NPDES Stormwater Permit Monitoring
Update April 27, 2010

by Dean Wilson
Stormwater Outfall Characterization
  Commercial
  High Density Residential (4 houses/acre)
  Low Density/Rural Residential (1 house 1-5 acres)

BMP Effectiveness Monitoring
  Monitor Two Different BMP Types
  Monitor Two of Each Type

Program Effectiveness Monitoring
  U-design and Get Ecology Approval
Stormwater Outfall Characterization
Permanent Installation for Long-Trend Analysis (10 years)
Flow-Weighted Composite Sample
11 Storms per Year
Continuous Flow Recording of All Storms
Water Quality Parameters
  Conventionals (TSS, Turb, Cond, Chloride, BOD, Hardness, MBAS)
  Metals (Copper, Cadmium, Lead, Zinc)
  Organics (PAHs, Pesticides, Phthalates)
  Nutrients
  Bacteria, TPH (grab samples)
Calculate Loadings
Site Selection
WELCOME

to

FALL CITY
Current Status

Commercial Site
- 7 Storms Collected
- 1st Storm 1.1M CFU/100ml Bacteria

High Density Residential
- 7 Storms Collected

Rural Residential
- 9 Storms Collected
BMP Effectiveness Monitoring
Sand Filter
Presettling Pond/Vault
Private Facilities on Sammamish Plateau
BMP Effectiveness Monitoring

Characterizing Inflow and Outflow of each BMP Type To Calculate Removal Efficiencies.

Random Sampling Design

Minimum of 12 samples to Characterize 90% of the Variability with 80% confidence
Current Status

Upper Sand Filter Seems to be Working Well
7 Samples Collected From Inflow
9 Samples Collected From Pond Outflow
9 Samples Collected From Sand Filter Outflow

Lower Sand Filter, not so much.
2 Samples Collected From Inflow
3 Samples Collected From Vault Outflow
2 Samples Collected From Sand Filter Outflow
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