

# Protect Alberta Waters

## Aquatic Invasive species (AIS):

- Are plant or animal species introduced from other areas that not only survive, but thrive in our environment, to the point that our native species, economy, or society becomes threatened.
- Imminent AIS threats to Alberta's waterways include:
  - Eurasian Watermilfoil (EWM)
  - Zebra Mussels
  - Quagga Mussels
- While not considered present in Alberta, invasive mussels and EWM are spreading, mainly on trailered watercraft among water bodies throughout much of North America, including western states and Manitoba. Prevention is the best strategy.



Eurasian Watermilfoil



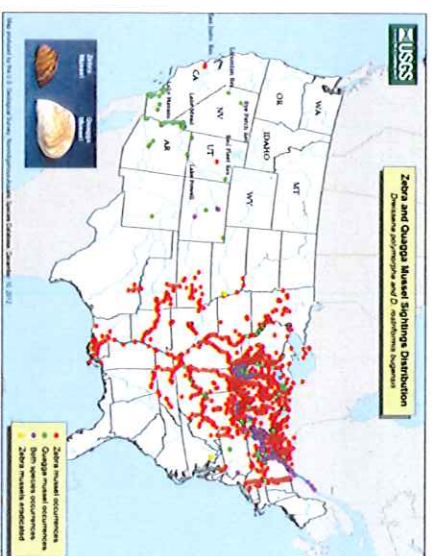
Zebra mussels



Quagga mussels

Actual size = 15 mm

Actual size = 20 mm



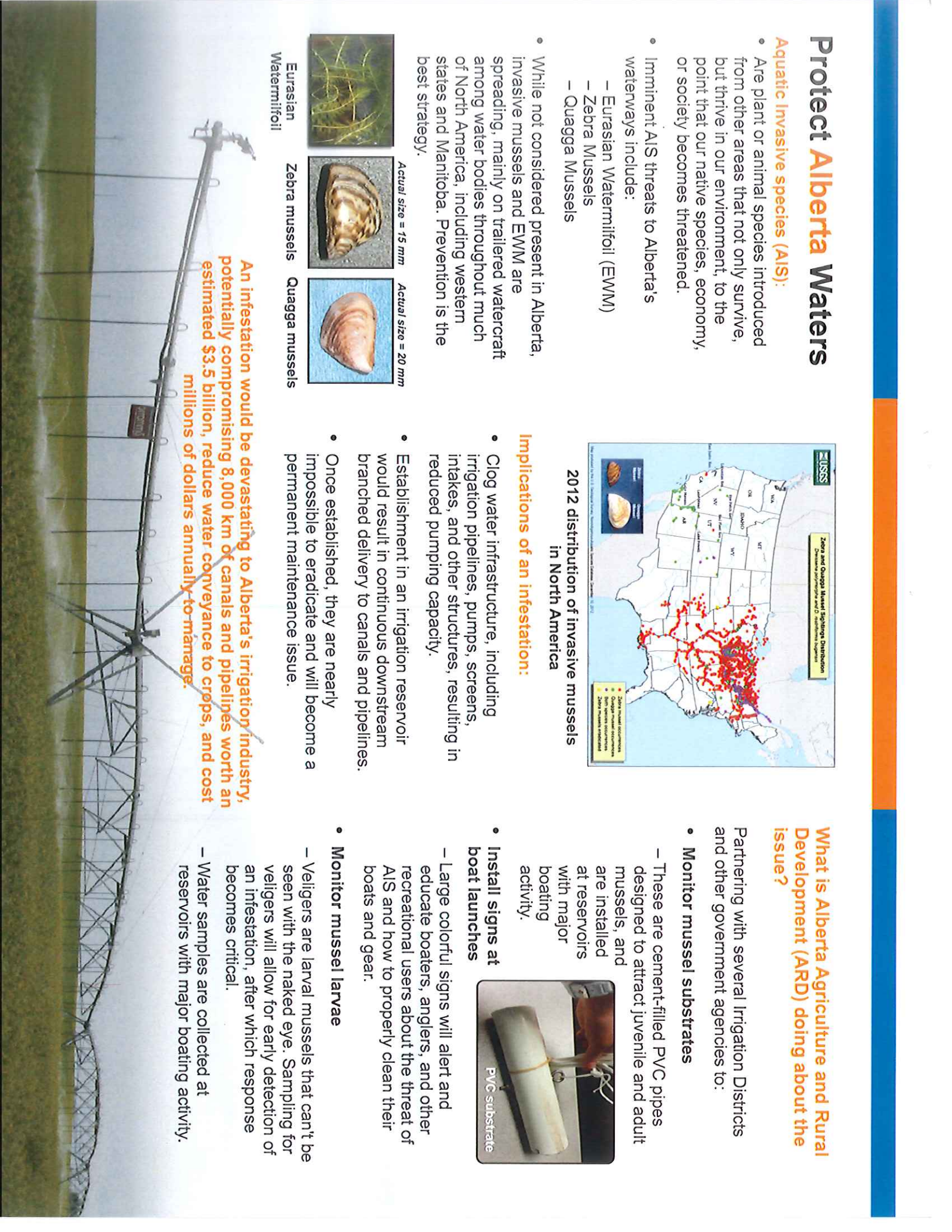
## Implications of an infestation:

- Clog water infrastructure, including irrigation pipelines, pumps, screens, intakes, and other structures, resulting in reduced pumping capacity.
  - Establishment in an irrigation reservoir would result in continuous downstream branched delivery to canals and pipelines.
  - Once established, they are nearly impossible to eradicate and will become a permanent maintenance issue.
- An infestation would be devastating to Alberta's irrigation industry, potentially compromising 8,000 km of canals and pipelines worth an estimated \$3.5 billion, reduce water conveyance to crops, and cost millions of dollars annually to manage.**

## What is Alberta Agriculture and Rural Development (ARD) doing about the issue?

Partnering with several Irrigation Districts and other government agencies to:

- **Monitor mussel substrates**
  - These are cement-filled PVC pipes designed to attract juvenile and adult mussels, and are installed at reservoirs with major boating activity.
- **Install signs at boat launches**
  - Large colorful signs will alert and educate boaters, anglers, and other recreational users about the threat of AIS and how to properly clean their boats and gear.
- **Monitor mussel larvae**
  - Veligers are larval mussels that can't be seen with the naked eye. Sampling for veligers will allow for early detection of an infestation, after which response becomes critical.
  - Water samples are collected at reservoirs with major boating activity.



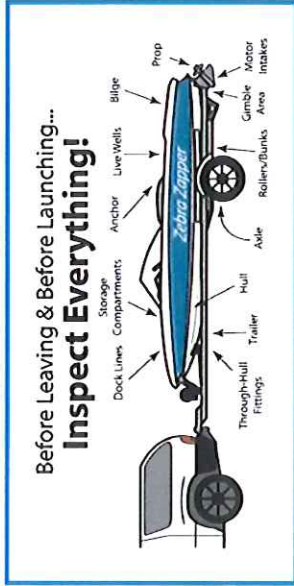
# Stop Aquatic Hitchhikers

# Aquatic Invasive Species

What can you do?

• Clean • Drain • Dry

your boat and all recreational gear.



Unwanted plants and animals can ruin your favorite recreation, fishing and boating waters, and foul irrigation and water conveyance infrastructure.

Report Aquatic Invasive Species

**1-855-336-BOAT  
(2628)**

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**STOP AQUATIC HITCHHIKERS!™**

For more information:

<http://crownmanagers.org/>  
<http://mywildalberta.com/>

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# Protecting Alberta's Irrigation Infrastructure



Quagga mussel growth on ABS pipe from Lake Mead, Arizona



Eurasian Watermilfoil can rapidly grow into thick, dense mats that clog boat propellers and affect recreational activities



Invasive mussels pose a major threat to irrigation



Alberta Agriculture and Rural Development  
Alberta Environment and Sustainable Resource Development