

ALTERNATIVES ANALYSIS: WILSON LAKE REALLOCATION

A wide range of alternatives are identified during the scoping process.

Alternatives come from public input, previous studies, local communities, and other agencies.



Alternatives Sources of Supply
Conservation and Demand Management
Maximization of Existing Sources <ul style="list-style-type: none"> •Leak Detection •Storage Capacity
Alternative Surface Water Sources <ul style="list-style-type: none"> •Kanopolis •Waconda (Glen Elder) •Other Surface Water Bodies
Alternative Groundwater Sources <ul style="list-style-type: none"> •Dakota Aquifer •Alluvial Aquifer •Big Creek Aquifer
Wilson Lake Reallocation <ul style="list-style-type: none"> •From Existing Multi-purpose Pool (No Pool Raise) •One Foot Pool Raise •Two Foot Pool Raise
Others????

Potential Impacts
Impacts to Existing Project Purposes <ul style="list-style-type: none"> •Dam Safety •Flood Control •Recreation
Infrastructure Requirements
Existing Water Supplies <ul style="list-style-type: none"> •Aquifer Levels
Economic Impacts <ul style="list-style-type: none"> •Regional Economic Impacts •Social Effects •Benefit-Cost Analysis •Financial Feasibility Analysis
Aesthetics
Environmental Impacts <ul style="list-style-type: none"> •Endangered Species •Wetlands •Water Quality •NEPA Compliance
Upstream and/or Downstream Flow
Recreation Impacts <ul style="list-style-type: none"> •Pool level effects on recreation
Others????

Some alternatives may be screened out early due to technical or other constraints.

Potentially feasible alternatives will be evaluated and compared.

Feasibility report with recommendation.

PUBLIC INPUT FROM FEBRUARY 2009 MEETING

Corresponding Wilson Lake Feasibility Study Component	Comment Categories from Previous Meeting	Number of Comments Received
Needs Analysis and Demand Management Forecast: Combines residential, municipal and industrial use through 2040	Increased Water Conservation in Hays/Russell	8
Technical Analysis: ID pool level impacts (up, down, how often, drought conditions)	Visuals/Aesthetics	6
Technical Analysis: Infrastructure requirements, ID impacts to existing project purposes	Dam Safety	1
Technical Analysis: Pool level impacts on downstream flow, computer model	Downstream Issues	1
Technical Analysis: Impacts to existing water supplies and aquifer levels	Groundwater Supply Wells	1
Environmental Analysis: Water quality study, desalination	Water Quality	3
Environmental Analysis: Endangered species, wetlands, water quality, NEPA compliance	Effects on Fish and Wildlife	2
Economic Analysis: Impact on authorized project purposes, regional economic impacts, social effects, financial feasibility analysis, benefit -cost analysis	Economics	15
Economic Analysis: ID changes in recreation activity or value	Recreation	19
Economic Analysis: Regional economic impacts, impacts to communities/tax revenues	Property Values	7
Alternatives Development: ID new sources, maximize existing sources, needs and demand management	Alternative Sources	6
Public Input: Public meetings, KWO website, contact list, KWO Technical Advisory Committee	Lack of Communication	2

ECONOMIC EVALUATION: MUNICIPAL AND INDUSTRIAL WATER SUPPLY

- **Critical Economic Considerations**
 - **Water needs analysis** – Corps reviews or prepares demand projection (includes conservation)
 - **Project cost** – must be consistent with regard to quantity, quality of water provided, and delivery to proponents system
 - **Water supply** – 100% local sponsor's cost, including: storage purchased from Corps, all appurtenant facilities (canals, pipes, pumps, etc.)
 - **Effect on authorized project purposes**
 - **Flood risk management** is a key consideration with potential changes closely scrutinized.
 - **Changes in recreation activity** or the value of the visit will be identified.
 - **Modification of recreational facilities** to reduce impacts will be considered as needed.
 - **"Least cost alternative"** – this alternative considering life cycle costs will be identified
- **Financial feasibility** – least cost alternative compared to reallocation alternative
- **Other Economic Considerations**
 - **Regional Economic Impacts** – positive and negative impacts related to construction activities, and effects on project purposes felt in the regional economy are evaluated.
 - **Other Social Effects** – effect on communities and institutions, threat to life, on concessionaires, etc.
- **The finding of the economic analysis will be clearly documented in the Feasibility Report**