ARMY CORPS OF ENGINEERS 21 STEP PROJECT DEVELOPMENT PROCESS

Planning Flow Chart with Guidance and Regulations

References that apply to all steps:

- Principles and Guidelines, US Water Resources Council, March 1983
- Planning Primer, IWR Report 97-R-15, November 1997
- Planning Manual, IWR Report 96-R-21, November 1996
- ER 1105-2-100 Planning Guidance Notebook
- EP 1165-2-1 Policy Digest, July 1999

Step 1- Initial Problem Identification

- Local interests send a letter requesting assistance to District Engineer
- Corps issues a Response answering the following:
  - Does this fall in our mission area?
    - Flood Control Act of 1960, Section 206 – Flood Plain Management Services
    - Flood Control Act of 1970, Section 216 – Review of Completed Projects
    - ER 1105-2-100 Planning Guidance Notebook, Chapter 2, Chapter 3 & Appendix E
    - EC 1105-2-409 Planning in a Collaborative Environment
    - ER 200-1-5 Policy for Implementation and Integrated Application of the USACE Environmental Operation Principles and Doctrine
    - EP 1165-2-1 Digest of Water Resources Policies and Authorities
    - ER1165-2-119 Modifications to Completed Projects
    - WRDA 1974 Section 22, Planning Assistance to States
    - EC 1105-2-214 Project Modifications for Improvement of the Environment and Aquatic Ecosystem Restoration (Implementation guidance for Section 1135, WRDA 1986)
  - Is this a local problem?
  - Can this be done under CAP?
  - EC 1105-2-217 CONTINUING AUTHORITIES
    - Section 3 Rivers and Harbors Act of 1945 – Emergency clearing and snagging navigation
Section 14  Flood Control Act of 1946 – Emergency Stream bank Protection Projects
Section 103  Rivers and Harbors Act of 1962 – Small Beach Erosion Control
Section 107  Rivers and Harbors Act of 1960 – Small Navigation Projects
Section 111  Rivers and Harbors Act of 1968 – Mitigation of Shore Damage Attributable to Federal Navigation Projects
Section 204  Water Resources Development Act of 1992 – Aquatic/Ecological Habitat Protection, Restoration, and Creation - (since amended to include Beneficial Uses of Dredged Material)
Section 205  Flood Control Act of 1948 – Small Flood Control Projects
Section 206  Water Resources Development Act of 1996 – Aquatic Ecosystem and Estuary Restoration
Section 208  Flood Control Act of 1954 – Clearing and Snagging Projects
Section 1135  Water Resources Development Act of 1986 – Environmental Restoration

Is there existing Investigations authority?

House Transportation and Infrastructure Committee Resolutions
Senate Environment and Public Works Committee Resolutions
Water Resources Development Acts

**Step 2 – Congressional Study Resolution / Authorization**

* Investigation Budget Request
  
  House Transportation and Infrastructure Committee Resolutions
  Senate Environment and Public Works Committee Resolutions
  Water Resources Development Acts

Other Legislation (Congressional earmarks)
ER 1105-2-100 Planning Guidance Notebook
EP 1165-2-1 Digest of Water Resources Policies and Authorities
Section 3 Rivers and Harbors Act of 1912- Authorizes examination and review of previous reports
Section 216 Rivers and Harbors and Flood Control Act of 1970- To investigate the modification of existing projects.
Section 2 1958 Fish and Wildlife Coordination Act
Step 3 – Initial Study Funding

- **Reconnaissance/Study Initiation Phase**
  - Public Laws (i.e. PL 10xx-xx)
  - Water Resources and Development Acts
  - Energy and Water Development Appropriations Bills
  - Annual Budget Engineering Circulars and Program Budgets

Step 4 – Conduct Reconnaissance Study

- **Start Reconnaissance (CW 140)**
  - PGM #99-01 Reconnaissance Phase Guidance
  - PGM #96-03 Expedited Reconnaissance Study Phase Guidance

- **Prepare Initial PMP**
  - Dozens of Policy Guidance Letters on new start projects and cost sharing, etc.
  - ER 1110-1-12 Quality Management
  - ER 1165-2-18 Reimbursement for Non-Federal Participation in Civil Works Projects
  - ER 1165-2-29 General Credit for Flood Control
  - ER 1105-2-219 Cost Allocation for Multi-Purpose Projects Including Ecosystem Restoration
  - ER 5-1-11 Management – U.S. Army Corps of Engineers Business Process (Revisions 12 Jan 2007)

- **Preliminary Stakeholder Input & ID**
  - ER 1105-2-100 Appendix B – Public Involvement and Coordination

- **Conduct 905(b)**
  - Is there Federal interest and does the local sponsor support?

- **District prepares Sec 905(b) Analysis**
  - Principles and Guidelines
  - ER 1105-2-100 Planning Guidance Notebook, Appendix G
  - EP 1165-2-1 Digest of Water Resources Policies and Authorities
  - WRDA 1986 Section 905(b)
Corresponding Guidance for the 21 Step Project Development Process

PGM 99-01 Reconnaissance Phase Guidance (3 Mar 1999)

- Is there Fed interest and local sponsor support?
  ER 1105-2-100 See Reconnaissance guidance in Chapter 4 (4-1 (a)(1), 4-3(a))

- AAR

**Step 5 – Certify Reconnaissance Phase**

Principles and Guidelines
- ER 1105-2-100 Planning Guidance Notebook, Appendix G
- EP 1165-2-1 Digest of Water Resources Policies and Authorities
- WRDA 1986 Section 905(b)
- PGM 99-01 Reconnaissance Phase Guidance (3 Mar 1999)

- Peer Review Plan

- District coordinates RP with PCX(s)
  - CECW-CP Memo Support to Planning Centers of Expertise (8 Nov 2006)
    - IEPR required?
      - ER 1105-2-100 Appendix H – Review and Approval of Decision Documents
      - ER 1110-2-1150 Engineering and Design for Civil Works Projects
      - CECW-CP Memo Peer Review Process (30 Mar 2007)

- Public Information Plan
  - FCSA and PMP
    - ER 1110-1-12 Quality Management
    - ER 1165-2-18 Reimbursement for Non-Federal Participation in Civil Works Projects
    - ER 1165-2-29 General Credit for Flood Control
    - ER 1105-2-219 Cost Allocation for Multi-Purpose Projects Including Ecosystem Restoration
    - ER 5-1-11 Management – U.S. Army Corps of Engineers Business Process (Revisions 12 Jan 2007)
Corresponding Guidance for the 21 Step Project Development Process

Step 6 – Negotiate PMP and FCSA

Please Reference this page for over 60 Policy Guidance letters pertaining to new start projects, cost sharing, etc:


- **Post Peer Review Plan**
  - EC 1165-2-209 Civil Works Review Policy
  - ER 1105-2-100 Appendix H – Review and Approval of Decision Documents
  - ER 1110-2-1150 Engineering and Design for Civil Works Projects
  - CECW-CP Memo Peer Review Process (30 Mar 2007)
  - CECW-CP Memo Support to Planning Centers of Expertise (8 Nov 2006)

- **Sign and Execute FCSA (CW 130)**
  - CECW-P/CECC-G Memorandum for MSCs, 19 Sept 2006 – Cost Sharing for Lands Associated with Fish and Wildlife Mitigation
  - ER 1105-2-100 Planning Guidance Notebook, Chapter 2 & Appendix G
  - EC 1105-2-208 Preparation and Use of Project Study Plans (expired but good reference)
  - WRDA 1986 Section 105 establishes 50/50 cost sharing

- **Feasibility Phase**

Step 7 – Execute FCSA & Request Feasibility Funds

Please Reference this page for over 60 Policy Guidance letters pertaining to new start projects, cost sharing, etc:


- CECW-P/CECC-G Memorandum for MSCs, 19 Sept 2006 – Cost Sharing for Lands Associated with Fish and Wildlife Mitigation
- ER 1105-2-100 Planning Guidance Notebook, Chapter 2 & Appendix G
- EC 1105-2-208 Preparation and Use of Project Study Plans (expired but good reference)
- WRDA 1986 Section 105 establishes 50/50 cost sharing
Step 8 – Conduct Feasibility Study

- **Develop Goals and Objectives**
  Principles and Guidelines, US Water Resources Council, March 1983
  Planning Primer, IWR Report 97-R-15, November 1997
  ER 1105-2-100 Planning Guidance Notebook
  EP 1165-2-1 Policy Digest, July 1999

- **Initiate Stakeholder Plan (?)**
  ER 1105-2-100 Chapter 2, Section 5- Partnerships and Teamwork

- **Publish NEPA Federal NOI**
  ER 200-2-2 Procedures for Implementing NEPA
  ER 200-2-3 Environmental Quality – Environmental Compliance Policies
  Title 40 Sections 1500-1508, Code of Federal Regulations -Regulations for Federal Agencies in preparation of NEPA documents

- **NEPA Public Scoping Meeting**
  ER 200-2-2 Procedures for Implementing NEPA
  ER 200-2-3 Environmental Quality – Environmental Compliance Policies
  Title 40 Sections 1500-1508, Code of Federal Regulations -Regulations for Federal Agencies in preparation of NEPA documents

- **Update Peer Review Plan (CW044)**
  EC 1165-2-209 Civil Works Review Policy
  ER 1110-2-1150 Engineering and Design for Civil Works Projects
  CECW-CP Memo Peer Review Process (30 Mar 2007)
  CECW-CP Memo Support to Planning Centers of Expertise (8 Nov 2006)

- **District prepares FSM documentation for MSC and HQ Review**
  ER 1105-2-100 Appendix G, Exhibit G-4- Items to be addressed in Feasibility Scoping Meeting (FSM) Documentation

- **Final FSM Package Approved**

- **FSM Conducted**
  ER 1105-2-100 Appendix G, Exhibit G-3 through G-6- procedures for Conducting FSMs, AFBs, and IRCs / IPRs for Feasibility and Post Authorization Studies and Reports

- **District prepares AFB documentation**
Corresponding Guidance for the 21 Step Project Development Process

ER 1105-2-100 Appendix G, Exhibit G-5- Items to be addressed in AFB Documentation

- **VE Workshop (CW 195)**
- **VE Complete (CW 290)**
  
  ER 11-1-321 Value Engineering
  USACE Publication / pamphlet on Value Engineering
  Federal Executive Agency Policy OMB Circular A-131, May 93

- **AFB documentation ATR (30 days)**
- **AFB documentation submitted to MSC (30-45 days) and RIT-OWPR (35-90 days) for review**
- **District addresses review comments from MSC/HQ**
- **Final AFB Package**
- **AFB conducted (CW 190)**
  
  ER 1105-2-100 Appendix G, Exhibit G-5- Items to be addressed in AFB Documentation

- **District prepares Draft Feasibility Report/NEPA Document**
  
  ER 1105-2-100 Chapter 2, Appendices D, E, G
  ER1105-2-101 Planning – Risk Analysis for Flood Damage Reduction Studies
  EC 1105-2-404 Planning Civil Works Projects using the Environmental Operating Principles
  ER 200-1-5 Policy for Implementation and Integrated Application of the U.S. Army Corps of Engineers (USACE) Environmental Operating Principles (EOP) and Doctrine
  ER 200-2-2 Procedures for Implementing NEPA
  ER 200-2-3 Environmental Quality – Environmental Compliance Policies
  ER 1110-1-1300 Cost Engineering Policy and General Requirements
  ER 1165-2-26 Implementation of Executive Order 11988 on Flood Plain Management
  WRDA 2007 Section 2033 – Residual Risk
  Section 902 WRDA 1986 – Maximum costs of projects
  Section 10 Rivers and Harbors Act of 1899
  Title 33 Code of Federal Regulations
  Title 40 Sections 1500-1508, Code of Federal Regulations - Regulations for Federal Agencies in preparation of NEPA documents

7
Planning Manual Chapters 5, 12, 13
Executive Order 11990 of 1977 – Protection of Wetlands
Executive Order 12898 of 1994 - Environmental Justice
Executive Order 13186 of 2001 – Protection of Migratory Birds
Principles and Guidelines, US Water Resources Council, March 1983
Principles and Standards for Water and Related Land Resources Planning – Level C; Final Rule September 29, 1980
Water Resources Council - Water and Related Land Resources - Establishment of Principles and Standards for Planning September 10, 1973
Benefit-Cost Analysis: 1933-1985 by Maynard M. Hufschmidt
National Environmental Policy Act, 1969
Fish and Wildlife Coordination Act of 1958
Endangered Species Act of 1973
Clean Water Act of 1977, particularly sections 404, 404(b)(1), 404(r), and 401
National Historic Preservation Act of 1966 (as amended)
Clean Air Acts of 1963 and 1970
Coastal Zone Management Act of 1977
Marine Mammal Protection Act of 1972
Coastal Barrier Resources Act of 1988
Migratory Bird Treaty Act of 1918
Marine Protection, Research and Sanctuary Act of 1972
Native American Grave Protection and Repatriation Act of 1990
(There are literally over a hundred other environmental laws that we have to comply with during feasibility studies)

- Draft Feasibility Report ATR (30 days)
  
  EC 1165-2-209 Water Resources Policies and Authorities: Civil Works Review Policy
  ER 1105-2-100 Appendix H – Review and Approval of Decision Documents
  ER 1110-2-1150 Engineering and Design for Civil Works Projects
  CECW-CP Memo Peer Review Process (30 Mar 2007)
Corresponding Guidance for the 21 Step Project Development Process

- **Draft Feasibility/NEPA Document (CW170)**

- **Publish NEPA Federal NOA**
  - ER 200-2-2 Procedures for Implementing NEPA
  - ER 200-2-3 Environmental Quality – Environmental Compliance Policies
  - Title 40 Sections 1500-1508, Code of Federal Regulations - Regulations for Federal Agencies in preparation of NEPA documents

- **Draft Report submitted to MSC (45-60 days) and RIT-OWPR (45-60 days) for review**

- **IEPR Conducted**
  - ER 1105-2-100 Appendix H – Review and Approval of Decision Documents
  - ER 1110-2-1150 Engineering and Design for Civil Works Projects
  - CECW-CP Memo Peer Review Process (30 Mar 2007)

- **District releases Draft Report and NEPA document for public review**
  - ER 1105-2-100 Appendix H – Review and Approval of Decision Documents
  - ER 1110-2-1150 Engineering and Design for Civil Works Projects
  - CECW-CP Memo Peer Review Process (30 Mar 2007)

- **NEPA Public Hearing**
  - ER 200-2-2 Procedures for Implementing NEPA
  - ER 200-2-3 Environmental Quality – Environmental Compliance Policies
  - Title 40 Sections 1500-1508, Code of Federal Regulations - Regulations for Federal Agencies in preparation of NEPA documents

- **District addresses review comments from Public, IEPR and MSC/HQ**

- **District prepares Final Feasibility Report and NEPA document**

- **Final Feasibility Report ATR (30 days)**
  - ER 1105-2-100 Appendix H – Review and Approval of Decision Documents
Step 9 – Complete Final Report for Coordination and Submission

- **District Engineer signs Final Report (CW260)**
  - Principle and Guidelines, Section VIII
  - ER 1105-2-100 Chapter 4, Appendix G (feasibility report content)
  - Planning Manual Chapter 14

- **Washington Level Review**
  - ER 1105-2-100 Appendix H
  - ER 1165-2-502 Resources, Policies and Authorities: Delegation of Review and Approval Authority for Post-Authorization Decision Documents

- **Continue Feasibility Phase**

Step 10 – Division Engineer’s Transmittal Letter

- EC 1105-2-405 Division Engineers Submittal of Final Decision Document for Projects Requiring Specific Authorization
- EC 1105-2-406 Division Engineers Presentation of Final Decision Document for Projects Requiring Specific Authorization
- ER 1105-2-100 Appendix H

Step 11 – Washington Level Policy Review

- ER 1105-2-100 Appendix H
- ER 1165-2-502 Resources, Policies and Authorities: Delegation of Review and Approval Authority for Post-Authorization Decision Documents

- **Civil Works Review Board**
  - ER 1105-2-100 Appendix H (Paragraph H-5) includes: Division Engineers Submittal, Report Summary Format, Civil Works Review Board, District Commanders Briefing, MSC Commander Briefing, After Action Report
Corresponding Guidance for the 21 Step Project Development Process

EC 1105-2-405  Division Engineers Submittal of Final Decision Document for Projects Requiring Specific Authorization (31 March 2005)

EC 1105-2-4  District Engineers Presentation of Final Decision Document for Projects Requiring Specific Authorization (31 March 2005)


- CWRB comments addressed at District/MSC levels
- HQ finalizes Draft Chief of Engineers Report
- 30 Day State and Agencies review of draft Chief’s Rpt and final NEPA document
- District addresses State & Agencies comments on Draft Chief’s Rpt and final NEPA document
- District files Final NEPA document
  - ER 200-2-2  Procedures for Implementing NEPA
  - ER 200-2-3  Environmental Quality – Environmental Compliance Policies
  - Title 40  Sections 1500-1508, Code of Federal Regulations - Regulations for Federal Agencies in preparation of NEPA documents

- HQ prepares final Chief’s Report
  - EC 1105-2-405  Division Engineers Submittal of Final Decision Document for Projects Requiring Specific Authorization
  - EC 1105-2-406  Division Engineers Presentation of Final Decision Document for Projects Requiring Specific Authorization

Step 12 – Chief of Engineer’s Report

- Chief’s Rpt Sent to Congress Auth. Comm. (Sec. 2033 of WRDA 07)
- Chief’s Rpt sent to ASA (CW)
- Chief’s Rpt sent to OMB

Step 13 – Administration Review

- Assistant Secretary of the Army for Civil Works [ASA (CW)]
- Office of Management and Budget (OMB)
Step 14 – Project Authorization

WRDA Fact Sheets
Section 1001
WRDA 1986 – Authorizes a project deauthorization review
Program

House Transportation and Infrastructure Committee Resolutions
Senate Environment and Public Works Committee Resolutions
Water Resources Development Acts
Other Legislation

- District negotiates PMP and Design Agreement

Step 15 – Execute PED Agreement

Section 2003
WRDA 2007 – Authorizes in-kind crediting
ER 415-1-11
Bidability, Constructability, Operability, and Environmental Review
CECW-AG Memo
Negotiation of the Preconstruction Engineering and Design (PED) Agreement (12 Nov 1997)
CECW-AG Memo
Model Design Agreement (3 Aug 1998)

Step 16 – Conduct PED

CECW-AG
Memorandum for Commanders and MSCs, 12 November 1997 – Negotiation of Preconstruction Engineering and Design (PED) Agreement
ER 415-1-13
Design and Construction Evaluation (DCS) CH 1
ER 1110-1-8155
Engineering and Design Specifications
ER 1110-1-8159
Engineering and Design, Dr. Checks
ER 1110-2-1150
Engineering and Design for Civil Works Projects
ER 1110- Series
This series of Engineering Regulations has dozens of ERs pertaining to a spectrum of design, engineering, inspection, monitoring, and performance evaluations for all types of projects.
Step 17 – Draft PPA Review / Approval

Supplemental Appropriation Act of 1985 – Outlines the Local Cooperation Agreement (LCA) process, requires cost sharing, and requires a financing plan

WRDA 1986 Further defines project cost sharing

ER 1165-2-13 Project Cooperation Agreements for New Start Construction

Project Partnership Kit, IWR Report 96-R-10, January 2001

Annual Budget EC for CW Action

Section 221 Flood Control Act of 1970 – In-Kind Contributions Provided or Performed by a Non-Federal Interest Prior to Execution of a Project Partnership Agreement


WRDA 99 Legally requires a Floodplain Management Plan as part of a PPA

ER 1140-2-301 Policies and Procedures CH 1, ENG Form 1831

ER 1150-2-302 Annual Report on Local Cooperation Agreements

ER 1165-2-131 Local Cooperation Agreement for New Start Construction Projects (17 Apr 1989)

ER 1165-2-208 In-Kinds Contribution Provisions of Section 221 (6 June 2008)


ER 1165-2-29 Section 104 - General Credit for Flood Control (18 November 1987)

ER 1165-2-120 Section 204(e) - Reimbursement for Advance Non-Federal Construction of Authorized Federal Harbor and Inland Harbor Improvements (15 June 1988)

ER 1165-2-30 Acceptance and Return of Required, Contributed or Advanced Funds (30 October 1998)

Contributed Funds Memorandum (CECW-P 2 July 2007)

Please Reference this page for over 60 Policy Guidance letters pertaining to new start projects, cost sharing, etc:


Step 18 – Congress Appropriates Construction Funds

- HQ reviews and approves PPA
Step 19 – Execute PPA

Section 2003 (c)(2) WRDA 2007 – Regarding policies and guidelines that will delegate District Engineers the authority to sign PPAs

Supplemental Appropriation Act of 1985 – Outlines the Local Cooperation Agreement (LCA) process, requires cost sharing, and requires a financing plan

WRDA 1986 Further defines project cost sharing

ER 1165-2-13 Project Cooperation Agreements for New Start Construction

Project Partnership Kit, IWR Report 96-R-10, January 2001

Annual Budget EC for CW Action

Section 221 Flood Control Act of 1970 – In-Kind Contributions Provided or Performed by a Non-Federal Interest Prior to Execution of a Project Partnership Agreement


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ER 1165-2-131 Local Cooperation Agreement for New Start Construction Projects (17 Apr 1989)

ER 1165-2-208 In-Kinds Contribution Provisions of Section 221 (6 June 2008)


ER 1165-2-29 Section 104 - General Credit for Flood Control (18 November 1987)

ER 1165-2-120 Section 204(e) - Reimbursement for Advance Non-Federal Construction of Authorized Federal Harbor and Inland Harbor Improvements (15 June 1988)

ER 1165-2-30 Acceptance and Return of Required, Contributed or Advanced Funds (30 October 1998)

Contributed Funds Memorandum (CECW-P 2 July 2007)

Please Reference this page for over 60 Policy Guidance letters pertaining to new start projects, cost sharing, etc:
Step 20 – Project Construction

Construction contracting is governed by the following:

Federal Acquisition Regulations
Department of Defense Supplement (DFARS)
Army Supplement (AFARS)
Engineer Supplement (EFARS)

Section 902  WRDA 1986 – Establishes maximum project costs

ER 385-1-XX  Within this series of engineering regulations there are around 15 individual regulations that pertain to field operations and safety
ER 415-1-15  Construction Time Extensions for Weather
ER 415-1-17  Contractor Performance Evaluations
ER 415-1-16  Fiscal Management
ER 415-345-13  Financial Closeout
ER 415-345-38  Transfer and Warranties
ER 1180-1-6  Contracts – Construction Quality Management

Step 21 – OMRR&R

Policy Guidance Letter No. 39 Responsibilities of the Corps of Engineers and Local Sponsor to Ensure Safe Operation, Maintenance, Repair, Replacement and Rehabilitation for Flood Control and Multipurpose Dams Constructed Under the Provisions of PL 99-662

Section 216  Flood Control Act of 1970 - Review of Completed Projects
ER 1110-2-100  Periodic Inspection and Continuing Evaluation of Completed Civil Works Structures
ER 1110-2-101  Reporting of Evidence of Distress of Civil Works Structures (RCS Exempt: AR 335-15, Paragraph 5-2e (8))
ER 1110-2-110  Instrumentation for Safety - Evaluations of Civil Works Projects
ER 1110-2-112  Required Visits to the Construction Sites by Design Personnel
ER 110-2-240  Water Control Management (Ch 1, 30 Apr 87/Ch 2, 1 Mar 94)
ER 1110-2-401  Operation, Maintenance, Repair, Replacement, and Rehabilitation Manual for Projects and Separable Elements Managed by Project Sponsors
ER 1110- Series This series of Engineering Regulations has dozens of ERs pertaining to a spectrum of design, engineering, inspection, monitoring, and performance evaluations for all types of projects.
ER 1130-2-500 Partners and Support (Work Management Policies)
ER 1130-2-510 Hydroelectric Power Operations and Maintenance Policies
ER 1130-2-520 Navigation and Dredging Operations and Maintenance Policies
ER 1130-2-530 Flood Control Operations and Maintenance Policies
ER 1130-2-540 Environmental Stewardship Operations and Maintenance Guidance and Procedures
ER 1130-2-550 Recreation Operations and Maintenance Policies
ER 1130-2-551 Hydropower Operations and Maintenance Policy Implementation of Bulk Power System Reliability Compliance Program