DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET NW
WASHINGTON DC 220314-1000

CEIWR (10-1-23) 7 December 2020

MEMORANDUM FOR RECORD

SUBJECT: Approval Authority for ER 10-1-23, Missions, Organizational Structure, and Functions Institute for Water Resources

1. This regulation designates the mission, major organization elements, and functions of the U.S. Army Engineer Institute for Water Resources (CEIWR), and establishes procedures for revising the organization structure, missions and functions.

2. Applicability. This regulation applies to the Institute for Water Resources. Unit Identification Code is W4EFAA.

3. Distribution Statement. Approved for public release; distribution is unlimited.

FOR THE COMMANDER:

LLOYD.JOHN.PHI LLIP.1021070595 Digitally signed by LLOYD.JOHN.PHILLIP.1021070595 Date: 2021.02.01 14:37:51 -05'00'

JOHN P. LLOYD
COL, EN
Chief of Staff

2 Encls
1. 1 Engineer Regulation
2. 4 Appendixes

SUMMARY of CHANGE

ER 10–1-23

United States Army Corp of Engineers (USACE)

Organization and Functions MISSIONS, ORGANIZATIONAL STRUCTURE, AND FUNCTIONS INSTITUTE FOR WATER RESOURCES

1. This administrative revision, dated 26 August 2020—

a. Formatted as specified in ER 25-30-1, dated 01 May 2020.

b. Inserted Appendix A to include all references used in publication.

c. Revised organizational structure figure to reflect IWR organizational changes (Appendix B).

d. Revised text concerning Executive Office's role in consulting on the role of the strategic direction for Civil Works international engagement (Appendix D, Paragraph D-1, Section b (3)).

e. Revised text to use new name of the Resource Management Office (Appendix D, Paragraph D-3).

f. Revised text to indicate that the Resource Management Office coordinates with the Director and Chief of Staff in directing and overseeing financial and resource management (Appendix D, Paragraph D-3).

g. Revised text using new name for Water Resources Center Enterprise groups (Appendix D, Paragraph D-4).

h. Revised text using new name for Civil Works Data Analysis and Information Systems Support Branch as well as mission and functions (Appendix D, Paragraph D-6).

i. Inserted Paragraph D-18. Water Resources Center (WRC) - Paragraph 011 that uses new name of Water Resources Center as well as describe its mission and functions (Appendix D).

j. Inserted D-19 Group S – Paragraph 012 (Appendix D).

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
441 G Street, NW
CEIWR-RMO Washington, DC 20314-1000

*ER 10-1-23

Regulation
No. 10-1-23

7 December 2020

Organization and Functions
MISSIONS, ORGANIZATIONAL STRUCTURE, AND FUNCTIONS
INSTITUTE FOR WATER RESOURCES

CONTENTS

*This regulation supersedes ER 10-1-23, dated 28 November. 2014.

1. Purpose. This Engineer Regulation designates the mission, major organization elements, and functions of the U.S. Army Engineer Institute for Water Resources (CEIWR), and establishes procedures for revising the organization structure, missions and functions.

2. Applicability. This regulation applies to the Institute for Water Resources. Unit Identification Code is W4EFAA.

3. Distribution Statement. This regulation is approved for public release and distribution is unlimited.

4. References. See Appendix A.

5. Records Management (Recordkeeping) Requirements. The records management requirement for all record numbers, associated forms, and reports required by this regulation are addressed in the Army Records Retention Schedule—Army (RRS-A). Detailed information for all related record numbers are located in ARIMS/RRS-A at https://www.arims.army.mil. If any record numbers, forms, and reports are not current, addressed, and/or published correctly in ARIMS/RRS-A, see Department of the Army (DA) Pamphlet 25-403, Guide to Recordkeeping in the Army.

6. Availability. This ER is available at the following website: https://www.usace.army.mil/publications/.

7. Policy. Any new requirement (workload) whether military/civil funded, direct or reimbursable that was not validated in the study must follow the formal concept plan process as published by Headquarters, Department of the Army G-37 Director, Force Management, and Headquarters, U.S. Army Corps of Engineers (HQUSACE) G-31 to request additional requirements and to ensure it is aligned with Manpower Study guidelines. Concept plans will be submitted to HQUSACE G-31 for staffing and will follow procedures outlined by G-31. All other changes not involving new requirements (workload) will be approved by the Director, CEIWR.

Appendix A
References

A-1. References.

a. AR 570-4, Manpower Management
https://armypubs.army.mil/ProductMaps/PubForm/AR.aspx

b. Memorandum, CERM-M, 27 Sep 2013, subject: Manpower and Organizational Study of the U.S. Army Engineer Institute for Water Resources (IWR).

c. Memorandum, CECO-GF, 04 June 2020, subject: Change Management Plan - Reorganization within the U.S. Army Corps of Engineers, Institute for Water Resources

Appendix B
Mission Statement

B-1. Mission Statement. The U.S. Army Engineer Institute for Water Resources (IWR) is a Field Operating Activity (FOA) under the Commanding General, USACE, and the staff supervision of the HQUSACE Directorate of Civil Works under the direction of the Deputy Commanding General for Civil and Emergency Operations (DCG-CEO) and the Director of Civil Works (DCW), and serves as a national center of expertise, supporting the HQUSACE, the Office of the Assistant Secretary of the Army (Civil Works) and USACE field offices by providing:

a. Analysis of emerging trends and issues in anticipation of changing water resources management conditions to inform the strategic direction of the Civil Works (CW) Program and the corporate development of policies, programs, and investment decision strategies.

b. Systems-based planning methodologies, tools and training across CW business areas.

c. Leadership of the USACE Economics Community of Practice, with a focus on project level, regional and national economic analysis, multi-criteria and risk-informed analysis, economic and socio-economic assessments, and enterprise capacity development.

d. Development of results-oriented CW Program and project information through the management of national data systems, and application for investment decision support to USACE CW on an enterprise level.

e. State-of-the-art hydrologic and hydraulic engineering methodologies, models and management systems, and associated planning and environmental methods, models and training.

f. Advanced engineering risk management expertise for dam, levee and infrastructure safety, and the development, application and stewardship of the engineering practice involving contemporary risk-related methods and models.

g. Assistance to USACE on anticipating, preventing or minimizing water conflicts and ensuring the interests of the public are addressed in Corps decision-making, and leadership of the USACE Community of Practice for Conflict Resolution and Public Participation.

h. Globally-recognized expertise on water security and Integrated Water Resources Management (IWRM) applied via partnerships with USACE Major Subordinate Commands (MSCs), Department of Defense (DoD) geographic Combatant Commands (COCOMs), the U.S. State Department, United Nations and other U.S. and international institutions and Non-Governmental Organizations (NGOs), to address water and natural resources planning, water policy and governance, water management, trans-boundary water conflict mitigation, and other water-related challenges within the U.S. and around the world.

i. Assistance to HQUSACE, Army, and DoD, working in partnership with USACE MSCs and DoD COCOMs, for strengthening theater security cooperation by facilitating civilian and

military collaborations, emphasizing multi-national force capacity development on the life-cycle planning of the humanitarian response and consequence management across all forms of extreme water events and other natural and technological disasters.

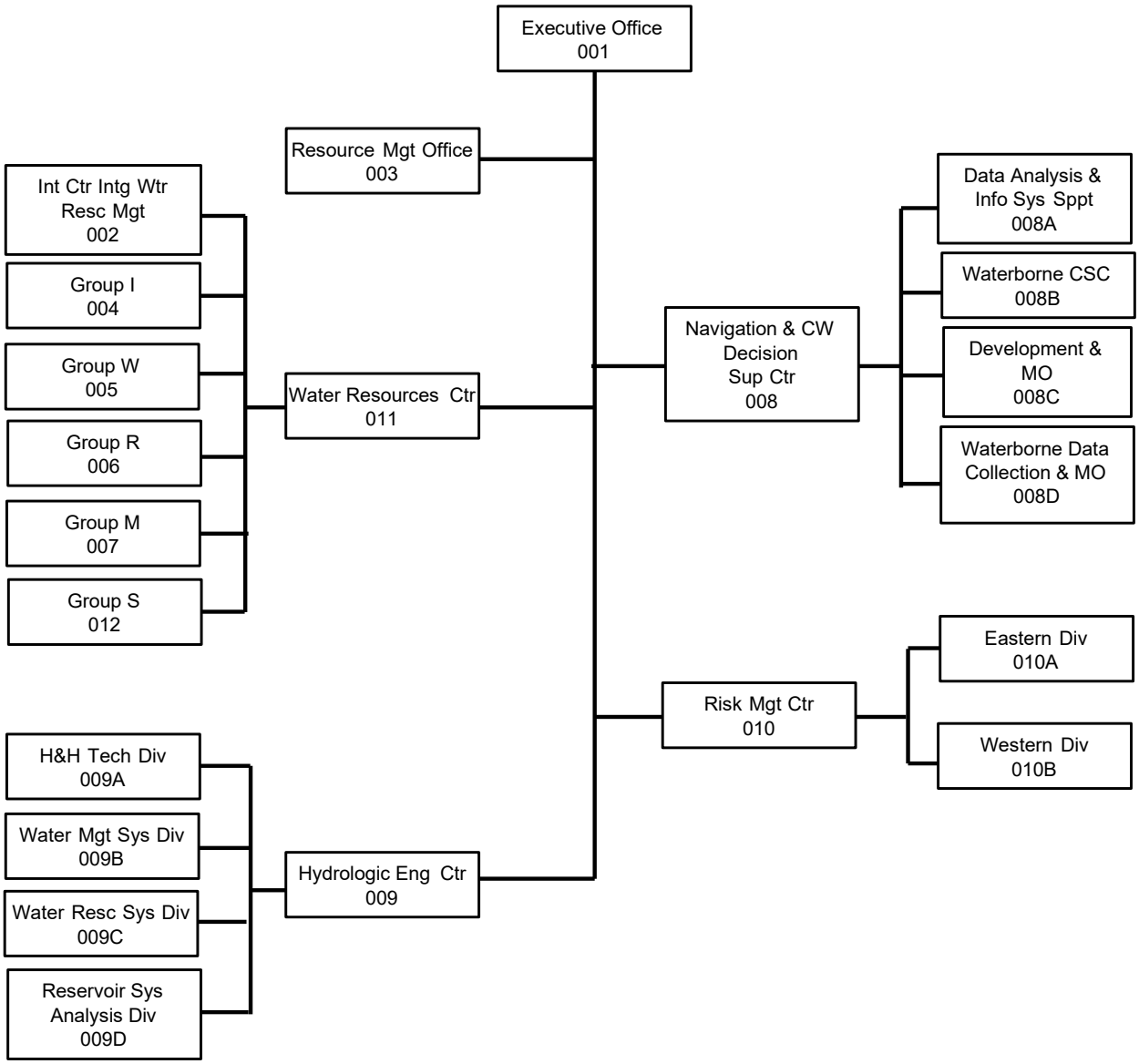
j. A critical mass of knowledge on the engineering and scientific aspects of global change and the adaptation to climate change and other risk factors in collaboration with interagency partners.

k. Enterprise-level financial analysis expertise in support of the CW mission and USACE intergovernmental collaboration on public works infrastructure investment decisions.

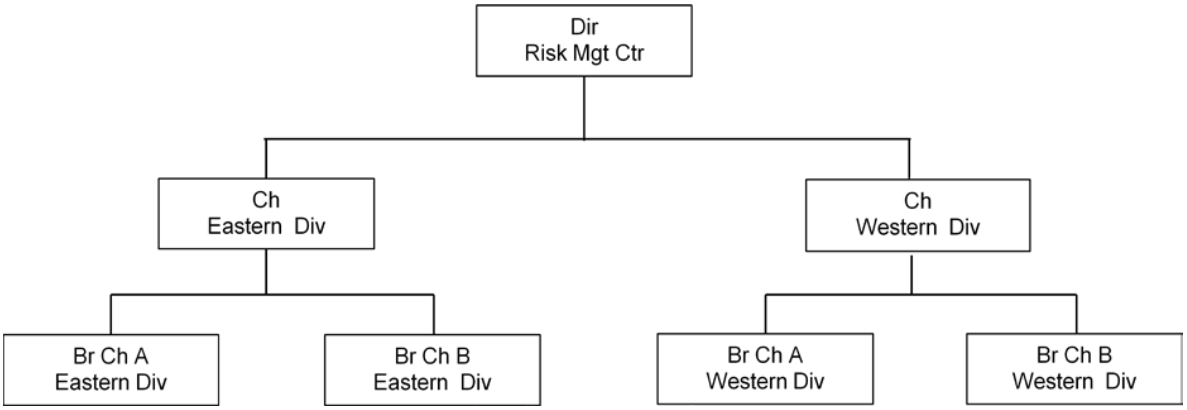
l. Policy and technical advice to USACE and Army senior leaders on a wide range of water resources, marine transportation, flood/coastal storm risk reduction, conflict resolution, international water, natural resources stewardship and ecosystem management issues.

Appendix C
Organizational Structure

C-1. Organizational Structure for the Institute for Water Resources



C-2. Organizational Structure for the Risk Management Center



Appendix D
Mission and Functions

D-1. Executive Office – Paragraph 001

a. Mission. The U.S. Army Engineer (USACE) Institute for Water Resources (IWR) supports the Civil Works (CW) Directorate, the Office of the Assistant Secretary of the Army (Civil Works) (ASA(CW)), and USACE field offices. The Executive Office provides overall leadership, executive direction and management of the IWR, encompassing all programs, projects and activities and across all centers and remote offices. The Executive Office plans, directs, manages, and executes all IWR technical, management and business support activities.

b. Functions.

(1) Executive Direction and Oversight: Establishes the strategic direction for the IWR programs and activities in consultation with Army and HQUSACE military and civilian leadership. Provides leadership to the IWR Corporate Management Board (CMB) composed of the institute's senior managers and center directors. The CMB advises the Director on setting the overall direction of the IWR; establishes the IWR's goals and objectives; integrates IWR's work and functions; ensures alignment of work products consistent with its goals and objectives; ensures overall Quality Assurance/Quality Control aimed at producing the highest quality work; establishes recruitment priorities; ensures performance appraisal consistency; and provides the strategic oversight of comprehensive or integrated responses to cross-cutting mission, functional, business- lines or policy requests from HQUSACE or Army. Provides executive direction and oversight of all aspects of the IWR's business management and technical activities, program development, and operations, independently initiating adjustments and/or corrective actions as necessary for mission success. Leads and oversees the implementation of the Project Management Business Process (PMBP) at IWR, and as publisher, oversees the publication of the IWR's reports, papers and technical documents, including e-publications, models and software.

(2) Conduct Strategic Communications and Analysis: Builds, maintains, and strengthens relationships with political appointees and career executives at the Departments of the Army and Defense; strategic partners at other federal agencies, White House committees and interagency working groups and task forces; key stakeholders at State and local governments, port authorities and river basin/watershed organizations; Congressional committee staff, principal assistants and Senate and House members; non- governmental organizations, professional societies and industry organizations, thought leaders in academia and universities and with University consortiums; the National Academy of Sciences; and leaders of key national trade, industry, professional and NGOs.

(3) Supports International Water Resources Outreach: Consults with the HQUSACE and Army military and civilian leadership and United Nations officials and State Department executives, Ambassadors and Foreign Mission Chiefs, to establish the strategic direction for Civil Works international engagement and the overall United States Government (USG) strategy for participating in the United Nations Educational, Scientific and Cultural Organization (UNESCO) International Hydrological Program (IHP). Provides strategic and technical

assistance on U.S. and international water resources planning, engineering and water management issues in support of HQUSACE Directorate of Civil Works and Directorate of Military Missions, Interagency and International Services (IIS); activities associated with providing U.S. water and theater security in coordination with USACE MSCs and DoD COCOMs around the world; the activities of the World Water Council; and international water treaty boards and commissions. Identifies opportunities, builds relations, develops technical partnerships, and executes and oversees the management of international agreements with foreign ministries, universities and global NGOs with mutual interests in water security. Provides leadership and executive oversight of activities supporting USACE and/or IWR memorandums of understanding/partnering agreements with international partners, as assigned by the USG, DoD, Army and HQUSACE. On behalf of the USG, oversees USACE support to The World Association for Waterborne Transport Infrastructure (PIANC), the U.S. Section of PIANC, and PIANC International, to advance the goals of the USG and PIANC, particularly in Latin America, and through the Organization of American States.

(4) Development and Management of the USACE Civil Works Program: Interfaces with and advises, assists and supports the HQUSACE Deputy Commanding General (DCG) for Civil and Emergency Operations, the DCW, the Director of IIS by advising on Civil Works and related Continental United States (CONUS) and Outside the Continental United States (OCONUS) water resources, water management, water security and other water and land-related natural resources issues and challenges. Provides executive interface with Corps of Engineers Civil Works (CECW) senior executives, participates as a member of USACE senior leader strategic sessions, and acts in conjunction with or on behalf of the DCG for Civil and Emergency Operations and the DCW in the executive oversight, strategic direction, and execution of assigned components of the Civil Works Transformation; provides intellectual input to the Civil Works Strategic Plan, and the USACE Commanding General's (CGs) Campaign Plan; reviews future CW Policy Development, International Water Resources, CW Research and Development of programs; and serves on various HQUSACE Civil Works executive oversight committees and boards, including the ASA(CW) – CECW Strategic Group, USACE Infrastructure Strategy Advisory Group, Adaptation to Climate Change Steering Committee, and Civil Works Research and Development (R&D) Steering Committee. Provides policy development, analysis and advice for CW leadership on national-scope water resources planning and management issues, including the identification of emerging issues and the associated implications to the USACE Civil Works Program. Oversees the conduct of national studies and special policy sensitive investigations, and evaluates, assesses, and recommends future USACE policy options towards the development of proposals for legislative changes through future Water Resources Development Acts (WRDA).

(5) Management, Oversight and Administration: Performs supervision and management of personnel and oversees management and administrative functions of all other work centers and provides leadership to the Corporate Business Team (CBT). The Executive Office in concert with the CBT provides centralized management in the areas of budget and financial management, travel, human resources, manpower, corporate information and logistics for the IWR FOA, and also provides staff action officer support and one-stop tasker control for the IWR Executive Office, National Capital Region (NCR) group managers and Center Directors across the FOA.

D-2. International Center for Integrated Water Resources Management – Paragraph 002

a. Mission. The International Center for Integrated Water Resources Management (ICIWaRM) mission is to advance the science and practice of IWRM to address water security and other water-related challenges, including disaster risk management, by regional and global action, through new knowledge, innovative technologies, collaborative interdisciplinary scientific research, networking, training and capacity development. ICIWaRM works with the U.S. Department of State (DOS), UNESCO IHP. The Center's globally-recognized expertise on water security and IWRM is applied via partnerships with USACE MSCs, DoD Combatant Commands COCOMs, the U.S. State Department, United Nations and other U.S. and international institutions, Universities and NGOs.

b. Functions.

(1) Supports International Water Resources Outreach: Performs international water resources outreach and collaborative interdisciplinary scientific research, networking, training, capacity development, and technology-transfer in support of Army/DoD post- conflict stability operations, peacekeeping, other diplomatic and/or U.S. Government water-related activities aligned with USACE goals and objectives. This includes participation in a wide variety of regional and global water-related workshops and symposiums, such as the periodic World Water Forums, and publishing the International Water Policy Journal. Oversees technical management of collaborative agreements with key U.S. international partners such as Japan, the Netherlands, and other nations and international partners such as The Nature Conservancy and the Global Water Partnership to provide means for advancing the international practice of IWRM through the IHP under the auspices of UNESCO.

(2) National Interface and Collaboration: The Center's engagement context reflects a "whole-of-government" approach, with ICIWaRM often collaborating with other USACE offices and laboratories, other federal agencies, principally including the U.S. State Department and its U.S. Agency for International Development (USAID), the Department of the Interior's U.S. Geological Survey (USGS) and Bureau of Reclamation, the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) and NOAAs National Weather Service (NWS) and National Ocean Service, the National Aeronautics and Space Agency and the National Science Foundation, along with Non-Governmental Organizations, including The Nature Conservancy and the Global Water Partnership (GWP), the academic water sector, including universities within the U.S. and around the world, and partnering foreign governments and host Nations.

(3) International Capacity Development: International water resources outreach and collaborative interdisciplinary planning, socio-economic, scientific, and engineering expertise in building networks, training, education, and technology-transfer in support of Disaster Risk Management (DRM), Army/DoD post-conflict stability operations, peacekeeping, various military-civilian collaboration interfaces, other diplomatic and/or USG water-related activities aligned with USACE goals, IWRM objectives and DOS foreign policy priorities. Includes:

(a) Technical advice, applications, training and education for USACE, the USG, other Nations, and international organizations on water security, national water policies, and country water strategies with regard to models and techniques for reducing, minimizing, and resolving trans-boundary water conflicts, facilitating stakeholder involvement and the participation of civil society in collaborative planning, risk- communication, adapting to climate change, managing river basin systems, Shared Vision Planning (SVP) and other consensus building approaches, along with a wide range of alternative dispute resolution (ADR) instruments applied towards strengthening IWRM and/or DRM in the developing world.

(b) A focus on advancing the international practice of IWRM through the United Nation's IHP, under the auspices of UNESCO, through the development of IWRM and DRM principles and best management practices, and focusing on governance (institutional frameworks), engineering, planning and evaluation issues. Includes:

(i) Synthesizing innovative IWRM and DRM principles, procedures and practices of USACE and other water management agencies, the private sector, and professional societies, and sharing via workshops, training courses, conferences and websites.

(ii) Fostering technological development and technology transfer of models and methods that enhances IWRM and DRM. This includes promoting applied research, testing and dissemination of innovative models and methods for hydrologic and ecological analysis and water resources management.

(iii) Undertaking training, education and capacity-building efforts, focusing on training for implementing IWRM at both watershed and national levels, particularly on behalf of developing and emerging nations in the Asia-Pacific, Latin America and Caribbean, Sub Sahara Africa, Middle East, and Eastern Europe and East Asia regions. This includes extending the capabilities and reach of IHP programs and IWRM education and capacity building at all levels (e.g., short courses, mid-career long-term training, and executive seminars). In addition, this includes building on distance learning through a network of universities, USACE training courses, NGOs and other USG partners.

(c) Technical Assistance to HQUSACE, Army and DoD. Works principally in partnership with USACE MSCs and regional COCOMs to strengthen theater security cooperation by facilitating civilian and military collaborations via fostering security cooperation and best practices through enhanced consequence management of all-hazards, as well as awareness and understanding of the connections between water security and national security, emphasizing multi-national force capacity development for life-cycle planning of the preparedness, response and consequence management across extreme water events and other natural and technological disasters. Activities in OCONUS are also undertaken in coordination through the HQUSACE Deputy Commanding General for Military and International Operations via the HQUSACE IIS, and executed in partnership with USACE MSCs and DoD COCOMs around the world.

(4) Civil-Military Emergency Preparedness (CMEP) Program: Provides technical and management leadership in support of the execution of the CMEP program. Coordinates training of emergency operation centers in former Soviet-bloc states and encourages a transition from

military to civil departments. Supports Combatant Commanders by helping to build partnership capacity for all hazards consequence management as part of the Warsaw Initiative Fund program in support of the North Atlantic Treaty Organization Partnership for Peace (PfP) nations.

D-3. Resource Management Office – Paragraph 003

a. Mission. Resource Management Office has centralized responsibility for resource management, program management, corporate information, and logistical functional areas for the IWR FOA, and also provides staff action officer support for the IWR Executive Office and Center Directors across the FOA, coordinating and staffing a wide array of actions with HQUSACE and the Office of the Assistant Secretary of the Army for Civil Works (ASA(CW)).

b. Functions.

(1) Directs and Oversees Financial and Resource Management: In coordination with the Director and Chief of Staff, directs the planning, organization, and administration of comprehensive financial management programs. Manages, plans, obtains, reconciles, and administratively controls funds and resources for IWR. Establishes and oversees processes for the preparation of travel orders, travel vouchers, and training requests via Corps of Engineers Financial Management System (CEFMS) as well as Military Interdepartmental Purchase Requests (MIPRs) and contractual Purchase Requests and Commitments (PR&Cs). Coordinates and validates P2 resource requirements with project managers and the budget office prior to entering PR&Cs into CEFMS. Provides consolidated corporate reports on the status of leave account and overhead (General & Administrative Expense and Departmental Accounts) and recommends corrective actions to the Director.

(2) Directs and Oversees Budget Execution: On behalf of the Director, provides all services to develop expense and operating budget submittals. Submits, monitors and reports on requirements and execution. Implements guidance and reports to higher authorities and IWR senior management on IWR's expense and operating budget program. Ensures internal controls (managed and reported) are in place.

(3) Directs and Implements Manpower and Human Resources Management: Provides comprehensive operational manpower management for IWR. Develops and advises the Director on manpower requirements, allocations, documentation and utilization information. Performs manpower control and reporting functions. Manages internal and external (USACE) manpower control reports, Integrated Manning Document and conducts surveillance of manpower planning and requirements processes using the Corps of Engineers Manpower Requirements System. Develops and maintains the Federal Activities Inventory Reform listing for serviced customers. Supports the IWR Director and senior managers by providing interface with HQUSACE Human Resources and serves as the Institute's operational point-of-contact with the Army Civilian Personnel Advisory Center/Operations Center on corporate recruitment processes and all personnel actions.

(4) Management, Oversight, and Administration: Provides interpretation and guidance according to relevant statutes, regulations, standards and processes. Provides expertise at staff

meetings/briefings, conferences and workshops. Provides direct management and supervision of assigned employees, which includes coaching, mentoring, counseling and providing training/professional development opportunities. Manages enterprise corporate processes on behalf of the Director and Center Directors. This includes:

(a) Recruitment and employee selections, performance and honorary awards, budget, travel, payroll and time and attendance. Provides administrative support related to operating budgets, acquisition of goods and services through contract and government purchase card, manpower/personnel management, correspondence, visitor reception and telephone call management, and logistical functions/tasks.

(b) Records management, correspondence and workflow, inventory and supplies, property management, and administration of the Institute's annual support services agreement with the Humphrey Engineering Center Support Activity which provides IWR with WRC access to Contracting, Safety, Counsel, Security, Logistics, Mailroom, Building and Office Maintenance support as a tenant of the Casey Building, along with providing oversight and administration of corporate Information Technology (IT) support services which are provided via separate financial agreement with ACE-IT.

D-4. Water Resources Center (WRC) – Paragraph 011

a. Mission. The Water Resources Center (WRC) supports the Civil Works (CW) Directorate, the Office of the Assistant Secretary of the Army (Civil Works) (ASA(CW)), and USACE field offices. The WRC develops innovative and implementable policies, methods, tools, and systems to enhance the analysis of water resources issues and delivery of Civil Works projects. The WRC provides strategic direction, command and control, as well as financial, administrative and clerical support for five Enterprise Groups and the ICIWaRM that support each of the Civil Works business areas of navigation, flood risk management, environment, regulatory program, recreation, emergency management, and water storage for water supply., The WRC Director serves on the IWR Corporate Management Board and Project Review Board and provides collaborative oversight input on the development and execution of the Institute's overall business processes and operations.

b. Functions.

(1) Executive Direction and Oversight: Establishes the strategic direction for the WRC programs and activities in consultation with IWR and HQUSACE military and civilian leadership. Participates in the IWR CMB, which is composed of the IWR center directors. The CMB advises the IWR Director on setting the overall direction of the IWR; establishing IWR's goals and objectives. The WRC Director participates in the IWR PMBP, and as publisher, oversees the publication of the WRC reports, papers and technical documents, including e-publications, models and software.

(2) Conduct Strategic Communications and Analysis: Builds, maintains and strengthens relationships with senior USACE leaders and career executives at the Departments of the Army; strategic partners at other federal agencies, and key stakeholders at State and local governments,

and river basin/watershed organizations; Congressional committee staff, principal assistants; non-governmental organizations, professional societies and industry organizations, thought leaders in academia and universities and with university consortiums; the National Academy of Sciences; and leaders of key national trade, industry, professional and NGOs.

(3) Supports International Water Resources Outreach: Consults with the HQUSACE and Army military and civilian leadership and United Nations officials and State Department executives, Ambassadors and Foreign Mission Chiefs, to establish the strategic direction for the International Center for Integrated Water Resources Management (ICIWaRM) Programs and activities, and the UNESCO IHP. Provides strategic and technical assistance on U.S. and international water resources planning, engineering and water management issues in support of HQUSACE Directorate of Civil Works and Directorate of Military Missions, IIS; activities associated with providing U.S. water and theater security in coordination with USACE MSCs and DoD COCOMs around the world. Identifies opportunities, builds relations, develops technical partnerships, and executes and oversees the management of international agreements with foreign ministries, universities and global NGOs with mutual interests in water security. Provides leadership and executive oversight of activities supporting USACE and/or IWR memorandums of understanding/partnering agreements with international partners, as assigned by the USG, DoD, Army and HQUSACE.

(4) Development and Management of the USACE Civil Works Program: Interfaces with and advises, assists and supports the HQUSACE DCG for Civil and Emergency Operations, the DCW, the Director of IIS by advising on Civil Works and related Continental United States (CONUS) and OCONUS water resources, water management, water security and other water and land-related natural resources issues and challenges. Provides intellectual input to the Civil Works Strategic Plan and the USACE Commanding General's (CGs) Campaign Plan; reviews future CW Policy Development for International Water Resources and CW Research and Development.

(5) Program. Oversees the conduct of national studies and special policy sensitive investigations, and evaluates, assesses, and recommends future USACE policy options towards the development of proposals for legislative changes through future WRDA.

(6) Management, Oversight, and Administration: Performs supervision and management of personnel and oversees management and administrative functions for WRC employees.

D-5. WRC Enterprise Groups – Group I, W, R, M, and S: Paragraphs 004, 005, 006, 007, & 012

a. Mission. The Institute for Water Resources (IWR) NCR office supports the CW Directorate and other USACE offices by serving as a National Center of Expertise (CX) for the systematic evaluation of economic, social, institutional, and environmental needs, including forward-looking analysis of changing water resources management conditions aimed at ensuring the USACE is equipped with state-of-the-art water resources and navigation planning analytical methods, models, and systems. The Institute's NCR office includes five enterprise groups: Group I, W, R, M and S, each consisting of a diverse mix of multi-disciplinary water resources specialists who exercise considerable technical independence as members of cross-organizational

Project Delivery Teams (PDTs) using "a project based" matrix-management approach consistent with the USACE Project Management Business Process (PMBP). Group members are typically assigned to PDTs engaged in a variety of IWR programs and projects, along with other subject matter experts (SMEs) from the Institute's various centers, and other SMEs or geographic managers vertically aligned with the USACE hierarchical structure of Communities of Practice (CoPs), Civil Works Business-Lines, MSCs, MSC Regional Business Offices, Planning Expertise Centers, and Regional Integration Teams (RITs).

b. Functions.

(1) Execution Oversight: Develops and oversees execution of specific work center projects and programs and monitors performance. Supervises and directs project managers; participates in selecting and assigning work; establishes and implements collaborative work processes; assembling PDTs across the Institute's matrixed-managed groups and expertise centers; and ensures projects are accomplished according to quality, schedule, and cost commitments. Provides reports and analysis on financial status and new initiatives.

(2) Workforce Development: Maintains and develops the Institute's technical workforce, including the participation in recruitment, mentoring, counseling, training, career development and the evaluation of employee performance within the context of PDT matrix management.

(3) WRC Management: Assists the WRC Director and Senior Manager in developing organizational level guidance related to FOA enterprise management development of internal procedures for functions such as travel, time and attendance, evaluations, internal controls, quality assurance, and personnel management.

(4) Critical Thinking: Engagement with the Civil Works (CW) leadership on emerging trends, issues, and implications to USACE through planning and policy analysis, national or special studies, thought-provoking events such as Castle Forums and Lunch/Dinner Roundtables, and via publication of IWR reports, issue/white papers, and external articles.

(5) Strategic Planning and Future Directions: Provides intellectual leadership, technical input, and process facilitation for engaging USACE leadership in the development of options and plans for adapting missions to future scenarios, trends or uncertainties, and for developing and evaluating alternative program execution strategies, business plans, program reforms, or potential long-range legislative changes relevant to the USACE Civil Works (CW) and IIS programs.

(6) Policy Development, Analysis and Advice: Provides policy development, technical analysis and advice for CW leadership on national-scope, water resources planning and management issues, including assessing and evaluating current and future USACE policy options.

(7) Develops and Manages Civil Works Program and Project Information: Develops and manages program and project performance measurement and analytical assessments for HQUSACE and Corps field offices to improve the effectiveness and efficiency of the CW

program. This function includes the development of CW program and project information for CW business line and account management, budget development and defense, performance measurement, project level analysis, and related budget development systems such as for watershed/systems budgeting. Program information management is facilitated by USACE's official designation as the U.S. Government Agent for the collection and dissemination of waterborne commerce statistics across the Nation; along with responsibilities for related navigation system, lock and dredging performance data; and data for other CW Business-Lines: flood risk management, including dam and levee safety; aquatic ecosystem restoration; regulatory program; water supply; recreation; natural resources management; environmental stewardship; hydropower; and disaster response. (Also, see section D-5 on the Navigation and Civil Works Decision Support Center, Paragraph 008).

(8) USACE Chief Economist: Provides the seat for the USACE Chief Economist, and for leadership of the Economics Community of Practice; oversight of quality and assurance of national consistency of water resources and marine transportation economic evaluation criteria, analytical techniques, forecast models, and industry financial information necessary for project-level and systems analysis, including: vessel operating costs (inland, coastal barge and ocean); global and U.S. maritime fleet composition; national and world commodity forecasts; transportation mode costs and pricing, and modal share estimates; and for the development and application of multi-objective plan formulation, evaluation and economic analysis procedures and tools for river basin, coastal and navigation systems and projects, regional economic impact analysis, integrated watershed planning and management techniques, inter-modal transportation analysis, and macro-economic trends.

(9) Develops and Implements Risk Management Methods and Tools: Leads the advancement and application of risk-informed methods and tools in support of the planning and related investment decision-support elements of the Civil Works program, including risk-based analysis and risk and uncertainty assessments. Tools and statistical methods are developed in cooperation with experts from multiple business-lines to ensure standard procedures are applied across USACE, and encompassing planning, investment decision-support and the dam and levee safety programs. Existing and new procedures are investigated and evaluated to ensure best practices are utilized. Evaluates new strategic directions for risk assessment procedures using updated programs and geospatial tools that provide improved real-time information critical to USACE emergency management staff.

(10) Water Resources Training and Education: Leads efforts to enhance the water resources technical competency of the USACE workforce and to advance the overall USACE CW capacity through training, education and technology transfer, including short courses delivered via the Proponent-Sponsored Engineer Corps Training (PROSPECT) program; custom courses and workshops delivered nationally, regionally, locally and through webinars and other distance learning; fosters relationships with universities with advanced degree programs in water resources disciplines; and manages the Planning Associates Program and the development, management and conduct of technical water resources training, workshops and seminars.

(11) Technical Support of USACE CoPs: Provides technical leadership and support of USACE CoPs relevant to IWR specialty areas, collaborates with other subject matter experts

across USACE on setting community goals and responsibilities; ensures the knowledge and skills essential to technical practice are met; and evaluates and ensures the currency of required criteria, methods, models and systems to ensure national consistency and effectiveness. Provides assistance to and collaborates with field staff across USACE on setting national technical goals, career level capability standards, and doctrine for relevant CoPs. Maintains cooperative relationships with the various Planning and Engineering Expertise Centers, with IWR national subject matter experts providing or sharing technical leadership on major programs, communities of practice, and/or centers of expertise.

(12) Conducts Special Studies: Undertakes special studies for complex, strategic, often multi-jurisdictional and/or politically sensitive water systems, programs, policy, and planning, including analysis of technical, institutional or related operational challenges or problems of regional or national scope, as assigned by Congress, Office of Management and Budget (OMB), Council of Environmental Quality (CEQ), Army, HQUSACE or MSCs.

(13) Participates in Civil Works Research, Development, Application and Technology Transfer: Scopes, develops, tests, applies and infuses into field practice the use of improved analytical techniques, methods and models within the Institute's mission purview, including as related to watershed planning, integrated water resources management, multi-objective plan formulation, benefit-cost and National Economic Development analysis, incremental cost and cost effectiveness analysis, environmental assessments, evaluation of ecological goods and services, adaptation to global change, project-level, regional, systems and watershed investment decision-making, and risk analysis.

(14) National Interface: Provides specialized technical expertise which facilitates USACE engagements on water resources planning, scientific and engineering technology issues and topics with other federal agencies, academia, policy development, industry and professional organizations, and management of USACE activities supporting the Inland Waterways Users Board, the Environmental Advisory Board, and the Coastal Engineering Research Board, and lead activities for the U.S. Section of PIANC, the National Research Council Transportation Research, Marine (MB), and Water Science and Technology boards, the National Institutes for Water Resources encompassing university-based water centers for each of the fifty states, the District of Columbia and U.S Territories, and other organizations.

(15) Conducts Strategic Communications and Analysis: Conducts and directs analysis to support development of strategic communications for delivering USACE messages and building coalitions for specific programs and in support of the overall CW program development processes. Target audiences include State and local governments and agencies, non-governmental organizations and a wide range of national and regionally- based stakeholders, and the general public. Advises on and develops communication strategies and multi-media instruments. Provides reviews and critical input, fosters existing partnerships and develops strategies for new partnerships. Collaborates with HQUSACE, USACE Communities of Practice and Civil Works Business-Lines, MSCs, Districts, and other agencies and organizations to develop strategic partnerships that promote the advancement of USACE missions.

(16) Interagency Collaboration: Builds, maintains and strengthens relationships with political appointees and career executives at the Departments of the Army and Defense; with strategic partners at Federal agencies, such as CEQ, OMB, Office of Science, Technology and Policy (OSTP), and associated committees and interagency working groups; the U.S. State Department and their National Commission for the United Nations Educational, Scientific and Cultural Organization (UNESCO) and National Committee for the International Hydrological Program; DOI, including the USGS, U.S. Fish and Wildlife Service, and Bureau of Reclamation; the Department of Commerce's National Oceanographic and Atmospheric Administration (NOAA), including the National Weather Service and National Ocean Service; the International Water Treaty Boards and Commissions; Congressional committee staff, principal assistants and Senate and House members; United Nations officials and other State Department officials and Ambassadors; Academia; National Academy of Sciences; and leaders of key national trade, industry, and professional societies and NGOs.

(17) Technical Expertise for International Water Resources Outreach and Collaboration: Provides international water resources expertise matrixed through the Institute's ICIWaRM (Paragraph 002), and, as needed, leveraging expertise drawn from other IWR centers, other USACE organizational elements, and/or other federal agencies or intergovernmental partnersto perform collaborative interdisciplinary scientific research, networking, training, capacity development, and technology-transfer. This includes:

(a) PIANC: Provides the United States Section Secretariat function of PIANC, an international technical association established in 1885. USACE leadership role in the U.S. Section of PIANC is established in law, with its mission being to advance the sustainable development of maritime and inland navigation infrastructure through the international exchange and publication of expert technical information on port and waterway development. Quadrennial Congresses, Annual General Assemblies, Technical Conferences, and an ongoing series of International Working Groups are used to harness the technical expertise of representatives from member countries in government, the private sector, and academia. IWR's function is to facilitate involvement of Army and USACE leadership of the U.S. Section, the facilitation of the U.S. PIANC Commissioners engagement, and the assembly, staffing and development of PIANC Working Groups and the production of the resulting technical reports which present the best practices drawn from across the globe on specific navigation issues and challenges.

(b) International Water Resources Capacity Development: Provides matrixed managed expertise towards facilitating outreach and collaborative interdisciplinary scientific research, networking, training, capacity development, and technology-transfer in support of Army/DoD post-conflict stability operations, peacekeeping, other diplomatic and/or USG water-related activities aligned with USACE goals and objectives, including technical assistance to USACE, Army and COCOM engagements such as in Iraq, Afghanistan, and other future potential or post-conflict nations or regions; (2) the technical leadership of the HQUSACE engagement with the World Water Council, the conduct of the periodic World Water Forum, and publishing the Water Policy Journal, (3) the management of collaborative agreements with key U.S. international partners such as Japan, the Netherlands, Canada, Mexico, the Peoples Republic of China, South Korea, Taiwan, etc., and other international partners such as The Nature Conservancy and the Global Water Partnership; and (4) providing a special a focus on advancing the international

practice of IWRM through the United Nation's IHP, under the auspices of UNESCO. (Also see section D-2 on the International Center for Water Resources Management - Paragraph 002).

(c) Technical Assistance to HQUSACE, Army and DoD: Provides technical assistance within IWR's water resources mission purview working principally in partnership with USACE MSCs and DoD COCOMs to strengthen theater security cooperation by facilitating USACE collaborations with other Nation's Military authorities and Civilian agencies. This includes engagement via management and execution of the CMEP program, emphasizing multi-national force capacity development for life-cycle planning of the preparedness, response and consequence management across extreme water events and other natural and technological disasters.

(18) Advances Techniques and Models for Conflict Resolution, Public Involvement, Partnering, Collaborative Planning, and Risk-Communication: IWR's Conflict Resolution and Public Participation Center of Expertise (CPCX) provides technical assistance to HQUSACE, MSCs and Districts, other Army and DoD components, and other agencies and institutions on consensus building, dispute resolution and collaborative processes for involving civil society in public works and natural resources management decision-making. The CPCX leads the development of USACE's collaborative capacity, publishes reports on environmental conflict resolution and collaborative processes, and manages the Corps' Public Participation and Risk Communication Community of Practice (CoP).

(a) The aim of the CPCX is to advance the use within USACE of computer-aided dispute resolution (CADRe), SVP, and associated consensus building approaches, along with a wide range of ADR instruments, in order to enable practitioners across USACE to better anticipate, prevent and manage water-related conflicts and engage in collaborative action successfully, with the goals of improving water resources management and ensuring the interests of the public are addressed in a fair and transparent manner.

(b) The CPCX is a virtual, distributed Technical Center of Expertise, drawing SMEs primarily from the Institute's NCR Enterprise Groups, but also leveraging resources from throughout the FOA and IWR's intergovernmental partners, such as the U.S. Institute for Environmental Conflict Resolution. The CPCX's work is focused on five functions:

(i) Consultation Services. The CPCX provides ongoing consultation services to the HQUSACE and Corps field offices on a cost reimbursable basis through its Directory of Expertise. This includes:

- Providing short term assistance to USACE leaders and/or staff engaged in a controversial issue associated with water and land resources activities.

- Establishing a network of USACE professionals skilled to assist in situation assessments, ways to incorporate process design, facilitation, risk communication and other public participation and conflict resolution services.

- Preparing and updating on a regular basis, a communication plan aimed at ensuring services are widely known throughout USACE.

- Facilitating the process of making the services of external conflict resolution and public participation professionals available to headquarters, divisions and districts for short or long-term situation assessment, process design, facilitation, risk communication and mediation.

(ii) Capacity Building. The CPCX develops and delivers an integrated program of training, peer learning, and mentoring that enables USACE leaders, staff and partners to strengthen their knowledge, skills and abilities to engage in collaborative leadership and effectively use conflict resolution and public participation processes. This includes:

- Cultivating a USACE culture that supports successful public participation, collaboration, and conflict resolution with its partners, stakeholders and public.

- Conducting, in partnership with each MSC, periodic organizational-level assessments to identify strengths and best practices in the policies, systems and culture at the division and district level that support effective public participation, collaboration and conflict resolution.

- Delivering and maintaining a training portfolio of courses on Public Participation and Conflict Resolution within the PROSPECT course series.

- Designing and implementing other ongoing educational activities in multiple media, including webinars, presentations at workshops and conferences, and via peer learning networks.

- Establishing and providing technical support to a network of experienced facilitators, mediators, risk communicators, and other public engagement practitioners in MSCs and key districts, who offer direct consultation services in their division or district and provide ongoing peer learning and coaching programs for this network.

(iii) Information Exchange. The CPCX leads the development of a robust USACE organizational culture with a strong commitment to action, evaluation of results, capturing lessons learned, and disseminating information to achieve improved intergovernmental collaborations and results in the future. This includes:

- Identifying gaps in the approaches and tools in current use by USACE.

- Serving as a catalyst for compiling existing knowledge and case examples within the Corps and from external experts.

- Establishing a robust outreach program to disseminate this knowledge widely, including but not limited to building on the publications on public participation and alternative dispute resolution published by IWR.

- Sponsoring workshops, conferences and intergovernmental technical events and reporting to HQUSACE and the CoP on outcomes.

- Leading the USACE Collaboration and Public Involvement Community of Practice (CoP) and collaborating with the CECW and CEOC senior executive co- proponents in HQUSACE and the field to identify opportunities and emerging challenges faced by USACE personnel, conduct research and pilot test innovative processes, tools and approaches.

(iv) Policy Support. The CPCX provides technical leadership of the USACE's effective implementation of federal conflict resolution and public engagement policies, domestically and internationally. This includes:

- Providing technical assistance to HQUSACE in drafting USACE guidance, policies, and/or Army doctrine that relate to conflict resolution, citizen participation in agency decision-making, and intergovernmental collaboration.

- Advising HQUSACE on national and international trends or issues in public participation, conflict resolution and collaborative governance.

- Serving as liaison with other federal agencies, academic and other institutions which serve as centers of expertise on conflict resolution.

- Serving as a resource for national or international initiatives on public participation and conflict resolution.

- Producing the USACE report and its input into the Army's annual Environmental Conflict Resolution report to CEQ and OMB.

- Establishing agency best practices and practical guides for choosing what alternative dispute resolution tools to apply for different types of conflict and different collaborative decision-making contexts and stages.

- Creating USACE-wide metrics to measure the Corps' progress and overall effectiveness in advancing environmental conflict resolution and collaboration.

(v) Methods Development and Research. The CPCX serves as the USACE thought-leader in order to position USACE as the preeminent Federal agency in using state-of-the-art collaborative processes, tools and approaches in solving the Nation's water resources problems. This includes:

- Leading the development and pilot testing of tools that appear promising, such as the advancement of Shared Vision Planning and related Computer Assisted Dispute Resolution (CADRe) approaches.

- Developing and demonstrating the use of collaborative decision support and computer modeling tools in different contexts (e.g., planning versus regulatory contexts) and at different stages of collaborative processes.

- Investigating and testing visualization techniques and other innovative means to communicate uncertainty and risk.

- Sponsoring world class experts to lecture and write in periods of residence visits at the Center.

- Ensuring new tools such as interactive modeling and software for negotiations are effectively integrated into field applications.

(19) Provides Policy, Technical and Scientific Leadership on Global Change: Leads assessments of the uncertainties associated with the adaptation of the CW program to climate and global changes, including land use, demographic, hydrologic, climatologic, societal values, and those associated with technology and an aging capital stock of CW infrastructure. Leads infusion of non-stationary approaches to USACE development of Civil Works strategies, models, analytical techniques, policies and guidance to address the adjustments or changes in planning, engineering-design, operations and maintenance and investment decision-making aimed at enhancing the resilience and/or reducing the vulnerability of USACE projects, systems, and programs to observed or expected change or increased variability in climate along with other changes affecting water resources.

(20) Facilitates Civil Works Business and Financial Transformation: Provides enterprise-level policy, business and financial expertise in support of HQUSACE and MSC/District strategies for transforming the execution and implementation context for Civil Works planning, engineering-design, operations and maintenance, and end-of life- cycle development of alternative business models, including design-build; plan-design-build; design-build-operate; design-build-operate-own, etc., in conjunction with innovative and entrepreneurial financial plans which leverage capabilities of public-private partnerships, private equity funds, tax-except bonds, infrastructure banks, revolving loan funds, etc., and related financial analysis in support of CW's intergovernmental collaborations on public works infrastructure investment decisions.

D-6. Navigation and Civil Works Decision Support Center – Paragraph 008

a. Mission. The Navigation and Decision Support Center (NDC) provides direct technical support to the navigation business line as well as support on budget development and defense, system management, investment decision-making, and data and system management for the other seven Civil Works (CWs) Business-Lines for the Corps. Other CW business line information includes the performance of USACE water resources infrastructure, including facilities for flood damage reduction, aquatic ecosystem restoration, water supply, hydroelectric power, recreation, environmental stewardship, the regulatory program, and multipurpose project/system management. NDC manages staff within the Waterborne Commerce and Statistics Center (WCSC) and Group S for strategic issues associated with data management, CW systems development, and investment decision support. The NDC Director serves on the

IWR Corporate Management Board and Project Review Board and provides collaborative oversight input on the development and execution of the Institute's overall business processes and operation.

b. Functions.

(1) Provides Technical Leadership and Oversight: The NDC Executive Office provides technical leadership and support to the following: Operations and Regulatory Community of Practice (CoP), the Environmental CoP, the Planning CoP, and several CoPs within the Engineering - Construction function; and provides technical assistance to the field, including the Inland Navigation and Deep-Draft Navigation Planning Expertise Centers (PcXs), and the Ecosystem Center of Expertise (EcoPcX). NDC collaborates with SMEs across USACE on the execution of USACE's Infrastructure Strategy, the Asset Management Program and the development and administration of CW's data management and Geographic Information Systems (GIS), ensuring criteria, methods and systems are compliant with DoD, Army and USACE requirements, current, nationally consistent and effective. Activities range from national-level database concept development and design to implementation, maintenance, and life-cycle integration of various databases for optimum response to users and operational efficiency. NDC monitors technology required for effective mission execution, including hardware, software, network and database management systems to ensure responsiveness and flexibility for enhancing USACE missions and CW's decision making. Promotes applied research, testing, and dissemination of innovative models, methods and systems for decision support, and water resources data management. Provides direct management support to IWR on Corps Information Technology changes and impacts on daily operations, including management of national data and GIS information systems. Serves as IWR's primary liaison for the Army Corps of Engineers Information Technology (ACE- IT) Center and compliance with DoD Information Assurance requirements.

(2) Fosters Navigation and Civil Works Data and System Integrity: Provides timely and accurate data and management decision support information for the Civil Works (CW) business functions through the collection, management, processing, distribution, evaluation and analysis of data, output, and performance information on the U.S. navigation system and other CW Business-Lines across the entire USACE water infrastructure portfolio. For the navigation system, this includes national data such as commodities, tons, ton-miles, vessel movements and lockages; physical characteristics information for locks, commercial ports, facilities, vessels and waterways; and operation and performance data for dredging and locks. NDC provides for coordination of navigation information within the USACE, the Department of Defense, with all Federal and non- Federal agencies and private partners and the general public to assure effective data collection and dissemination strategies, as well as Federal statistics standardization, and serves on national and international committees to establish standards for codes and terminology. Coordinates with the Department of Transportation's (DOTs) Bureau of Transportation Statistics, the Maritime Administration and other DOT Agencies to provide information for multi-modal freight flow analysis.

(3) Develops and Manages Civil Works Program and Project Information: Supports program and project performance analytical assessments for HQUSACE and Corps field offices in an

effort to improve or measure the effectiveness and efficiency of the entire CW program. Leads budget analyses of performance and budgetary data to provide support to CW Business-Line Managers and staff for potential strategic improvements in performance across the spectrum of CW missions. Works with WCSC staff on the development of CW program and project information for CW business-line and account management, performance measurement, and project-level analysis. This work includes: official designation as the U.S. Government agent for the collection and dissemination of waterborne commerce statistics across the Nation, navigation system, lock and dredging performance, regulatory program data, flood damage reduction statistics, and other related CW programs. Provides data analysis in support of policy development for CW leadership on national-scope, and water resources planning and management issues. Assesses and evaluates current and future USACE policy options. Provides direct support for contracts and contractors assigned to specific programs and projects required by Headquarters personnel. Conducts special studies for water resources systems, programs, policy, planning or operational problems of regional and national scope assigned by HQUSACE or USACE District offices.

(4) Management, Oversight, and Administration: Supervises and directs staff and project managers and ensures NDC administration and personnel matters are accomplished according to quality, schedule, and cost commitments. Provides administrative support to the organization, including record keeping, time and attendance, travel scheduling and administration, archiving, correspondence, credit card purchasing, reception duties, and filing. Provides routine upward reporting and provides briefings to general officers and other USACE representatives. Provides organizational level guidance related to NDC management, such as the development of internal procedures for center functions related to travel, time and attendance, evaluations, internal controls, quality assurance and human resources management. Manages computer support and associated technology to ensure USACE staff has access to needed CW information systems capabilities. Coordinates with IWR technical staff on support for internally designed software and technology. Coordinates with IWR and Army Corps of Engineers Information Technology Services (ACE-IT) staff to ensure computers meet technical needs and are up to date and includes the latest hardware and software. Ensures IWR personnel are trained on the use of required software before installation. Conducts routine coordination with ACE-IT personnel on administrative needs.

D-7. Civil Works Data Analysis and Information Systems Support Branch – Paragraph 008A

a. Mission. The Navigation and Civil Works Decision Support Center (NDC), an element of the CEIWR, is the designated center of expertise for the collection, management, and dissemination of infrastructure utilization and performance information for U.S. waterways and port and harbor channels. A key data analysis element of the NDC is the Civil Works Data Analysis and Information Systems Support Branch (InfoSys), which serves as the interface between the WCSC data collection and USACE and stakeholder consumers of this information. Through careful analysis of WCSC data and information from other sources, the Data Analysis and Information Systems Support Branch is able to provide useful trend analyses and future predictions of commercial transport on the Nation’s inland waterways and coastal ports. This information is essential for developing budgets and prioritizing maintenance and waterborne investments to enable the movement of commerce on the Nation’s waterways.

b. Functions.

(1) Policy Development, Analysis and Advice: The InfoSys staff provides, analysis and advice for CW leadership on national inland navigation and coastal port planning and management issues, including assessing and evaluating current and future USACE policy options. Staff evaluates and analyzes existing and new data, previous policy and strategic goals, with current and projected future national priorities to identify potential trends and recommend strategies and policies for the future. Staff members include analyses of climate change issues associated with inland and coastal navigation and develop and apply related decision support tools for HQUSACE and the Assistant Secretary of the Army for Civil Works (ASA (CW)).

(2) Provides Technical Leadership and Oversight: The InfoSys staff provides critical technical leadership and development of navigation tools such as the WCSC data management system and tools for monitoring lock performance and waterway dredging. InfoSys provides assistance to and collaborates with staffs across USACE and the navigation and dredging industries to ensure USACE data collection and information dissemination is meeting the needs of the Nation.

(3) Manages the Development and Execution of the Operations and Maintenance and Business Information Link (OMBIL) AIS: Managing the operation and continued development of the USACE system for Civil Works Operations and Maintenance performance data via the web-based OMBIL and its link to the Civil Works Business Intelligence (CWBI) system. CWBI, which now includes OMBIL, represents a single web based data gateway available to all USACE personnel.

(4) Managing the Lock Performance and Dredging Systems: Leads the continued system development and execution of the Corps Lock Performance Monitoring System (LPMS), including the LPMS central database, archives and distribution of summary reports; collects, manages and distributes data Corps dredging activities, including bid schedules, location of contract and dredging activities, dredge type, and cubic yards. These enterprise systems encompass the collection, editing, maintenance and analysis of data collected at all Corps-owned and operated locks and for all dredging activities. Distributes for all USACE the collected and synthesized information as well as the physical aspects of lockages. Lockage data includes: vessel name and number, direction of the vessel, number of cuts, lockage and vessel type, entry and exit type, arrival time, lockage time, and a description of any factor which may have interfered with the lockage. Vessel data includes: vessel name and number, information on assisting vessels, dimensions of the flotilla, number of passengers, barge types, width and length, number of barges, the type and number of tons of each commodity and whether or not the vessel stopped since its last lockage. Calculated data includes total and average processing and delay times; and scheduled and unscheduled downtime.

(5) Measures Program and Project Performance: InfoSys staff generate and provide performance measures to HQUSACE, MSCs, and Districts for the Navigation Business-Lines. This includes the creation of new metrics which are incorporated into the Corps Oracle Financial Analyzer (OFA) that are used in the enterprise decision making process for the Corps' annual

budget. Staff also creates management views of Corps Business Line and financial data which supports the Operations and Maintenance (O&M) community's business needs.

(6) Conducts Strategic Communications and Analysis: InfoSys conducts/directs analysis to support development of strategic communications for specific programs and in support of the overall CW navigation program. InfoSys undertakes special studies on waterborne traffic flow, port utilization, and dredging while conducting analysis of operational problems of regional and national scope assigned by HQUSACE or Corps field offices. InfoSys engages in extensive interagency coordination activities, collaborates with numerous other federal and non-federal organizations.

(7) Management, Oversight and Administration: The InfoSys Manager supervises staff and ensures administrative and personnel matters are accomplished in accord with quality, schedule, and cost commitments. This includes establishing and implementing collaborative work processes and collaborating with other teams on assembling PDTs, and providing supervisory oversight, technical interface, and developing IWR's technical workforce with recruitment of new staff, mentoring, counseling, training, career development and the evaluation of employee performance within the context of PDT matrix management. In addition to briefing General Officers, senior USACE staff and other federal agency officials, the InfoSys manager assist the NDC director in providing organizational level guidance related to NDC management, such as in the development of procedures for functions related to travel, time and attendance, internal controls, quality assurance, and personnel management.

D-8. Waterborne Commerce Statistics Center – Paragraph 008B

a. Mission. The Navigation and Civil Works Decision Support Center (NDC), an element of IWR, is the designated CX for the collection, management and dissemination of infrastructure utilization and performance information for U.S. waterways and port and harbor channels. The Waterborne Commerce Statistics Center (WCSC) provides strategic direction, command and control, as well as financial, administrative and clerical support for WCSC in execution of the WCSC missions.

b. Functions.

(1) Develops and Manages Civil Works Program and Project Information: Develops the program and project information for CW Business-Lines and account management, for project level analysis and performance measurement, and for project-level analysis, including: official designation as U.S. Government agent for the collection and dissemination of waterborne commerce statistics across the Nation; navigation system, lock and dredging performance; regulatory program data; flood risk management statistics; and related CW's programs. (Reference b).

(2) Policy Development, Analysis and Advice: Conducts policy development, analysis and advice for CW leadership on national-scope water resources planning and management issues, including assessing and evaluating USACE policy options.

(3) Executes Budget and Financial Management: Develops, oversees execution of the WCSC budget, and monitors performance. Provides reports and analysis on financial status and new initiatives. Provides training and guidance in the budget and financial management functional area.

(4) Develops and Manages Program and Project Performance: Develops and manages program and project performance metrics as well as analytical assessments for HQUSACE and USACE District offices for improving the effectiveness and efficiency of the CW program.

(5) Provides Technical Leadership and Oversight: Provides technical leadership and support of USACE CoPs relevant to navigation by collaborating with other SMEs across USACE on setting community goals and responsibilities. Ensures the necessary knowledge and skills are essential to technical practice, and evaluates the currency of required criteria, methods, models and systems to be consistent and effective nationally. Provides technical assistance to USACE District offices, RITs, MSC Centers of Expertise, regional business centers, homeland security, emergency response teams, other federal agencies, and intergovernmental and international institutions and organizations.

(6) Management, Oversight and Administration: Provides supervision, executive direction, and oversight for human resources and manpower management for WCSC and other organizational elements including employee's professional development activities and training. Provides administrative support to WCSC organizational level guidance related to organization management. This includes the development of internal procedures for the following functions: travel, time and attendance, evaluations, internal controls, quality management, and personnel management. Provides routine upward reporting on various topics. Prepares travel orders, travel vouchers and training requests via Corps of Engineers Financial Management System (CEFMS) as well as MIPRs) and contractual PR&Cs. Coordinates and validates P2 resource requirements with project managers and the budget office prior to entering PR&Cs into CEFMS. (Reference h, r, x).

D-9. Development and Management Office – Paragraph 008C

a. Mission. The Navigation and Civil Works Decision Support Center (NDC), an element of the CEIWR, is the designated center of expertise for the collection, management, and dissemination of infrastructure utilization and performance information for U.S. waterways and port and harbor channels. The primary operational arm of NDC is the Waterborne Commerce Statistics Center (WCSC), which provides one-stop capability for national navigation information systems. WCSC is the U.S. Government agent for collection and management of U.S. Waterborne Commerce Statistics, which includes national data such as commodities, tons, ton-miles, vessel movements and physical characteristics information for commercial ports, facilities, vessels and waterways. The WCSC Development and Management Office (DMO) collects and publishes data on the national waterway infrastructure inventory, collects and publishes data on the national vessel inventory, provides information technology leadership and guidance to the WCSC, and provides support to other NDC/WCSC offices in accomplishing mission.

b. Functions.

(1) Develops and Manages Civil Works Program and Project Information: Develops CW program and project information for CW Business-Lines and account management, for performance measurement, and for project-level analysis, including: official designation as U.S. Government agent for the collection and dissemination of waterborne commerce statistics across the Nation; navigation system, lock and dredging performance; regulatory program data; flood damage reduction statistics; and other related CW programs.

(2) Provides Technical Leadership and Oversight: Provides technical assistance to USACE District offices, Regional Integration Teams, Communities of Practice, CW Business-Lines, IWR Centers, USACE Expertise Centers, and WCSC to support mission.

(3) Management, Oversight, and Administration: Demonstrates leadership and provides interpretation and guidance consistent with relevant statutes, regulations, standards and processes. Provides expertise at staff meetings/briefings, conferences and workshops. Provides direct management/supervision of assigned employees which includes coaching, mentoring, counseling and providing training/professional development opportunities. Manages employee selections, performance, awards, budget, travel, and time and attendance. Provides administrative support related to operating budgets, acquisition of goods and services through contract and government purchase card, manpower/personnel management, correspondence, visitor reception and telephone call management, and logistical functions/tasks.

D-10. Waterborne Data Collection and Management Office – Paragraph 008D

a. Mission. The Waterborne Commerce Statistics Center (WCSC) Enforcement Office provides project management, collection (including enforcement), processing, quality control, and dissemination of U.S. Waterborne Commerce Statistics. The WCSC Director serves on the IWR Corporate Management Board, and Project Review Board and provides collaborative oversight input on the development and execution of the Institute's overall business processes and operation.

b. Functions.

(1) Develops and Manages Civil Works Program and Project Information: Develops CW program and project information for business-lines and account management, performance measurement, and project-level analysis. WCSC is officially designated as the U.S. Government agent for collection and dissemination of waterborne commerce statistics across the Nation; navigation system, lock and dredging performance; regulatory program data; flood damage reduction statistics; and other related CW programs.

(a) As a United States Government (USG) agent for collection and management of U.S. Waterborne Commerce Statistics, collects, acquires, processes, distributes and maintains archives of historical waterborne commercial vessel trip and cargo data for the Nation.

(i) Collects domestic vessel and cargo movement data from U.S. carriers engaged in commercial transportation on the navigable U.S. waterways.

(ii) Serves as the central collection agency for acquiring and providing U.S. foreign waterborne transportation statistics obtained from U.S. Customs and Border Protection (CBP), U.S. Census, and purchased from private sources.

(iii) Collects and processes domestic shipper information in conjunction with domestic waterborne commerce data subject to the Harbor Maintenance Tax and provides to CBP for enforcement/audit purposes (Reference c).

(iv) Conducts annual inventory via survey of U.S. flag vessels in commercial use throughout the country and produces the Waterborne Transportation Lines of the U.S. data files and national summary publication.

(v) Compiles all U.S. waterborne commerce freight tonnage and ton-mile statistics; publishes same in a national summary report.

(vi) Compiles and produces foreign and domestic freight traffic and vessel trip and draft statistics for the waterways and harbors of the U.S. [those assigned to USACE for maintenance and improvement] and U.S. major ports.

(vii) Responds to requests for special statistical data of waterborne traffic not otherwise available in published statistical form, within limitations prescribed to preserve USACE commitment to the confidential treatment of source data.

(viii) Supports the USACE responsibility for documenting the nation's commercial port infrastructure served by Federal channels by maintaining a comprehensive Navigation Infrastructure Inventory. Publishes data for about 31,000 individual navigation points of interest (NPIs) on the Internet.

(ix) Coordinates on a dynamic basis with each U.S. port facility to update dock data and verifies characteristics, continuously developing new update and survey procedures to increase the frequency of update and to allow facility operators/port authorities to interactively update their own database information.

(x) Disseminates port information via the electronic equivalent of the hard-copy Port Series books (no longer being published) via a contemporary NPI search tool to facilitate retrieval of information for specific NPIs.

(2) Policy Development, Analysis and Advice: Provides policy development, analysis and advice for CW leadership on national-scope water resources planning and management issues, including assessing and evaluating USACE policy options.

(3) Develops and Manages Program and Project Performance: Develops and manages projects and performance measurement and analytical assessments for HQUSACE, USACE field

offices and Expertise Centers, and other IWR, NDC, and WCSC staff to improve the effectiveness and efficiency of the CW program. Develops program and project information for business-lines and account management, performance measurement, and project level analysis, including definition of project scope; assembly of Project Management Plans; identification of team; allocation of tasks, resources; identifying deliverables, milestones and fiscal schedules: monitoring performance; developing execution reports; and assuring the quality of products.

(4) Provides Technical Leadership and Oversight: Provides technical leadership and support of USACE CoPs relevant to IWR specialty areas; collaborates with other subject matter experts across USACE on setting community goals and responsibilities; ensures the knowledge and skills essential to technical practice are met; and evaluates and ensures the currency of required criteria, methods, models and systems to ensure national consistency and effectiveness. Technical Assistance: Provides technical assistance to USACE District offices, RITs, MSCs CXs, Regional Business Centers, Department of Homeland Security and Emergency Response Teams, other federal agencies, and intergovernmental and international institutions and organizations.

(5) Management, Oversight and Administration: Demonstrates leadership and provides interpretation and guidance consistent with relevant statutes, regulations, standards and processes. Provides expertise at staff meetings/briefings, conferences and workshops. Provides direct management/supervision of assigned employees which includes coaching, mentoring, counseling and providing training/professional development opportunities. Manages employee selections, performance, awards, budget, travel, and time and attendance. Provides administrative support related to operating budgets, acquisition of goods and services through contract and government purchase card, manpower/personnel management, correspondence, visitor reception and telephone call management, and logistical functions/tasks. (Reference h, r, x).

D-11. Hydrologic Engineering Center – Paragraph 009

a. Mission. The Hydrologic Engineering Center (HEC) serves as a USACE (U.S. Army Corps of Engineers) CX in the technical areas of surface and groundwater hydrology, river hydraulics and sediment transport, hydrologic statistics and risk analysis, reservoir system analysis, planning analysis, real-time water control management and a number of other closely associated technical subjects. HEC's primary goal is to support the nation in its water resources management responsibilities by increasing USACE technical capability in hydrologic engineering and water resources planning and management. Essentially, HEC's quest is to move the state-of-the-art into the state-of-the-practice. HEC provides services primarily to HQUSACE, USACE Division and District and offices and laboratories. However, subject to appropriate agreements, services are also available to other federal and local agencies, the U.S. private sector in support of international work and international institutions. While software and other products are primarily developed for USACE, the products are also available to the public domain meaning the services are available at no charge to anyone in the world.

(1) HEC is organized into four divisions: Hydrology and Hydraulics Technology; Water Management Systems; Water Resource Systems; and Reservoir Systems Analysis Division.

Staff in each division perform training, write technical documentation, conduct research, develop software, provide technical assistance and perform special projects.

(2) HEC subject matter experts also serve on cross-functional teams across the center, in support of the Corps Water Management System (CWMS), the development of river basin system's based software and with USACE CoPs, Civil Works (CW) Business-Lines, MSC (Major Subordinate Command) RITs, the Modeling, Mapping and Consequence Center, and Planning Expertise Centers. An ongoing focus is the continued development of the HEC suite of software (HEC-RAS, HEC-HMS, HEC-FDA, HEC- WAT, HEC-ResSim, etc.); providing leadership in advancing risk analysis as the foundation for planning and engineering analysis; and development and deployment of CWMS, the real-time forecasting and decision-support system used 24/7 to execute USACE's water resource water control mission.

(3) The HEC Director relies on the Executive Office to provide direction and management of the day-to-day operations of the HEC. Directs, supervises, and coordinates HEC's technical program, and supervises and coordinates management and administrative activities. The HEC Director serves on the IWR Corporate Management Board and Project Review Board and provides collaborative oversight input on the development and execution of the Institute's overall business processes and operation.

b. Functions.

(1) Develops Hydrologic and Hydraulic Engineering Methods, Models and Management Systems: Leads HEC in the development, stewardship and application of state-of-the-art hydrologic and hydraulic engineering, water management, reservoir systems, flood risk management, environmental and water resources planning methods, models, and management systems. A main function of HEC is to produce world class software and provide expert technical support that is used by USACE on an enterprise basis. HEC tools are recognized as the world standard for the water resources community and are utilized by USACE, other federal agencies, State and local agencies, academia, and the professional community in the U.S. and around the world.

(2) Provides Technical Leadership and Oversight: Provides technical leadership and support to the following: Engineering and Construction Community of Practice (E&C CoP); the Environmental CoP, the Planning CoP, the Civil Works (CW) R&D; USACE international water resources activities; and provides technical assistance to the field. Collaborates with other subject matter experts across USACE on setting resources activities and provides technical assistance to the field. Collaborates with other subject matter experts across USACE on setting community goals and responsibilities and provides technical assistance to the field. Collaborates with other subject matter experts across USACE on setting community goals and responsibilities which ensures the knowledge and skills that are essential to the technical practice are met. Evaluates and ensures that required criteria, methods, models, and systems are current which ensures national consistency and effectiveness. Conducts special studies for water resources systems, programs, policy, planning or operational problems of regional and national scope assigned by HQUSACE or USACE District offices.

(3) Fosters Technical Competency: Leads efforts to coordinate technical competency and technology development for risk-based scientific and engineering analyses. Coordinates with other IWR elements, USACE CoPs, Districts, MSCs, and other agencies/organizations to develop strategic partnerships that promote the advancement of hydrologic and hydraulic engineering and water resources analysis. Develops, manages and conducts water resources training, workshops, seminars and conferences for FOAs, Proponent-Sponsored Engineer Corps Training (PROSPECT), MSC Centers of Expertise and CECW programs.

(4) Executes Budget and Financial Management: Develops and oversees the execution of the HEC budget, and monitors performance. Also, provides reports and analysis on financial status and new initiatives and provides training and guidance on the budget and other financial management functional areas. Provides project management for HEC which includes project management related activities such as: definition of project scope; development of PMPs (Project Management Plans); identification of team members; allocation of task and resources; identifying deliverables and milestones; developing obligation schedules; monitoring performance; developing execution reports; and assuring quality of products.

(5) Policy Development, Analysis and Advice: Participates in policy development, analysis, and gives advice to CW leadership on national-scope water resources planning and management issues, including assessing and evaluating USACE policy options. Serves as a national interface on water resources planning, scientific and engineering technology, and policy development in collaboration with other IWR elements, and for HQUSACE, other federal agencies, academia, industry and professional societies, and management of USACE activities.

(6) Management, Oversight and Administration: Provides administrative support to HEC including the reviewing and preparing of letters and other routine correspondence. Receives phone calls/visitors and forwards to the responsible staff. Prepares travel orders, travel vouchers, and training requests into the Corps of Engineers Financial Management System (CEFMS) and also enters MIPRs and contractual PR&Cs into CEFMS. Coordinates and validates resource requirements with technical staff and budget office prior to entering PR&Cs into CEFMS; and manages and responds to Access Request Management System (ARMS) requests. Provides executive direction and oversight for human resources and manpower management for HEC and other organization elements which include employee's professional development activities and training. (Reference f, g, I, j, k, n, o, p, q, aa, ff).

D-12. Hydrology and Hydraulics Technology Division – Paragraph 009A

a. Mission. The Hydrology and Hydraulics Technology Division directs, supervises and coordinates the HEC research, training, and technical assistance program in hydrology and hydraulics technology. This encompasses developing methods and software, and providing studies involving surface water hydrology, river hydraulics, land surface erosion/sediment transport, hydrologic statistics, groundwater hydrology, water quality, drought and low flow. Also, provides supervision and management for the overall HEC research program, and serves as HECs primary liaison with the Engineer Research and Development Center (ERDC).

b. Functions.

(1) Develops Hydrologic and Hydraulic Engineering Methods, Models and Management Systems: The Hydrology and Hydraulics Technology Division provides leadership in the development, stewardship, and application of state-of-the-art hydrologic and hydraulic engineering, water management, flood risk management, reservoir simulation, environmental and water resources planning methods, models and management systems. A main function of HEC is to produce world class models and provide expert technical support that is used by USACE worldwide. HEC tools are recognized as the standard for the water resources community and are utilized around the world by USACE, other federal agencies, State and local agencies, academia, and the professional community (both in the U.S. and abroad). The suite of HEC's models are internationally recognized and used worldwide.

(2) Develops Hydrologic and Hydraulic Engineering Software: Keeps abreast of the latest software coding methods and technological developments throughout the water resources community; keeps abreast of evolving policy, studies, and procedures; stays informed of requirements from USACE research, development initiatives; creates PMPs; creates software design documents; researches the availability of algorithms or creates algorithms based on research; implements the algorithms; tests the software to assure that the requirements of the design have been met and the software performs as expected with ease of use and satisfies the needs of users and arranges beta testing by other water resource professionals. Also, the Hydrology and Hydraulics Technology Division develops documentation, releases notes, and installs packages; writes journal articles or papers describing software and lastly, provides the software on the HEC website.

(3) Provides Technical Leadership and Oversight: Provides technical leadership and support to the E&C CoP; the Environmental CoP, the CW R&D; the international waters resources Program; and provides technical assistance to the field. Providing technical leadership and support of the CoPs involve collaborating with other subject matter experts across USACE on setting community goals and responsibilities which ensure the knowledge and skills essential to the technical practice are met. Evaluates and ensures the required criteria, methods, models, and systems are current which ensures national consistency and effectiveness.

(4) Participates in Civil Works R&D: Provides leadership and oversight of HEC's participation in the CW R&D program through the development, application and technology transfer of improved analytical techniques, methods and models for hydrologic and hydraulic engineering; water management; multi-objective plan formulation; environmental and economic evaluation; investment decision-making; and risk analysis.

(5) Analyzes Global Climate Change: Supports a range of global climate change activities including the assessment of the uncertainties associated with the adaptation of the CW program to global changes. This encompasses changes from land use, demographic, hydrologic, climatologic, societal values, and those associated with technology and an aging CW infrastructure capital stock, and the development of strategies, policies, models and methods to address the adjustments or changes in planning, engineering-design, operations and decision-making to enhance resilience or reduce vulnerability of USACE projects, programs and systems to address observed or expected changes or variability in the future.

(6) International Water Resources Outreach: In coordination with other IWR international elements, provides international water resources outreach and collaborative interdisciplinary scientific research, networking, training, capacity development, and technology-transfer in support of Army/ DoD post-conflict stability operations, peacekeeping, other diplomatic and/or USG water-related activities aligned with USACE goals and objectives. Also includes civilian and military collaborations to deliver technical assistance to HQUSACE, Army and DoD, working principally in partnership with USACE MSCs and DoD's COCOMs, on strengthening theater security cooperation by facilitating civilian and military collaborations including via management and execution of the CMEP program, emphasizing multi- national force capacity development for life-cycle planning of the preparedness, response and consequence management across extreme water events and other natural and technological disasters.

(7) Provides Technical Assistance: The Hydrology and Hydraulics Technology Division provides technical assistance to USACE District offices, RITs, MSC Centers of Expertise, Regional Business Centers, U.S. Department of Homeland Security and emergency response teams, other federal agencies, and intergovernmental and international institutions and organizations. The assistance provides technically sound solutions to complex or unusual water resource problems and includes the development of Memorandums of Understanding or Agreement (MOUs/MOAs) to facilitate the assistance.

(8) Fosters Technical Competency: Leads efforts in advancing technical competency and technological development for risk-based hydrologic and hydraulic engineering, scientific and water resources planning analyses. Coordinates with CoPs, Districts, MSC Centers of Expertise, and other agencies and organizations to advance the practice of hydrologic and hydraulic engineering and water resources analysis. Develops, manages and conducts water resources training, workshops, seminars and conferences for FOAs, PROSPECT, MSCs and CECW.

(9) Provides Policy Development, Analysis and Advice: The Hydrology and Hydraulics Technology Division provide policy development, analysis and advice for CW leadership on national-scope water resources planning and management issues, including assessing and evaluating USACE policy options. Serves as a national interface on water resources planning, scientific and engineering technology, and policy development with other IWR elements, other federal agencies, academia, industry and professional societies.

(10) Management, Oversight and Administration: Provides personnel management, budget oversight and execution and contract monitoring. Personnel management includes providing direction and oversight for human resources and manpower management for the Hydrology and Hydraulics Technology Division. The Division develops and oversees execution of the budget and monitors fiscal performance for the division. Ensures employees receive mentoring and attend professional development activities and training.

(11) Project Management: Applies project management processes such as: definition of project scope; development of PMPs; identification of team members; allocation of tasks and resources; identifying deliverables and milestones; developing obligation schedules; monitoring performance; developing execution reports; and assuring quality of products.

D-13. Water Management Systems Division – Paragraph 009B

a. Mission. The Water Management Systems Division directs, supervises and coordinates the HEC research, training, and technical assistance program in hydrology and hydraulic modeling and reservoir simulation applications for water management system software. This is in support of the USACE National Water Management Mission and assists Divisions and Districts operating water resources infrastructure such as multi-purpose reservoir projects. Serves as HEC's primary liaison for the Army Corps of Engineers Information Technology (ACE-IT) Center and compliance with DoD Information Assurance requirements.

b. Functions.

(1) Develops Hydrologic and Hydraulic Engineering Methods, Models and Management Systems: The Water Management Systems Division provides leadership in the development, stewardship and application of state-of-the-art hydrologic and hydraulic engineering, water management, flood risk management, environmental and water resources planning methods, models and management systems. This is in support of the USACE National Water Management Mission. The models developed ensure the USACE can operate projects, which are part of the Nation's Infrastructure, reliably and according to authorized purposes for any conditions. The Water Management Systems Division provides input to HEC models and engineering/integration standards and practices; and HEC system security, management and administration in coordination with Army Corps of Engineers - Information Technology (ACE-IT) and compliance with DoD Information Assurance requirements. Also, the Water Management Systems Division is responsible for tracking downloads of HEC models from the HEC website.

(2) Special Studies: The Division's activities include managing the most complex projects that also serve to progress methods, models, and water management systems. These are special studies for water resources systems, programs, policy, planning or operational problems of regional and national scope assigned by HQUSACE or USACE field offices.

(3) Develops and Infuses the Use of Risk Analysis: The Water Management Systems Division provides hydrologic and hydraulic engineering leadership in the advancement and application of risk management methods and tools in support of the dam, levee and infrastructure safety programs, and risk-based analysis, assessments, and decision-making aimed at improving the reliability of the overall USACE infrastructure portfolio.

(4) Develops Hydrologic and Hydraulic Engineering Software: Develops software that helps ensure operating projects perform to meet authorized purpose and evolving conditions and help to improve the reliability of the Nation's aging Water Resources infrastructure. The Water Management Systems Division develops methods and software, involving hydrologic, hydraulic, and reservoir simulation of planning initiatives; water management technology; real-time data acquisition; communications; and stewardship including improvements and advancements of the USACE CWMS application. The Water Management Systems Division supports USACE

Divisions and Districts on an enterprise basis across the Nation which includes hydrologic and hydraulic forecasting, reservoir regulation simulation and water supply reallocation.

(5) Provides Technical Leadership and Oversight: The Water Management Systems Division provides technical leadership and support of CoPs. The USACE Water Management and USACE CWMS Users group are two CoPs that are supported. Technical leadership and support of USACE CoPs relevant to IWR specialty areas. Collaborating with other subject matter experts across USACE on setting community goals and responsibilities ensures the knowledge and skills essential to the technical practice are met. Evaluates and ensures that required criteria, methods, models, and systems are current which ensures national consistency and effectiveness, and provides assistance to the Districts and Division offices to help improve the ability of these offices to produce technically sound solutions to complex water resource problems.

(6) Participates in Civil Works Research and Development (CW R&D): The Water Management Systems Division provides application and technology transfer of improved analytical techniques; methods and models for hydrologic and hydraulic engineering; water management; multi-objective plan formulation; environmental and economic evaluation; investment decision-making; and risk analysis.

(7) Analyzes Global Climate Change: Supports a range of global climate change activities including the assessment of the uncertainties associated with the adaptation of the CW program to global changes, including the assessment of the uncertainties associated with the adaptation of the CW program to global changes. This includes changes from land use, demographic, hydrologic, climatologic, societal values, and those associated with technology and an aging CW infrastructure capital stock, and the development of strategies, policies, models and methods to address the adjustments or changes in planning, engineering-design, operations and decision-making to enhance resilience or reduce vulnerability of USACE projects, programs and systems to address observed or expected changes or future variability.

(8) International Water Resources Outreach: In collaboration with other IWR international elements, provides technical outreach and collaborative interdisciplinary scientific research, networking, training, capacity development, and technology-transfer in support of Army/DoD post-conflict stability operations, peacekeeping, other diplomatic and related activities aligned with USACE goals and objectives, including technical exchange. These include the management of collaborative agreements with key U.S. international partners such as Japan, Taiwan, South Korea and other international partners providing a special focus on advancing the international practice. Other international water resources activities include civilian and military collaborations, defined as: technical assistance to HQUSACE, Army and DoD, working principally in partnership with USACE MSCs and DoD's COCOMs, on strengthening theater security cooperation by facilitating civilian and military collaborations for response and consequence management across extreme water events and other natural and technological disasters.

(9) Provides Technical Assistance: The Division provides technical assistance to USACE District offices, RITs, MSC Centers of Expertise, Regional Business Centers, U.S. Department of Homeland Security and emergency response teams, other federal agencies, and

intergovernmental and international institutions and organizations. The assistance provides technically sound solutions to complex or unusual water resource problems. This work also includes the development of MOUs or MOAs that allow for technical assistance to occur.

(10) Fosters Technical Competency: Leads efforts to advance technical competency and technological development of risk-based scientific hydrologic, hydraulic engineering and planning analyses. Coordinates with CoPs, Districts, MSCs, and other agencies and organizations to advance their capabilities in hydrologic and hydraulic engineering and water resources analysis. Develops, manages and conducts water resources training, workshops, seminars and conferences for FOAs, PROSPECT, and MSC Centers of Expertise and CECW programs.

(11) Provides Policy Development, Analysis and Advice: The Water Management Systems Division provides policy development, analysis and advice for CW leadership on national-scope water resources planning and management issues, including assessing and evaluating USACE policy options. Serves as a national interface on water resources planning, scientific and engineering technology, and policy development with other IWR elements, other federal agencies, academia, industry and professional societies.

(12) Management, Oversight and Administration: Provides personnel management, budget oversight and execution and contract monitoring for the division. Personnel management includes providing direction and oversight for human resources and manpower management for the Water Management Systems Division. Also includes employee's professional development activities and training.

(13) Program Management: The Water Management Systems Division applies the USACE Project Management Business Process in managing assigned activities which includes: definition of project scope, development of PMPs, identification of team members, allocation of task and resources, identifying deliverables and milestones, developing obligation schedules, monitoring performance, developing execution reports, assuring quality of products. The Division develops and oversees execution of the Division budget and monitors fiscal performance for all assigned work.

D-14. Water Resources Systems Division – Paragraph 009C

a. Mission. The Water Resources Systems Division directs, supervises, and coordinates the HEC research, training, and technical assistance program for water resource systems. This work encompasses developing methods, models and software, and conducting studies involving reservoir systems, water resource systems optimization, flood risk management, risk management, risk analysis, river/ecosystem restoration, and watershed studies. Provides administrative supervision and management for the HEC technology transfer program of training, HEC model software, publications, webinars, and video distribution; serves as the primary liaison with the Proponent-Sponsored Engineer Corps Training (PROSPECT) program.

b. Functions.

(1) Develops Hydrologic and Hydraulic Engineering Methods, Models and Management Systems: The Water Resources Systems Division develops, provides stewardship and application of state-of-the-art hydrologic and hydraulic engineering, water management, flood risk management, reservoir simulation, environmental and water resources planning methods, models and management systems. A main function of HEC is to produce world class models and provide expert technical support that is used by USACE worldwide. HEC tools are recognized as the standard for the water resources community and are utilized around the world by USACE, other federal agencies, State and local agencies, academia, and the professional community (both in the U.S. and abroad). The suite of HEC's models is internationally recognized and used worldwide.

(2) Develops Hydrologic and Hydraulic Engineering Software: Keeps abreast of the latest software coding methods and technological developments throughout the water resources community; keeps abreast of evolving policy, studies, and procedures; stays informed of requirements from USACE research, development initiatives; creates PMPs; creates software design documents; researches the availability of algorithms or creates algorithms based on research; implements the algorithms; tests the software to assure that the requirements of the design have been met and the software performs as expected in a user-friendly fashion and satisfies the needs of users and arranges beta testing by other water resource professionals. Also, the Water Resources Systems Division develops documentation, releases notes, installs packages; writes journal articles or papers describing software; and provides the software on the HEC website.

(3) Provides Technical Leadership and Oversight: The Water Resources Systems Division provides technical leadership and support to the following: E&C CoP; the Environmental CoP, the Planning CoP, the Civil Works (CW) Research and Development Program (R&D); the international waters resources program; and technical assistance to the field. The Water Resources Systems Division also collaborates with other subject matter experts across USACE on setting community goals and responsibilities which ensure the knowledge and skills essential to the technical practice are met. Evaluates and ensures that required criteria, methods, models, and systems are current which ensures national consistency and effectiveness. Conducts special studies for water resources systems, programs, policy, planning or operational problems of regional and national scope assigned by HQUSACE or USACE District offices.

(4) Participates in Civil Works Research and Development (CW R&D): Provides leadership and oversight of the center’s participation in the CW R&D program through the development, application and technology transfer of improved analytical techniques, methods and models for hydrologic and hydraulic engineering; water management; multi-objective plan formulation; environmental and economic evaluation; investment decision-making; and risk analysis.

(5) Analyzes Global Climate Changes: The Water Resources Systems Division supports a range of global climate change activities including the assessment of the uncertainties associated with the adaptation of the CW program to global changes. This includes land use, demographic, hydrologic, climatologic, societal values, and those associated with technology and an aging capital stock of CW infrastructure. Development of strategies, policies, models and methods are used to address the adjustments or changes in planning, engineering-design, operations and

decision- making environments to enhance resilience or reduce vulnerability of USACE projects, systems, and programs.

(6) Provides International Water Resources Outreach: In coordination with other IWR international elements, provides international water resources technical outreach and collaborative interdisciplinary scientific research, networking, training, capacity development, and technology-transfer in support of Army/DoD post-conflict stability operations, peacekeeping, other diplomatic and/or United States Government (USG) water-related activities aligned with USACE goals and objectives.
This includes civilian and military collaborations, defined as technical assistance to HQUSACE, Army and DoD, working principally in partnership with USACE MSCs and DoD's COCOMs, on strengthening theater security cooperation by facilitating civilian and military collaborations via management and execution of the CMEP program, emphasizing multi-national force capacity development for life-cycle planning of the preparedness, response and consequence management across extreme water events and other natural and technological disasters.

(7) Provides Multi-Objective Plan Formulation, Evaluation and Economic Analysis Procedures and Tools: The Water Resources Systems Division develops multi-objective plan formulation, evaluation and economic analysis procedures and tools for river basin, coastal and navigation systems and projects, including integrated watershed planning and management techniques, inter-modal transportation analysis, assessment of regional impacts, and macro-economic trends.

(8) Provides Technical Assistance: The Water Resources Systems Division provides technical assistance to USACE District offices, RITs, MSC Centers of Expertise, regional business centers, homeland security and emergency response teams, other federal agencies, and intergovernmental and international institutions and organizations. The assistance provides technically sound solutions to complex or unusual water resource problems. This work also includes the development of MOUs or MOAs that allow for technical assistance to occur.

(9) Fosters Technical Competency: The Water Resources Systems Division leads efforts in advancing technical competency and technological development of risk- based, scientific hydrologic and hydraulic and engineering and water resources planning analyses. Coordinates with CoPs, Districts, MSCs, and other agencies and organizations to advance the practice of hydrologic and hydraulic engineering and water resources analysis. Develops, manages and conducts water resources training, workshops, seminars and conferences for FOAs, PROSPECT, and MSC Centers of Expertise and CECW programs.

(10) Policy Development, Analysis, and Advice: The Water Resources Systems Division provides policy development, analysis and advice for CW leadership on national-scope water resources planning and management issues and assesses/evaluates USACE policy options. Serves as a national interface on water resources planning, scientific and engineering technology, and policy development with other IWR elements, other federal agencies, academia, industry and professional societies.

(11) Management, Oversight and Administration: The Water Resources Systems Division provides personnel management, budget oversight and execution and contract monitoring for the division. Personnel management includes providing direction and oversight for human resources and manpower management for the Water Resources Systems Division, including employee's professional development activities and training. Develops and oversees execution of the budget and monitors fiscal performance for the division.

(12) Project Management: The Water Resources System Division applies the USACE Project Management Business Process in managing assigned activities. This includes: definition of project scope, development of PMPs; identification of team members; allocation of task and resources; identifying deliverables and milestones; developing obligation schedules; monitoring performance; developing execution reports; and assuring quality of products. The Division develops and oversees execution of the Division budget and monitors fiscal performance for all assigned work.

D-15. Reservoir Systems Analysis Division – Paragraph 009D

a. Mission. The Reservoir Systems Analysis Division directs, supervises and coordinates HEC research, training and the technical assistance program for reservoir and reservoir systems technologies. This encompasses developing methods and software and conducting studies involving reservoir systems analysis, reservoir optimization, water supply, reservoir sedimentation, water quality, drought and real-time water management (including the full range of authorized purposes), and water resources planning. Provides supervision and management for the reservoir program and serves as the liaison with the HQUSACE on all reservoirs related issues.

b. Functions.

(1) Develops Hydrologic and Hydraulic Engineering Methods, Models and Management Systems: The Reservoir Systems Analysis Division provides leadership in the development, stewardship and application of state-of-the-art hydrologic and hydraulic engineering, flood risk management, reservoir simulation, water management and water resources planning methods, models and management systems, and associated planning and environmental methods, and models. This includes the full life- cycle of software development to include design, development, application, support, maintenance, documentation, and certification and incorporates project work in support of USACE offices.

(2) Develops Hydrologic and Hydraulic Engineering Software: Keeps abreast of the latest software coding methods and technological developments throughout the water resources community; keeps abreast of evolving policy, studies, and procedures; stays informed of requirements from USACE research, development initiatives; creates PMPs; creates software design documents; researches the availability of algorithms or creates algorithms based on research; implements the algorithms; tests the software to assure the requirements of the design have been met and the software performs as expected with ease of use and satisfies the needs of users; and arranges beta testing by other water resource professionals. Develops documentation,

releases notes, and installs packages; writes journal articles or papers describing software; and provides the software on the HEC website.

(3) Provides Technical Leadership and Oversight: The Reservoir Systems Analysis Division provides technical leadership and support to the E&C CoP; the Environmental CoP, the Planning CoP, the CW R&D; the International Waters Resources Program; and providing technical assistance to the field. Providing technical leadership and support of the CoPs involves collaborating with other subject matter experts across USACE on setting community goals and responsibilities which ensure the knowledge and skills essential to the technical practice are met. Evaluates and ensures that required criteria, methods, models, and systems are current which ensures national consistency and effectiveness.

(4) Participates in Civil Works Research and Development (CW R&D): The Reservoir Systems Analysis Division provides leadership and oversight of the CW R&D program through the following: the development, application and technology transfer of improved analytical techniques; methods and models for hydrologic and hydraulic engineering; reservoir systems simulation; reservoir optimization; water management; multi-objective plan formulation; environmental evaluation; and risk analysis.

(5) Analyzes Global Climate Change: The Division supports a range of global climate change activities including the assessment of the uncertainties associated with the adaptation of the CW program to global changes. This includes land use, demographic, hydrologic, climatologic, societal values, and those associated with technology and an aging capital stock of CW infrastructure. The development of strategies, policies, models and methods to address the adjustments or changes in planning, engineering-design, operations and decision-making environments to enhance resilience or reduce vulnerability of USACE projects, systems, and programs to observed or expected change or variability in climate along with other changes affecting water resources.

(6) Provides International Water Resources Outreach: In coordination with other IWR international elements, provides international water resources technical outreach and collaborative interdisciplinary scientific research, networking, training, capacity development, and technology-transfer in support of Army/Department of Defense (DoD) post-conflict stability operations, peacekeeping, other diplomatic and/or United States Government (USG) water-related activities aligned with USACE goals and objectives. Also includes civilian and military collaborations, defined as: technical assistance to HQUSACE, Army and DoD, working principally in partnership with USACE MSCs and DoD's COCOMs, on strengthening theater security cooperation by facilitating civilian and military collaborations including via management and execution of the CMEP program; emphasizing multi-national force capacity development for life-cycle planning of the preparedness; response and consequence management across extreme water events; and other natural and technological disasters.

(7) Provides Technical Assistance: The Reservoir Systems Analysis Division provides technical assistance to USACE District offices, RITs, MSC Centers of Expertise, regional business centers, homeland security and emergency response teams, other federal agencies, and intergovernmental and international institutions and organizations. The assistance provides

technically sound solutions to complex or unusual water resource problems, and often involves the development of MOUs or MOAs to facilitate the assistance.

(8) Conducts Special Studies: Conducts special studies for reservoir systems, programs, and policies. This includes: water supply and climate change and planning or operational problems of regional and national scope assigned by HQUSACE or USACE District offices.

(9) Fosters Technical Competency: Leads efforts in advancing technical competency and technological development for risk-based, scientific hydrologic and hydraulic and engineering and water resources planning analyses. Coordinates with CoPs, Districts, MSCs, and other agencies and organizations to advance the practice of hydrologic and hydraulic engineering and water resources analysis. Develops, manages and conducts water resources training, workshops, seminars and conferences for FOAs, PROSPECT, and MSC Centers of Expertise and CECW programs.

(10) Policy Development, Analysis and Advice: The Reservoir Systems Analysis Division provides policy development, analysis and advice for CW leadership on national-scope water resources planning and management issues, including assessing and evaluating USACE policy options. Serves as a national interface on water resources planning, scientific and engineering technology, and policy development with other IWR elements, other federal agencies, academia, industry and professional societies.

(11) Management, Oversight and Administration: The Reservoir Systems Analysis Division provides personnel management, budget oversight and execution and contract monitoring for the division. Personnel management includes providing direction and oversight for human resources and manpower management for the Division, and for the employee's professional development activities and training.

(12) Project Management: Applies project management processes such as: definition of project scope; development of PMPs; identification of team members; allocation of tasks and resources; identifying deliverables and milestones; developing obligation schedules; monitoring performance; developing execution reports; and assuring quality of products.

D-16. Risk Management Center – Paragraph 010

a. Mission. The Risk Management Center (RMC) supports the USACE Civil Works by managing and assessing risks for dams and levee systems across the USACE. This includes support dam and levee safety activities throughout the USACE and develops policies, methods, tools, and systems to enhance activities. The RMC Executive Office provides strategic direction, command and control, as well as financial, administrative and clerical support for RMC in execution of its missions. The RMC Director serves on the IWR Corporate Management Board and Project Review Board and provides collaborative oversight input on the development and execution of the Institute's overall business processes and operation.

b. Functions.

(1) Develops and Implements Risk Management, Methods and Tools: Supports and informs HQUSACE management of the portfolio of dams and levees in USACE's inventory with the goal of reducing risks in the most efficient manner possible. Leads efforts to evaluate structures where risks are potentially unacceptable and manage the portfolio from a national perspective. The RMC, in consultation with the Dam Senior Oversight Groups (DSOG) and HQUSACE, manages resource queues for Periodic Assessments (PA), Issue Evaluations, Dam Safety Modification Studies, and approved projects awaiting design or construction funds. The RMC, in consultation with the Levee Senior Oversight Group (LSOG) and HQUSACE, manages resource queues for Levee Safety policy and method development. Maintains a five, ten, and 30-year plan to reduce risks across the USACE portfolio of dams. RMC leads the development of risk-related tools and risk methodology for USACE. Develops tools and methods internally and with District, MSC, CEIWR, Hydrologic Engineering Center (HEC), Engineer Research Design Center (ERDC), and external support. The center leads the development of methodology to support risk assessments in dam safety, levee safety, asset management, and other risk activities as requested by HQUSACE, and leads the conduct risk assessments and is the mandatory center for assessing life safety risks.

(2) Provides Technical Leadership and Oversight: Leads efforts to coordinate technical competency and technology development for risk-based scientific and engineering analyses of dams and levees. Coordinates with CoP groups, Districts, MSCs, and other agencies and organizations to develop strategic partnerships to promote the advancement of the dam and levee safety missions. RMC contributes to USACE dam safety support to outside organizations and supports HQUSACE as requested in providing services to international entities for dam safety related products. MSCs coordinate through the RMC to obtain the necessary resources in support of Dam Safety related products to international organizations. Supports HQUSACE with technical and programmatic oversight for all non-routine dam and levee safety activities. Develops processes and procedures to standardize compliance with ER 1110-2-1156, EC 1165-2-209 or current CWs Review Policy, and the current levee safety policy. Conducts sufficient quality reviews to ensure consistency in product development and continual improvement through lessons learned. Supports Civil Works research, development, application and technology transfer of improved analytical techniques, methods and models, water management, multi-objective plan formulation, investment decision-making, and risk analysis. (Reference t, y).

(3) Develops and Manages Program and Project Performance: RMC supports HQUSACE with technical and programmatic oversight for all non-routine dam and levee safety activities. RMC manages the planning, execution, and monitoring of Periodic Assessments (PA), Issue Evaluation Studies (IES), Dam Safety Modification Studies (DSMS), and HQUSACE-approved projects awaiting design and construction funds and tasks. This includes: managing the planning, execution, and monitoring of all levee safety policy and methodology development funds and activities; providing upward reporting to IWR and HQUSACE for these programs including proper management of the scope, schedule, and budget for all tasks and execution of funds in compliance with all fiscal laws and regulations; and managing plans, obtains, and reconciles administratively controlling funds. (Reference a, d, u, v, w, ee).

(4) Fosters Technical Competency: RMC leads efforts to identify, monitor, and develop technical competency and technology development for risk-based scientific and engineering analyses of dams and levees in coordination with the HQUSACE Chief, E&C and CoP leads. Coordinates with CoPs, Districts, MSCs, and other agencies/organizations to develop strategic partnerships to promote the advancement of the dam and levee safety missions. RMC competency development activities includes classroom or online training, on-the-job experiences, observing experts, reading and seeking feedback from others, among other methods. Fosters and develops technical competency by developing USACE technical personnel to accomplish the following: effectively apply technical knowledge to solve a range of problems; possess an in-depth knowledge and skill in a technical area; develop technical solutions to new or highly complex problems that cannot be solved using existing methods or approaches; provide expert advice or solutions in specified technical areas; and keep informed about cutting-edge technology. (See references for RMC function No. 1).

(5) Policy Development, Analysis and Advice: Supports HQUSACE and other IWR elements in policy development and participates in national or regional strategic planning efforts as requested by IWR/HQUSACE or USACE Major Subordinate Commands (MSCs). Identifies gaps in existing policy and suggests improvements to existing policy. Supports Civil Works leadership on national-scope water resources planning and management issues, including assessing and evaluating USACE policy options. (See references for RMC function No. 1).

(6) Management, Oversight and Administration: Provides direct management and supervision of assigned employees. This includes coaching, mentoring, counseling and providing training and professional development opportunities. Manages employee selections, performance, awards, budget, travel, and time and attendance. Provides administrative support related to operating budgets, acquisition of goods and services through contract and government purchase card, manpower/personnel management, correspondence, visitor reception, receives telephone calls, and logistical functions/tasks.

D-17. Risk Management Center Eastern Division – Paragraph 010A

a. Mission. The Risk Management Center Eastern Division (RMC East) supports the USACE CW by managing and assessing risks for dams and levee systems across the USACE, supports dam and levee safety activities throughout the USACE, and develops policies, methods, tools, and systems to enhance those activities.

b. Functions.

(1) Develops and Implements Risk Management Methods and Tools: RMC East supports and informs HQUSACE management of the portfolio of dams and levees in the USACE inventory with the goal of reducing risks in the most efficient manner possible. The RMC East leads efforts to evaluate structures where risks are potentially unacceptable and manages the portfolio from a national perspective. The RMC East, in consultation with the DSOG and HQUSACE, manages resource queues for Periodic Assessments, Issue Evaluations, Dam Safety Modification Studies, and approves projects awaiting design and construction funds. The RMC East, in consultation with the LSOG and HQUSACE, manages resource queues for Levee Safety

policy and methodology development. The RMC East also maintains a five, ten and 30-year plan to reduce risks across the USACE portfolio of dams. The RMC East is responsible for leading the development of risk-related tools and risk methodology for USACE. The RMC East develops these tools and methods internally and with MSCs; Districts; IWR, HEC; ERDC; and external support. The RMC East leads the development of methodology to support risk assessments in dam safety, levee safety, asset management, and other risk activities as requested by HQUSACE. The RMC East also leads risk assessments and is designated as the mandatory center for assessing life safety risks. (Reference t, gg, hh, ii).

(2) Provides Technical Leadership and Oversight: The RMC East leads efforts to coordinate technical competency and technology development for risk-based scientific and engineering analyses of dams and levees. The RMC East coordinates with CoPs, Districts, MSCs, and other agencies/organizations to develop strategic partnerships to promote the advancement of the dam and levee safety missions. The RMC East contributes to USACE dam safety support to outside organizations. The RMC supports HQUSACE as requested in providing services to international organizations for dam safety related products. The MSC coordinates through the RMC East to obtain the necessary resources in support of Dam Safety related products to international organizations. The RMC East supports HQUSACE with technical and programmatic oversight for all non-routine dam and levee safety activities. The RMC East develops processes and procedures to standardize compliance with ER 1110-2- 1156, EC 1165-2-209 or current Civil Works Review Policy, and the current levee safety policy. The RMC East conducts sufficient quality reviews to ensure consistency in product development and continual improvement through lessons learned. RMC East supports Civil Works research, development, application and technology transfer of improved analytical techniques, methods and models, water management, multi- objective plan formulation, investment decision-making, and risk analysis. (Reference t, y).

(3) Develops and Manages Program and Project Performance: Supports HQUSACE with technical and programmatic oversight for all non-routine dam and levee safety activities. The RMC East manages the planning, execution, and monitoring of all Periodic Assessments (PAs), Issue Evaluation Studies (IESs), DSMSs, and HQUSACE approved projects awaiting design and construction funds and tasks. The RMC East manages the planning, execution, and monitoring of all levee safety policy and methodology development funds and activities. The RMC East has overall responsibility for upward reporting to IWR and HQUSACE for these programs. This includes proper management of the scope, schedule, and budget for all tasks and execution of funds in compliance with all fiscal laws and regulations and managing, planning for, obtaining, reconciling and administratively controlling funds. (Reference a, d, u, v, w, ee).

(4) Fosters Technical Competency: Leads efforts to identify, monitor, and develop technical competency and technology development for risk-based scientific and engineering analyses of dams and levees in coordination with the HQUSACE Chief, E&C and CoP leads. Coordinates with CoPs, Districts, MSCs, and other agencies/organizations to develop strategic partnerships to promote the advancement of the dam and levee safety missions. Competency development activities includes classroom or online training, on-the-job experiences, observing experts, reading and seeking feedback from others, and other methods. RMC East strives to foster and develop technical competency by developing USACE technical personnel. This includes

effectively applying technical knowledge to solve a range of problems; possessing in-depth knowledge and skills in a technical area; and developing technical solutions to new or highly complex problems that cannot be solved using existing methods or approaches. Sought out as an expert to provide advice or solutions in various technical areas and keeps informed on cutting-edge technology on various technical areas. (See references for RMC East functions No. 1).

(5) Policy Development, Analysis and Advice: The RMC East supports HQUSACE and other IWR elements in policy development and participates in national or regional strategic planning efforts as requested by IWR/HQUSACE or USACE MSCs. The RMC East identifies gaps in existing policy and suggests improvements to existing policy. RMC East supports CW leadership on national-scope water resources planning and management issues, including assessing and evaluating USACE policy options. (See references for RMC East function No. 1).

(6) Management, Oversight and Administration: RMC East provides direct management/supervision of assigned employees which includes coaching, mentoring, counseling and providing training/professional development opportunities. Manages employee selections, performance, awards, budget, travel, and time and attendance. Provides administrative support related to operating budgets, acquisition of goods and services through contract and government purchase card, manpower/personnel management, correspondence, visitor reception and telephone call management, and logistical functions/tasks.

D-18. Risk Management Center Western Division – Paragraph 010B

a. Mission. The Risk Management Western Division (RMC West) supports USACE CWs by managing and assessing risks for dams and levee systems across the USACE, supports dam and levee safety activities throughout the USACE, and develops policies, methods, tools, and systems to enhance those activities.

b. Functions.

(1) Develops and Implements Risk Management, Methods and Tools: RMC West is responsible for supporting and informing HQUSACE management of the portfolio of dams and levees in the USACE inventory with the goal of reducing risks in the most efficient manner possible. The RMC West leads efforts to evaluate structures where risks are potentially unacceptable and manages the portfolio from a national perspective. The RMC, in consultation with the DSOG and HQUSACE, manages resource queues for Periodic Assessments, Issue Evaluations, and Dam Safety Modification Studies, and approved projects awaiting design and construction funds. The RMC, in consultation with the LSOG and HQUSACE, manages resource queues for Levee Safety policy and methodology development. The RMC West also maintains a five, ten, and 30-year plan to reduce risks across the USACE portfolio of dams. Responsible for leading the development of risk-related tools and engineering risk methodology as related to dam and levee safety within USACE. Develops tools and methods internally and with Districts, MSCs, CEIWR, HEC, ERDC, and external support. The RMC West leads the development of methodology to support risk assessments in dam safety, levee safety, asset management, and other risk activities as requested by HQUSACE and is the appointed center for assessing life safety risks. (Reference t, gg, hh, ii).

(2) Provides Technical Leadership and Oversight: RMC West is responsible for leading efforts to coordinate technical competency and technology development for risk- based scientific and engineering analyses of dams and levees. RMC West coordinates with CoP groups, Districts, MSCs, and other agencies/organizations to develop strategic partnerships that promote the advancement of the dam and levee safety missions. RMC West contributes to USACE dam safety support to outside organizations and supports HQUSACE as requested in providing services to international organizations for dam safety related products. The MSCs coordinate through the RMC West to obtain the necessary resources in support of Dam Safety related products to international organizations. The RMC West supports HQUSACE with technical and programmatic oversight for all non-routine dam and levee safety activities. Develops processes and procedures to standardize compliance with ER 1110-2-1156 (Dam Safety), EC 1165-2- 209 (Review Policy) or current Civil Works Review Policy, and the current levee safety policy. Conducts sufficient quality reviews to ensure consistency in product development and continual improvement through lessons learned. RMC West supports Civil Works research, development, application and technology transfer of improved analytical techniques, methods and models, water management, multi-objective plan formulation, investment decision-making, and risk analysis. (Reference t, y).

(3) Develops and Manages Program and Project Performance: RMC West supports HQUSACE with technical and programmatic oversight for all non-routine dam and levee safety activities. Manages the planning, execution, and monitoring of PAs, IESs, and DSMSs, and HQUSACE approved projects awaiting design and construction funds and tasks. The RMC West manages the planning, execution, and monitoring of all levee safety policy and methodology development funds and activities. The RMC West has overall responsibility for upward reporting to IWR and HQUSACE for programs that include proper management of the scope, schedule, and budget for all tasks and execution of funds in compliance with all fiscal laws and regulations. Responsible for managing, obtaining, reconciling and administratively controlling funds. (Reference a, d, u, v, w, ee).

(4) Fosters Technical Competency: RMC West leads efforts to identify, monitor, and develop technical competency and technology development for risk-based scientific and engineering analyses of dams and levees in coordination with the HQUSACE Chief, E&C and CoP leads. Coordinates with CoPs, Districts, MSCs, and other agencies/organizations to develop strategic partnerships that promote the advancement of the dam and levee safety missions. Competency development activities include classroom or online training, on-the-job experiences, observing experts, reading and seeking feedback from others, and other methods. RMC West leads the advancement to enhance the engineering safety-related technical competency of the USACE workforce by developing USACE technical personnel to effectively apply technical knowledge to solve a range of problems; possess an in-depth knowledge and skill in a technical area; develop technical solutions to new or highly complex problems that cannot be solved using existing methods or approaches; be sought out as an expert to provide advice or solutions in his/her technical area; and be kept informed about cutting- edge technology in technical areas. (See references for RMC West function No. 1).

(5) Provides Policy Development, Analysis and Advice: RMC West supports HQUSACE and other IWR elements in policy development and participates in national or regional strategic planning efforts as requested by IWR/HQUSACE or USACE Major Subordinate Commands (MSCs). Identifies gaps in existing policy and suggests improvements to existing policy. Supports Civil Works leadership on national-scope water resources planning and management issues, including assessing and evaluating USACE policy options. (See references for RMC West function No. 1).

(6) Management, Oversight and Administration: Provides direct management and supervision of assigned employees which include coaching, mentoring, counseling and providing training/professional development opportunities. Manages employee selections, performance, awards, budget, travel, and time and attendance. Provides administrative support related to operating budgets, acquisition of goods and services through contract and government purchase card, manpower/personnel management, correspondence, visitor reception and telephone call management, and logistical functions/tasks.

D-19. Group S – Paragraph 012

See Section D-4. WRC Enterprise Groups – Group I, W, R, M, and S: Paragraphs 004, 005, 006, 007, & 012.