



**DRUMMOND
CARPENTER**
engineering + research

PROJECT PROFILE

Village of Elk Rapids Stormwater Reduction

Client: The Watershed Center Grand Traverse Bay

Location: Elk Rapids, MI

Service Areas: Green Infrastructure & Sustainability
Civil & Water Resources Engineering

Services Provided: Site Visioning
Public Outreach
Planning & Design
Construction Specifications



Project Activities

In the first phase of the project, the Drummond Carpenter team identified feasible green stormwater infrastructure (GS) locations and rendered those practices for community and municipal input. Public outreach involved a workshop discussing GSI typologies, graphical renderings of potential GSI in Elk Rapids, and voting on practices and locations. Based on public input two grant proposals were submitted and subsequently awarded to the Watershed Center of Grand Traverse Bay on behalf of the Village of Elk Rapids.

A National Fish and Wildlife Service (NFWS) grant of \$150,000 encompasses design and construction of a bioswale in the municipal marina and a series of street side rain gardens. The \$400,000 Great Lakes Restoration Initiative (GLRI) grant involves a large underground infiltration chamber under Cedar Street and curb cut bioretention cells downtown. Each year the complete practices are expected to reduce 3.8 million gallons per year of stormwater from discharging to the Great Lakes. Both projects are undergoing construction in 2020.

Outcomes

The initial project visioning and community engagement led to \$550,000 of grant awards funding design and construction for four GSI practices. Drummond Carpenter staff are preparing a complete construction document (CD) set, construction specifications, and a bid packages. The practices are scheduled for construction in 2020.