

KANSAS CITY DISTRICT

Wilson Lake Reallocation Study

Public Meeting

Russell, KS

24 February 2010



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US Army Corps of Engineers
BUILDING STRONG®



Clarification

(inserted subsequent to the 24 February meeting)

The KWO Stakeholder Working Group may have been referred by Corps of Engineers personnel as a Kansas Water Office (KWO) Technical Advisory Committee during the meeting and during the presentation. There may have been some confusion caused by this.

This clarification is inserted to confirm that that there is only one group. The membership and the purpose of the Stakeholder Working Group was introduced by the KWO during their remarks. The group should be referred to as the Stakeholder Working Group.

The remaining slides contain the same content as the meeting presentation.



Wilson Lake Reallocation Study Public Meeting February 24, 2010

Provide information

Reallocation feasibility study process

Update on the status of the planning study

Provide an opportunity for public participation
and comment



Meeting Agenda and Structure

- Introductions
- KWO remarks
- Reallocation Feasibility Study and Planning Study Update (30 minutes)
- Public Comments/Questions (60 Minutes)
- Availability Session (60 minutes)



Opening Statements

Introductions

KWO Remarks



Role of the Corps in Water Supply

- Federal Law – 1958 Water Supply Act
 - ▶ Identifies roles and responsibilities for water supply planning
- State and Local Interests
 - ▶ Primary responsibility for water supply development
- Federal Government
 - ▶ “Participate and cooperate” in developing water supplies connected with federal navigation, flood control, irrigation, or multipurpose projects



Wilson Dam and Lake

- Authorizations

- ▶ 1944 Flood Control Act - authorized for USBR
- ▶ 1956 USBR transferred to USACE



Dam Closed Sep 3, 1963

MP Pool First Filled Mar 12, 1973



Project Purpose

- Wilson Lake and Dam Authorized for
 - ▶ Flood Control
 - ▶ Navigation
 - ▶ Irrigation
 - ▶ Recreation
 - ▶ Fish and Wildlife
 - ▶ Water Quality



Key Historical Studies

- Reconnaissance Report and Draft Environmental Assessment (1997)
- Yield Analysis Report (2004) KWO
- Treatment Facility Concept Design Report (2004) KWO



Current Studies

- Planning Assistance to States - Environmental Study (2007 – present; under review)
- Wilson Lake Reallocation Feasibility Study (2009 start)



Goal of the Reallocation Study

Feasibility level study to determine whether Wilson Lake storage reallocation is the

- ▶ least cost,
- ▶ environmentally sustainable,
- ▶ technically feasible,

solution to future water supply needs.



Key Study Components

- Public Input
- Water Supply Needs Analysis
- Alternatives Development
- Alternatives Evaluation
 - ▶ Technical Assessment
 - ▶ Economic Assessment
 - ▶ Environmental Assessment
- Recommendation



Public Input

- Public Meetings
 - ▶ February 2009
 - ▶ February 2010
 - ▶ Future meetings - TBD
- Corps of Engineers Website
- KWO Website
 - ▶ Updates
- Contact List
 - ▶ Email and direct mail



Water Supply Needs Analysis

- Preliminary Needs Determination: 5.1MGD
 - ▶ Hays, Russell, and surrounding communities
 - ▶ Forecast through 2040
 - ▶ Combines residential, municipal, and industrial use
- Feasibility Level Investigation
 - ▶ Additional detail on users and peak demands
 - ▶ Independent assessment of needs
 - ▶ Will contact cities and water districts



Wilson Lake Reservoir Operations Model Assumptions

- 2050 Estimate of Sediment Conditions
 - ▶ Will be updated with recent sediment survey
- Lake Inflow Depleted 1952 through 1981
 - ▶ Estimate based on changed watershed
 - ▶ Provided by the Kansas Water Office
- 5.1 Million Gallons per Day Water Supply
 - ▶ Constant withdrawal



Future Reservoir Operations Modeling Work

- Improve 2050 Sediment Estimate
 - ▶ Additional survey information
- Refine Existing Alternatives
 - ▶ Seasonal adjustment for water supply
- Evaluate Additional Alternatives
 - ▶ Higher pool raise
- Study Pool Raise Effect on Flood Control
- Provide Information for Dam Safety Analysis



Preliminary Model Output

May-Sep Percent Days Below Elevation

Elevation	No Action	Water Supply from Multipurpose Pool	Water Supply with Two Feet Raise
1518	96%	97%	78%
1516	73%	76%	60%
1514	46%	57%	47%
1512	23%	44%	30%
1510	8%	25%	17%
1508	1%	11%	5%
1505	0%	1%	0%



Alternatives Development

- Conservation
- Review Use of Existing Sources
 - ▶ Kanopolis Lake & Cedar Bluff Reservoir
 - ▶ Aquifers
 - ▶ Surface flows
- Identify Potential New Sources
 - ▶ Dakota Aquifer
 - ▶ Waconda Lake
 - ▶ Wilson Lake
- Others
 - ▶ Public input



Alternative Screening

- NEPA and Corps Planning Process Requirements
- Preliminary Screening
- Selection of Alternatives for More Detailed Analysis
- State and Federal Agency Coordination



Alternatives Evaluation Technical Analysis

- Infrastructure Requirements
- Impacts to Existing Project Purposes
 - ▶ Flood control
 - ▶ Pool level
 - ▶ Project safety
- Impacts to Existing Water Supplies
 - ▶ Aquifer levels
- Downstream Flow



Alternatives Evaluation Economic Analysis

- Alternative Costs
 - ▶ Construction, operations, & maintenance
 - ▶ Updated storage costs
- Economic Impacts
 - ▶ Recreation
 - ▶ Local businesses
 - ▶ Property owners



Alternatives Evaluation Environmental Analysis

- Resources of Concern
 - ▶ Endangered species
 - ▶ Wetlands
 - ▶ Water Quality
 - ▶ Desalination discharges
- NEPA Compliance
 - ▶ Cooperating agencies review
 - ▶ Public review & comment



Plan Selection & Recommendation

- Public & Agency Comment Resolutions
- Corps of Engineers Review
- Non-Federal Partner Approval
- Non-Federal Partner Financial Commitment
- Agency Coordination



Study Schedule

- Approximate Three Year Timeline
- Initial Year Efforts
 - ▶ Develop scope for economic studies
 - ▶ Alternatives
 - ▶ Updated needs analysis
 - ▶ Model revisions (based on updated sediment surveys/variable demand)
 - ▶ Flood control analysis
 - ▶ Public safety



Study Schedule

- Second Year
 - ▶ Economic analysis
 - ▶ Water quality analysis
 - ▶ Other environmental analysis
 - ▶ Plan selection – or additional alternative development
 - ▶ Reviews and public comment
- Third Year
 - ▶ Development of recommended plan
 - ▶ Environmental assessment report/public comment



Comments & Discussion

- Please wait for the microphone
- All comments will be written down by court reporter



Availability Session

This concludes the presentation and open comment portion of the meeting.

We will be available for discussion this evening if you have specific questions of our subject matter experts.

Thank you for attending and for your participation.

