

EPHRATA WWTP STORMWATER MANAGEMENT (SWM) IMPROVEMENTS

The Borough of Ephrata

Project Description This Northern Lancaster County project was completed in 2017-2019. Design & Permitting occurred during the winter of 2017 into the spring of 2018. Construction occurred during that summer. Finally, a one year maintenance provision provided for the permanent vegetation establishment, invasive weed removal and training to local maintenance crews enabling a more sustainable long term project.

Project Goals To increase water infiltration and evaporation at the end of the Stevens Dry Valley System Critical Area Recharge Area (CARA) and reduce nutrient and sediment delivery downstream.

Project Results Two areas were retrofitted according to plans with no problems as follows:

- Constructed 585 L.F. of Vegetative Swale Widening with Left Bank Grading along the channelized portion of the swale. (Right Bank Grading on adjacent property as part of another project is planned for this fall.) In the 1.26 acre open field portion, constructed five (5) 0.5 foot berms for water retention to encourage infiltration and evaporation. The swale drains 1,510 acres. Berm layout retains 12,528 CF of stormwater retention filtering sediment and nutrients. Two signs were erected explaining project benefits.
- Retrofitted an existing Detention Basin with native grasses and sedges adding seven (7) 0.5 foot berms for water retention to encourage infiltration and evaporation. The basin treats runoff from 71.64 acres. The basin berms provide 17,879 CF of stormwater retention.

Both projects combined are estimated to reduce annual pollutant loads by 2,583 # of N, 128 # of P and 40.31 tons of sediment per year.



Ariel Photo Site Map