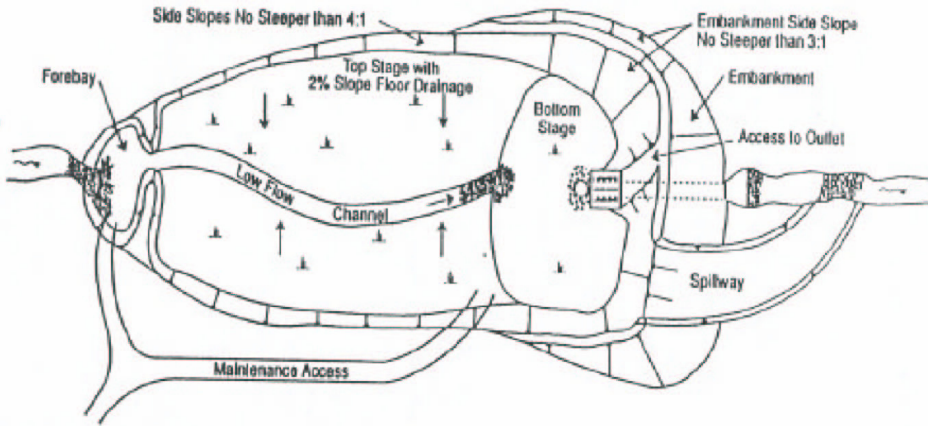


# 947 BMP: Extended Detention Basins



### 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.
- Shallow basin with large surface area performs better than deep basin with 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 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

### CONSIDERATIONS

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



### TARGETED POLLUTANTS

- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses

- |  |
|--|
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> High Impact</li> <li><input checked="" type="checkbox"/> Medium Impact</li> <li><input type="checkbox"/> Low or Unknown Impact</li> </ul> |
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### IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

- |  |
|--|
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low</li> </ul> |
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