Crystal Pond Watershed Inspection 7/19/2021 Notes:

To view all photos from this watershed inspection, please email me (hillary.kenyon@gmail.com) for access to the shared Google Drive photo album (with approximate geo-location from each photo). All volunteers that have access to this shared Google photos album will be able to upload their own smart-phone photos, to keep track of updated watershed conditions and sampling sites for the future. The following field notes and general recommendations are meant to enhance future community conversations about watershed management.

Camp Yankee Road
No catch basins observed on first part of road

Stream from Buell's Orchard
Field seepage/runoff from Buell's Orchard (photo@2:56) flows under the road and into the woods, along the Crystal Pond Road northwards and then back across the road towards what appears to be in direction of Inlet 8.

41.918475, -72.105042 First road crossing; 41.920097, -72.105636 Second road crossing

First road crossing at Buell's Orchard is a good place for Eutrosorb and/or wetland plantings to use nutrients and more WQ testing, likely a source of consistently high nitrogen. There is a long meandering way for this stream to allow for some natural dilution of agricultural nutrients/fertilizers through the woods, but ultimately some of these nutrients will make their way (particularly nitrogen) to the lake, even if good fertilizer practices are in place. Nitrogen travels easily through groundwater, often faster than trees can use it. There could be a planted filter strip along the inside of the fence to allow roots to intercept groundwater nitrogen.

Historical in-lake nitrogen data suggests that in-lake nitrogen concentrations have actually decreased since the 1990s and early 2000s. The TN concentrations measured in 2014-2021 were some of the lowest on record. Inlet 7 appears to come from the Buell's Orchard farm pond further south. Both Inlets 7 and 8 get runoff from the orchard.

Soil erosion just uphill of Inlet (Culvert) 9 on Lake Drive, just around the corner from Crystal Pond Road private property runoff from construction land disturbance – could use catch basin filters to prevent sediment from flowing into the basins during high-flow storms. (41.918475, -72.105042)

Would be best to discourage property owners from storing large amounts of open sediment near the side of the road. Machinery can easily track soil into the road, bringing large amounts of phosphorus attached to soil particles that will eventually get washed into the catch basin system during rainfall events.

All the catch basins on Lake Drive could use filters, and the sides of the roads with heavy erosion need better vegetated swales to secure sediment.

Home construction not using adequate soil and erosion control practices. Contractors should prevent tracking soil onto the road and install silt fences to prevent erosion of open soil.

Corner of Lake Drive & Cove Road

Both the northeastern side of Crystal Pond Road and the E. Lake Rd/Cove Rd had significant roadside and roadway erosion. It is incredibly important to make sure that dirt roads are not impairing downstream areas. Contrary to popular belief, dirt roads are not permeable and runoff is still high, like that of a regular paved road, except dirt roads bring more phosphorus via runoff through eroding soil particles, particularly fine clays. This area will impact Inlet 1, could not investigate further due to private roads (Photos from approximately 41.928306, -72.098892)

Corner of Crystal Pond Rd and Kenyonville Rd, private driveway very muddy after the rain. Soil erosion present near entrance to Kenyon Woods. Private property, could not access for further investigation. Horses observed in the fields. Horses do generally present a threat of nitrogen waste through surface and groundwater, but a small number of hourses may not be a major concern. Ultimately the threat of nutrient pollution from horses and other farm animals depends on how close to a stream or culvert the animals reside. The likely area to be affected is Area 2, 3, or Culvert 3. Increase general community awareness around how soil erosion impacts streams and the lake water quality; encourage best management practices on private lands.