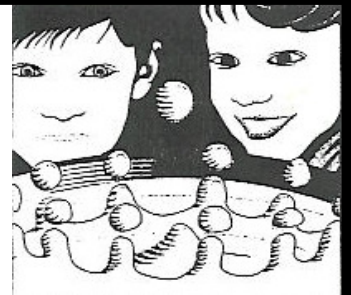


W.O.W.

Wonders of Water



Annual Water Wonder Day

This June you will be attending Water Wonder Day where you will have the opportunity to learn about Damariscotta Lake inside and out, spending an entire day at Wavus Camp in Jefferson. Captain Mulville from the Maine Lakes Conservancy Institute will welcome you aboard the Melinda Ann pontoon boat water lab. In this hour and a half discovery of the Lake, you will learn the basics of lake science, discover the wonders of water ecology and study current issues impacting water quality and lake health. Some of the research equipment you will use includes a benthic dredge and sieve, an underwater camera, and a hydrophone. You will also take part in an erosion hunt and a plant patrol, learn about alien lake invaders, and design your own tee shirt with educators from the Damariscotta Lake Watershed Association and the Maine Department of Environmental Protection.

WOW, what great ways to learn about the lake!

This WOW will provide you with more information to help prepare you for Water Wonder Day!

What do Dirt, Bacteria and Nutrients have in common?

They are the big three pollutants to water bodies. This means that dirt, bacteria, and nutrients make our water unfit for drinking, fishing, swimming and other activities. Let's take a closer look at these pollutants and what you can do to help protect water.

DIRT When rain or melting snow washes dirt into our water, the dirt smothers the little critters in the streams and lakes and kills any fish eggs clinging to rocks. Dirt can also clog the gills of fish and suffocate them. Also, if there is a lot of dirt in the water, plants cannot get enough sunlight to make food. **What can you do?** Stabilize exposed soil by making sure it is covered by vegetation (trees, grass, etc.) or hay to prevent it from washing into the water.

BACTERIA Some bacteria, such as fecal coli forms (which are found in the intestines of humans and animals), pollute the water. However, remember that not all bacteria are harmful. Bacteria can come from failing septic systems, discharges from sewage treatment plants, and livestock operations. **What can you do?** Pick up after your dogs (dog waste pollutes too). Maintain your septic system.



NUTRIENTS The two most common nutrients in lakes are nitrogen and phosphorus, which can cause too much algae to grow, turning the water green. Where do nutrients come from? Nutrients are found in many fertilizers that farmers and homeowners use. They are also found in animal waste and failing septic systems. **What can you do?** Make sure you're not over-fertilizing your lawn. Keep livestock out of streams. Use phosphorus-free detergents and properly maintain your septic system.

Invasive Aquatic Plants

What is an invasive aquatic plant?

It is a plant that has the ability to thrive and spread aggressively outside its natural range. A naturally aggressive plant may be especially invasive when it is introduced to a new habitat if the insects, diseases and foraging animals that naturally keep its growth in check in its native range are not present in its new habitat. An invasive aquatic plant is an invasive plant that grows underwater; invasive wetland plants (such as purple loosestrife) are not considered aquatic, although many people think they should be.

There are 11 aquatic plants considered invasive by the State of Maine, they are: Brazilian Elodea, Curly-Leaf Pondweed, Eurasian Water-Milfoil, European Naiad, Fanwort, European Frogbit, Hydrilla, Parrot Feather, Variable-Leaf Water-Milfoil, Yellow Floating Heart, and Water Chestnut. Over 30 lakes in Maine are known to be infested with invasive aquatic plants. The 4 invasive aquatic plants documented in Maine lakes are Eurasian and Variable-Leaf Water Milfoils, Hydrilla, and Curly-Leaf Pondweed.

Does Damariscotta Lake have any invasive aquatic plants?

YES. In September of 2009, a DLWA volunteer discovered Hydrilla growing in a small cove in Jefferson. Hydrilla is considered the worst invasive aquatic plant in North America. In Maine, Hydrilla is also known to exist in Pickerel Pond in Limerick, which is in York County.



Hydrilla growing in
Pickerel Pond.

WANTED

FOR INFESTING DAMARISCOTTA LAKE

Distinguishing Characteristics:

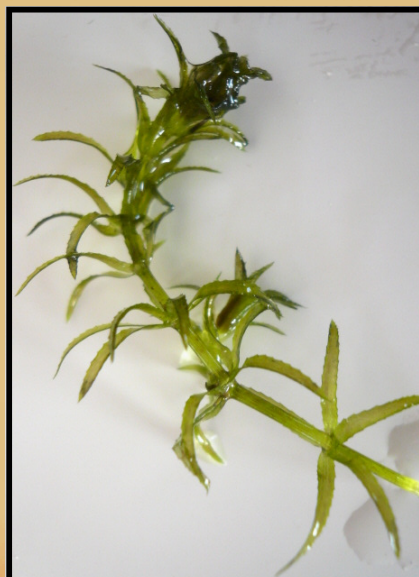
- 4-8 leaves per whorl
- finely serrated leaves

Habitat:

- still or flowing waters
- waters up to 30 feet deep

Lookalikes:

- Brazilian Waterweed, Native Waterweeds, Mare's Tail



HYDRILLA

Origin

- this plant is native to Africa, Australia, and parts of Asia

Dangers:

- can grow up to 2 cm a day
- will crowd out native plants and grow in dense mats preventing people and fish from enjoying the lake

Attention Citizens: Town Meeting at Water Wonder Day

Disclaimer: The following proposal is not real. Similar plans exist in other areas, but the following story is just for the Water Wonder Day Town Meeting purposes.

Here is what each group represents:

Developers: These people are from out of town and are very wealthy; they build huge resorts everywhere. They pay and plan for all of

the construction and see this resort as an investment. Recently the State of Maine sold the Damariscotta Lake State Park to a group of

developers. The town of Jefferson is meeting to discuss the site and discuss with the developers their thoughts and concerns about the possibility of resort building on the Lake. Present at the meeting will be the developers, local business owners, lake users, contractors, the town government, and the Damariscotta Lake Watershed Association. (DLWA)

Local Business Owners: These business owners rely on the public to make their money. The resort will have varying effects on the businesses; both good and bad. Examples include: Bond Brothers, Jefferson Market, and the Bed & Breakfast.

Lake Users: These are local and out of state people who use the lake for recreation.

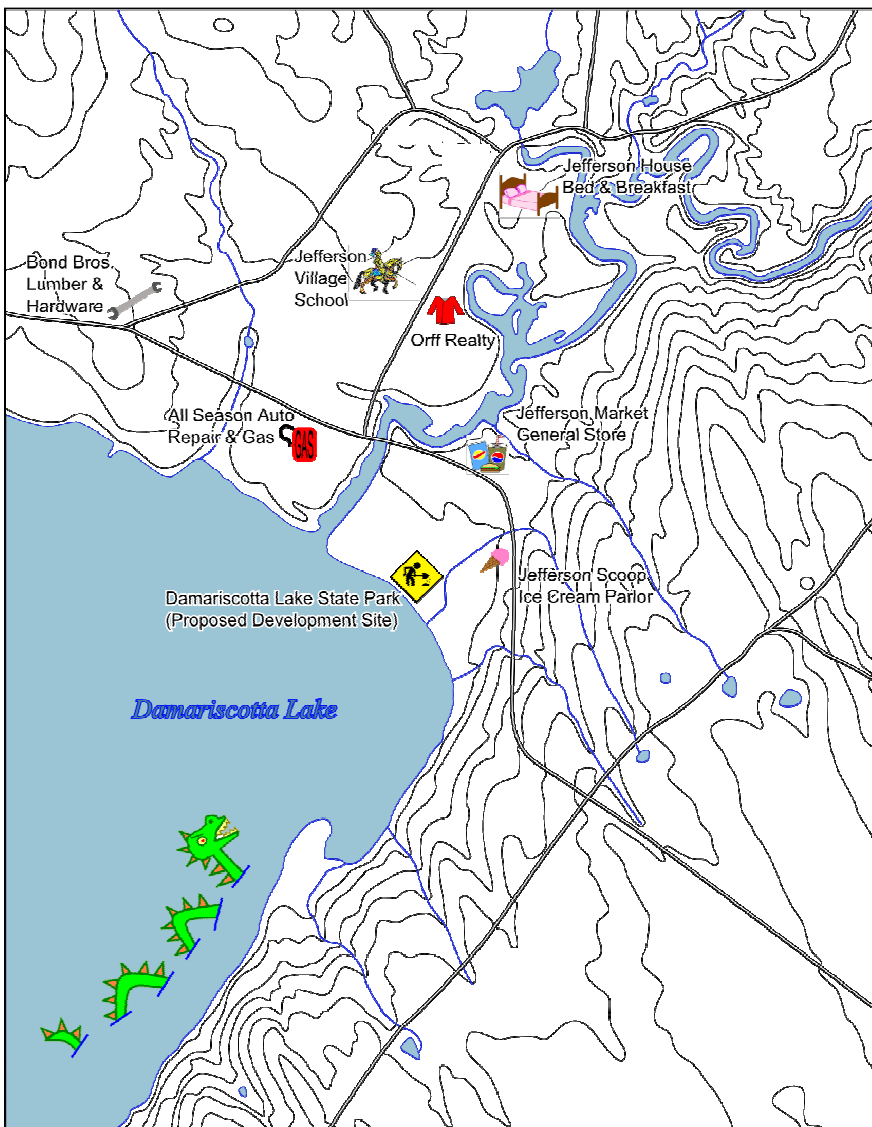
Examples include: swimmers, boaters, fishermen, and beach-goers.

Contractors: These are local workers who are hired and paid by the developers. This development is a great money making opportunity for them. Examples are: masons, landscapers, and carpenters.

Town Government: This group includes various officers and selectmen. They will be happy about raised taxes due to the resort because it will mean more money for the town to spend. They are glad that people will get jobs but nervous about what effect the resort will have on trash removal, sewage, and road maintenance.

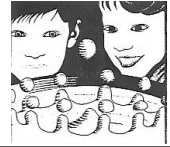
DLWA

This is the local non-profit environmental organization which works to conserve land and limit development so that it can be enjoyed by people and wildlife. They test and monitor water quality each summer.





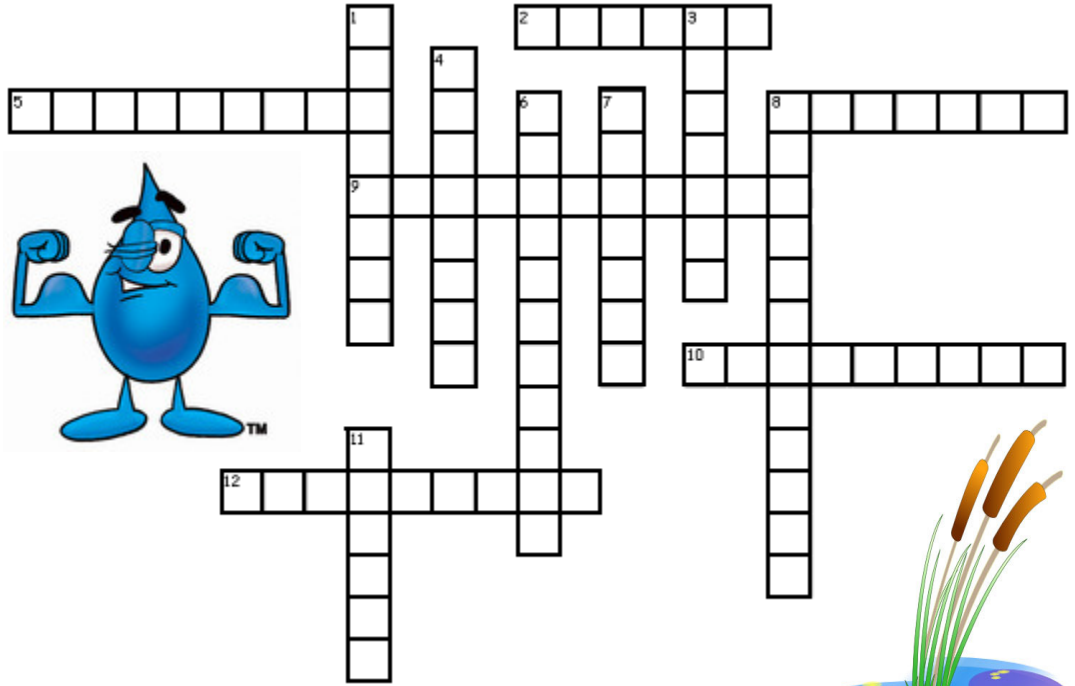
Review of Key Words from W.O.W., volumes 1, 2, & 3



How well do you remember vocabulary from the W.O.W. newsletters?
Test your memory on this W.O.W. themed crossword puzzle!

DOWN

1. To use natural resources in a way that doesn't use them up
3. The process of land being worn away by water
4. A type of plant that is unwanted and can destroy water quality of lakes
6. Water found in the cracks and spaces between rocks and soil
7. Water must be good _____ in order to be drinkable
8. The process of water vapor cooling and forming clouds
11. Monitors use this type of disk to check the water's clarity



ACROSS

2. Plants found along shore lines that slow the flow of water
5. An undesired change in air, water, or land that can cause harm to humans, plants, and animals
8. This type of line shows equal elevation on a topography map.
9. The process of water turning into water vapor
10. Fish breathe this form of oxygen
12. Everyone lives in one of these geographic formations!

See you at Water Wonder Day!



What is the United States Environmental Protection Agency??

The U.S. Environmental Protection Agency, or EPA, is responsible for protecting human health and the natural environment from pollution. EPA does this by conducting research, enforcing laws, developing national policies, and providing information and technical help to states and communities.

You can visit the EPA online at www.epa.gov/kids/

