DARRP

Office of Response and Restoration • Office of Habitat Conservation • General Counsel for Natural Resources

Cleanup and Restoration at the

Dupont Newport Superfund Site

Newport, DE

NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP) acts as a trustee to protect and restore natural resources injured by releases from waste sites, oil spills, and ship groundings.

Site History

The remedial site encompasses an approximately 120-acre property in Newport Delaware, on the north and south banks of the Christina River, a tributary to the Delaware River. Site operations included paint pigment manufacturing, production of chromium dioxide, high-purity silicon, and other organic and inorganic pigments. Chromium dioxide operations at the site ended in 2000, although pigment manufacturing continues.

Waste materials from plant operations were disposed of in two areas. The 8-acre north landfill received process wastes from 1902 to 1974, and the 17-acre south landfill was active from approximately 1902 to 1953. As a result, soil, groundwater, and nearby river and marsh sediments were contaminated, primarily with metals, pigment, and pigment sludge.

Remediation

The site was placed on the Superfund National Priorities List in 1990, and the U.S. Environmental Protection Agency (EPA) Record of Decision (ROD) for the selected remedy was released in August 1993.

Remedial actions by DuPont began in 1996 and were completed in 2002 and included:

- Removal of contaminants from the North and South Wetlands
- Dredging of 15 thousand cubic yards of sediment from three areas of the Christina River
- Dredging of approximately 11.9 acres of wetlands.

Highlights

Cooperative approach between DuPont and remedial and trustee agencies facilitated integrated cleanup and restoration on-site.

Restoration project at Mispillion River in Milford, Delaware features:

- environmental covenant for protection of a 56-acre property
- reduced erosion and stabilized over 2,200 feet of shoreline.
- new channels and shallow pools created, leading to better tidal flushing, improved fish passage, more spawning habitat, and control of invasive plants.

Aerial photo, from the Southeast, of the DuPont Newport Superfund site before remediation.

- Integration of remediation and restoration through coordination between EPA, Delaware Department of Natural Resources and Environmental Control (DNREC), DuPont, U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Army Corps of Engineers (USACE) to maximize effectiveness of cleanup.

The on-site restoration at North and South Wetlands at time of remediation resulted in:

- Sediment excavation to a depth greater than required in ROD
- Sediment stabilization
- Installation of native vegetation and invasive plant control

Assessment

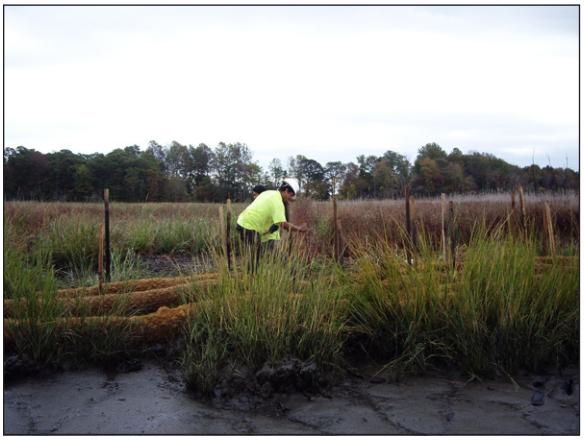
The Natural Resource Trustees (Trustees) for this Site – NOAA, USFWS, and DNREC – assessed natural resource damages attributable to releases from this site. Resource services have been lost due to the migration of contaminants, including metals, pigment and pigment sludges, into tidal wetlands on the site as well as sediment and surface waters of the Christina River.

Restoration

The Trustees' natural resource damages claim is compensated by the on-site restoration activities completed by DuPont at the North and South Wetlands and by additional, recently completed restoration in the Delaware River watershed.

South Wetlands – Post remediation and restoration

North Wetlands – Post remediation and restoration



Worker securing biologs at Mispillion River, Milford Delaware.

The consent decree settlement became effective in February 2007 and is valued at $1.6 million. It provides for an environmental covenant purchased by DuPont and held by the State of Delaware to protect, in perpetuity, a 56-acre property located along the Mispillion River in Milford, Delaware.

Restoration work on the Mispillion River in Milford, Delaware:

- Began in 2007 and finished in 2008, with monitoring planned
- Reduces erosion and stabilizes more than 2,200 feet of shoreline by placing natural-fiber logs at the water's edge and installing wave-dampening timber structure
- Creates an oxbow channel and shallow pools in the tidal marsh, allowing fish passage and providing additional spawning area, improving tidal flushing, and leading to an increase in salinity to control invasive Phragmites

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For further information about DARRP, please visit
http://www.darrp.noaa.gov