

A Multi-Agency Partnership to Restore the Passaic River

Alice Yeh

EPA Region 2

Elizabeth Buckrucker

USACE - KC

Megan Grubb

USACE - NY

Lisa Baron

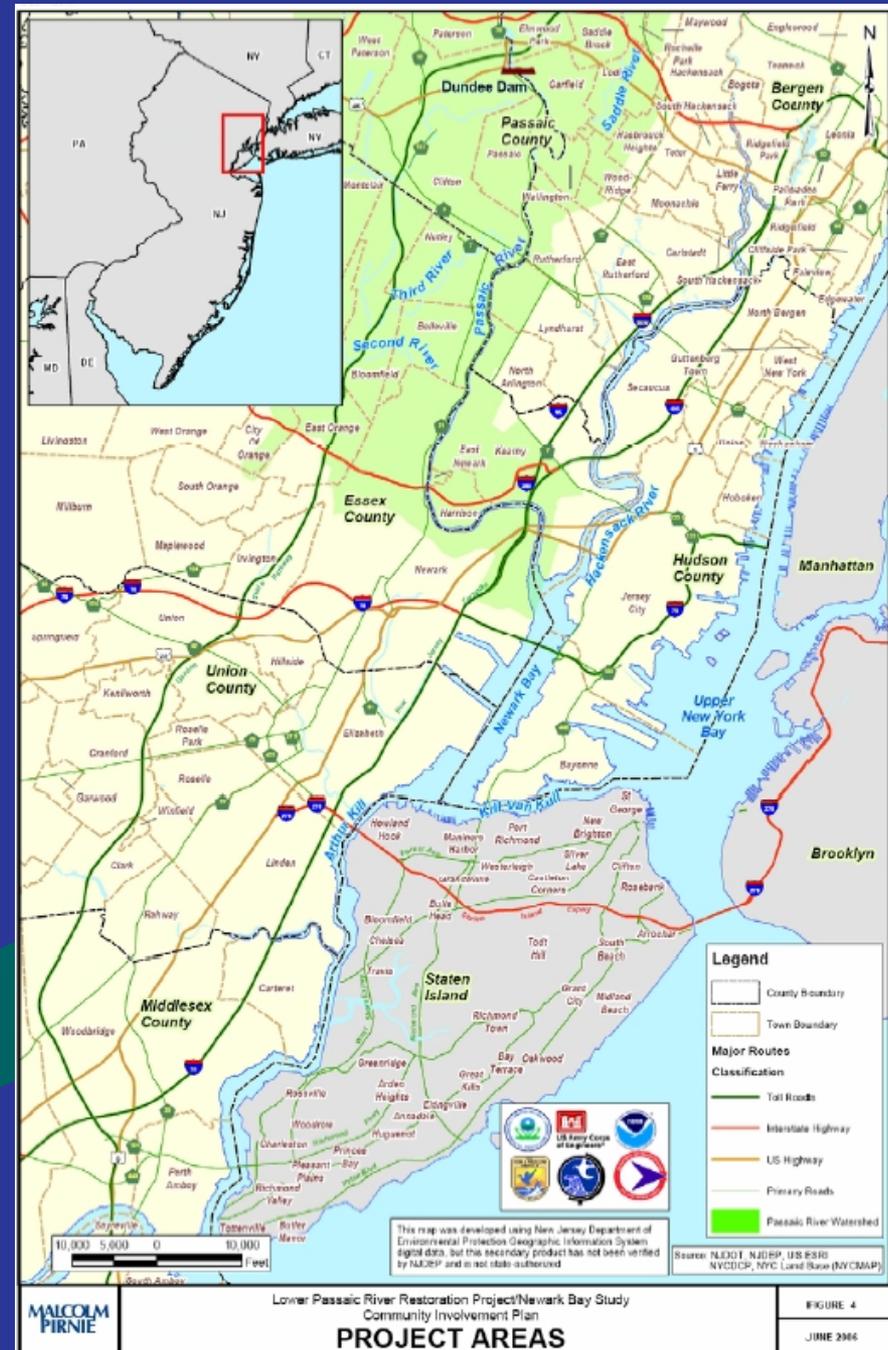
NJDOT

The Lower Passaic River Restoration Project

- Site Description & Background
 - Partner Agencies
 - Roles and Authorities
 - Purpose and Goals
 - Integrated Project Strategies
 - Accomplishments
 - Partnership Benefits
- 

Passaic River: Geographic Setting

- Located in northeastern New Jersey
 - Within parts of 5 counties (Essex, Bergen, Hudson, Passaic, Union)
 - Mostly urban with population of ~2.8M (4,700 persons/mi²)
- River spans over 80 miles with watershed of 935 mi²



Lower Passaic River Restoration Project/Newark Bay Study
Community Involvement Plan

PROJECT AREAS



The Lower Passaic River Restoration Project: Site Description

- Study area is 17 tidal miles from Dundee Dam to Newark Bay
- Watershed of 173mi²
- Contaminants:
 - Dioxin
 - PCBs
 - PAHs
 - Pesticides (e.g. DDT)
 - Metals, including mercury



Historical Use

Newark's industrial development started in the 1800's

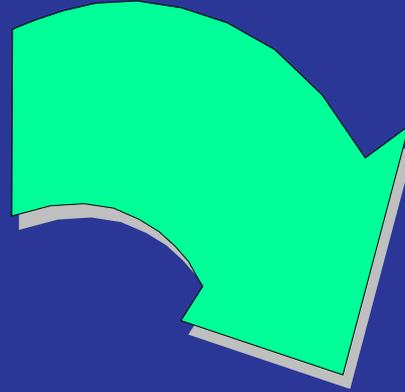
- Chemical Manufacturers
- Electric Power Generators
- Metal Recyclers
- Paper Products
- Paints & Dyes
- Tanneries
- Petroleum Refiners
- Rubber & Textiles



The Lower Passaic River Restoration

Project: The Issues

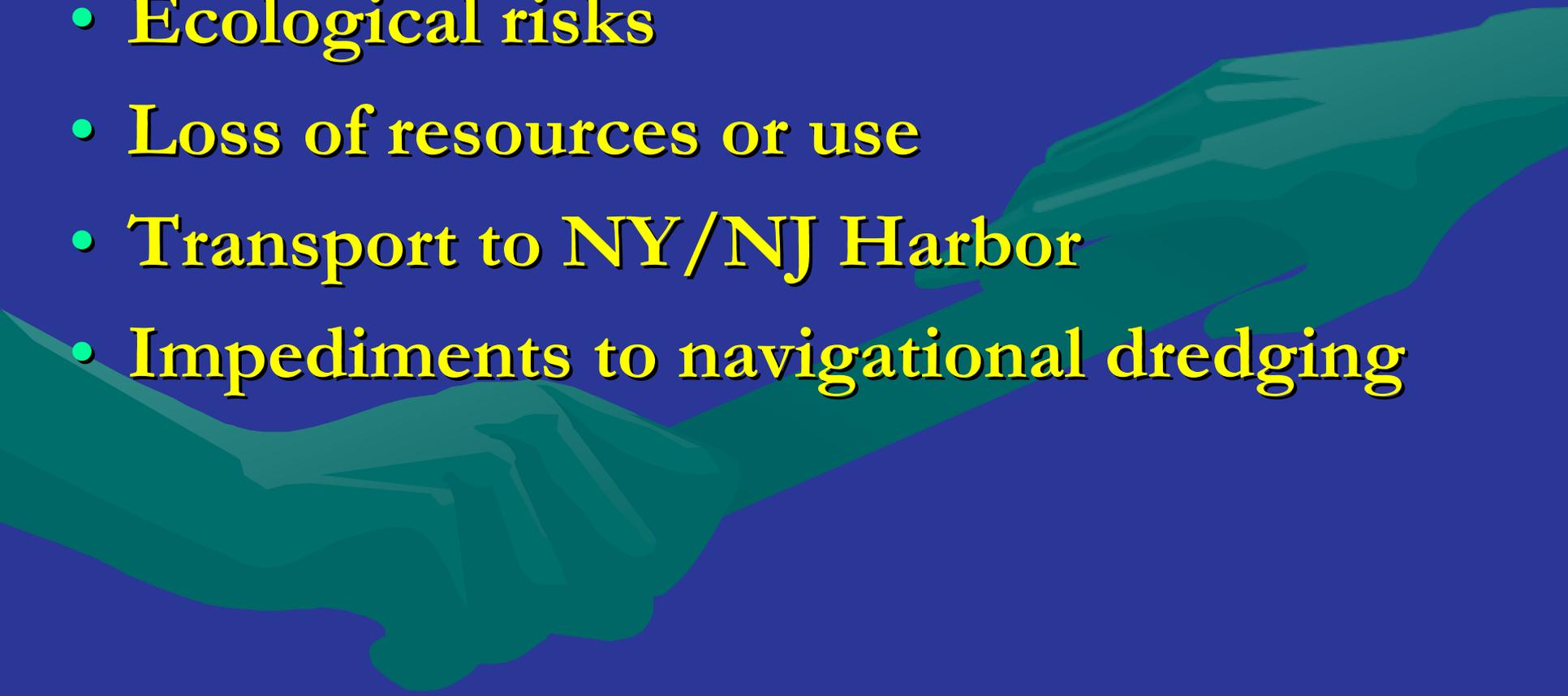
- Industrial Revolution
- Urban Development
- Population Growth



- Poor Water Quality
- Contaminated Sediments
- Bans on Fishing
- Lost Wetlands
- Degraded Habitat



The Consequences

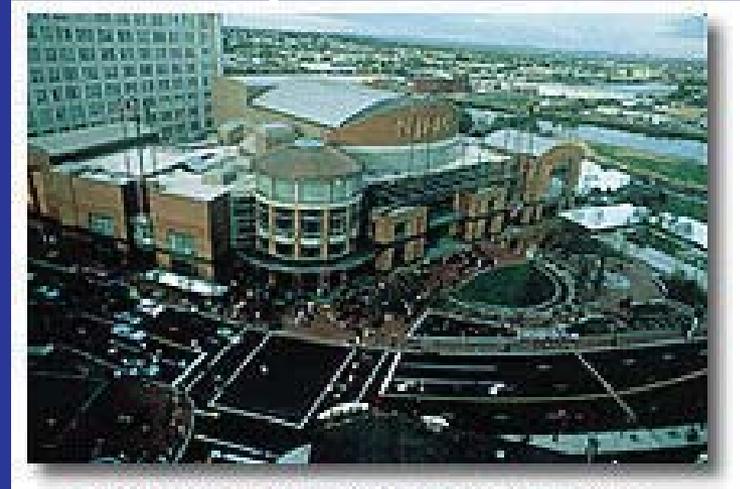
- Health risks and hazards
 - Ecological risks
 - Loss of resources or use
 - Transport to NY/NJ Harbor
 - Impediments to navigational dredging
- 

Current Uses of the River

Industrial



Development



Recreation



Waste Disposal

And a use of
the River
we'd rather
not have...



Superfund/WRDA: Background Summary

- 1976: Congress authorizes WRDA flood control study for Passaic
- 1984: Diamond Alkali Site listed on NPL
- 1990: Consent Decree with Occidental Chemical Corporation (OCC) to clean up upland site
- 1994: Order on Consent for OCC to study 6-mile stretch of Passaic
- 2000: Congress authorizes WRDA Lower Passaic River Ecosystem Restoration Study
- 2001: OCC Completes upland site cleanup; Corps completes Reconnaissance Study
- 2003: Passaic 6-mile stretch expanded to 17-mile study
- 2004: Order on Consent with 31 Potentially Responsible Parties (PRPs) to study 17-mile stretch
- 2005 Order on Consent adds 12 more PRPs

Partnership Agreements

Nat'l Memorandum of Understanding



**US Army Corps
of Engineers®**



Feasibility Cost Sharing Agreement

Project Management Plan



**NJ Dept of
Environmental
Protection**

Memorandum of Agreement

Partnership Background

- 1999 - Initiated by EPA, USACE & NJDOT
- 2003 - Selected as Pilot Study under URRI MOU – (EPA & USACE)
- 2003 – NOAA, USFWS and NJDEP signed MOA; Natural Resource Damage Assessment & Restoration
- 2003 (June) FCSEA signed (USACE & OMR)
- 2003 Joint PMP (EPA, USACE, OMR)

Other Stakeholders

- Passaic River Coalition
- Passaic River Institute of Montclair State University
- NY/NJ Baykeeper
- Hackensack Riverkeeper
- Passaic Valley Sewerage Commissioners (PVSC)
- Nereid Boat Club
- Clean Ocean Action
- Natural Resources Defense Council (NRDC)
- Others...

Partner Agency Authorities

- **USEPA - CERCLA**
 - Superfund
- **USACE/NJDOT - WRDA**
 - Environmental Restoration
 - Navigation
- **Trustees – USFWS/NOAA/NJDEP**
 - CERCLA/Natural Resources Damages

Integration of Authorities

USEPA
CERCLA

USACE
WRDA

Risk Driven

Cost – Benefit Driven

Identify problem
Investigate contamination
Report on investigation
Design/construct remedy
Ensure effectiveness

NPL listing
RI/FS
Record of Decision
RD/RA
O&M

Reconnaissance
Feasibility Study
Feasibility Report
Design & Construction
O&M

**Responsible parties pay
(Joint & Several)**

**Variable % federal
cost share**

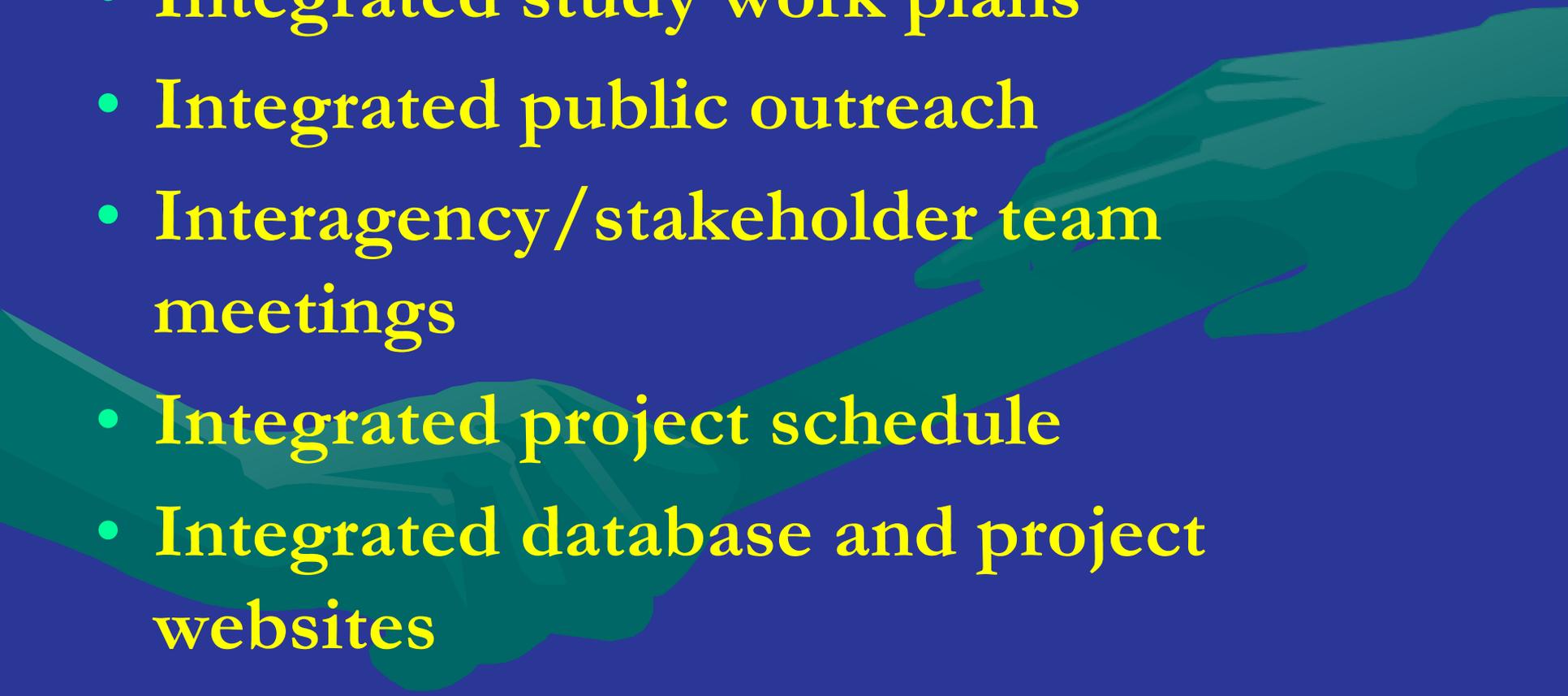
Purpose of the Joint Study

To develop a comprehensive watershed-based plan for the cleanup and restoration of the
Lower Passaic River

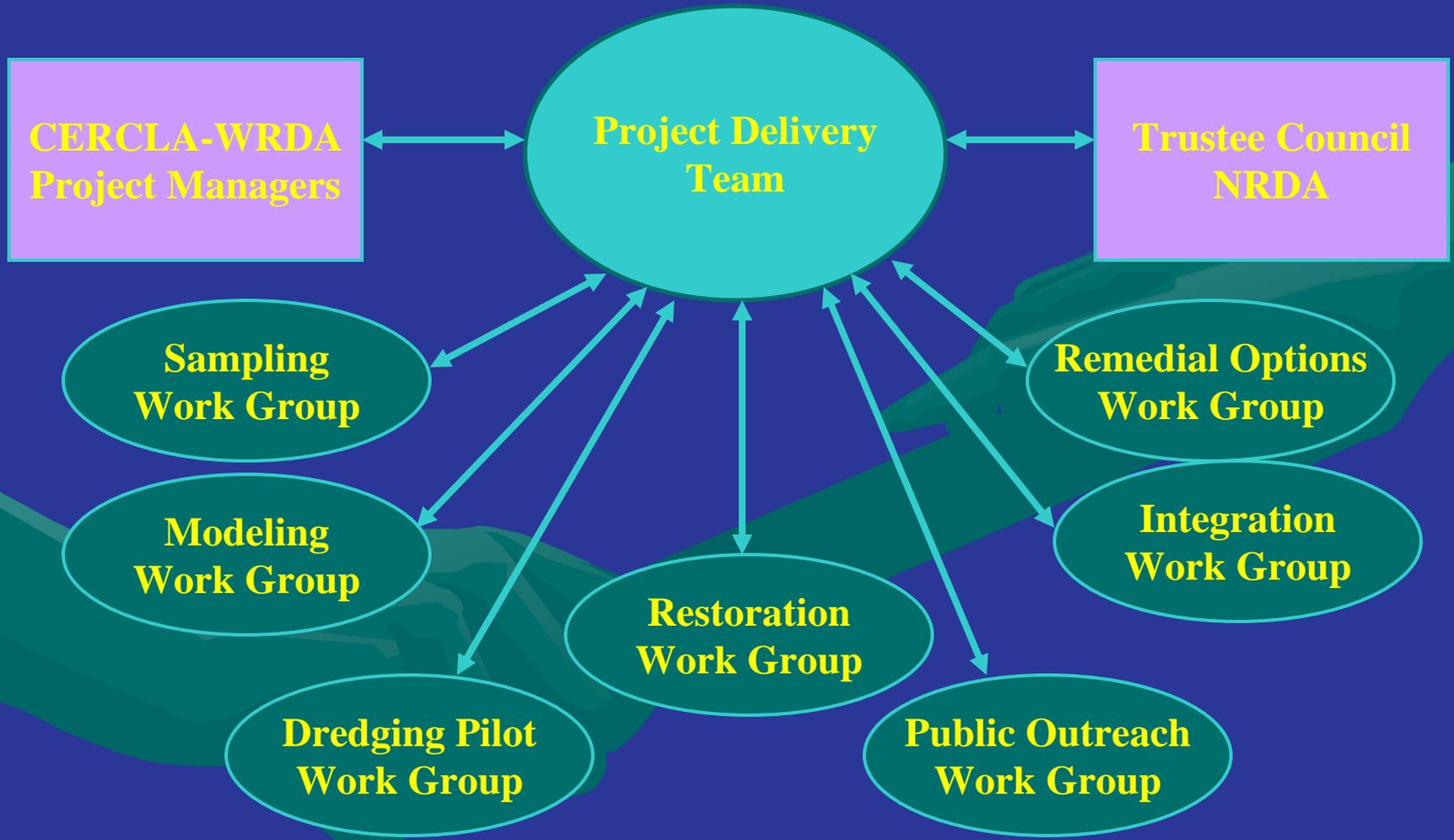
Goals of Comprehensive Plan

- Remediate contamination to reduce risks
- Improve water quality
- Restore, create, and enhance wetlands and habitats
- Provide public benefit
- Reduce contaminant loading to NY/NJ Harbor

Integrated Project Strategies

- **Integrated PMP**
 - **Integrated study work plans**
 - **Integrated public outreach**
 - **Interagency/stakeholder team meetings**
 - **Integrated project schedule**
 - **Integrated database and project websites**
- 

Integrated Partnership – Team Approach



The Lower Passaic River Restoration Project: Accomplishments

Understanding the Site:

- ✓ Comprehensive database with historical and new data
- ✓ Conceptual Site Model (historical data evaluations)

Sampling:

- ✓ Work Plan/Sampling Plans (3 volumes)
- ✓ Hydrodynamic, Bathymetry, Geophysical Surveys
- ✓ Erosion Testing
- ❖ High/low resolution sediment cores

Modeling:

- ✓ Modeling Work Plan
- ❖ Hydrodynamic Model Calibration Report
- ❖ Sediment Transport Model
- ❖ Fate and Transport Model
- ❖ Bioaccumulation Model

- ✓ Complete
- ❖ In Progress or Future Tasks

The Lower Passaic River Restoration Project: Accomplishments cont.

Risk Assessments:

- ✓ Pathways Analysis Report
- ❖ Human Health and Ecological Risk Assessments

Restoration Planning:

- ❖ Restoration Opportunities Report
- ✓ NEPA Scoping Meeting

✓ Community Involvement Plan

Early Actions:

- ❖ Focused Feasibility Study
- ❖ Proposed Plan

- ✓ Complete
- ❖ In Progress or Future Tasks

Sediment Coring & Samples



PASSAIC RIVER
CORE ID: E1
DEPTH: 0 - 1 FT

0-1 ft



PASSAIC RIVER
CORE ID: B1
DEPTH: 3 - 4 FT

3-4 ft



Partnership Benefits

**Communication
&
Funding**



- **Overlapping data needs**
 - Information sharing
 - Maximize data use
- **Coordinated Funding Responsibilities**
 - Consultant team
- **Early coordination of remedial and restoration planning**
- **Global Settlement**
- **Consider Interim Solutions**

Conclusions

Partnership means:

- Combining authorities and funds
- Maximizing strategic use of resources
- Finding a comprehensive solution

It's a lot of work but it's worth it...

QUESTIONS?

Alice Yeh (212) 637-4427

Elizabeth Buckrucker (816) 389-3581

www.ourPassaic.org