North Central Texas Water Quality Project

Validation of BMP Reservoir Impact Using WASP

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Inactivation of P by Alum

- Apply alum treatment to 3655 acres of EM Lake

- Should result in 68% reduction in P released through flux
Flux Reduction in WASP

Reservoir Impact of Flux Reduction
Significant Chl-a Impact

### SWAT Loading Reductions Chl'a' Seg 1

**North Central Texas Water Quality Project**

- **Scale Factor**: All daily loads systematically reduced by given scale factor
North Central Texas Water Quality Project

Optimal BMP WASP Run

• New Watershed Loads (NPS) with suite of 11 BMPs implemented
• Summertime flux rate reduced
• All other loads remain unchanged
• All kinetics, uses, precipitation same as calibration model.

Watershed TP Loading

![Graph showing Trib Watershed TP Contributions]
WASP BMP Results – Chl-a

WASP BMP Results - TP
Chl-a Statistical Verification

Eagle Mountain Dam Chl'a'

<table>
<thead>
<tr>
<th>Chl-a ug/L</th>
<th>Calibration</th>
<th>Optimal BMP</th>
<th>30% Reduction</th>
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<tbody>
<tr>
<td>0</td>
<td>A</td>
<td>B</td>
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TP Statistical Verification

Eagle Mountain Dam TP

<table>
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