NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

# PROJECT SPOTLIGHT

# Dzus Fastener Co., Inc.

State Superfund Site No. 152033

## PROJECT BACKGROUND

The Dzus Fastener Company manufactured fasteners and springs from 1932 to 2015. The company was known as DFCI between 2001 and 2015, although the operation of the facility remained the same. Operations included the design and manufacture of ¼-turn fasteners, latches and panel strips for use in military and commercial aerospace, transportation, electronics, air handling, refrigeration, motor control, and computer industries. The wastes from the metal plating, tumbling, electroplating, chromic acid, anodizing, and special finishing operations consisted of oils, heavy metals, volatile organic compounds, and salts. Leaching pools, which have been remediated, were used for the disposal of hazardous wastes. Due to the direction of groundwater flow, these contaminants migrated offsite into the sediments and soils surrounding a downgradient stream (Willetts Creek) and a downstream impoundment (Lake Capri). The soils and sediments have been remediated and the groundwater is being monitored as part of ongoing site management activities.

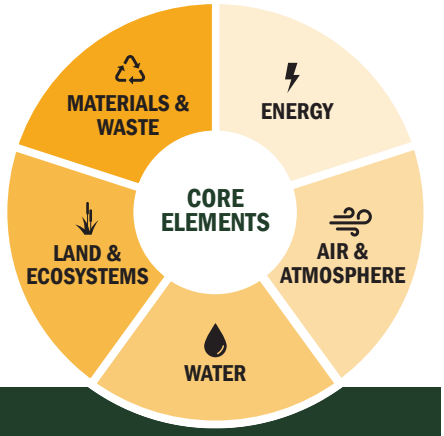
This project achieved remedial goals while minimizing the environmental footprint of construction activies and ensuring the long-term resiliency of installed components. Several DEC policies and guidances were implemented during the project including:

**DER-10 Technical Guidance for Site Investigation and Remediation:** Provides an overview of the site investigation and remediation process.

**DER-31 Green Remediation:** Establishes a preference for remediating sites in the most sustainable manner while still meeting all legal, regulatory and program requirements.

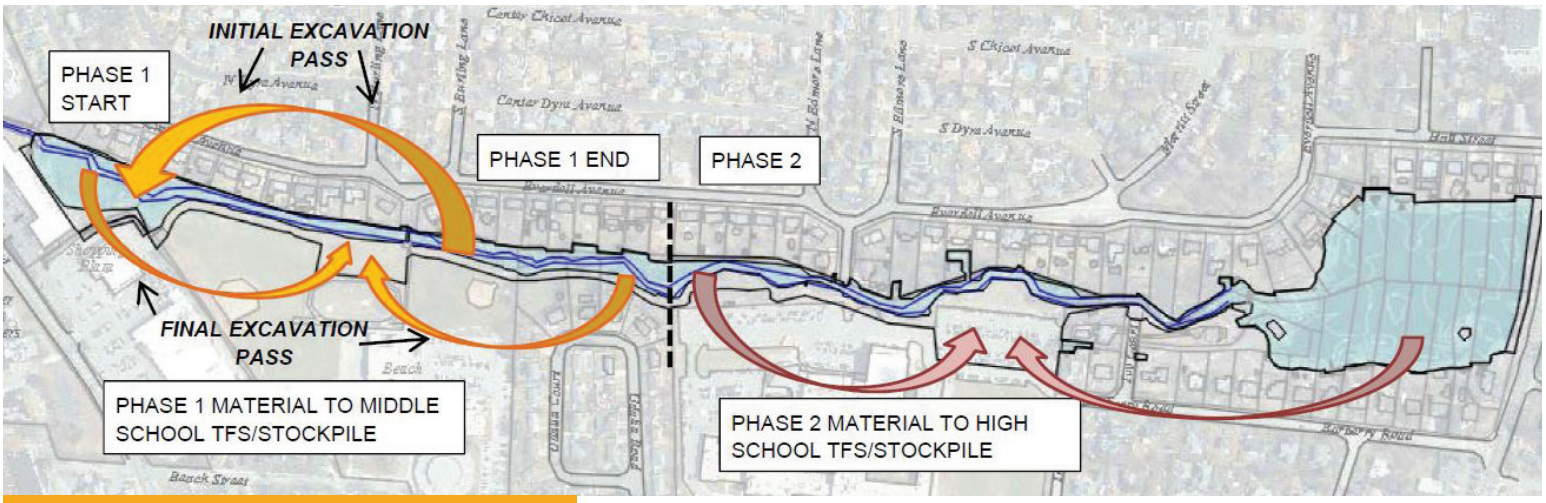
**CP-49 Climate Change and DEC Action:** Integrates climate change considerations into NYSDEC Activities

**CP-75 DEC Sustainability:** Provides sustainability directives to minimize the environmental footprint of DEC activities.




## Site Reuse

When a Superfund site is restored for reuse, it can revitalize a local economy with jobs, new businesses, tax revenues and spending. This case study captures the beneficial effects on the site and in the community of the Dzus Fasterner Co., Inc site located in West Islip, New York.




## Resilient Remediation

The West Islip area was hit with several intense weather events over the last decade. These include Superstorm Sandy in 2012 and a historic rain event in 2014. As part of the clean-up effort at the site, DEC conducted a detailed climate resiliency assessment to ensure the engineered components of the project would be able to withstand future climate driven weather events.

## Remedial Action Objective

The primary objective of any environmental cleanup is to reduce the toxicity, mobility, volume, and extent of released hazardous substances.

Over **80,000 tons** of contaminated soil and sediment were removed and disposed of offsite.

Nearly **60,000 labor hours** were expended during site work with no reportable safety incidents.

Community stakeholders were kept up-to-date with weekly mailers to impacted property owners, monthly community newsletters to the wider community, and periodic in-person meetings open to the general public.

# A GREENER CLEANUP

The environmental cleanup of Willetts Creek and Lake Capri was conducted from April 2019 through May 2020.

During site work, various green remediation best management practices were implemented to reduce the environmental footprint of cleanup activities, including:

- Use of existing office space by project staff, rather than importing and establishing temporary facilities at the site.
- Biodegradable wattles and matting were used for erosion controls during construction and restoration.
- Wood waste from clearing activities was resused as a sediment bulking additive which reduced the amount of required drying agent.
- Willetts Creek and Lake Capri were enhanced to mitigate future flooding of adjacent properties.
- Backfill was locally sourced and an idle reduction plan implemented which both reduced greenhouse gas emmissions from transportation.

# COMMUNITY BENEFITS

### CURRENT DEVELOPMENT OF THE FORMER DZUS PROPERTY

The former vacant Dzus Facility is being put to beneficial reuse through developing the site as a gas station, restaurant, and retail space. Development of ths site is currently underway.

### INVASIVE SPECIES REMOVAL

Prior to the cleanup the creek cooridor was primarily vegetated with invasive plant species such as Phragmites which choked out native wetland species such as cattails. Invasive species were removed during dredging and will continue to be controlled as part of ongoing management of the site.

### NEW FOOTBRIDGE

The old footbridge and culvert at Beach Street Middle School would often clog with debri resulting in flooding which rendered the foot bridge unpassable. A new footbridge with a larger culvert was installled to alleviate flooding in the area and upstream of the bridge.

### LOCALLY SOURCED BACKFILL

Nearly 30,000 tons of sand, stone, and topsoil was sourced from local aggregate suppliers limiting green house gas emissions from trucking and supporting local businesses.

### SCHOOL SECURITY

As part of restoration activities a chainlink fence with privacy screening was installed along the creek to serve as as security measure for the school and to limit trespassing on adjacent residential properties.

### OUTDOOR CLASSROOM

With restoration of Willetts Creek, the creek is serving as a living classroom to facilitate the teaching of biology, ecology, and environmental stewardship to students of the West Islip School District.

### LAKE CAPRI

The bottom of Lake Capri was lowered, which increases the lake's water holding capacity and also helps mitigate the overgrowth of aquatic vegetation and occurrence of algal blooms.

# RESTORATION HIGHLIGHTS

## DRAINAGE IMPROVEMENTS

Grading of Willetts Creek and the bottom of Lake Capri were lowered to enhance flood storage capacity. This was done to mitigate the severity of flooding on adjacent properties that had historically occurred following heavy rainfall. These improvements were augmented with a new foot bridge to prevent sediment depostion and debri back-up.

## CLIMATE RESILIENCY

Following a detailed evaluation of climate projections specific to Long Island, additional armoring of the creek bank in strategic areas was conducted to ensure the creek is resilient to future storms that may become more severe due to climate change. These areas are monitored during site management activities following any qualifying storm events in compliance with the the site managment plan.

## NATIVE PLANTINGS IN WETLANDS AND FLOODPLAIN

Prior to cleanup, Willetts Creek was choked with invasive plant species such as Phragmites. As part of the cleanup effort, over 4,000 individual trees and wetland plugs were planted during restoration of the site following sediment and soil removal. Plant species native to Long Island were selected to minimize irrigation and fertilizing requirements while maintaining the ecological integrity of Willetts Creek.

# ADDITIONAL RESOURCES

Project Documents are available at these locations:

West Islip Public Library
3 Higbie Lane
West Islip, New York 11795
(631) 661-7080

Region 1 NYSDEC
Headquarters
SUNY at Stony Brook
50 Circle Road
Stony Brook, NY 11790
Appointments (631) 444-0200

The NYSDEC Website at:
http://www.dec.ny.gov/chemical/114710.html

Through the DECInfo Locator:
https://www.dec.ny.gov/data/DecDocs/152033/

## DEC Tree Nursery

Trees planted at the site were selected in consultation with DEC Region 1 staff to ensure that native species were used during restoration. A portion of these trees were obtained from the DEC's own Colonel William F. Fox Memorial Saratoga Tree Nursery.

DEC
Saratoga Tree Nursery
2369 Route 50 South
Saratoga Springs, NY 12866
(518)-581-1439
https://www.dec.ny.gov/animals/9395.html

*Drone photos used in this project highlight were obtained using a DEC unmanned aircraft piloted by Division of Law Enforcement staff from Region 2. First page aerial photo obtained from https://patch.com/new-york/westislip/the-history-of-west-islip-the-dzus-fastner-co-inc*