

| PCS Reservoir | | |
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| Contaminant of Concern | Potential Source | Protection Area Relevant Information |
| Oxygen Saturation | Oxygen Saturation Levels have held declined steadily since 1987 from just above 80% to just above 60%. Generally, the primary cause of oxygen depletion in a water body is from excessive algae and phytoplankton growth driven by high levels of phosphorus and nitrogen. This can also be caused by an overgrowth of algae that consume the oxygen in the impoundment. The density of the Water Chestnut mats has severely limited light penetration into the water likely reduced the growth of native aquatic plants beneath the canopy. The reduced plant growth combined with the decomposition of the water chestnut plants which die back each year are likely contributing to reduced levels of dissolved oxygen in the water. | Aerators have been installed - harvesting the invasives is needed - as well as addressing contributing factors that lead to their proliferation (turbidity, nitrogen and phosphate levels) |
| Total Phosphate | Total Phosphate has risen slightly from roughly .04 ppm to roughly .05 ppm. Levels above 0.1 ppm usually indicate human-influenced pollution sources. This includes runoff into waterways from: wastes produced by poultry, dairy and other animal farming operations that are not properly managed, concentrations of droppings from nuisance animals (e.g. Canada geese) and even | Review of Ag and septic within proximity of streams needed |
| Petroleum | Fueling stations, bulk storage | Mapping these facilities |
| Turbidity | Turbidity has steadily increased from 1987, from roughly 5 NTU to more than 20 NTU. Construction or mining activities, Natural erosion may be contributing causes. | analysis of slopes and development within the watershed |
| Chlorides | Road salting applications | Chlorides have risen sharply from 100ppm levels in 1987 to a roughly 125ppm average in 2019. Chloride concentrations of between 1 and 100 ppm (parts per million) are normal in freshwater. This could be an indication that road salt application is impacting the stream |
| Fertilizer and Lawn Chemicals | Residential Development and potential growth at former French's Hollow golf course | Cluster Dev't, conservation subdivision, land protection strategies |
| Pesticides | Orchards and Ag operations | |

| PCS Black Creek | | |
|-------------------------------|---|--|
| Contaminant of Concern | Potential Source | Protection Area Relevant Information |
| pH | pH in the Black Creek has risen slightly from 7.5 to 8 on average. The normal, healthy range of pH for supporting aquatic life is between 5 and 7. An increase in pH could be due to contribution of lime, a neutralizer of acid soils in agriculture. Areas with a lot of limestone may also have more alkaline waters naturally. | Need to determine if soils are a contributing factor or this is the result of ag |
| Total Phosphate | Levels above 0.1 ppm usually indicate human-influenced pollution sources. This includes runoff into waterways from: wastes produced by poultry, dairy and other animal farming operations that are not properly managed, concentrations of droppings from nuisance animals (e.g. Canada geese) and even household pets, seeping of sewage wastes from improperly-sited or poorly-maintained home septic systems, and inadequate sewage treatment plants. | Review of Ag and septic within proximity of streams needed |
| Petroleum | Fueling stations, bulk storage | Mapping these facilities |
| Temperature | Temperatures in the waterbody have steadily increased since 1987 - an indication that increased impervious development, which discharges warmer water, could be impacting the stream | |
| Fecal coliform | Average, non geomean levels had increased sharply between 1987 and 2002, rising from 150 colonies /100mL to more than 300 colonies /100mL. This could be the result or runoff into waterways from: wastes produced by poultry, dairy and other animal farming operations that are not properly managed, concentrations of droppings from nuisance animals (e.g. Canada geese). It may also mean seeping of sewage wastes from improperly-sited or poorly-maintained home septic systems are to blame. | |
| Pesticides | Orchards and Ag operations | |

PCS Bozen Kill

| Contaminant of | Potential Source | Protection Area Relevant |
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| pH | pH in the Black Creek has risen slightly from 7.5 to 8 on average. The normal, healthy range of pH for supporting aquatic life is between 5 and 7. An increase in pH could be due to contribution of lime, a neutralizer of acid soils in agriculture. Areas with a lot of limestone may also have more alkaline waters naturally. | Need to determine if soils are a contributing factor or this is the result of ag |
| Petroleum | Fueling stations, bulk storage | Mapping these facilities |
| Temperature | Temperatures in the waterbody have steadily increased since 1987 - an indication that increased impervious development, which discharges warmer water, could be impacting the stream | |

PCS Normans Kill

| Contaminant of Concern | Potential Source | Protection Area Relevant Information |
|--------------------------------------|--|--|
| pH | pH in the Black Creek has risen slightly from 7.5 to 8 on average. The normal, healthy range of pH for supporting aquatic life is between 5 and 7. An increase in pH could be due to contribution of lime, a neutralizer of acid soils in agriculture. Areas with a lot of limestone may also have more alkaline waters naturally. | Need to determine if soils are a contributing factor or this is the result of ag |
| Total Phosphate | Levels above 0.1 ppm usually indicate human-influenced pollution sources. This includes runoff into waterways from: wastes produced by poultry, dairy and other animal farming operations that are not properly managed, | Review of Ag and septic within proximity of streams needed |
| Petroleum | Fueling stations, bulk storage | Mapping these facilities |
| Turbidity | Construction or mining activities, Natural erosion | analysis of slopes and development within the watershed |
| Chlorides | Road salting applications, increasing Sq. Ft. of impervious surfaces in the watershed contribute | Chlorides have risen sharply from 100ppm levels in 1987 to a roughly 125ppm average in 2019. Chloride concentrations of between 1 and 100 ppm (parts per million) are normal in freshwater. This could be an indication that road salt application is impacting the stream |
| Temperature | Temperatures in the waterbody have steadily increased since 1987 - an indication that increased impervious development, which discharges warmer water, could be impacting the stream | |
| Fertilizer and Lawn Chemicals | Residential Development and potential growth at former Hiawatha Trails golf course | Cluster Devt, conservation subdivision, land protection strategies |