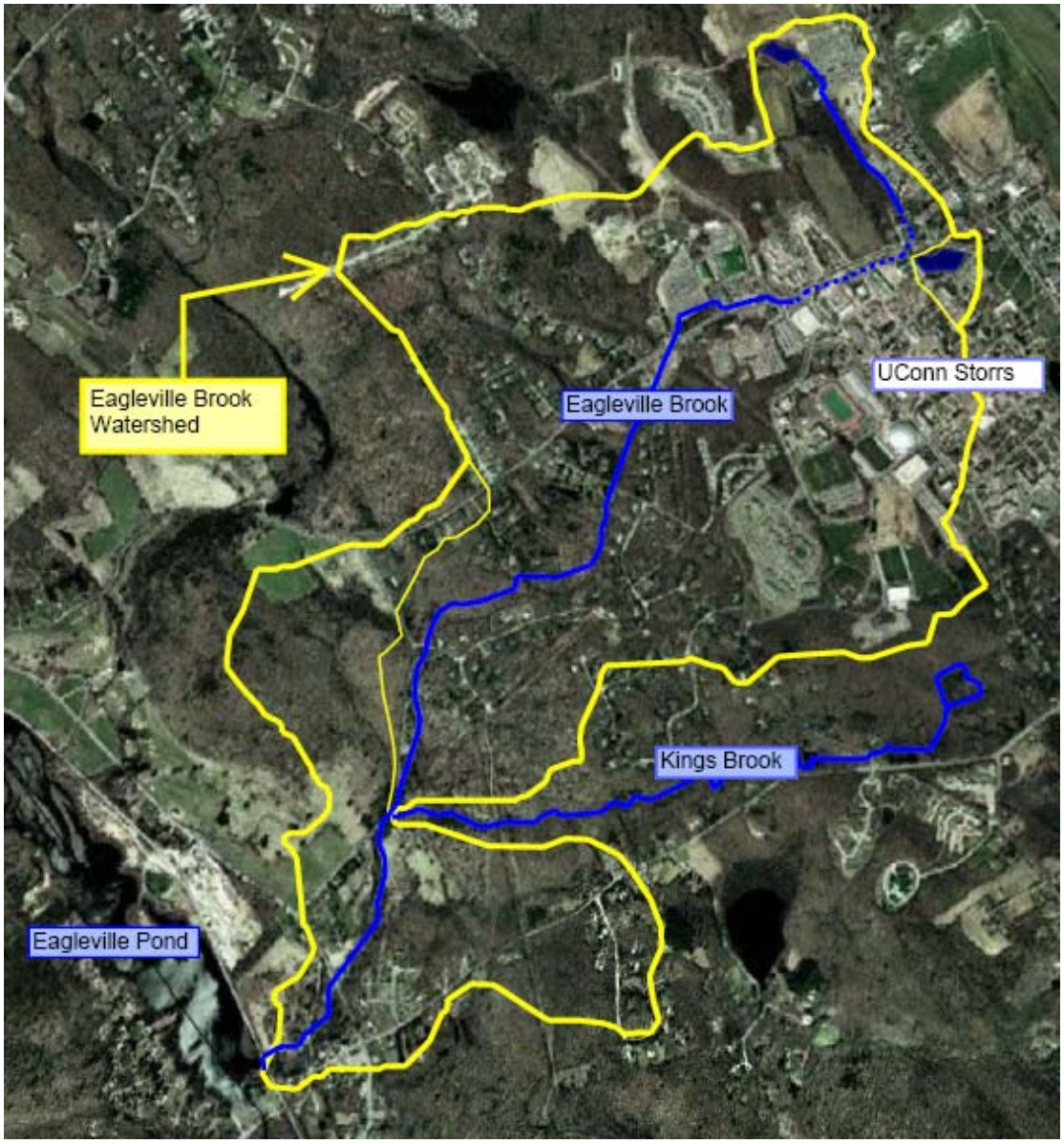
TMDL Designed to Improve Quality in Eagleville Brook

Connecticut DEP has developed an EPA-approved "Total Maximum Daily Load" analysis which attributes the impaired water quality of Eagleville Brook to the general effect of stormwater run-off from impervious surfaces, such as traditional pavement and buildings. To improve the quality of the brook, the TMDL assigns a reduction in the amount of impervious cover within the watershed, which includes much of the main campus.

Eagleville Brook was among the 202 bodies of water listed in the DEP's *2004 List of Connecticut Waterbodies Not Meeting Water Quality Standards*. Subsequent DEP studies did not identify specific pollutants contributing to the water quality impairment. However, the impacts to aquatic life were attributed to the general affects of stormwater run-off, citing a complex array of factors that includes chemical pollutants, heat transfer, deposition of fine sediment, and habitat erosion.



The TMDL developed for Eagleville Brook is one of 18 state-wide TMDLs that DEP has finalized to date. The Eagleville Brook TMDL is unique in that the remedy does not involve reductions of specific pollutants, like metals or organic compounds. Instead, the TMDL recognizes that specific reductions in the amount of impervious cover (IC) will mitigate the impact of stormwater to the brook.

To improve the water quality, a general goal of 11% IC is assigned by the TMDL. A watershed with this proportion of IC is expected to be able to sustain aquatic life at a level that meets the Connecticut *Water Quality Standards*. The TMDL reports that the area around UConn's Swan Lake consists of 27% IC, and that rest of the watershed upstream of where Eagleville Brook meets Kings Brook consists of 14% IC.

The TMDL is not intended to restrict development and compliance will *not* judged by the amount of impervious cover. Success will be based on future water monitoring by DEP to assess the relative health of aquatic life in Eagleville Brook.

The TMDL is implemented through the DEP permitting process and provides four basic ways of demonstrating reductions:

1) Removing impervious surfaces where practical,
2) Rerouting drainage away from Eagleville Brook,
3) Minimizing additional disturbances, and
4) Installing engineered controls to reduce the impact of run-off.

All construction projects within the Eagleville Brook watershed that require DEP permitting will need to demonstrate a means of reducing the impacts of IC before approvals are authorized.

Since the TMDL became finalized with EPA-approval in February 2007, no campus construction projects have been initiated that would have required DEP permitting. Nonetheless, several measures like those listed below have been implemented by UConn to either reduce IC or mitigate the impact of stormwater run-off.

- Porous pavers were used around Lakeside Apartments so that there was no net increase in IC with the construction of the building addition.
- The expansion of the Student Union Quad.
- Facility Operations has begun using a soil aerator over areas landscaped surfaces that have been compacted by years of foot traffic.