### **South Bay Floodplain**

This site is situated in a flood plain adjacent to South Bay in West Saint John. This area was completely inundated during the 2018 and 2019 floods, and will likely see further flooding in the future (top photo). The riparian area is dominated by ash species which are likely to be decimated with the arrival of the non-native Emerald Ash Borer (EAB) in the region. In partnership with WWF-Canada and with funding from NRCAN's 2 Billion



Trees Program, ACAP Saint John and the landowner planted 280 climate tolerant oak and maple trees in the floodplain to ensure that this riparian area will remain healthy through EAB infestation and under future climate scenarios (bottom photo). This project supports W W F - C a n a d a 's implementation of Priority Threat Management in the Wolastoq/Saint John watershed.

The property is a historical farmstead, originally settled in the late 1800's and has been cleared in the past for agricultural purposes (turnips, cow pasture, and hayfield). The landowner hopes to continue to restore the area to a floodplain forest and to reduce invasive plant species on the property.



### **Spar Cove**

Spar Cove is an infill site and former illegal dumping ground located at the confluence of Newman's Brook and the Wolastoq River. ACAP Saint John has been working to renaturalize the riparian area at Spar Cove since 2018 by blocking road access to the site to prevent illegal dumping, covering the infill with soil, planting native trees along the shoreline, and installing flood-proof benches and signage. This work, completed in partnership with TD Insurance and WWF-Canada, has transformed Spar Cove into a community space that provides educational opportunities while also increasing flood resilience. Community members have been supportive of this project and have commented on how it has improved this area as a recreational space to enjoy the river vista.

Before:



**Current State:** 



<u>During:</u> Volunteer events in 2019 (left) and 2020 (right).





#### **Montgomery Crescent Park rain garden**



Montgomery Crescent Park rain garden is a community-led project in a residential neighbourhood. Community members approached ACAP Saint John and suggested planting a rain garden in an unused park. With the support of the City of Saint John, and funding from both the City of Saint John and the New Brunswick Environmental Trust Fund, volunteers and ACAP Saint John staff were able to create a 200 m² rain garden containing over 400 native, water-tolerant plants. This rain garden provides habitat

and food sources for butterflies, birds, and bees in addition to reducing the impacts of increased rainfall on built infrastructure and neighbouring homes.

Before:



After:



#### **Geo Wall**

Newman's Brook is an urban waterway that is routinely mistaken for a ditch given its proximity to the roadway. As such, this watercourse is routinely overlooked and has been degraded over the years even though it is fish bearing. Where Newman's Brook and Patterson Brook converge, a culvert headwall was eroding, allowing a large amount of sediment to fill in the brook. In partnership with the City of Saint John and WWF-Canada a geowall was selected for the site. Using Flex MSE products, a green retaining wall was constructed at the site to prevent the culvert head wall from eroding into the brook while also reducing sedimentation from the roadway and improving filtration. This project demonstrates how 'hard engineering' principles can be used to create natural infrastructure that will promote healthy habitats.





#### **Constructed Wetland: Irving Oil Field House**

Through this Environment and Climate Change Canada's National Wetland Fund project, ACAP Saint John worked with the developer of the Irving Oil Field House to create a stormwater plan that included enhancing a small degraded wetland on-site to a fully functional constructed wetland. The site is located within the Marsh Creek watershed which is highly urbanized and faces many stormwater, water quality and flooding issues. This wetland has not only increased the stormwater containment for the infrastructure but offers tremendous wildlife habitat, educational opportunities, and community recreation space. The project has also improved the water quality and flood water retention in the area, creating a more resilient habitat in the face of climate change.





#### Before/After:

