MCNP Technology Infusion

Philosophy: **"Knowledge gained from monitoring a finite number of specific projects will provide both site-specific and generic "Lessons Learned" that are applicable to a region that experiences essentially the same range of environmental factors.**

(Philosophy continued)

Knowledge gained from projects exposed to large waves and high tides (i.e.,Pacific Coast) can not be extrapolated to the Great Lakes. Neither can knowledge gained from projects experiencing ice conditions be applicable to projects in warm climates.

Hence, a **regional analysis** is necessary."

Regions and Site-Specific Project Locations

Pacific Coast

Breakwaters

Fisherman's Wharf, San Francisco, CA
Spud Point, Bodega Bay, CA
Crescent City, CA

Jetties

Yaquina Bay, OR
Humboldt Bay, CA

(continued)

Pacific Coast

Floating Breakwaters

Friday Harbor Marina, WA
UW Friday Harbor Laboratory, WA
East Bay Marina, WA
Zittle's Marina, WA
Brownsville Marina, WA
Semiahmoo Marina, WA

Jetty Spurs

Siuslaw River, OR

(continued)

Pacific Coast

Wave Transformation

Redondo Beach-King Harbor, CA

Harbors

Fisherman's Wharf, San Francisco, CA

(continued)

Atlantic Coast

Jetties

Manasquan Inlet, NJ

Ocean City, MD

Inlets

Manasquan Inlet, NJ

Ocean City, MD

Beach Nourishment and Sand Transport

Oakland Beach, RI

Carolina Beach, NC

(continued)

Atlantic Coast

Confined Aquatic Disposal Cells

Boston Harbor, MA

Gulf of Mexico

Weir-Jetties

Colorado River Mouth, TX

East Pass Inlet, Destin, FL

(continued)

Great Lakes

Breakwaters

Cattaraugus Creek Harbor, NY
Burns Harbor North Breakwater, IN
Cleveland Harbor East Breakwater, OH
Great Lakes Breakwater Stone, IL, IN, OH

Beach Nourishment and Sand Transport

Cattaraugus Creek Harbor, NY
St. Joseph, MI

(continued)

Great Lakes

Inlets

Cattaraugus Creek Harbor, NY

Hawaii

Wave Transformation

Agat Harbor, Guam

Harbors

Barbers Point Harbor, Oahu, HI

(continued)

Hawaii

Breakwaters

Ofu Harbor, American Samoa
Nawiliwili Harbor, Kauai, HI
Kahului Harbor, Maui, HI
Laupahoehoe, HI

Alaska

Harbors

St. Paul Harbor, AK

Breakwaters

St. Paul Harbor, AK

Directive

An in-depth study will be performed by ERDC to determine the extent to which MCNP "Lessons Learned" from previous monitoring have been used since becoming available in planning and design of new projects and O&M rehabilitation modifications.

1. ERDC will identify project benefits derived from these previous applications of MCNP "Lessons Learned" (Pull Technology).

Directive

A concerted effort will be established by ERDC for ensuring that "Lessons Learned" are infused into future new work as well as O&M rehabilitation work.

2. ERDC will develop techniques for increasing application of MCNP "Lessons Learned" to other projects through effective technology infusion (Push Technology).

Pull Technology

Both site-specific and generic "Lessons Learned" are being compiled into one comprehensive Lessons Learned document.. Each previous MCNP District Team Member and an Operations Division engineer will be queried by ERDC about specific points pertaining to application of knowledge in that document to their District projects, on a project-by-project basis beginning as early as 1985 when MCNP "Lessons Learned" first became available.

Pull Technology

Two specific questions are pertinent:

1. How have "Lessons Learned" from projects within **your** District been applied to other projects within **your** District, what are the applications, and how are benefits derived?

2. How have "Lessons Learned" from projects within **other** Districts been applied to projects within **your** District, what are the applications, and how are benefits derived?

Push Technology

Each previous MCNP District Team Member and an Operations Division engineer will be queried by ERDC regarding present and/or potential future projects within their District that may benefit from application of past MCNP "Lessons Learned".

Push Technology

Two specific issues are pertinent:

1. **Existing periodic major O&M rehabilitation projects will be examined for application of both site-specific and generic "Lessons Learned" from that geographic region.**

2. **Planned new and non-periodic major O&M rehabilitation projects known at this time will be examined for application of both site-specific and generic "Lessons Learned" from that geographic region.**

MCNP Technology Infusion

When existing periodic major O&M projects, and planned new projects and non-periodic major O&M projects, have been examined for application of MCNP "Lessons Learned", ERDC will apply techniques (presently under development) for estimating potential benefits of such application, and will perform such estimations in concert with District MCNP Team Members. Follow-up action will track application and actual benefits derived from these specific project applications.