	Process Advisor	202/512-6492	202/512-6451

* Attended Tier II July 17-19 workshop.

** Attended both Tier II July 17-19 workshop and August 23 workshop.

HYDROPOWER PERFORMANCE TEAM MEMBERS

Name	Symbol	Telephone #	Fax #
Participants			
Chapman, Craig (unable to attend)	CECW-OM-O	202/761-0246	
**Harvison, Roy	CESAD-CO-OH	404/331-5303	404/331-2613
**Zanganeh, Shap (Now retired)	CECW-EH	202/761-8508	202/761-1485
**Mittelstadt, Dick	CENPD-ET-WM	503/326-3752	503/326-5148 503/326-4161
**Juett, Don	CEMRK-CO-TM	816/426-3998	816/426-6001
Moser, David (Unable to attend)	CEWRC-IWR-R	703/428-8066	703/428-8435
Wagner, Dennis (Unable to attend)	CENPD-ET-PC	503/326-3830	503/326-2056
Workshop Support Team			
Hayes, Donald W.	Facilitator	618/549-2832	618/529-3188
Robinson, Ridge	Recorder	703/355-2786	703/428-8435
Therhault, Lisa	Recorder		
Other Attendees			
Kenyon, Dave	CECW-BD	202/761-8575	
Hiltz, Tim	CECW-BD	202/504-4936	
Joseph, Ed	Process Advisor	202/512-6492	202/512-6451

* Attended Tier II July 17-19 workshop.

** Attended both Tier II July 17-19 workshop and August 23 workshop.

NAVIGATION PERFORMANCE TEAM MEMBERS

Name	Symbol	Telephone #	Fax #
Participants			
**Daggett, Larry L.	CEWES-HR	601/634-2259	601/634-3218
**Tagatz, Harold	CENCS-CO	612/290-5311	612/290-5330
**Hill, Thomas Cecil	CELMV-DP-P	601/634-5838	601/634-5796
**Thorpe, Phillip J.	CEWRC-IWR-N	703/428-7074	703/428-8435
DeVeaux, John	CESAD-ET-CO-M	404/331-6742	404/331-2631
Fuller, Rob (Unable to attend)	CEORL-PD	502/582-5658	502/582-6734
Winger, Dave (Unable to attend)	CECW-EH	202/761-0224	202/761-1485
Workshop Support Team			
Dunning, Mark	Facilitator	703/428-9090	703/428-8435
Sharp, Frank	Recorder	703/428-6369	
Remer, Sandy	Recorder	703/428-6593	
Other Attendees			
Kenyon, Dave	CECW-BD	202/761-8575	
Hiltz, Tim	Project Coordinator CECW-BD	202/504-4936	
Joseph, Ed	Process Advisor	202/512-6492	202/512-6451

* Attended Tier II July 17-19 workshop.

** Attended both Tier II July 17-19 workshop and August 23 workshop.

REGULATORY PERFORMANCE TEAM MEMBERS

Name	Symbol	Telephone #	Fax #
Participants			
**Stark, Kirk	CECW-OR	202/761-1786	202/761-5096
**Middleton, Arch	CESAM-OP-S	334/694-3786	334/690-2660
**Ventola, Ron	CELMN-OD-S	504/862-2257	504/862-2289
*Engler, Robert	CEWES-EN	601/634-3624 Secretary: Ext. 2285	601/634-3726
**Schilling, Kyle	CEWRC-IWR	703/428-8015	703/428-8435
Workshop Support Team			
Sinclair, Rick	Facilitator	703/428-7214	703/428-8435
Whittington, Richard	Recorder	703/428-6051	703/428-8435
Allred, Karla	Recorder	703/428-6041	703/428-8435
Other Attendees			
Joseph, Ed	Process Advisor	202/512-6492	202/512-6451

* Attended Tier II July 17-19 workshop.

** Attended both Tier II July 17-19 workshop and September 29 workshop.

RECREATION PERFORMANCE TEAM MEMBERS

Name	Symbol	Telephone #	Fax #
Participants			
**Wahus, Dave	CECW-ON	202/761-1790	202/761-1671
**Norman, Laura	CERE-A	202/761-0488	202/761-5191
*Hardie, Bruce	CESWD-ETR	214/767-2347	214/767-2183
**Jackson, Scott	CEWES-EN-R	601/634-2105	601/634-3726
**Norton, Tom	CELMK-OD-G	601/226-6090 Ext.3016	601/226-5054
**Hansen, Bill	CEWRC-IWR-R	703/428-9089	703/428-8435
Snyder, Don (Unable to attend)	CENAB-OP-T	410/962-6016	410/962-6038
Workshop Support Team			
Sinclair, Rick	Facilitator	703/428-7214	703/428-8435
Langowski, John F., Jr.	Recorder	618/549-2832	618/529-3188
Hayes, Donald W.	Recorder	618/549-2832	618/529-3188
Other Attendees			
Kenyon, Dave	CECW-BD	202/761-8575	
Hiltz, Tim	Project Coordinator CECW-BD	202/504-4936	
Joseph, Ed	Process Advisor	202/512-6492	202/512-6451

* Attended Tier II July 17-19 workshop.

** Attended both Tier II July 17-19 workshop and August 21 workshop.

SUPPORT FOR OTHERS PERFORMANCE TEAM MEMBERS

Name	Symbol	Telephone #	Fax #
Participants			
**Kisicki, Don	CECW-I	202/761-4273	202/761-0824
*Jones, Spike	OASA(CW)	703/693-3654	703/697-3366
*Boone, Jim	CESAJ-DP-S	904/232-2583	904/232-3920
**Cribbin, Bob	CERE-AP	202/761-1704	202/761-5191
*Decell, Lewis	CEWES-EP-L	601/634-3494	601/634-3528
**Urban, Noel	CEMP-RS	202/761-8879	202/761-0525
Barry, Eileen (Unable to attend)	CENAD-PP-S	212/264-7175	212/264-9511
Withaeger, Jim	CESWF-PM-G	817/334-3892	817/334-2948
Bertini, Al	CECW-I	202/761-4271	202/761-0824
Strait, Jim	CEMP-RS	202/761-0414	202/761-0525
Workshop Support Team			
Langowski, Jr., John F.	Facilitator	618/549-2832	618/529-3188
Whittington, Richard	Recorder	703/428-6051	703/428-8435
Allred, Karla	Recorder	703/428-6041	703/428-8435
Other Attendees			
Kenyon, Dave	CECW-BD	202/761-8575	
Hiltz, Tim	Project Coordinator CECW-BD	202/504-4936	
Joseph, Ed	Process Advisor	202/512-6492	202/512-6451

* Attended Tier II July 17-19 workshop.

** Attended both Tier II July 17-19 workshop and August 23 workshop.

WATER SUPPLY PERFORMANCE TEAM MEMBERS

Name	Position	Telephone #	Fax #
Participants			
*Sorrentino, Bill	CECW-E	202/761-4536	202/761-4536
*Johnson, Bill	CEWRC-HEC	916/756-1104	916/756-8250
*Werick, Bill	CEWRC-IWR-P	703/428-9055	703/428-8435
*Combs, Glen	CESWD-ETP-A	214/767-2302	214/767-2990
**Lauwaert, Allan	CECW-PR	202/272-0123	
**Cone, Steve	CECW-PD	202/761-0136 202/395-3495 (At OMB thru December 1995)	
Workshop Support Team			
Ayres, Donna	Facilitator	703/428-6291	703/428-8435
Kanamine, Ted	Recorder	703/428-7126	
Allred, Karla	Recorder	703/428-6041	703/428-8435

* Attended both Tier II July 17-19 workshop and Tier II November 28 workshop.

** Attended Tier II November 28 workshop.



APPENDIX 3 PARKING LOT ISSUES AND RESPONSES

1. This appendix provides draft answers to Parking Lot Issues raised by participants in the National Program Performance Measure Team Workshops, 17 - 19 July 1995.
2. Answers are identified as to three sources: Tier I, Don Cluff, or Staff. The attribution "Tier I" reflects what CECW-B and IWR staff (Hiltz, Dunning, and Sinclair) distilled from Tier I discussions at the 15 August workshop. Tier II participants should keep in mind that Tier I discussion of parking lot issues was done as they re-evaluated program purposes using Tier II feedback and items 1.a. and 1.b above.
3. The following illustrates how to interpret symbols in an issue and answer:

EXAMPLE:

1.1.^a Can we call our offices via conference call to get consensus? (FCSD)^b

^a 1.1 = Day 1, Issue No. 1 from the 17 - 19 July Tier II National Program Performance Measures Workshop

^b (FCSD) = Tier II Program Performance Measure Team - in this instance: Flood and Coastal Storm Damage Reduction Program

Other Tier II Program Performance Measure Team symbols include:

Nav = Navigation
EM = Emergency Management
SFO = Support for Others
Rec = Recreation
HY = Hydropower
WS = Water Supply
Env=Environment
Reg=Regulatory

PARKING LOT ISSUES, Day 1

1.1. Can we call our offices via conference call to get consensus? (FCSD)

Cluff Answer: Short answer = Yes. Concern however was resolved as workshop process unfolded. Process assumes empowerment, sufficient breadth of knowledge within work group, and an iterative process. The 80% sufficiency rule and iterative process allows for continuous improvement.

1.2. There are two missions in our purpose statement (Flood Damage Reduction, Coastal Storm Damage Reduction). Should these be separated up front? (FCSD)

Tier I Answer: No. Purposes of activities were believed sufficiently similar as to allow combination. If performance measurement development process demonstrates they should be separated; then it can be done in next iteration.

1.3. Should emergency flood management be viewed as a function of Flood and Coastal Storm Damage Reduction Business Program; or should we assume that falls under Emergency Management Business Program? (FCSD)

Tier I Answer: It is appropriate to assume emergency flood management falls under Emergency Management Business Program based upon the way the Corps of Engineers organizes its resources to respond to the business purpose. Tier I recognizes the cross-cutting nature of some programs; but, Tier I decided that some programs are special emphasis areas within the Corps CW mission which deserve separate identification. The merits of integration or recombination can be examined as Tier I and II gain experience in results-oriented program performance measurement.

1.4. Is this for real?, i.e. will we actually use these to manage the Corps? (WS)

Cluff Answer: Yes.

(a) There are no guarantees that OMB and Congress will sustain the initiative over time. However, GPRA is viewed as a landmark piece of legislation and a sound initiative. Congress recognized the initiative would take time to accomplish; it provided for a six year period to progress through pilot projects and an iterative implementation process to gain experience with results-oriented measures before full implementation in FY 1999.

(b) OMB is proceeding with implementation on a fast track. OMB exercised its prerogative in deciding our program performance measures in FY 96 ahead of the results of Tier II July workshops. OMB's actions pose a challenge for us. We either seize the initiative, develop measures that make sense to the Corps, and then furnish performance information to influence the deliberative process that determines budgets and appropriations. Or, alternatively, we can let OMB and others decide for us what our program performance measures will be.

(c) Corps CW leadership fully support the spirit and intent of the act and are moving ahead without depending upon guidance or direction from OMB and Congress. The Director of Civil Works commented in the Tier I and Tier II workshops that once you understand the intent of the Government Performance and Results Act, you wonder why it was not undertaken years ago. Measuring results based on business purposes is a far stronger way of presenting Corps accomplishments to the public and Congress than simply reporting on processes measures such as we achieved a 95 percent expenditure rate.

(d) Management steps to date:

(1) We have introduced the nine program structure into the Budget Memo for FY 97 and made provisions for using results-oriented measures based on results of FY 95 workshops.

(2) The FY 95 Chief Financial Officers (CFO) Act Report will use the nine program structure to begin to report results to the extent we can retrospectively apply measures developed in FY 95 workshops. We committed to doing this in the FY 94 CFO Report. The Army Audit Agency will critique our progress.

(3) We are beginning integration of the measures into the Consolidated Command Guidance for FY 96.

(4) The Director of Civil Works directed that the process move to the Tier III (district) level in FY 96 to align and link district performance measures to the national programmatic level (mission and business programs). Our initial ability to implement and use results-oriented program performance measures will be largely influenced by the progress of Tier II in developing such measures. The Director of Civil Works and Tier I leadership also recognize that it will require an iterative process to gain experience with results-oriented measurement to successfully employ them. We expect that the results-oriented program structure and performance information will offer new insight into the ongoing restructuring initiatives as we gain experience with results-oriented performance measurement.

1.5. The Water Supply Business workgroup assumes water supply for emergency management is being dealt with by the Emergency Management Business workgroup. Please confirm the assumption. (WS)

Tier I Answer: The assumption is appropriate.

1.6. Program Performance Measures should not be tied to individual performance appraisals. (Nav)

Cluff Answer: Correct. The Corps is not organized such that an individual or set of individuals is responsible for the results of a program. Many of the programs depend upon cross-cutting functional organizations to contribute to their development (planning, design, and construction) and then operation. Moreover, each program is an aggregation of numerous projects or contributing elements that exceed the span of control of an individual or few individuals so as to be able to relate their performance appraisals to results-oriented measures. Results-oriented measures will heighten the importance of successful matrix management.

However, the question misses a central goal of results-oriented performance measurement. Craig Holt, ODOT, explained how results-oriented performance measurement led to alignment of activities (organizational) with the agency's mission and program goals when implemented

vertically through out the organization. Ed Joseph, GAO, affirmed this was a common finding for both private and public sector organizations recognized for employing best management practices.

1.7. Should there be another program area -- multiple purpose reservoir management? (A complete issue statement follows) (WS)

Managing Competing Water Uses as a Business Program

An essential business program of the Corps of Engineers is the balancing of competing uses of reservoir storage. For multiple-purpose reservoirs, the Corps mission to "contribute to the national welfare" is maximized when competition for storage is managed in the national interest. Individual business programs maximize the national welfare but only that segment of the national welfare which they represent. In fact, national welfare could actually be diminished with aggressive pursuit of individual business programs.

Seven of the nine business programs are in direct competition. Product gains in one program usually require product losses in another program. This is because so many of these products are derived from a common and limited resource: Corps management of reservoir space.

Performance measures established for individual programs are inherently linked to each other by shared storage space. As a business program, balancing competing purposes can have its own set of performance measures serving customers that include, but are not limited to, those of other business programs. In the end, Corps performance as a water agency is measured not only by its ability to manage individual programs but by its ability to effectively and efficiently manage competing demands for stored water.

Tier I Answer: The multiple purpose issue suggests several dimensions.

(a). Should seven programs be subsumed under one multiple purpose program function? Or should a tenth multi-purpose program be developed where the seven are in competition? The issue of multiple purpose management is limited in its application. The Corps of Engineers is constrained by legal authority as to what program purposes it can engage in. Multiple purpose as an optimization question occurs primarily where multiple purpose reservoirs have been expressly authorized. Multiple purpose reservoir is no longer a significant program development activity for the Corps. The implications of cost sharing introduced in the 1986 Water Resources Development Act, environmental considerations, and diminishing site opportunities with economic potential for reservoir development make the future of multiple purpose reservoir development very limited with respect to new project starts.

(b). Tier I did not support making it a focus program or area of emphasis in the first round of developing results-oriented program performance measurement. Tier I is open to having the

question pursued further in subsequent iterations after experience is gained with the initial program structure and performance measurement.

(c). Conversely, for those projects where a primary purpose is authorized (flood damage reduction or navigation) the issue of potentially competing trade-offs is answered by the limitation placed on the other program purposes authorities. This is evident in the qualification "in conjunction with" for water supply and "compatible with" for recreation business purpose statements. It is present also in hydropower but not explicitly identified in the business purpose statement.

(d). Given multipurpose water management does not have a significant program development future (see (a) above); does the operations community need a tenth program, separately identified, for developing optimization performance measures for existing multiple purpose reservoirs operated by the Corps? The issue of optimization typically sorts down to a site specific or region specific set of solutions. Resolution typically involves developing a set of operation plans to respond to differing hydrologic, economic and political considerations. Corps management solutions must reflect state water law as it relates to allocating reservoir storage and releases. Thus, reservoir managers need a portfolio of operating plans to make the trade-off decisions which reflect the range of physical, economic, and political considerations unique to that reservoir or system of reservoirs.

(e). The trade-off or optimization challenges of multiple purpose reservoir development and operation does not negate the need to have a better articulation of outcomes for each project purpose. Tier I believes the more the multi-dimensional nature of results-oriented performance measurement can be portrayed for each program purpose; the sharper the trade-off analyses can be displayed.

(f). The issue statement, coupled with issue number 1.8 (below) suggests a strategic planning question. Should the Corps of Engineers pursue legislative authority to take on the role of multiple purpose water manager for the Nation? Corps leadership does not believe this is an appropriate role to pursue given the primacy of state water law in most aspects of water resource management; and the purposefully constrained authorities granted the Corps to pursue water resources development.

1.8. Should we collapse many of the business programs into "provide for the greatest use of the nation's water resources"? (WS)

Tier I Answer: No. See answer 7(f) above.

1.9. Is regulatory a business process or part of our environmental and navigation missions?

Tier I Answer: Tier I recognizes the cross-cutting aspects of regulatory with navigation and environment. However, Tier I felt the activity deserves a separate program focus in light of the political importance attached to it by both the Administration and Congress. The merits of integration or consolidation within Navigation and/or Environment can be re-evaluated in subsequent iterations as we gain experience with results-oriented performance measurement.

DAY 2

2.1. How are the other groups viewing their customer? Is Congress also their customer? (FCSD)

Cluff Answer: The question of whether Congress is a program customer has been the most troubling of parking lot issues to resolve. Tier I dealt with the issue in their August 15th workshop and offered clarifying guidance to Tier II for their subsequent performance verification workshops. Tier I viewed Congress as a significant but not the only customer for many programs. The advisors to Tier I cautioned against developing lists of program customers for Tier II. The focus of both Tier I and II participants should be directed at exploring the question of which key customer groups influence mission, program authorities, and resources and then focus on evaluating their information needs to better define program performance measures.

2.2. Can a tape of Craig Holt's opening remarks on the process and successes with the process be made available for Tier III, IV, etc? (Rec)

Cluff Answer: We did not make provisions for taping Craig Holt facilitating the Civil Works program performance workshops. Holt has offered to make available tapes of him in other facilitated programs. We will review his other tapes for possible use in follow on Tier III and IV workshops.

2.3. Groups the Corps has traditionally called customers appear to be categorized as co-developers or suppliers (e.g. businesses, local sponsors, interest groups) in this process. (Rec)

Cluff Answer: See the answer to 2.1 above. Some of the confusion and disagreement appears to stem from interchanging project level customers with program level customers. Businesses and local sponsors may operate at the project level to be co-developers in the project development phase and recipients of the flow of services during the operation and maintenance phase of a project. Interest groups representing coalitions of business interests, project sponsors, or facility users may operate at the national level to influence mission, authorities, and resources.

2.4. Will there be provisions for researching data collection and management of performance measures? (Rec)

Cluff Answer: No expressed provision was included in GPRA to fund the development of results-oriented program performance measures. There are no separate resources identified for data collection and management. This does pose a concern. Resource requirements will have to be evaluated during the process of developing data implementation guidance. In all likelihood funding will come from District overhead.

2.5. There appears to be structural inconsistency and overlap in some of the program purposes. (Rec)

Tier I Answer: Tier I recognizes there may be overlap in some activities between some programs. Tier I selection of programs was based on authority and the emphasis the Administration and Congress devote to activities which might otherwise be subsumed under other programs, such as regulatory, environment and emergency management. Given the iterative process built into the GPRA process, Tier I and Tier II can evaluate the first year experiences with results-oriented measures and re-evaluate program boundaries and definitions when we reiterate the process in 1996.

2.6. Do we want to be in a national leadership role? (EM)

Tier I Answer: The program leadership role lies with the Federal Emergency Management Agency (FEMA). We operate within the program authorities available to us and under the leadership of FEMA.

2.7. Who is the audience for the purpose statement? (EM)

Cluff Answer: It is intended for a wide range of audiences. The extent of the range is defined by who and what organizations have an interest in understanding the Corps role in emergency management. This includes, but is not limited to, the public at large, Congress, FEMA, Corps employees, and Tier II workgroup. The purpose statement provides the needed context within which program performance measures are to be developed.

2.8. Are we "management" or ""readiness"? (EM)

Tier I Answer: Both. Management and readiness are evident in the two thrusts in the purpose statement. Readiness is inherent in the "prepare for" dimension of the purpose statement. Management is inherent in the "respond to" dimension. Editorial note: Tier II in fact resolved the issue themselves by identifying two products: (1) readiness and (2) response.

2.9. Can Tier II revise the purpose statement? Or can we expect response to the pros/cons from Tier I? (EM)

Cluff Answer: Tier II program performance measure teams were encouraged to provide critical comment and recommendations on how to improve program purpose statements. However, the prerogative for changing the purpose statements rests with the Tier I leadership group.

2.10. We would like to see results of Tier II prior to sending them up to Tier I. Is this possible? We would also like to see other work group results. (EM)

Staff Answer: The process and schedule were compressed such that this was not possible. A separate enclosure in this information package reports the results of seven of nine program performance teams. We will also publish a close out report for this first year iteration

which will provide the results of the nine program performance measure teams, lessons learned, and what's next.

2.11. What is the role of Congress? Stakeholders? Interest Groups? (SFO)

Staff Answer: See answer to Day 2, Issue 1 (2.1).

2.12. When will these performance measures be implemented? (SFO)

Cluff Answer: FY 96 for those measures which are sufficiently well developed and do not pose data collection or significant resource requirements.

2.13. In O&M we developed performance measures but haven't received the final list of measures to use. Will we get the performance measures in CW at the field level? (HY)

Cluff Answer: Absolutely. [See answer to 2.10.]

2.14. What to do with performance measures that fall within the jurisdiction of another business program area? (HY)

Staff Answer: We believe this will turn out to be a hypothetical question. We believe the screening criteria which the workgroup will apply during the validation and verification process will preclude any such possibility to clear the screening process. The validation screening process focuses on assuring performance measures align with the program purpose statement. If during this process, a measure is judged appropriate for another business function, it will be a simple matter to refer that measure to the other program workgroup.

2.15. "Customers" should define performance measures. We should present each identified customer with the applicable "purpose" and products and ask them:

-Do you think you are a customer?

-Are these the products you receive?

-How do you (customer) measure our (Corps) performance in providing the product?
(Env)

Cluff Answer: A qualified yes. We are working on plans to carry the program performance measures to the Tier III and IV levels. The plans include provisions for drawing partners and stakeholders into the dialogue or process for developing project and service delivery level performance measures. Our outside advisors caution us on asking partners and stakeholders to lead us in the development process. This will not work. The Corps needs to first gain understanding and experience in developing performance measures. We believe we will gain valuable insight by inviting others into the development process; but, we must be clear on how we engage them.

2.16. Where do we account for non-environmental compliance (OSHA, wage/labor standards, etc.)? (Env)

Staff Answer: For the present we view these as falling outside the focus of GPRA results-oriented performance measures. They are internal process related measures. It is possible that as we progress into Tier III and IV measures that such performance measurement concerns will emerge through the KRA - Work Environment.

2.17. Some KRA's may be important to the Corps internally (see KRA#5: Program Results and Justification) and to external customers (see KRA#1: Customer Satisfaction). Will this be sorted out at Tiers III and IV? (FCSD)

Staff Answer: These two KRA's are important at all levels; measures are needed at the Tier III and IV level as well as Tier II level. Program results and justification by definition focus at Tier II level program performance measurement. However, there must be a subset of performance measures at the Tier III and Tier IV levels which link because of the requirements of aggregation or summation.

2.18. Would you give us feedback on our KRA#5 (Program Results and Justification) analysis - how to balance results appropriate to National/programmatic level with political realities of micro-management? (FCSD)

Cluff Answer: We do not expect performance measures to perform the balancing function of collective versus individual concerns of Congress. We view "political realities" as a characterization of individual Congressperson, state and local political interests regarding individual projects. That reality will exist regardless of whether program performance is measured. The program outcomes perspective provides a context for the collective body of Congress, the Administration, and other interests to assess how individual project performance relate to program performance. It provides the same perspective for the individual Congressperson, state and local interests to view the contribution or justification of an individual project on a national level.

2.19. What is time zero? (FCSD)

- When we deliver the project?
- When we achieve the end result (our purpose, product)?
- When all project claims are settled?

Staff Answer: First, the question operates at the Tier III and Tier IV level and assumes project construction is involved. Second, the answer depends on who is measuring completion with what objective. An auditor might view the last criterion as the one to be measured. However, from a GPRA perspective it is the customer's view that counts. In those cases where we are constructing a project; "time zero" will be when the flow of project benefits becomes available. This may involve measuring separable project elements to account for functional elements becoming available before project completion.

2.20. Where do we/should we measure the technical quality of the product/project? It's difficult to see this at the District or project level. (FCSD)

Staff Answer: The five Key Result Areas do not identify technical quality of product as a separate area of measurement. The Key Result Area "Customer Satisfaction" does anticipate that Tier II will develop performance measures which provide for obtaining the customer's views on product quality. Such a measure will be a departure for many in the Corps where emphasis is placed on internal measures; i.e., standards and processes, to define quality or assure quality. Obtaining customer views of product quality provide for an external measure of quality. We believe the concern will resolve itself as we progress through the results-oriented performance measure development process.

2.21. KRA's #3 (Technical Competence) and #4 (Work Environment) may be Tier IV measures. How do they fit at Tier II programmatic on national level? How will HQ track them if they are Tier IV measures? (FCSD)

Staff Answer: Our approach for now is develop the plans and process to carry the results-oriented performance measurement down through Tiers III and IV and gain experience in results-oriented measures developed at these levels. We will identify those measures which allow aggregation to reflect a program perspective and assessment as well as individual project or local conditions. We may find with experience that these two KRA's do not link to programs as defined from a GPRA perspective; they may be better linked under a Management Effectiveness and Efficiency context.

**APPENDIX 4
REVISED BUSINESS PURPOSE STATEMENTS**

NAVIGATION

Original Version by Tier I

The purpose of navigation is to provide safe and efficient channels and harbors for movement of commerce, recreation, and associated activities.

Proposed Version by Tier II

The purpose of navigation is to provide safe, reliable, and efficient key waterway transportation system elements for movement of commerce, national security needs, and recreation.

Revised Version by Tier I

The purpose of navigation is to provide safe, reliable, and efficient waterborne transportation systems (channels, harbors, and waterways) for movement of commerce, national security needs, and recreation.

**FLOOD AND COASTAL STORM DAMAGE
REDUCTION**

Original Version by Tier I

The purpose of flood and coastal storm damage reduction is to save lives and minimize the level of property damage incurred by floods and storms using both traditional and nontraditional measures.

Proposed Version by Tier II

The purpose of flood and coastal storm damage reduction is to save lives and reduce the level of property damage incurred by the floods and storms using both traditional and nontraditional methods.

Revised Version by Tier I

Tier I accepted Tier II suggestions and proposed version.

HYDROPOWER

Original Version by Tier I

The purpose of hydropower program is to provide reliable and cost-effective power services to power marketing agencies (PMAs), the Federal Energy Regulatory Commission (FERC), and others.

Proposed Version by Tier II

The purpose of hydropower program is to provide reliable and efficient electric power to the nation through power marketing agencies (PMAs).

Revised Version by Tier I

The purpose of hydropower program is to provide reliable, efficient, and cost-effective power and related services to power marketing agencies (PMAs) and the Federal Energy Regulatory Commission.

REGULATORY

Original Version by Tier I

The purpose of the regulatory program is to protect the nation's wetlands and navigable waters through the Army permitting process.

Proposed Version by Tier II

The purpose of the regulatory program is to balance development with the protection of the nation's wetlands and navigable waters through the Army permitting process.

Revised Version by Tier I

The purpose of the regulatory program is to balance the uses and protection of the nation's wetlands and water through the Army permitting process.

ENVIRONMENT

Original Version by Tier I

The purpose of environment is to:

- Ensure environmental compliance (ERGO)
- Manage natural resources
- Provide for mitigation
- Provide for restoration

Proposed Version by Tier II

The purpose of the environment program is to ensure compliance with applicable laws, to mitigate project degradation, and to maintain or improve current environmental conditions.

Revised Version by Tier I

The purpose of the environment program is to ensure compliance (ERGO, etc.), to mitigate project degradation, and to maintain or improve current environmental conditions.

EMERGENCY MANAGEMENT

Original Version by Tier I

The purpose of emergency management is to prepare for and respond to natural and national emergencies under Corps, FEMA, and other agency authorities.

Proposed Version by Tier II

The purpose of emergency management is to take a leadership role in preparing for and responding to natural and national emergencies supporting the Army and the nation under Corps, FEMA, and other agency authorities and Executive Orders.

Revised Version by Tier I

The purpose of emergency management is to prepare for and respond to natural and national emergencies under Department of Defense (DOD), FEMA, and other agency authorities.

SUPPORT FOR OTHERS

Original Version by Tier I

The purpose of support for others is to assist other governmental entities to achieve their mission consistent with the capabilities of the Corps.

Proposed Version by Tier II

The purpose of support for others is to assist other entities to achieve their mission consistent with the abilities of the Corps.

Revised Version by Tier I

The purpose of support for others is to assist governmental and other entities to achieve their mission consistent with their capabilities and expertise of the Corps.

RECREATION

Original Version by Tier I

The purpose of recreation is to provide quality public recreation opportunities and experiences compatible with other project purposes.

Proposed Version by Tier II

Tier II accepted Tier I definition, but with several concerns.

Revised Version by Tier I

The purpose of recreation is to provide public recreation opportunities and experiences compatible with other project purposes.

WATER SUPPLY

Original Version by Tier I

The purpose of water supply is to provide and manage storage in Corps reservoirs in conjunction with other purposes for beneficial uses.

Proposed Version by Tier II

Tier II accepted Tier I definition, but with numerous concerns and a substantive “parking lot” issue.

Revised Version by Tier I

The purpose of water supply is to provide and manage storage in Corps multiple purpose reservoirs in conjunction with other purposes for beneficial needs.



APPENDIX 5
VERIFIED PERFORMANCE MEASURES
BY BUSINESS PROGRAM AREA

EMERGENCY MANAGEMENT

1. Annual aggregate percentage of Corps state of readiness
2. **Annual cost of readiness in dollars per year***
3. Annual national assessment of emergency management preparedness direct labor compared to Civil Works program direct labor
4. Annual aggregate percentage deviation from baseline costs and schedule for reconstruction activities
5. Annual aggregate percentage of customer satisfaction for emergency management events
6. Annual aggregate percentage reflecting the percent of time the Corps responds within an established goal
7. Annual aggregate damages prevented in dollars versus dollars expended for flood fight operations
8. Aggregate of annual benefits recouped through reconstruction versus the total cost of reconstruction
9. **Annual national assessment of emergency management response direct labor compared to Civil Works program direct labor***

ENVIRONMENT

1. For each ERGO chapter, percent of projects in compliance
2. Cost of compliance versus cost avoided
3. For each compliance category in ERGO, remaining cost to achieve 100 percent compliance
4. Value of resources mitigated versus cost of mitigation
5. Percentage of projects in compliance with authorized mitigation
6. Percent of projects in compliance with part I (natural resources management) of the Operational Management Plan (OMP)
7. Value added to resources managed versus cost of management
8. Value of resources restored versus cost of restoration
9. **Percent mitigation lands achieving the intent in the authorizing legislation or relevant Corps decision document*** (Note that this measure was drafted during the O&M process and is equivalent to measure #6 above).

* Note: Measures identified in **bold** have been recommended for data collection and benchmarking in FY 96 on the basis of procedures described in pp. 12-13 of the Phase I report. See Appendix 7 for further specification of these measures.

FLOOD AND COASTAL STORM DAMAGE REDUCTION

1. **Damage prevented divided by total damage***
2. Cumulative damage reduction divided by dollars spent
3. Time from start of study to initiate project construction
4. Customer satisfaction with flood and storm damage reduction product
5. Percentage of projects completed on schedule
6. Percentage of projects on / under / over budget
7. **Total average annual damages prevented by our projects***
8. Number of people whose probability of being in “harm's way” has been reduced

HYDROPOWER

1. **Availability***
2. **Percent of unplanned outages (forced outages)***
3. Percent of planned outages
4. Derated capacity versus installed capacity
5. Cost per megawatt of installed capacity
6. FTE per megawatt of installed capacity
7. Capacity lost due to nonpower constraints
8. Revenue lost due to nonpower constraints
9. Capacity lost due to outages
10. Revenue lost due to outages
11. Capacity lost due to derated or worn equipment
12. Revenue lost due to derated or worn equipment

NAVIGATION

1. **Percent availability***
2. Harbors—estimated total project cost / actual total project cost
3. Harbors—initial total project time / actual total project time
4. Ratio of project benefits to Operations and Maintenance (O&M) costs
5. Percent transits with drafts greater or equal to 90 percent of authorized depth
6. Percentage of the world fleet that can use U.S. harbors

*Note: Measures identified in **bold** have been recommended for data collection and benchmarking in FY 96 on the basis of procedures described on pp. 12-13 of the Phase I report. See Appendix 7 for further specification of these measures.

RECREATION

1. Percent cost recovered
2. Ratio of non-Corps costs/Corps costs
3. Number of partnerships
4. Percent of natural resources management employees perceiving a safe environment
5. Cost/unit of use (camping)
6. Customer satisfaction

REGULATORY

1. Acres of wetland losses proposed
2. Acres of impact permitted
3. Percent of development proposals authorized
4. Acres that would be impacted without the program
5. Regulatory actions to provide flexibility and cumulative impact analysis
6. Acres compensated
7. **Percentage of all actions completed within established time frames***
8. Percentage of all authorizations completed via general permits and abbreviated permitting processes during the reporting period

SUPPORT FOR OTHERS

1. **Customers satisfied with timeliness***
2. **Customers satisfied with cost***
3. **Customers satisfied with responsiveness***
4. **Customers satisfied with quality***
5. **Customers satisfied with competence of workforce***

WATER SUPPLY

1. Customer service rating (AWWA)
2. Responsiveness to requests for water supply
3. Revenues of collected water supply storage / revenues owed

*Note: Measures identified in **bold** have been recommended for data collection and benchmarking in FY 96 on the basis of procedures described on pp. 12-13 of the Phase I report. See Appendix 7 for further specification of these measures.

**APPENDIX 6
PERFORMANCE MEASURE PROPONENTS AND
POINTS OF CONTACT**

<u>Business Program</u>	<u>CECW Proponent</u>	<u>Point of Contact</u>
NAVIGATION	Dan Burns CECW-O	Barry Holliday CECW-OD
FLOOD & COASTAL STORM DAMAGE PREVENTION	Ed Dickey CECW-P	Bob Daniel CECW-PD
ENVIRONMENT	Dan Burns CECW-O Fred Caver CECW-B	<i>Natural Resources</i> Darrell Lewis CECW-ON <i>Compliance</i> Jim Wolcott CECW-OA <i>Restoration/ Mitigation</i> Pete Luisa CECW-BW
SUPPORT FOR OTHERS	Don Kisicki CECW-I	Don Kisicki CECW-I
HYDROPOWER	Dan Burns CECW-O	Harold Tohlen CECW-O
EMERGENCY MANAGEMENT	Dan Burns CECW-O	Ed Hecker CECW-OE-D
RECREATION	Dan Burns, CECW-O	Darrell Lewis CECW-ON
REGULATORY	Dan Burns CECW-O	Kirk Stark CECW-OR
WATER SUPPLY	Steve Stockton CECW-E	Bill Sorrentino CECW-E

APPENDIX 7 FACT SHEETS OF RECOMMENDED MEASURES

EMERGENCY MANAGEMENT

PRODUCT: Preparedness

KRAs: Customer Satisfaction; Management Effectiveness and Efficiency

MEASURE # 2: ANNUAL COST OF READINESS IN DOLLARS PER YEAR

Definition: A Corps-wide assessment of expenditures on readiness.

Demonstrates:

- Training costs
- Exercises
- Development of plans—communication with other agencies
- Stockpiling of material
- Collection of information/data sources

Unit of Output: Dollars per year

Data Source: Districts/Divisions/Labs/Headquarters

PRODUCT: Response

KRAs: Management Effectiveness and Efficiency; Program Results and Justification

MEASURE # 9: ANNUAL NATIONAL ASSESSMENT OF EMERGENCY
MANAGEMENT RESPONSE DIRECT LABOR COMPARED TO CIVIL
WORKS PROGRAM DIRECT LABOR

Definition: *Emergency management direct labor (\$) for response*
Civil Works direct labor (\$)

Demonstrates: Annual effort for response compared to Civil Works efforts.

Unit of Output: Percent

Data Source: To be determined

ENVIRONMENT

PRODUCT: Maintenance

KRAs: Management Effectiveness and Efficiency, Program Results and Justification

MEASURE #6: PERCENT OF PROJECTS IN COMPLIANCE WITH PART I (NATURAL RESOURCES MANAGEMENT) OF THE OPERATIONAL MANAGEMENT PLAN (OMP)

(Clarification provided to separate natural resources from Part II of the OMP, which addresses Park Management.)

Definition: The number of projects for which task in the OMP, including those developed in cooperation with resource agencies, are accomplished as scheduled divided by the total number of projects.

Demonstrates: When the management of environmental resources is being accomplished in accordance with approved schedules.

Unit of Output: Percentage (yes/no)

Data Source: Project Maintenance Office
OMP

Master Plan

FLOOD AND COASTAL STORM DAMAGE REDUCTION

PRODUCT: Compliance

KRAs: Management Effectiveness and Efficiency

MEASURE : PERCENT SIGNIFICANT FINDINGS CORRECTED VS NUMBER IDENTIFIED. (Significant finding requires immediate attention. It poses, or has a high likelihood to pose a direct and immediate threat to human health, safety, the environment, or the mission.)

Definition: The number of significant findings at Corps operated projects and facilities not including outgrants, that were corrected; divided by: the total number of significant findings that were identified as a result of ERGO assessments, regulator inspections, and good management practices, plus any uncorrected significant finding from previous year.

Demonstrates: Annual compliance with environmental laws and regulations is being accomplished.

Unit of Output: Percentage

Data Source: Divisions/Districts/Labs

PRODUCT: Compliance

KRAs: Management Effectiveness and Efficiency

MEASURE : PERCENT MAJOR FINDINGS CORRECTED VS NUMBER IDENTIFIED. (Major finding requires action but not necessarily immediate attention. It may pose a threat to human health, safety, or the environment.)

Definition: The number of major findings at Corps operated projects and facilities, not including outgrants, that were corrected divided by: the total number of major findings that were identified as a result of ERGO assessments, regulator inspections, and good management practices, plus any uncorrected major findings from previous year.

Demonstrates: Annual compliance with environmental laws and regulations is being accomplished.

Unit of Output: Percentage

Data Source: Divisions/Districts/Labs

FLOOD AND COASTAL STORM DAMAGE REDUCTION

PRODUCT: Flood Reduction and Storm Damage Reduction

KRAs: Program Results and Justification

MEASURE #1:	DAMAGE PREVENTED DIVIDED BY TOTAL DAMAGE
Definition:	Measures cumulative damage prevented by Corps projects divided by the cumulative damage occurring in areas protected by Corps projects.
Demonstrates:	Effectiveness of program
Unit of Output:	Percentage
Data Source:	Post-flood reports, FIA

PRODUCT: Flood Reduction and Storm Damage Reduction

KRAs:

MEASURE #7:	TOTAL AVERAGE ANNUAL DAMAGES PREVENTED BY OUR PROJECTS
Definition:	Cumulative average annual dollar damages that all completed Corps flood and storm damage reduction projects (would) have mitigated (if the design events had occurred).
Demonstrates:	Damage potential absent protection, e.g., progress against time.
Unit of Output:	\$ cost avoidance
Data Source:	Feasibility reports, DMs, J-sheets.

HYDROPOWER

PRODUCT: Capacity

KRAs: Customer Satisfaction (External)
Management Effectiveness and Efficiency (Internal)

MEASURE #1: AVAILABILITY

Definition: Availability is the ratio of the hours that the unit, power plant, or system was actually on line or capable of being placed on line, compared to the total hours in the period. A unit is considered available if it can be placed in service within ten minutes of request.

Demonstrates: Availability is a measure of the effectiveness of the program.

Unit of Output: Percent developed by available hours divided by period hours.

Data Source: Power plant records

PRODUCT: Capacity

KRAs: Customer Satisfaction (External)
Management Effectiveness and Efficiency (Internal)

MEASURE #2: PERCENT OF UNPLANNED OUTAGES (FORCED OUTAGES)

Definition: The ratio of the total hours of forced outages compared to the total hours in the period.

Demonstrates: Effectiveness of the maintenance plan

Unit of Output: Percent developed by hours of forced outage divided by hours in the period

Data Source: Power plant operating logs

NAVIGATION

PRODUCT: Waterway Systems

KRAs: Customer Satisfaction; Management Effectiveness and Efficiency; Program Results and Justification

MEASURE #1: PERCENT AVAILABILITY

Definition: Days Waterway closed X 20 miles - (waterway mile - days closed for weather) - (waterway mile -days closed for scheduled repairs) ÷ 365 days X total waterways miles.

Assumptions:

- A closure has a direct effect on tows within 10 miles either side of the closure. Indirect on tows further away.
- Days closed for weather: Flood flows or iced-in closures effect the shippers the same way these conditions effect the Corps (the harbors and docks are usually effected by the same weather conditions and shippers cannot load or unload during these times) therefore the shippers do not have a need to use the waterways.
- Days closed for scheduled repairs: This number will vary significantly from year to year and distort the results. We should be managing to minimize unscheduled closure on the waterways.

Demonstrates: Percent of time waterway system is usable when towboat operators want to use it.

Manage to minimize unscheduled closure time of locks and channels.

Unit of Output: Percent waterways system available

Data Source: LPMS - Navigation Data Center

- Channel closure data is reported but may not be put into a computer system at this time.

NAVIGATION

PRODUCT: Waterway Systems

KRAs: Customer Satisfaction; Management Effectiveness and Efficiency; Program Results and Justification

MEASURE #5:

DELAY COST TO TRAFFIC ON THE NATION'S WATERWAY SYSTEM

Definition:

This measure will be calculated by summing the total cost of delays at locks and in various segments of the waterway system due to lock outages scheduled maintenance and repair, repair due to accidents, and delays caused by congestion; delays to tows and other commercial vessels in the waterway segments (not channels that are part of a harbor system) that require maintenance dredging in order for vessels to pass through the segment, and delays to vessels due to closed channels (usually on orders from the U.S. Coast Guard Marine Safety Office) for reasons of high water, sunken equipment in the channel, substance spills or other accidents. The total delay time for all delayed vessels at each location will be multiplied by the average hourly operating and capital cost of an average size tow or other commercial vessel and summed for all locations. This will be divided by the sum of the ton-mileage associated with that river segment to provide a measure of the volume of traffic.

Demonstrates:

This measure highlights the impact that failure to be able to maintain the waterway system has on waterborne transportation. Some of the delay will be the responsibility of the Corps of Engineers and will reflect normal scheduled maintenance operations while some of the delay will be driven by natural conditions due to river flows and by accidents. The source of the delays will have to be interpreted by analysis of the individual waterway segments contributing to the statistic.

Unit of Output:

\$/ton-mile

Data Source:

Lock Performance Monitoring System for delays at locks, Hydrographic Survey or River Patrol reports for channel closures or reduction below authorized depths and widths, U.S. Coast Guard Marine Safety Officer for closures due to navigation conditions, e.g., high water during floods, bridge closures, or accidents.

NAVIGATION

PRODUCT: Waterway System

KRAs: Management Effectiveness and Efficiency

MEASURE:	LOCK CHAMBER DAYS AVAILABLE
Definition:	Ratio of days lock chambers are operational for passage of vessels to total days available.
Demonstrates:	Availability
Unit of Output:	Percent
Data Source:	CMR process

REGULATORY

PRODUCT: Environmental Protection and Development

KRAs: Customer Satisfaction; Program Results and Justification

MEASURE # 7: PERCENTAGE OF ALL ACTIONS COMPLETED WITHIN ESTABLISHED TIMEFRAMES

Definition: Number of actions completed within the established standard timeframe divided by the total number of action completed.

Demonstrates: Program efficiency/timeliness

Unit of Output: Percent

Data Source: District reporting

PRODUCT: HTRW Remediation

KRAs: Management Effectiveness and Efficiency

MEASURE # 1: CUSTOMERS SATISFIED WITH TIMELINESS

Definition: In the perception of our customers are we delivering products in a timely fashion.

Demonstrates: The degree of customer satisfaction with timeliness.

Unit of Output: Numerical rating system

Data Source: Annual survey of customer representatives (on scene coordinators or Remedial Project Managers)

SUPPORT FOR OTHERS

PRODUCT: HTRW Remediation

KRAs: Management Effectiveness and Efficiency

MEASURE # 2:	CUSTOMERS SATISFIED WITH COST
Definition:	In the perception of our customers are we delivering products at reasonable cost.
Demonstrates:	The degree of customer satisfaction with product cost.
Unit of Output:	Numerical rating system
Data Source:	Annual survey of customer representatives (on scene coordinators or Remedial Project Managers)

PRODUCT: HTRW Remediation

KRAs: Management Effectiveness and Efficiency

MEASURE # 3:	CUSTOMERS SATISFIED WITH RESPONSIVENESS
Definition:	In the perception of our customers, are we responsive? Do we seek and incorporate their views; treat them as an important member of the team; solicit, listen to and resolve their concerns; display flexibility in responding to their needs; and keep them informed.
Demonstrates:	The degree of customer satisfaction with Corps responsiveness.
Unit of Output:	Numerical rating system
Data Source:	Annual survey of customer representatives (on scene coordinators or Remedial Project Managers)

SUPPORT FOR OTHERS

PRODUCT: HTRW Remediation

KRAs: Technical Competence

MEASURE # 4:	CUSTOMERS SATISFIED WITH QUALITY
Definition:	Are customers satisfied with the quality of the products delivered.
Demonstrates:	The degree of customer satisfaction with product quality.
Unit of Output:	Numerical rating system
Data Source:	Annual survey of customer representatives (on scene coordinators or Remedial Project Managers)

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13. ABSTRACT (Maximum 200 words) In FY 95 the U.S. Army Corps of Engineers Civil Works Program began development of program performance measures in response to the Government Performance and Results Act of 1993 (GPRA). This report describes the first phase in the development of these measures. It presents the goals of the initiative, the results-oriented performance model being employed, the implementation process, results obtained thus far, lessons learned, and planned next steps in Phase II. The report is primarily intended to serve as a summary reference document for those who have participated in the measures-development process. It is also meant to provide an overview of the goals and methods of the initiative to those within the Corps of Engineers who have not, thus far, been involved in the process. Lastly, the report is meant to provide information and lessons learned to others involved in the development of results-oriented performance measures.

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