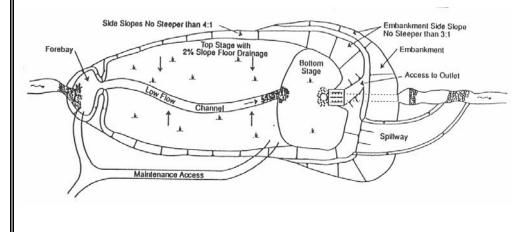
BMP: Extended Detention Basins



CONSIDERATIONS

- Soils
- 🗵 Area Required
- 🗆 Slope
- Water Availability
- Aesthetics
- ⊠ Hydraulic Head
- Environmental Side Effects

DESCRIPTIONS:

Extended detention basins are dry between storms. During a storm the basin fills. A bottom outlet releases the stormwater slowly to provide time for sediments to settle.

APPLICATION:

- Objective is to remove only particulate pollutants.
- Use where lack of water prevents the use of wet ponds, wetlands or biofilters.
- Use where wet ponds or wetlands would cause unacceptable mosquito conditions.

INSTALLATION/APPLICATION CRITERIA:

- Basin volume is sized to capture a particular fraction of the runoff.
- Drawdown time of 24 to 40 hours is required.
- A shallow basin with large surface area performs better than a deep basin with the same volume.
- Place energy dissipators at the entrance to minimize bottom erosion and resuspension.
- Vegetate side slopes and bottom to the maximum extent practical.
- If side erosion is particularly severe, consider paving or soil stabilization.
- If floatables are a problem, protect outlet with a trash rack or other device.
- Provide bypass or pass through capabilities for 100-year storm.

LIMITATIONS:

- May be less reliable than other treatment control BMPs. Inability to vegetate banks and bottom may result in erosion and resuspension.
- Limitation of the orifice diameter may preclude use in small watersheds.
- Requires differential elevation between inlet and outlet.

MAINTENANCE:

- Check outlet regularly for clogging.
- Check banks and bottom of basin for erosion and correct as necessary.
- Remove sediment when accumulation reaches 6-inches, or if resuspension is observed.



PIONEERING UTAH'S FUTURE

Adapted from Salt lake county BMP FACT Sheet

TARGETED POLLUTANTS

- Sediment
- 🗵 Nutrients
- ⊠ Heavy Metals
- ⊠ Toxic Materials
- ☑ Oxygen Demanding Substances
- ⊠ Oil & Grease
- ⊠ Floatable Materials

□ Bacteria & Viruses

- High Impact
- Medium Impact
- □ Low or Unknown Impact

IMPLEMENTATION REQUIREMENTS

Capital Costs
O&M Costs
Maintenance
Training

■ High 🗵 Medium 🗆 Low

EDB