

June 2009

Drinking Water Source Protection Committee
Approved Minutes of Meeting 06/08/09

Members present: Dave Shinnlinger, Chairman; Bob Reagan, Selectman; Edward Berger; John Bergeron, Secretary.

Meeting called to order at 7:10 PM by chairman Shinnlinger at the town offices

The meeting was devoted to stuffing envelopes with material for a mailing to all watershed property owners this month. The cover letter included in that mailing is attached.

Meeting adjourned at 8:20 PM

Respectively submitted,

John Bergeron

**Town of Canaan Water Department &
Canaan Drinking Water Source Protection Committee &
Cardigan Mountain School**

Dear Canaan Street Lake Watershed and/or Wellhead Protection area Landowner,

The southeast cove of Canaan Street Lake is a drinking water reservoir for Canaan Village. There are marginal problems with trihalomethanes and haloacetic acids, which are caused by high levels of organic carbon, and which in turn are caused by phosphorous. In the Canaan Street Lake watershed, several decades of human activity have increased phosphorous levels above those normally found in remote lakes, and this is impacting Canaan Village's drinking water. Cardigan Mountain School, Crescent Campsites, and many private residences draw drinking water through wells adjacent to the lake, and presently there are no known problems with these water wells, but we must exercise care to preserve these wells.

There are some steps we can take to minimize the Canaan Village drinking water problem and protect area wells, and we ask all watershed landowners to consider the following:

- 1 Have your septic system cleaned at least every three years:
- 2 Use low phosphorous dishwashing detergent.
- 3 Avoid domestic animal waste near streams and lake.
- 4 Use slow release, low phosphorous fertilizer at minimum application levels.
- 5 Allow natural vegetation and leaf litter to accumulate near water bodies:
- 6 Minimize high-speed traffic or boat wakes near the reservoir.
- 7 When using fireworks, please minimize waterbody contact.
- 8 Avoid spilling gasoline on the ground, especially near wells, brooks, or the lake.
- 9 Handle, store and dispose of gasoline, paints, and chemicals properly.

Phosphorus is a major risk to the water supply because it increases the amount of organic matter in the lake and leads to rapid plant growth, which negatively affects water treatment processes. Phosphorous comes from contaminants such as human, animal, wildlife waste products, decaying plant matter, fertilizer and soil components. These are washed directly into the lake or gradually moved to the groundwater and then to the lake. This will occur throughout the watershed, but it is especially important to minimize phosphorous if you are near any water including brooks, wetlands, intermittent streams, or the lake. Once phosphorous reaches one of these waterbodies it is generally carried quickly downstream to the lake. Phosphate is another version of phosphorous and is just as harmful.

1. While we think of septic systems as a sanitary solution, they do discharge contaminants into the soil and into the groundwater (nitrates, bacteria, pathogens as well). Older septic systems, which are not raised mounds, are poor at removing phosphorus, so most of it goes to the groundwater and then to the water supply.
2. A major household source that you can easily control is automatic dishwashing detergent. Low phosphorous dishwashing detergents are available.
3. Pet and farm animal waste contains phosphorous, and should be minimized near streams or the lake. We can do little to control wildlife's phosphorous contribution.

4. Fertilizers should be both slow release and low phosphorous. If fertilizer is marked 29-2-4, the middle number "2" represents phosphorous, and smaller is better. Within 25 feet of the lake no fertilizer is allowed, but lime is acceptable.
5. Stormwater runoff contains silt and sand, which contains considerable phosphorus. Maintaining a vegetative buffer along streams and the lake, such as native plants, groundcovers, bushes, saplings, trees, leaf litter, roots, and fallen limbs helps to capture most phosphorus. Lawns, however, are not very effective at removing phosphorous from stormwater runoff, and they tend to accumulate Canadian Geese fecal material. Planting some native low shrubs or groundcover near the lake will discourage these waterfowl and preserve your lake view. Existing cleared areas may be maintained, but please give consideration to reducing them.
6. Wind, waves, boat wakes, and boat propellers churn the lake water and raise both phosphorous and organic matter from the lake bottom. When possible it is desirable to minimize boat traffic near the reservoir boundary. Nature will continue to churn the waters, but we can help by reducing our portion.
7. Fireworks contain a number of toxic chemicals (lead, barium, dioxin, cadmium, perchlorate, and others). Keeping debris out of the lake best protects water quality.
8. Draining gasoline onto the ground, or burning with gasoline is harmful to wells.
9. Refuel boats, snowmobiles, ice augers on shore and away from wells, not on the lake or ice.

No matter where you live in the watershed, phosphorous and other contaminants from your land are travelling along the surface to the nearest stream, or moving down to groundwater and then to the lake or wells. Please help us minimize the amount of phosphorous and other contaminants reaching the lake and wells, as this will mitigate the Village water problem, protect wells, and preserve lake recreation for years to come.

Thank you for your consideration and please contact Edward Berger, John Bergeron, Bob Reagan, Dave Shinnlinger, or Tim Jennings with questions,

Bob Reagan, Chairman
Canaan Water Department

Dave Shinnlinger, Chairman
Drinking Water Source Protection Committee
Town of Canaan

Tim Jennings, Director
Facilities Operations and Maintenance
Cardigan Mountain School