

Engineering With Nature[®]

AN ATLAS

The Engineering With Nature (EWN) initiative formally began in 2010 within the US Army Corps of Engineers. The approach is building upon good past practices while advancing current and future capabilities that support more sustainable water resources practices, projects, and outcomes.

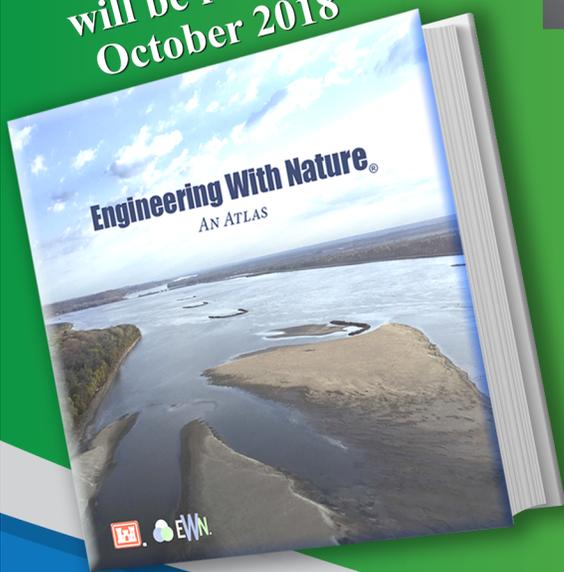
"Engineering With Nature is an important initiative for the US Army Corps of Engineers."
--James Dalton, USACE Director of Civil Works

Engineering
With Nature,
An Atlas
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EWN is the intentional alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental, and social benefits through collaboration.

Over the years, the initiative has grown to include a number of partner organizations and collaborators in the US and abroad. This book highlights successful projects and the contexts in which these projects were developed; it introduces the reader to the wide range of organizations advancing worldwide progress in this field today.

Through its striking project photographs coupled with brief narrative descriptions, the book gives interested readers and practitioners alike a tangible sense of the potential to engineer with nature.



For further information about EWN and to access the electronic version of the book, please visit the following website:
www.engineeringwithnature.org



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Beaches and Dunes

- Deer Island Aquatic Ecosystem Restoration
Mississippi Sound, Mississippi, United States
- Hondsbosche Dunes
Pettemer, the Netherlands
- Delfland Sand Motor Pilot
The Hague, the Netherlands
- Murrells Inlet Beneficial Use of Dredged Material
Murrells Inlet, South Carolina, United States
- North Norfolk Coast Restoration
Norfolk, East Anglia, England, United Kingdom
- Long Beach Island Coastal Storm Damage Reduction
Long Beach Island, New Jersey, United States
- Taumanu Reserve–Onehunga Foreshore Restoration
Auckland, New Zealand
- Galveston Beach Nourishment at 61st Street
Galveston, Texas, United States
- Oriental Bay Foreshore Restoration
Wellington, New Zealand

Wetlands

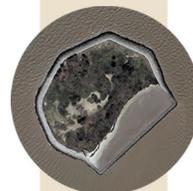
- Braddock Bay Restoration
Lake Ontario, Greece, New York, United States
- Hamilton Wetlands Restoration
Novato, California, United States
- Salt Marsh Development Marconi Delfzijl
Port of Delfzijl, the Netherlands
- Savannah Harbor Dredged Material Containment Areas
Savannah Harbor, Jasper County, South Carolina, United States
- Salt Marsh Development with a Mud Motor
Koehoal, Tzummarum, the Netherlands
- Sears Point Wetland Restoration
San Pablo Bay, Sonoma County, California, United States
- Blackwater National Wildlife Refuge Marsh Resiliency
Cambridge, Maryland, United States
- Duluth 21st Avenue West Demonstration Project
Superior Harbor, Duluth, Minnesota, United States
- Dredged Sediment in an Uncontrolled Diversion
West Bay, Louisiana, United States

Islands

- Mordecai Island Coastal Wetlands Restoration
Barnegat Bay, Ocean County, New Jersey, United States
- Horseshoe Bend Island
Lower Atchafalaya River, Louisiana, United States
- Evia Island Bird Habitat
Galveston, Texas, United States
- Cat Island Chain Restoration
Green Bay, Wisconsin, United States
- Redistribution and Impacts of Nearshore Berm Sediments
Chandeleur Barrier Islands, Louisiana, United States

Reefs

- MacDill Oyster Reef Shoreline Stabilization
Tampa, Florida, United States
- Coffee Island Oyster Reefs
Portersville Bay, Alabama, United States
- Oesterdam Sand Nourishment Project
Oesterdam, Eastern Scheldt, the Netherlands
- Swift Tract Oyster Reef Breakwaters
Bon Secour National Wildlife Refuge, Baldwin County, Alabama, United States



Riverine Systems

- Eugene Field Park Restoration Project
Chicago, Illinois, United States
- Slowing the Flow at Pickering
Pickering, North Yorkshire, England, United Kingdom
- Horner Park Restoration Project
Chicago, Illinois, United States
- Stroud Rural Sustainable Drainage Systems
Stroud, Gloucestershire, England, United Kingdom
- River Glaven Restoration Project
Hunworth, Norfolk, England, United Kingdom
- Springhouse Run Stream Restoration
Washington, District of Columbia, United States

Levee Setbacks and Floodplains

- Belford Natural Flood Management Scheme
Belford, Northumberland, England, United Kingdom
- Missouri River Levee Setbacks
Missouri River, Iowa and Missouri, United States
- Kalkense Meersen Cluster
Scheldt River, Flanders, Belgium
- Medmerry Managed Realignment Scheme
Selsey, West Sussex, England, United Kingdom
- Alkborough Flats Managed Realignment
Alkborough, North Lincolnshire, England, United Kingdom
- Redman Point– Loosahatchie Bar Environmental Restoration
Mississippi River near Memphis, Tennessee, United States
- The Polders of Kruikebe
Kruikebe, Belgium

Use of Vegetation and Natural Materials

- Building with Nature in Indonesia
Demak, Northern Java, Indonesia
- Sankey Natural Flood Management Initiative
Sankey Valley, St. Helens, England, United Kingdom
- Dunn Creek Confluence Habitat Restoration
Kootenai River, Libby, Montana, United States
- Bowmont Catchment Initiative
Town Yetholm and Kirk Yetholm, Scottish Borders, United Kingdom
- Beneficial Use Site 4A Vegetation Workshop
Chocolate Bayou Channel, Brazoria County, Texas, United States
- Making Space for Water
Kinder Scout, Derbyshire, England, United Kingdom
- Lower Boulder Creek Ecosystem Restoration Project
Boulder County, Colorado, United States
- Park Pod Plachtami, Under the Sails Park
Brno-Nový Lískovec, Czech Republic
- Skagit River Rehabilitation of Flood Control Works
Skagit County, Washington, United States

Environmental Enhancement of Infrastructure

- Ashtabula Harbor Breakwater Tern Nesting Habitat
Ashtabula, Ohio, United States
- Milwaukee Harbor Breakwater Fish Habitat Demonstration Project
Milwaukee, Wisconsin, United States
- Cleveland Harbor East Arrowhead Breakwater Demonstration Project
Cleveland, Ohio, United States
- Houtrib Dike Pilot Project
The dike between the cities of Lelystad and Enkhuizen, the Netherlands
- Fowl River Private Living Shorelines
Theodore, Alabama, United States
- Rich Revetments: Enhancing Hard Substrates for Ecology
Zierikzee/Sint Annaland, Eastern Scheldt, the Netherlands
- Soo Locks Fish Habitat Restoration
Sault Ste. Marie, Michigan, United States
- Mud Mountain Fish Passage
Buckley, Washington, United States