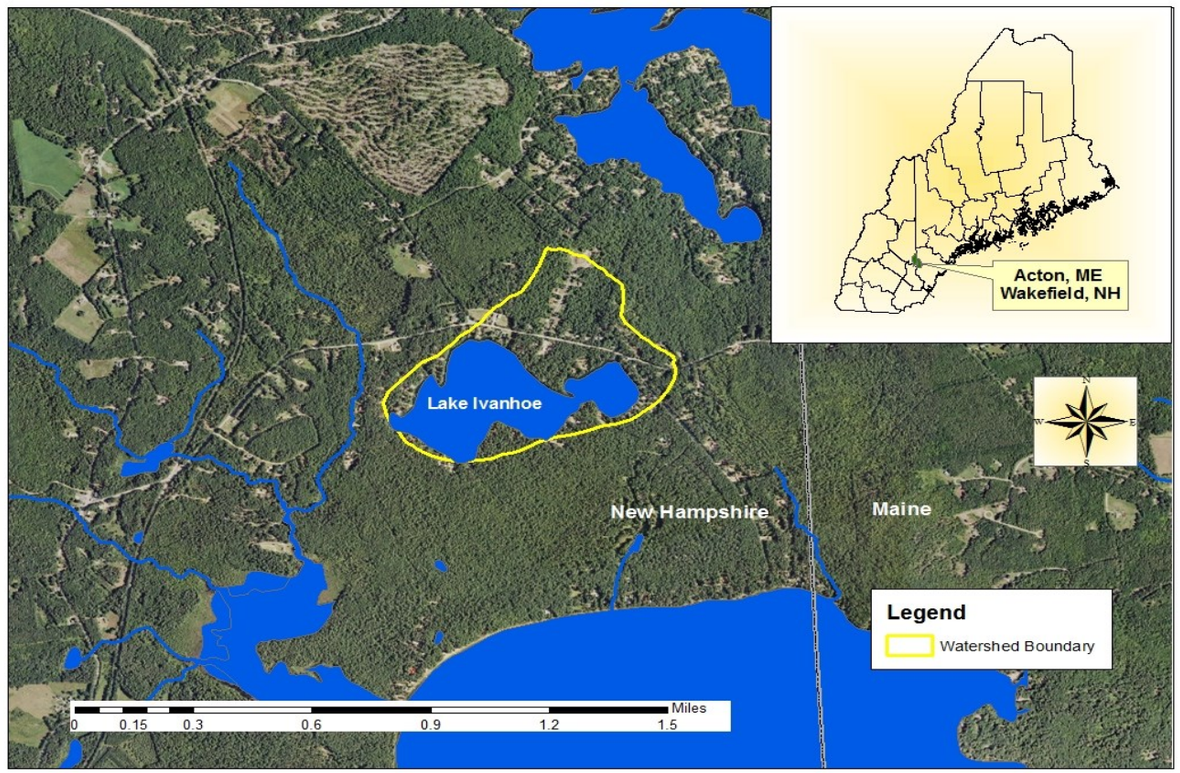
Lake Ivanhoe aerial photo

Lake Ivanhoe/Round Pond Association:

Lake Ivanhoe/ Round Pond



What you can do:

1. Always check your boat, trailer, and equipment for plant material.
2. Respect shoreland zone restrictions.
3. Control polluted run-off from roads, paths, driveways, and roof.
4. Cultivate flowers, shrubs, or trees as a shoreline buffer.
5. Limit lawn size AND:
   - A. Don't use fertilizers.
   - B. Use phosphorus-free or low-phosphorus fertilizers.
   - C. Use low, slow release nitrogen fertilizers.
6. Don't stress the septic system.
7. Dogs, humans, and boats should never be washed in the lake.
8. Observe headway speeds within 200 feet of Maine shores and 150 feet of NH shores.
9. When replacing a boat motor, choose a clean 4-stroke engine.
10. Pick up pet wastes.
11. Volunteer as a lake host.
12. Get a free AWWA site assessment.
13. Support your local and regional lake associations.

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Acton Wakefield Watersheds Alliance

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References:

- Salmon Falls Headwater Lakes: Watershed Management Plan. FB Environmental and Acton Wakefield Watersheds Alliance (2010)
- www.lakesofmaine.org
- NH Fish and Game Department

Get to Know Your Lake, Your Lake's Watershed, and the People who Support It

AWWA YCC Project on Lake Ivanhoe - Infiltration Steps

Programs:

- Lake Ivanhoe does not yet have a **Boat inspection program** or a **Weed watchers program**
- **Acton Wakefield Watersheds Alliance:** Since 2005, AWWA has been protecting and restoring water quality in the Wakefield, NH and Acton, ME lakes region by affecting land use policies and practices through education and remediation of polluted runoff.
- **Youth Conservation Corp:** AWWA employs local high school students for summer work in their YCC program. The YCC implement numerous techniques and structures to slow and stop sediment erosion from degrading the health of the lakes. The program also offers technical assistance for homeowners wishing to help protect the lake on their own.

Shoreline Structure:

The Lake Ivanhoe shoreline is composed of primarily low density residential houses and camps (66%). The majority of these structures (88%) are within 50 feet of the shoreline. The proximity of these structures to the shore leads to primarily high property impact from polluted runoff carrying sediments, pet wastes, and lawn fertilizers. The 57 septic systems along the shore can also impact the clarity and health of the lake if not maintained properly.

Watershed Survey:

In 2009, a team of 46 volunteers and technical staff from the York County SWCD, AWWA, Maine DEP, and NH DES identified areas of erosion that contribute to lake pollution. **25 sites** were identified as impacting water quality. Of these 25 sites, 20 (80%) were found in residential areas. These sites were found to have a low and medium impact on water quality and could be easily fixed at low cost by the homeowner with some technical assistance. While residential properties were found to contribute **11.4 tons of soil per year** to the lake, construction was estimated to contribute **17.8 tons per year** to the lake.

AWWA YCC Project on Lake Ivanhoe—Erosion Control Mulch (ECM) with slate walkway.

Watershed Characteristics:

Location: Wakefield, Carroll County, NH
Coordinates: 43°36'04"N 70°59'24"W
Major Drainage Basin: Piscataqua River, Portsmouth, NH
Subdrainage Basin: Salmon Falls River
Drains to: Great East Lake
Outflows: Historically a small stream that was filled in by construction. Current outflow is overland to Great East Lake.
Watershed Area: 455 acres (0.71 mi^2)
Watershed Forest Cover: 64%
Developed Watershed: 17%
Buildable Area in Watershed: 59%
Lake Classification: Oligotrophic

Physical Synopsis:

Lake Ivanhoe has the smallest **area, volume,** and **depth** of the five Salmon Falls Headwaters Lakes. It is the only lake that does not **stratify**. In other words, it remains at a relatively constant temperature throughout the water column.

Lake Characteristics:

Mean Depth: 12 feet (3.7 m)
Max Depth: 20 feet (6.1 m)
Surface Elevation: 571 feet
Surface Area: 68 acres (0.12 mi^2)
Volume: 992,000 m^3
Perimeter (Shoreline): 8,858 feet (1.67 mi)
Average Time Water Remains in Lake: 1.1 yrs
-In other words, it takes 1.1 years for water that enters the lake to leave the lake.
Average Transparency: 16.7 feet (5.1 m)
Water Sampling Began: 1981
2009 Phosphorus Concentration: 8.0 parts per billion (ppb)

In order to preserve the lake's water quality the phosphorus concentration needs to be reduced.

Dissolved Oxygen: Because the lake does not stratify (see stratification under *physical synopsis*), the DO remains relatively constant throughout the water column from top to bottom.

AWWA YCC Crew 2012