

**COLUMBIA WATERSHED & LAKE STORM DAMAGE EXAMPLES  
FROM DECEMBER 2023 & JANUARY 2024 STORMS  
& FUNCTIONAL VS NON FUNCTIONAL DRAINPIPES**

**BACKGROUND:**

For a 6-week period of time from December 11, 2023, thru January 28, 2024, we had seven storm events that produced a precipitation total of 17.51". The official CT weather data provided the two-month precipitations totals for those storms as:

- Storms on December 11, 18 & 28 produced 9.14" of rain.
- Storms on January 7, 10, 13 & 28 produced 8.37" of rain and/or snow.

Combining the amount of rain and/or snow with a water table that is essentially at ground level and Nature outpaced the ability for the lake to maintain the winter drawdown water level despite the dam gate remaining open from mid-December 2023 thru February 2024. Below are a few of many examples on the lake as to how drainage systems were overwhelmed.

**Watershed Drainage Overwhelming Stormwater, Swale & Inlets Draining into the Lake Examples:** In two of the seven storms, the December 18<sup>th</sup> and January 10<sup>th</sup> storms rainwater flow and force was such that it overwhelmed the watershed area and drainage systems into the lake. This caused forceful overflow of water to paths of least resistance, flooding of grounds and structures and lakebed erosion. A few examples of the force, overflow and resulting damage are:



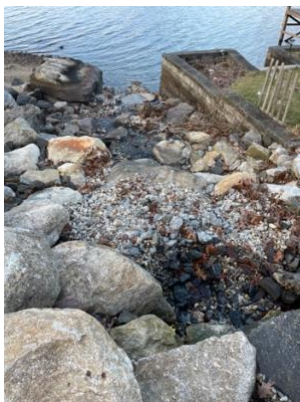
Waterfall – Route 87



Route 87 Overflow



Erdoni Road Culvert Overflow



Sleepy Hollow Swale Destruction



Erdoni Road Beach Erosion



Dobush Right of Way

**Watershed Drainage Overwhelming Stormwater, Swale & Inlets Draining into the Lake Examples: (continued)** In two of the seven storms, the December 18<sup>th</sup> and January 10<sup>th</sup> storms rainwater flow and force was such that it overwhelmed the watershed area and drainage systems into the lake. This caused forceful overflow of water to paths of least resistance, flooding of grounds and structures and lakebed erosion. A few examples of the force, overflow and resulting damage are:



Lakebed Erosion



Lakebed Erosion

**FUNCTIONING AND NON-FUNCTIONING STORMWATER DRAINS:** In order to assess stormwater drainage elements as phosphorous and nitrogen that can negatively impact the lake's water quality, our lake consultant, TRC recommended at a rainstorm's end that we inspect the major stormwater drains to ensure that they are functioning or not. At the end of the December 28<sup>th</sup> storm 24 drains or swales were inspected for their 'First Flush' Flow. Examples From Functional Stormwater Drains are:



36 Erdoni Road



10 Erdoni Road



Henniquen Road/Beach



200 Route 87



Lower Route 87 Between Lewis/Moran's



Upper 166 Route 87

**FUNCTIONING AND NON-FUNCTIONING STORMWATER DRAINS: (continued)**

During the December 28<sup>th</sup> storm of 24 drains viewed three had No 'First Flush' Flow and are considered Non-Functional. Those three non-functional drains are:



Sleepy Hollow



36 Erdoni Road Swale



Dobush Right of Way – No 'First Flush' Discharge

**January 28<sup>th</sup> Storm Recheck:** To check the functionality of the newly installed drainpipe at the Dobush Right of Way we revisited to capture its 'First Flush' Flow. ON January 28<sup>th</sup> the drainpipe had no discharge while other stormwater drains and swales had discharge. It is considered a non-functional drainage pipe. TRC, our lake consultant recommends further assessment of the non-functional pipes to determine why there is no discharge.



Dobush Right of Way –  
No 'First Flush' Discharge  
Non-Functional Drain