

Wetland Design Considerations



Common Wetland Types of the Central Valley

- Managed Wetlands
 - Permanent Wetlands
 - Semi-permanent Wetlands
 - Seasonal Wetlands
- Un-managed
 - Vernal Pools



Permanent Wetlands



Characteristics

- Location – Terminal basins, cut-off sloughs/ oxbows, typical lowest areas in a drainage.
- Soils – Can vary widely, but are often dominated by sand/gravel
- Hydrology – Surface and/or sub-surface from nearby rivers/streams. Often associated with an extremely high water table.
- Water Depth – Deep (>30")
- Water Regime – Flooded year-round
- Vegetation – Submergent and emergent vegetation (examples)
- Percent Cover – 75% cover/25% open water
- Associated Wildlife - Avian, Reptiles, Amphibians, Fish, mammals, etc



Semi-Permanent Wetlands



Characteristics

- Location – slightly upslope from basin floor
- Soils – heavier soils. Often a clay or clay loam.
- Hydrology – surface flows from seasonal run-off/snow pack
- Water Depth – typically 18”-30”
- Water Regime – flooded late-fall through mid-summer (Nov-mid July)
- Vegetation – mostly emergent vegetation (examples)
- Percent Cover – 50% cover/50% open water
- Associated Wildlife - Avian, Reptiles, Amphibians, mammals, etc.

Semi-Permanent Wetlands



Seasonal Wetlands



Seasonal Wetlands



Characteristics

- Location – Mostly upslope from basin floor
- Soils – Heavy clay soils. Often with an associated clay pan restrictive layer
- Hydrology – Seasonal run-off
- Water Depth – typically 18” or less
- Water Regime – flooded early-fall through mid-spring(October through April)
- Vegetation – Emergent cover, with the majority being moist soil plants
- Percent Cover – 25% cover/75% open water
- Associated Wildlife - Heavy use by migratory waterfowl and shorebirds, lesser use by reptiles, amphibians, mammals, etc.

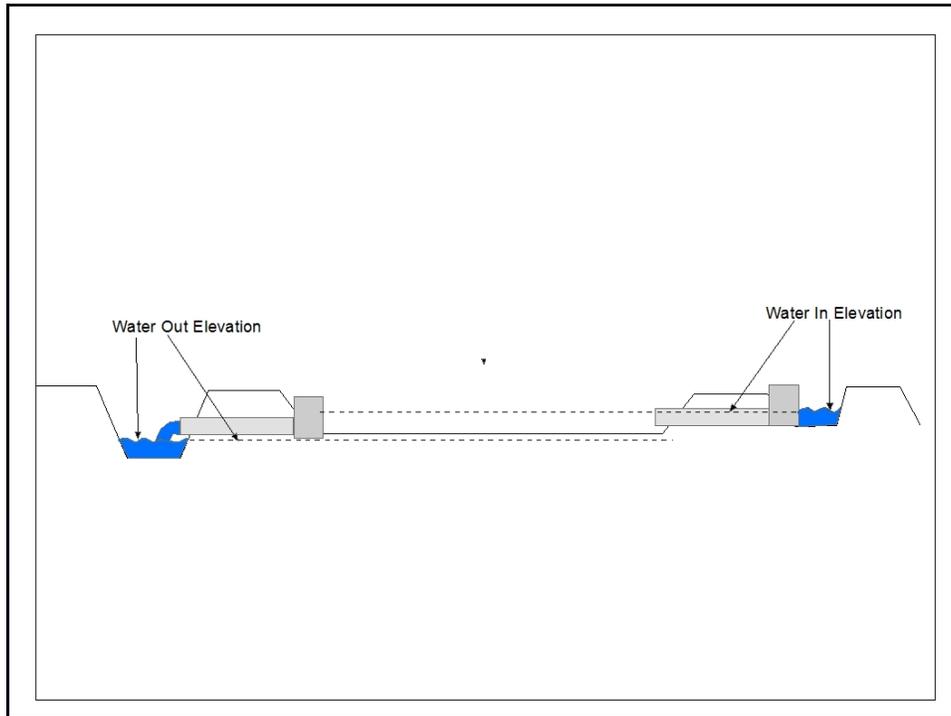
Project Design Considerations



Project Design Considerations

Important Topographical Elevations

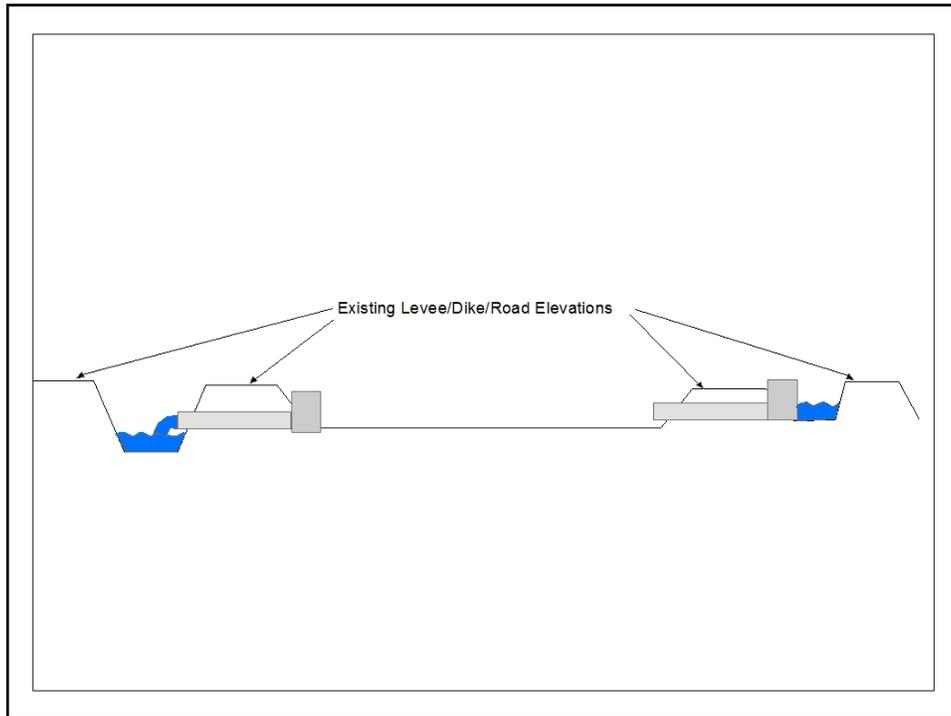
1. Water-In vs. Water-Out



Project Design Considerations

Important Topographical Elevations

1. Water-In vs. Water-Out!!
2. Height of Existing Levees/Roads, WCS, etc.



Project Design Considerations

Key Topographical Elevations

1. Water-In vs. Water-Out!!
2. Height of Existing Levees/Roads, Water Control Structures, etc.
3. Height of Neighboring WCS (upstream and downstream)
4. Existing Field Grade(s)
5. Permanent Bench Marks
 - Well/Pump Pads, Bridges, etc.
 - Set Your Own?

Project Design Considerations Cont'd

Other Important Considerations.....

6. Soils
7. Existing Vegetation
8. Current Hydrological Regime
9. Historical Uses/Conditions
10. Condition of Existing Infrastructure
11. Alternative Water Sources
12. Invasive Species Issues
13. Disturbance Issues
14. Cut or Fill Project?

