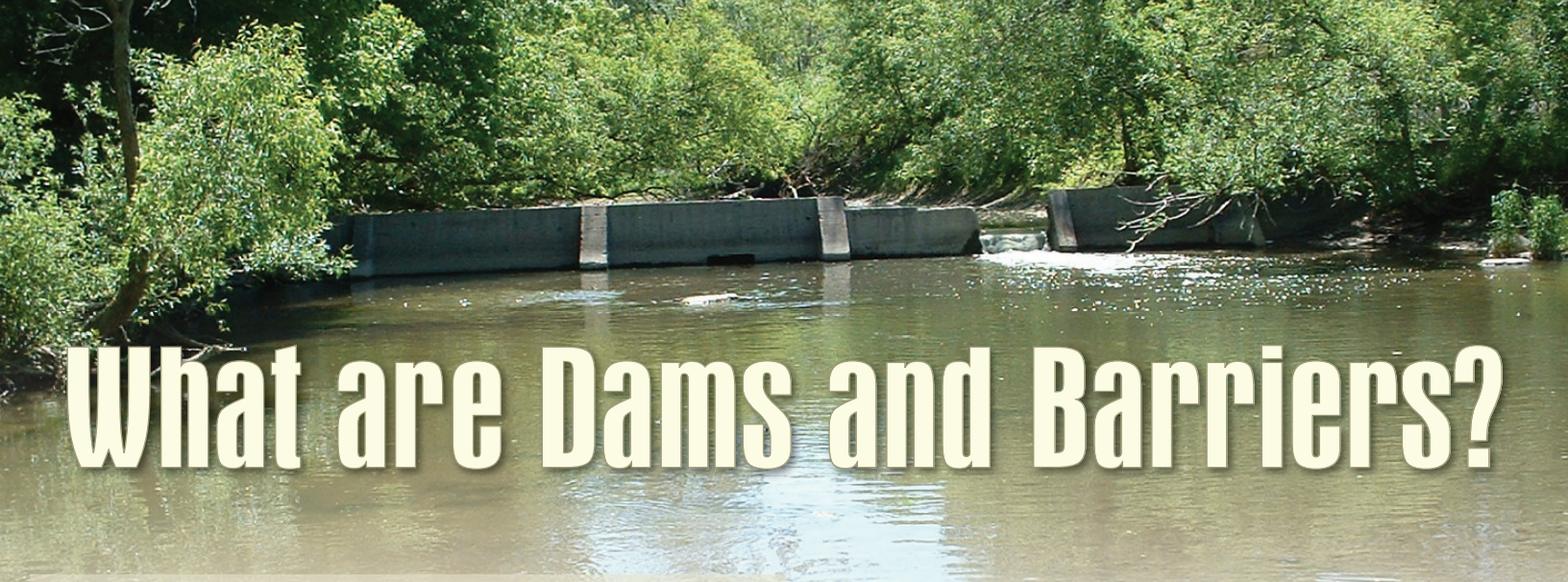

What are Dams and Barriers?

A DAM is a structure built across a river, lake, pond or stream to hold back water in order to raise its level and create a reservoir, or to divert the flow of water.
Examples of dams include:
- **Flood control dams**
- **Hydroelectric dams**
- **Mill dams**
- **Weirs**
- **Beaver dams**

A BARRIER is a physical blockage or impediment to the movement or migration of fish in a river, lake, pond or stream. Examples of barriers include:
- **Dams and weirs**
- **Perched culverts**
- **Train, road and lane crossings**
- **Low flow crossings**
- **Debris**
- **Fast flowing water**
- **Steep grade**
- **Waterfalls**

Why build Dams and Barriers?

- Store Water
  - o Provide water source for livestock, irrigation, fire fighting
  - o Run mill water wheels
  - o Generate hydroelectric power
- Manage Water Levels
  - o Prevent flooding
  - o Augment streamflow during dry periods
- Cross Over or Through Water
  - o Road, rail, bridge and low flow crossings
- Create Recreational Opportunities
  - o Reservoirs may be used for fishing, canoeing and swimming
- Create Wildlife Habitat
  - o Some fish, beaver and waterfowl may benefit

What are the Impacts of Dams & Barriers?

- Block migration of fish and other wildlife
- Isolate aquatic communities
- Replace river or stream habitat with slow-flowing lake or pond habitat
- Alter the original river channel and natural stream flows, which affects aquatic habitat
- Increase soil/sediment deposition in the reservoir upstream of dam
- Increase water temperature in the reservoir, thus warming the water downstream
- Increase eutrophication (excess nutrients causing excessive algae growth resulting in lack of oxygen)
- Increase evaporation from reservoir
- Increase erosion downstream of dam

Reasons to modify or remove a Dam or Barrier

- Improve water quality and habitat
- Remove a barrier to fish migration and other aquatic species
- Structure is reaching the end of its lifespan
- No longer serving a purpose or its original purpose
- Eliminate a safety hazard

Reasons to keep a Dam or Barrier

- Cultural value, community attachment to the structure and reservoir
- Structure is required for flood control, water storage or as a water source
- Prevent non-native invasive species from competing with native species
- Limit the spread of fish diseases such as Viral Haemorrhagic Septicaemia (VHS)

Options for Mitigation or Removal

Many options are available to reduce the impact of a dam or barrier on water quality, fish and other wildlife; from modifying it, to removing it completely. Funding may be available if you are interested in pursuing a project with your dam or barrier.

For more Information

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UPPER THAMES RIVER
CONSERVATION AUTHORITY
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