

# GREEN SHIPPING ACTION PLAN

SEPTEMBER 2021

GREAT LAKES  
ST. LAWRENCE  
GOVERNORS  
& PREMIERS



The Great Lakes St. Lawrence Regional Maritime Transportation Strategy established the goals of doubling maritime trade, shrinking the environmental impact of the region's transportation network, and supporting the region's industrial core. While maritime is an inherently efficient mode of moving goods, there are many opportunities to increase efficiency and improve environmental performance.

The Great Lakes St. Lawrence Governors & Premiers (GSGP) partnered with Green Marine to identify opportunities to improve environmental performance in the region's maritime system. This action plan represents steps to improve regional environmental performance while increasing the system's overall competitiveness. The plan includes various actions aimed at key system users and governmental agencies. GSGP, working with key regional stakeholders, can help the regional maritime industry to meet short- and long-term goals.

## MARITIME INDUSTRY

### Efficiency and Emissions

- Assess current impacts by carrying out detailed annual emissions inventories of greenhouse gases (GHGs) and other air pollutants and set reduction targets based on this data
  - Conduct energy efficiency audits to identify areas for improvement and to implement an Energy Efficiency Management Plan to improve energy efficiency of operations
  - Begin transition toward smart shipping by:
    - Installing digital equipment to reduce paper use;
    - Using information technology to standardize data;
    - Creating a data sharing platform and begin developing tools;
    - Monitoring real-time fuel consumption
  - Carry out a pilot project on voyage optimization to assess feasibility and benefits for the region
  - Carry out pilot projects with alternative fuels
- Incorporate applicable quiet vessel technologies and practices
  - Monitor environmental impacts such as underwater noise to better inform operations
  - During maintenance, retrofits and new construction:
    - Conduct regular inspection and cleaning of hull/underwater surfaces
    - Apply environmentally friendly anti-fouling paint or other coatings
    - Use biofouling resistant materials for pipes and unpainted equipment and apparatus
  - Use Marine Growth Prevention Systems

### Green Operations

- Adhere to all voluntary measures such as slowdown zones to reduce coastal erosion and potential impacts to marine mammals



## PORTS AND TERMINAL OPERATORS

- Assess community impacts (e.g., noise, dust emissions, traffic) and implement a mitigation plan
- Monitor ongoing impacts and improvements
- Electrify vehicles, equipment, and machinery
- Install charging stations for electric vehicles in ports
- With ship owners, assess the economics and environmental benefits of installing shore power in ports

## GOVERNMENT

- Carry out a GHG inventory for the regional maritime system and set aspirational targets
- Begin transition toward smart shipping by:
  - Digitizing to reduce paper use
  - Ensuring data protection and security
  - Creating a regional data sharing platform and begin developing tools
- Carry out a pilot project on voyage optimization
- Identify future infrastructure needs for alternative fuels
- Assess the impacts, vulnerability, and risks of climate change on infrastructure
- Develop smart shipping solutions to improve efficiency and reduce wildlife risks along the Estuary and Gulf of St. Lawrence

## OVERARCHING STRATEGIES

### Promote Research, Development and Demonstration (RD&D)

- Invest in research and green technology RD&D projects
  - Support existing innovation centers and drive the creation of new business clusters, incubators, and accelerators

### Incentivize green shipping

- Recognize and reward initiative and innovation in sustainable transportation
- Expand policies and programs to support GHG reductions
- Facilitate access to capital for projects that will improve environmental performance

### Prepare for energy transition

- Initiate landside infrastructure planning (e.g., for refueling) and vessel modifications/new design to eventually accommodate new fuels and propulsion systems

### Build the long-term and ecologically sustainable potential of the regional maritime system

- Coordinate federal, state/provincial and governmental approaches

