Water Resources Development incl. Climate Change
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WHY PLAN?

• OAHU FREEWAY. Interstate H-1 was authorized as a result of the Statehood Act of 1960.[4] The portion of H-1 that runs through downtown Honolulu opened in 1953 as the Mauka Arterial; it was added to the Interstate system when Hawaii became a state. This section has been largely unchanged since its inception and its design suffers from having too many on/off ramps, short distanced on-ramps, and on-ramps that enter the freeway almost immediately before an off-ramp (opposite of current design standards). The 'new' section of H-1 was, however, built to modern freeway standards.

• “CHANCE FAVORS THE PREPARED MIND” – villain from the movie Under Siege.
AGENDA

- Area of Responsibility
- Mission Sets
- Services
- Project Purposes
- Project Development Process
- Planning Principles
- Plan Formulation
- Criteria
- Principles of Analysis
- Future Without Project Condition
- Summary of USACE Planning
- How can we help create the village of Tomorrow?

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AREA OF RESPONSIBILITY

- 5 Time Zones
- 12 Million Square Miles
- 2 Congressional Districts
- 3 U.S. Territories
- 3 Freely Associated States

District Headquarters:
- Co-located with DIV at Fort Shafter
- Two Area Offices
  - Fort Shafter
  - Schofield Barracks
- Offices in Guam, Kwajalein, and Hawaii “Big Island”
SERVICES

• PROJECT DEVELOPMENT
  o Develop large and small water resources development project in the areas of Navigation, Hurricane & Storm Damage Reduction, and Ecosystem Restoration.
  o Generally, cost shared 65% Federal; 35% local government.
  o Long term solution.
  o Watershed Planning.

• TECHNICAL STUDIES
  o Flood mapping studies – 100% Federally funded.
  o Technical studies and master plans – 50% Federal funded; 50% local government funded.

• WORK FOR OTHERS
  o Utilize USACE like a private consultant through executing support agreements for definable features of work.
PROJECT PURPOSES

- Navigation
- Hurricane and Storm Damage Protection (flood control and shoreline protection)
- Ecosystem Restoration
- Hydroelectric Power (secondary)
- Recreation (secondary)
- Water Supply (secondary)
PROJECT DEVELOPMENT PROCESS

ER 1105-2-100, Planning Guidance Notebook
PLANNING COMMUNITY TOOLBOX - TRAINING

- PCC1: Civil Works Orientation
- PCC2: Planning Principles and Procedures
- PCC3: Environmental Considerations
- PCC5: Hydrology and Hydraulic (H&H) Considerations in Planning
- PCC6: Plan Formulation
- PCC7: Public Involvement and Team Planning
- Risk Analysis

https://planning.erdc.dren.mil/toolbox/resources.cfm?Id=0&Option=Main
PLANNING PRINCIPLES

• FEDERAL OBJECTIVE
  o Based on Principles and Guidelines.
  o National Economic Development
  o Environmental Protection
  o Utilized by USACE, NRCS, Bureau of Reclamation, TVA

Tinian Harbor breakwater, CNMI
PLAN FORMULATION

- Management Measures
- Alternative Plans
- Viable Array
- Final Array

Recommended Plan

CRITERIA

- Technical feasibility
- Implementation cost
- O&M requirements
- Cost-effectiveness
- Availability of land
- Acceptability
- Social fairness
- Flood risk reduction
- Life safety risk reduction
- Community resilience
- Environmental impact
- Cultural resources
CRITERIA

- Completeness, Effectiveness, Efficiency, Acceptability
- Sponsor Objectives
- National Economic Development
- Environmental Quality
- Regional Economic Development
- Other Social Effects

Kaumalapau Harbor (Lanai)
Leone Bridge, Am Samoa
PRINCIPLES OF ANALYSIS

- Period of Analysis (generally 50 years)
- Without-Project Condition
- With-Project Condition
- Benefit-Cost Analysis (aka BC ratio)
- Cost Effectiveness Analysis
- Net Benefits (Optimization)
- Incremental Analysis
- Trade-Off Analysis
- Risk and Uncertainty Analysis
- Planning Area (systems approach)
- Prices/Costs
FUTURE WITHOUT PROJECT CONDITION

- Most Likely Condition Expected to Exist in the Future
- 50 year Economic Life
- Climate Change
- Land Use Changes
- Environmental Changes
- Economic Changes
- Urban Development
- Basis that all proposed plans are compared to

Shoreline Protection, American Samoa

Iroquois Point, Oahu
USACE PLANNING

• Inform a decision to recommend that Congress invest in the development of the project.
• Primarily based on National Economic Development Benefits.
• Prescriptive.

Serving Our Military, Our Nation, and the People of the Pacific

Essayons, Barbers Point Harbor, Oahu
HOW CAN WE HELP CREATE THE VILLAGE OF TOMORROW?

• Adopt an Integrated Comprehensive Planning Approach; i.e., clear and achievable objectives, coordinate/integrate all actions.
• Leverage Other Resources; e.g., Federal funding, philanthropic funding, reach beyond your local knowledge.
• Engage All Stakeholders, especially the Community.
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