July 14 Storm Events and Effects on Erosion Controls in Erdman Brook and Frank’s Creek
State Licensed Disposal Area Precipitation Gauge
July 14, 2015

Liquid Equivalent Precipitation (inches)

0.51”

0.88”

2.51”
July 14 storms

- Total rainfall for the day = 3.90 inches
- 3.9 inch total for 24 hours is slightly larger than the 10-year recurrence interval total of 3.7 inches
- Rainfall received from 8:00pm to 8:30pm totaled 1.80 inches, which is equivalent to a 100-year recurrence interval for a 30 minute rainfall
Storm Effects on Erosion Controls

- Erosion controls functioned as designed
- Grade control structures withstood the high flows
- Some channel armoring (rip-rap) was displaced
- On Frank’s Creek, some scour (erosion) of the stream banks and stream bed occurred.
- Effects not unanticipated – erosion controls not designed to be permanent installations, would require maintenance
Planned Repairs

- Repairs will be performed on Erdman Brook and Frank’s creek this year
- Repairs will generally be to replace in kind, with certain enhancements
- Enhancements include additional stone check dams and weirs intended to further reduce flow velocities and dissipate energy during large storm events.
Erdman Brook Retaining Wall

- Part of the erosion controls installed on Erdman Brook in 2011-2012, a retaining wall at the downstream end of the structures began to show evidence of leaning
- Pressure and movement of the slope behind the wall causing it to move, exacerbated by groundwater and freeze/thaw cycles
- Wall will require repair and redesign
Erdman Brook Retaining Wall

- Later this year, temporary bracing support will be installed to prevent further movement.
- Design options are currently being evaluated for the repair/replacement of the wall.
- Repair/replacement is planned to occur in 2016 field season.