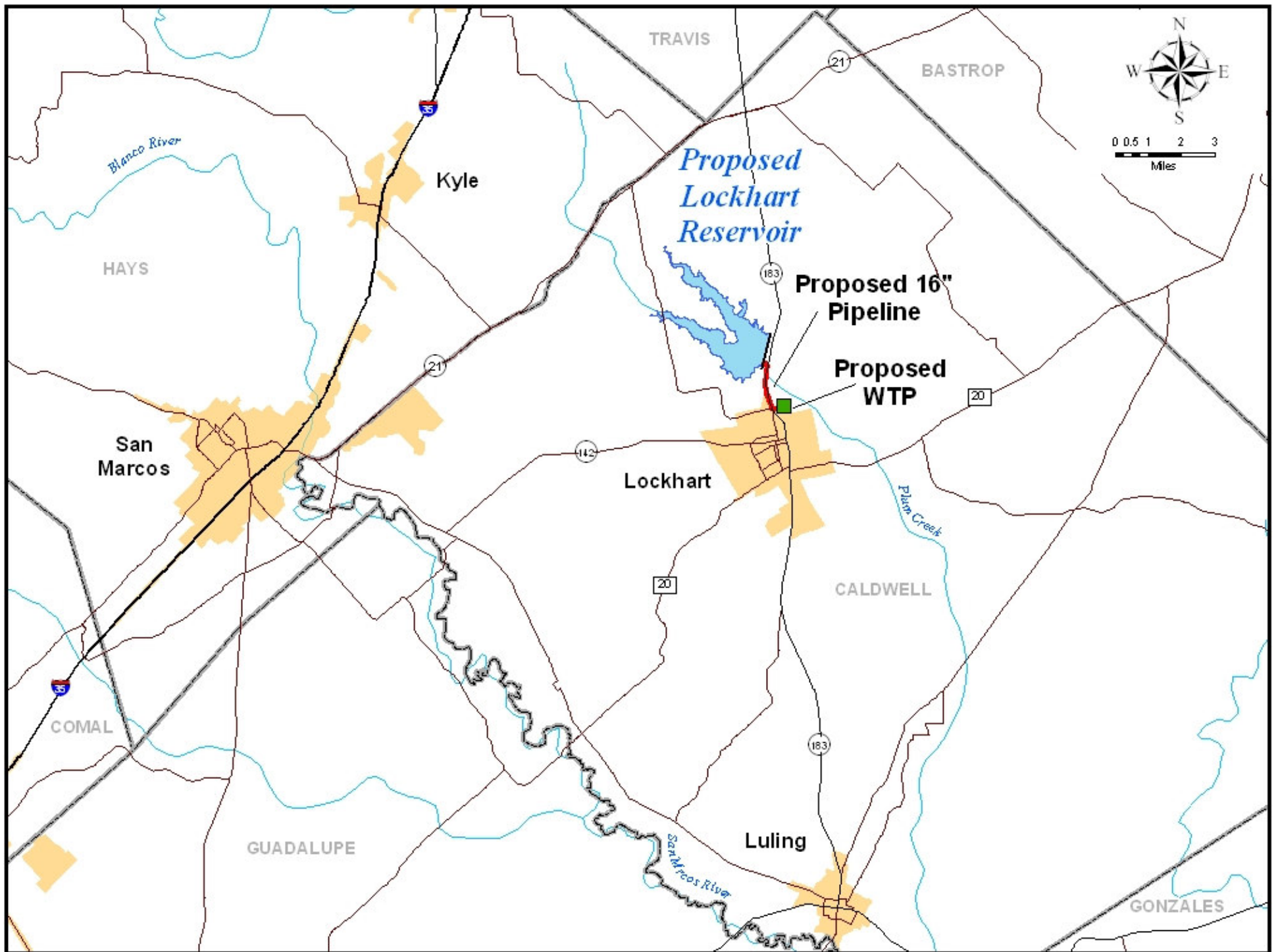
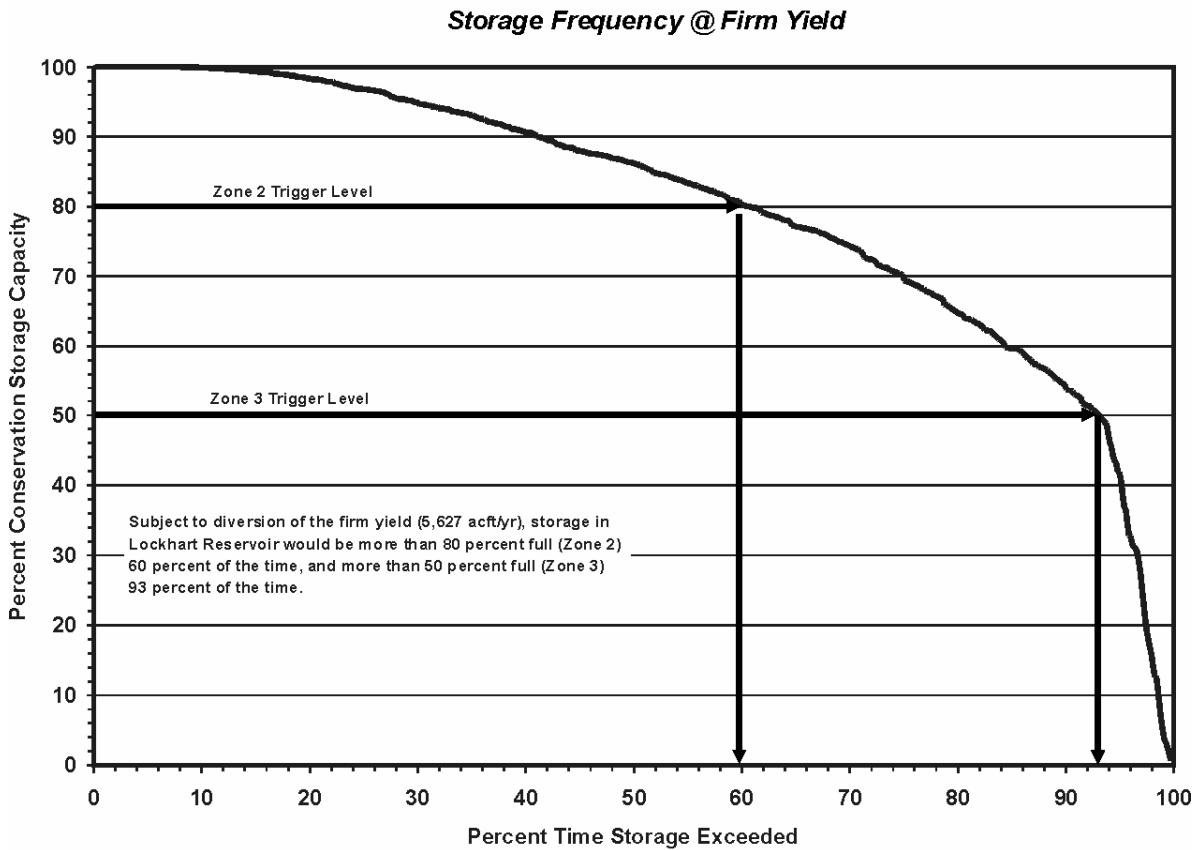
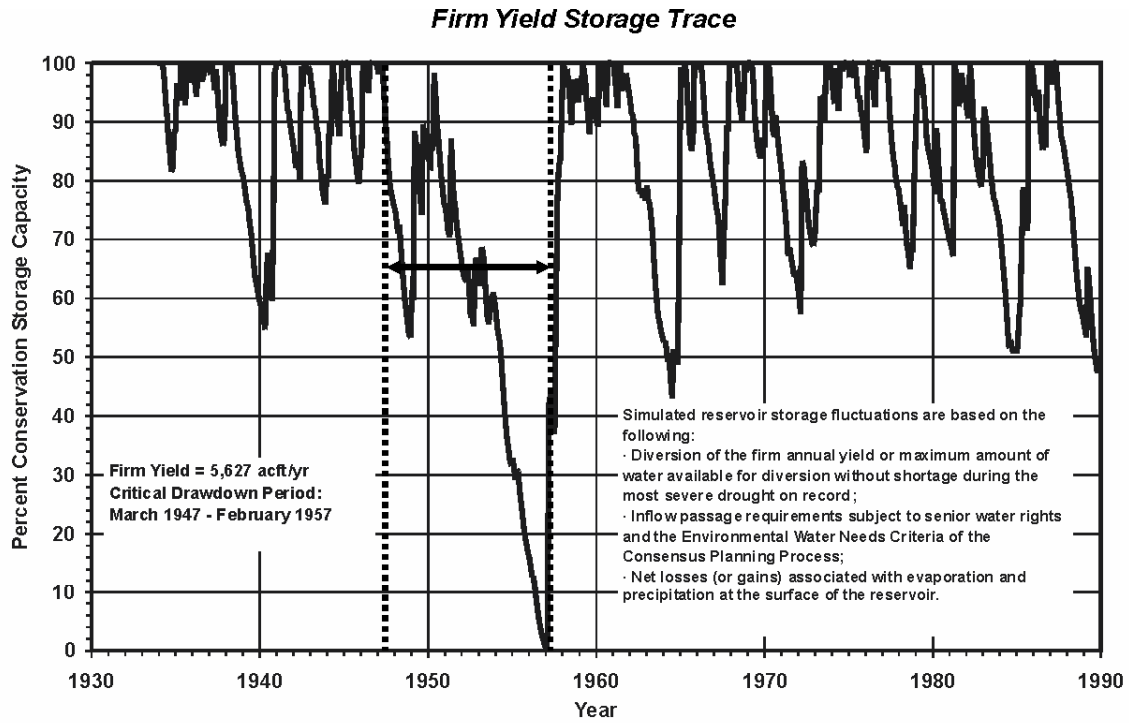


## 2006 South Central Texas Regional Water Plan Water Management Strategy Summary Sheet

<p style="text-align: center;"><b>Unit Cost (\$/acft/yr)</b></p>	<p><b>Name:</b> Lockhart Reservoir (G-21)</p> <p><b>Description:</b> The Lockhart Reservoir site is located on Plum Creek, a tributary to the San Marcos River, north of Lockhart in Caldwell County. At elevation 482 ft-msl, the conservation pool capacity would be 50,000 acft. Facilities include a reservoir, intake, pump station, 16-inch 2-mile transmission pipeline, and water treatment plant near Lockhart. Strategy has capacity to meet projected needs of Lockhart and other water user groups in the area.</p> <p><b>Decade Needed:</b> 2020+</p>												
<p style="text-align: center;"><b>Quantity (acft/yr)</b></p>	<p><b>Cost, Quantity of Water, and Land Impacted</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"><b>Unit Cost of Water:</b></td> <td style="width: 15%; text-align: right;"><b>\$1,042</b></td> <td style="width: 15%; text-align: right;"><b>\$/acft/yr</b></td> <td style="width: 30%; text-align: right;"><b>Treated Water Delivered</b></td> </tr> <tr> <td><b>Quantity of Water:</b></td> <td style="text-align: right;"><b>5,627</b></td> <td style="text-align: right;"><b>acft/yr</b></td> <td style="text-align: right;"><b>Reliability = Firm</b></td> </tr> <tr> <td><b>Land Impacted:</b></td> <td style="text-align: right;"><b>2,921</b></td> <td style="text-align: right;"><b>acres</b></td> <td></td> </tr> </table>	<b>Unit Cost of Water:</b>	<b>\$1,042</b>	<b>\$/acft/yr</b>	<b>Treated Water Delivered</b>	<b>Quantity of Water:</b>	<b>5,627</b>	<b>acft/yr</b>	<b>Reliability = Firm</b>	<b>Land Impacted:</b>	<b>2,921</b>	<b>acres</b>	
<b>Unit Cost of Water:</b>	<b>\$1,042</b>	<b>\$/acft/yr</b>	<b>Treated Water Delivered</b>										
<b>Quantity of Water:</b>	<b>5,627</b>	<b>acft/yr</b>	<b>Reliability = Firm</b>										
<b>Land Impacted:</b>	<b>2,921</b>	<b>acres</b>											
<p style="text-align: center;"><b>Impact (ac)</b></p>	<p><b>Additional Considerations per Regional Water Planning Guidelines</b></p> <p><b>Environmental Factors:</b> Reservoir would inundate approximately 2910 acres of land, including a 5-mile segment of Plum Creek. There are no listed protected species in the project area.</p> <p><b>Impacts on Water Resources:</b> Reduced streamflow immediately below dam. Consensus Criteria for Environmental Flow Needs was used in determining reservoir pass-through requirements based on reservoir content.</p> <p><b>Impacts on Agricultural &amp; Natural Resources:</b> Land inundated by the reservoir includes both crop and range land.</p> <p><b>Other Relevant Factors per SCTRWPG:</b> Some questions regarding economic feasibility compared to alternative supply sources. Local government support expressed in preparation of 2001 Regional Water Plan. Currently, no new construction in the proposed reservoir pool, however, the alignment of TX130 passes immediately below the dam site.</p> <p><b>Comparison of Strategies to Meet Needs:</b> Moderate unit cost. No conflicts with other recommended water management strategies.</p> <p><b>Interbasin Transfer Issues:</b> Not applicable.</p> <p><b>Third-Party Impacts of Voluntary Transfers:</b> Not applicable.</p> <p><b>Regional Efficiency:</b> The strategy is a new supply proximate to Lockhart and other WUGs in and around Caldwell County.</p> <p><b>Water Quality Considerations:</b> None of significant concern.</p>												

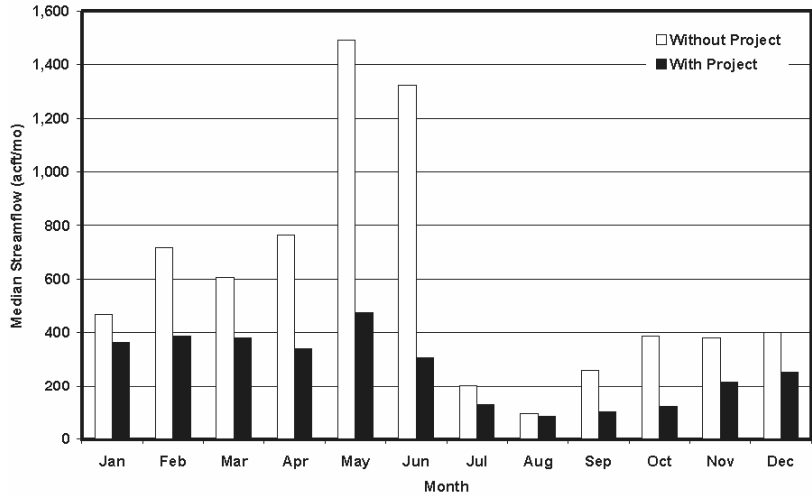


<b>Cost Estimate Summary Water Supply Project Option Second Quarter 2002 Prices G-21 - Lockhart Reservoir</b>	
<b>Item</b>	<b>Estimated Costs for Facilities</b>
<b>Capital Costs</b>	
Dam and Reservoir <sup>1</sup> (Conservation Pool 50000 acft, 2910 acres, 482 ft. msl)	\$18,568,000
Intake and Pump Station (5.26 MGD)	\$1,236,000
Transmission Pipeline (16 in dia., 2 miles)	\$540,000
Water Treatment Plant (5.26 MGD)	\$8,124,000
Distribution	<u>\$6,980,000</u>
<b>Total Capital Cost</b>	<b>\$35,448,000</b>
Engineering, Legal Costs and Contingencies	\$12,380,000
Environmental & Archaeology Studies and Mitigation	\$7,697,000
Land Acquisition and Surveying (2921 acres)	\$7,860,000
Interest During Construction (3 years)	<u>\$5,776,000</u>
<b>Total Project Cost</b>	<b>\$69,161,000</b>
<b>Annual Costs</b>	
Debt Service (6 percent, 30 years)	\$1,729,000
Reservoir Debt Service (6 percent, 40 years)	\$3,014,000
Operation and Maintenance	
Intake, Pipeline, Pump Station	\$106,000
Dam and Reservoir	\$279,000
Water Treatment Plant	\$638,000
Pumping Energy Costs (1,673,028 kW-hr @ 0.06 \$/kW-hr)	\$100,000
<b>Total Annual Cost</b>	<b>\$5,866,000</b>
<b>Available Project Yield (acft/yr)</b>	5,627
<b>Annual Cost of Water (\$ per acft)</b>	\$1,042
<b>Annual Cost of Water (\$ per 1,000 gallons)</b>	\$3.20
<sup>1</sup> Cost is an update of the United States Study Commission – Texas, "Capacity Cost Curve for Lockhart Reservoir Site", May 1960 using the ENR CCI.	

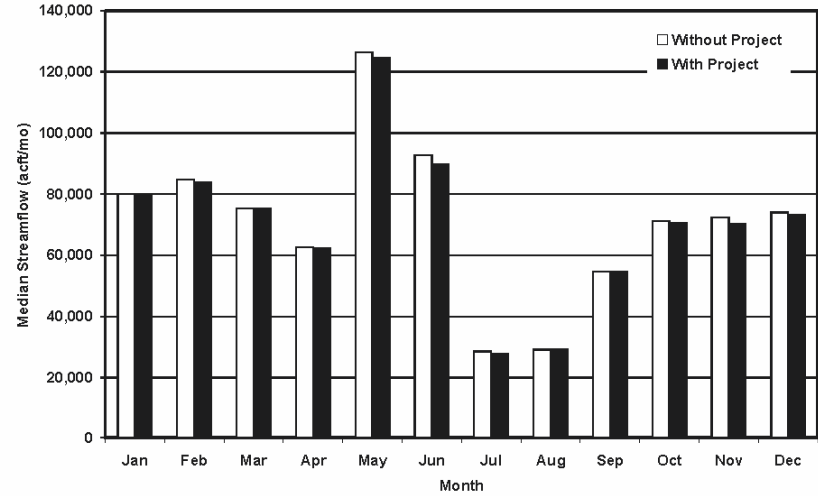


**Figure 5.8-2. Lockhart Reservoir Storage Considerations**

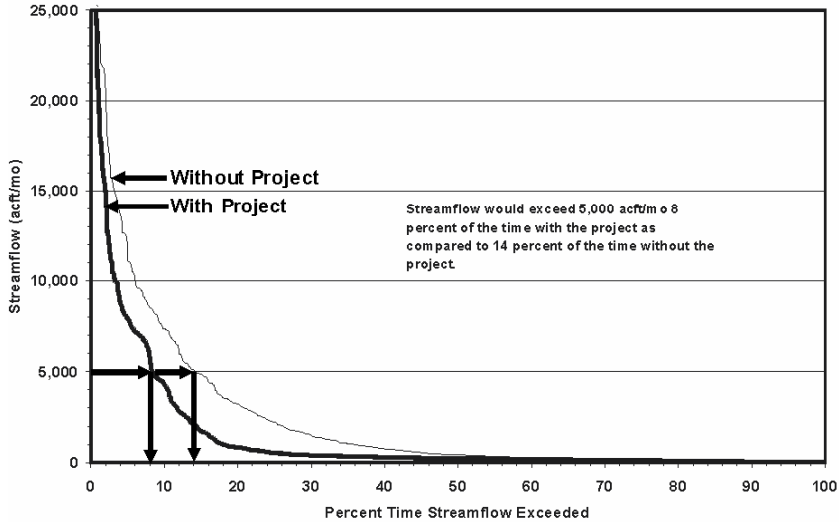
**Plum Creek @ Lockhart Reservoir — Median Streamflow Comparison**



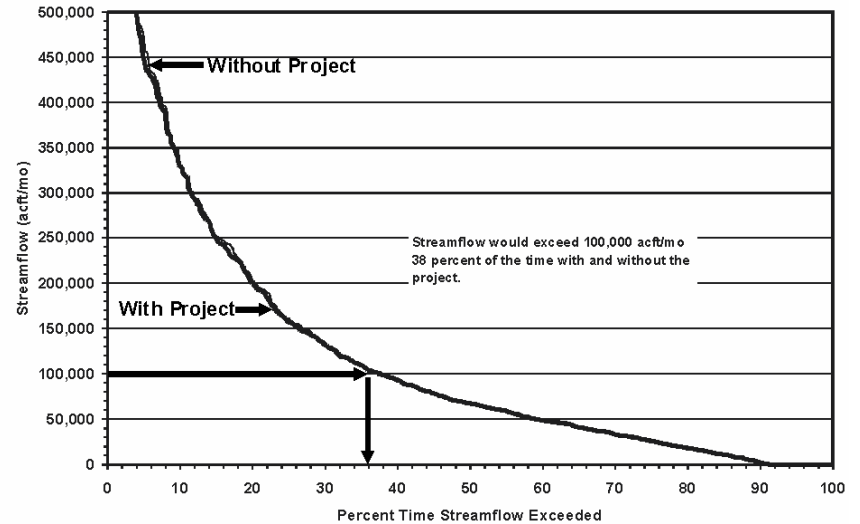
**Guadalupe River @ Saltwater Barrier — Median Streamflow Comparison**



**Plum Creek @ Lockhart Reservoir — Streamflow Frequency Comparison**



**Guadalupe River @ Saltwater Barrier — Streamflow Frequency Comparison**



**Figure 5.8-3. Lockhart Reservoir Streamflow Comparisons**