

# EVALUATING THREE ALTERNATIVE DESIGNS USING WATER BUDGETS\*

\*WATER BUDGET: A tool that predicts lake water levels over time based on variables like rainfall, soils, topography, evapotranspiration, surface inflows, and outflows

## Alternative #1: 215' Outlet Elevation



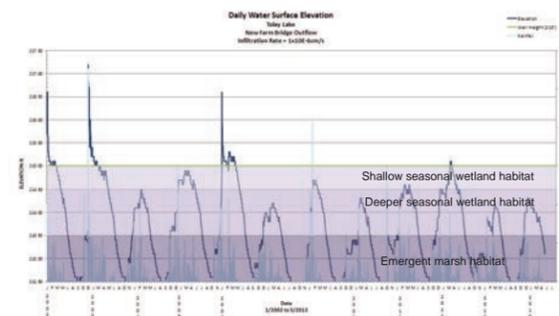
Total Area: 71.1 Acres

Total Volume: 97.7 Acre-Ft.

Annual Frequency of Inundation with this Alternative:

SHALLOW SEASONAL WETLAND (SEASONAL SHALLOW ZONE): 42% of years  
 DEEPER SEASONAL WETLAND (SEASONAL TALL ZONE): every year  
 EMERGENT MARSH (EMERGENT ZONE): every year

Ten-Year Water Budget Graph:



Final Analysis:

Adequate hydrology to support seasonal wetland habitat.

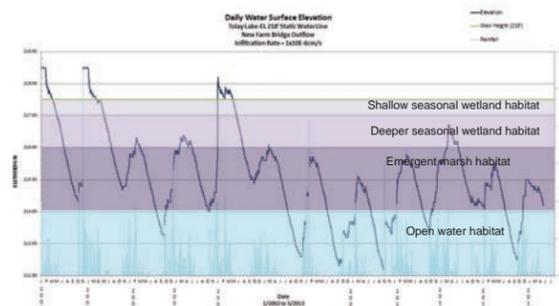
## Alternative #2: 218' Outlet Elevation, No Back Berm



171.5 Acres

439 Acre-Ft.

SHALLOW SEASONAL WETLAND (SEASONAL SHALLOW ZONE): only 27% of years  
 DEEPER SEASONAL WETLAND (SEASONAL TALL ZONE): only 29% of years  
 EMERGENT MARSH (EMERGENT ZONE): 82% of years  
 OPEN WATER: every year



Not enough hydrology to support seasonal wetland habitat. Deep water pool will steal water from seasonal wetlands.

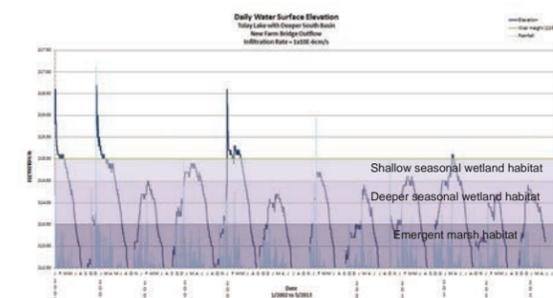
## Alternative #5: 215' Outlet Elevation, With Added Grading to Deepen South Basin



93.3 Acres

115.5 Acre-Ft.

SHALLOW SEASONAL WETLAND (SEASONAL SHALLOW ZONE): 42% of years  
 DEEPER SEASONAL WETLAND (SEASONAL TALL ZONE): every year  
 EMERGENT MARSH (EMERGENT ZONE): every year



Adequate hydrology to support seasonal wetland habitat.