

***ADVANCING NATURAL INFRASTRUCTURE IN CANADA***

# **Program Models: Criteria to Deliver Successful Multi-Stakeholder Natural Infrastructure Programs**

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*A Weston Family Initiative*

# ALUS Canada

- Community-developed, farmer-delivered
- Voluntary program
- Delivers natural infrastructure
- 22 communities in six provinces





## **Presentation:**

**Comprehensive study by Westbrook Consultants  
that looked at:**

- **Barriers to natural infrastructure funding in Canada**
- **National and Regional programs to finance natural infrastructure on agricultural lands**
- **Summary of Opportunities and Challenges**
- **Criteria for Successful Programs**



An aerial photograph showing a large herd of black cattle grazing in a lush green field. The cattle are scattered across the landscape, with some clusters and some individuals. The field is vibrant green, suggesting healthy grass. The perspective is from directly above, looking down on the herd.

## Why are farmers important?

- Single largest holder of private land
- Many populated centres surrounded by farmland
- Decades of land use change has reduced natural infrastructure
- Increased risk from flood and drought and need to improve water quality (e.g. reduce phosphorus and nitrates)



## **USDA's Natural Resources Conservation Service Programs include:**

- **Conservation Reserve Program (24 million acres)**
- **Conservation Stewardship Program (70 million acres)**
- **Agricultural Management Assistance Program**
- **Western Lake Erie Basin Initiative**
- **Environmental Quality Incentives Program**
- **Rural Development Water and Environmental Program**



An aerial photograph of a large body of water, likely a lake or reservoir, surrounded by a forested area. The water is dark blue, but there are significant areas of bright green, indicating algal blooms or other water quality issues. The surrounding land is covered in dense green trees and vegetation.

## **US Environmental Protection Agency:**

- **The Clean Water Act and Section 319 Grants**
- **Clean Water State Revolving Funds**



## State of California

2016 - New law that states: “source watersheds are recognized and defined as integral components of California’s water infrastructure.”



# America's Water Infrastructure Act of 2018

- Direction to the EPA to accept green infrastructure for stormwater management when applicable
- US Army Corps of Engineers to consider “natural or nature-based” projects as alternatives
- Funding for drinking water sourcewater protection
- A new grant assistance program to support local agencies' needs to address climate resiliency






# Multi-stakeholder Programs

A high-angle photograph shows two individuals, a woman in a blue shirt and a man in a white shirt, kneeling in a muddy, tidal flat area. They are engaged in planting mangrove seedlings. The woman on the left is using a small shovel to dig a hole in the mud. The man on the right is holding a tray of seedlings. Several black plastic trays filled with young mangrove plants are placed on the ground near them. The ground is a mix of light-colored sand and dark, wet mud, with some water visible in the background.

If well-designed can be cost-efficient,  
adaptable, sustainable = better results

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- An aerial photograph of a large body of water, likely a lake or river, showing a significant green algal bloom. The bloom is concentrated in the upper left and lower left portions of the image, appearing as a dense, bright green mass. The water in the rest of the image is a darker, more muted green. The bloom's edge is irregular and somewhat jagged.
- **US - Sustain Our Great Lakes Program**
  - **Australia - Rivers of Carbon**
  - **Australia - Water Sharing Investment Partnerships**
  - **US - Florida Everglades/Lake Okeechobee Dispersed Water Management Program**

### **Water Trading Programs**

- **Ontario South Nation River Watershed Total Phosphorus Management**
- **Chesapeake Bay Nutrient Trading Program**
- **Ohio River Basin Water Quality Trading Project (Interstate)**





## Alternative Financing Models – Opportunities

- Provide incentives
- Understand value and invest in co-benefits
- Manage risk
- Improve transparency and accountability
- Meet regulatory requirements
- Achieve cost effective gains





# **Alternative Financing models – Challenges**

## **Scale, Scope, and Administration**

- **Delivery units**
- **Supply and demand**
- **Administrative burden and transaction costs**

## **Regulatory, Legal and Administrative**

- **Policy driving action**
- **Continuity**

## **Performance**

- **Uncertainties**
- **Demonstration of co-benefits**
- **Verification process**





## **Elements for Success for Alternative Financing Models:**

- **Mix of policy drivers and voluntary actions**
- **Participatory approach**
- **Context-specific**
- **Performance-based**
- **Risk-informed, evidence-based**
- **Low administrative burden**
- **Transparent process**
- **Adaptive management**



## Recommendations to move forward:

- Resolve barriers in existing infrastructure funds
- Dedicate a portion of green infrastructure funds to natural infrastructure projects and/or create stand alone funding programs
- Convene experts and practitioners to develop natural infrastructure guidelines on how to design and evaluate projects (e.g. US Army Corp of Engineers process)





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