



## CONSIDERATIONS

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



# WEBER COUNTY

## ENGINEERING DEPARTMENT

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## 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.

## TARGETED POLLUTANTS

- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substance
- 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