

City of Moscow Surface Water Reservoir Feasibility Study

Water Summit 2007

October 2, 2007

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Surface Water Reservoir Feasibility Study

Purpose

- Provide an Alternate Domestic Water Supply
- To Reduce Dependence and Demand Upon Subsurface Water Supply



Surface Water Reservoir Feasibility Study

Proposal

- Acquisition of Watershed
 - Fee Title
 - Easements
 - Other Form of Agreement for Use and Protection



Camp Creek, Middle Watershed Landscape

Surface Water Reservoir Feasibility Study

Proposal

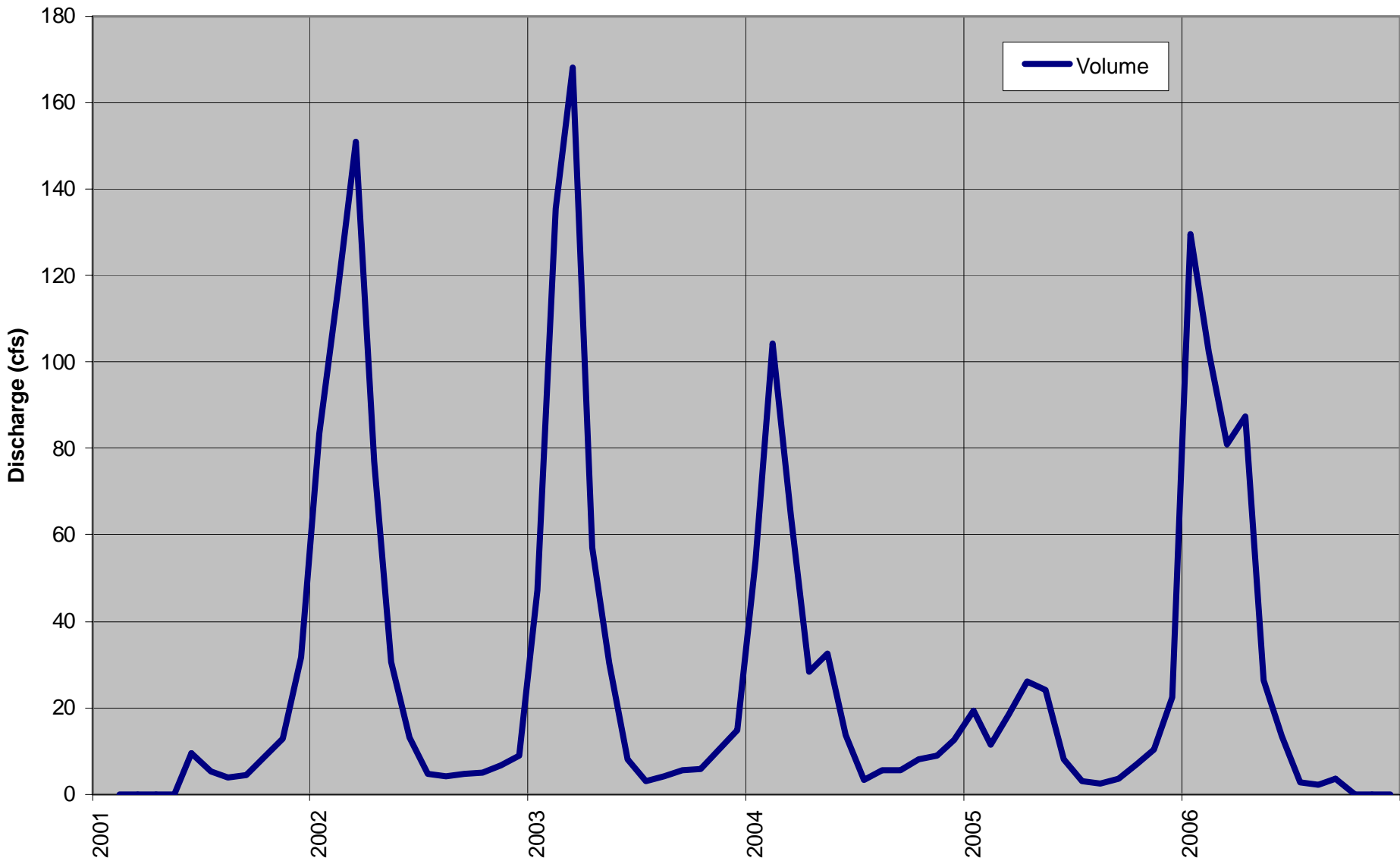
- Acquisition of Watershed
 - Fee Title
 - Easements
 - Other Form of Agreement for Use and Protection
- Single or Multiple Surface Water Impoundments
 - On Stream Facility
 - Off Stream Facility

Surface Water Reservoir Feasibility Study

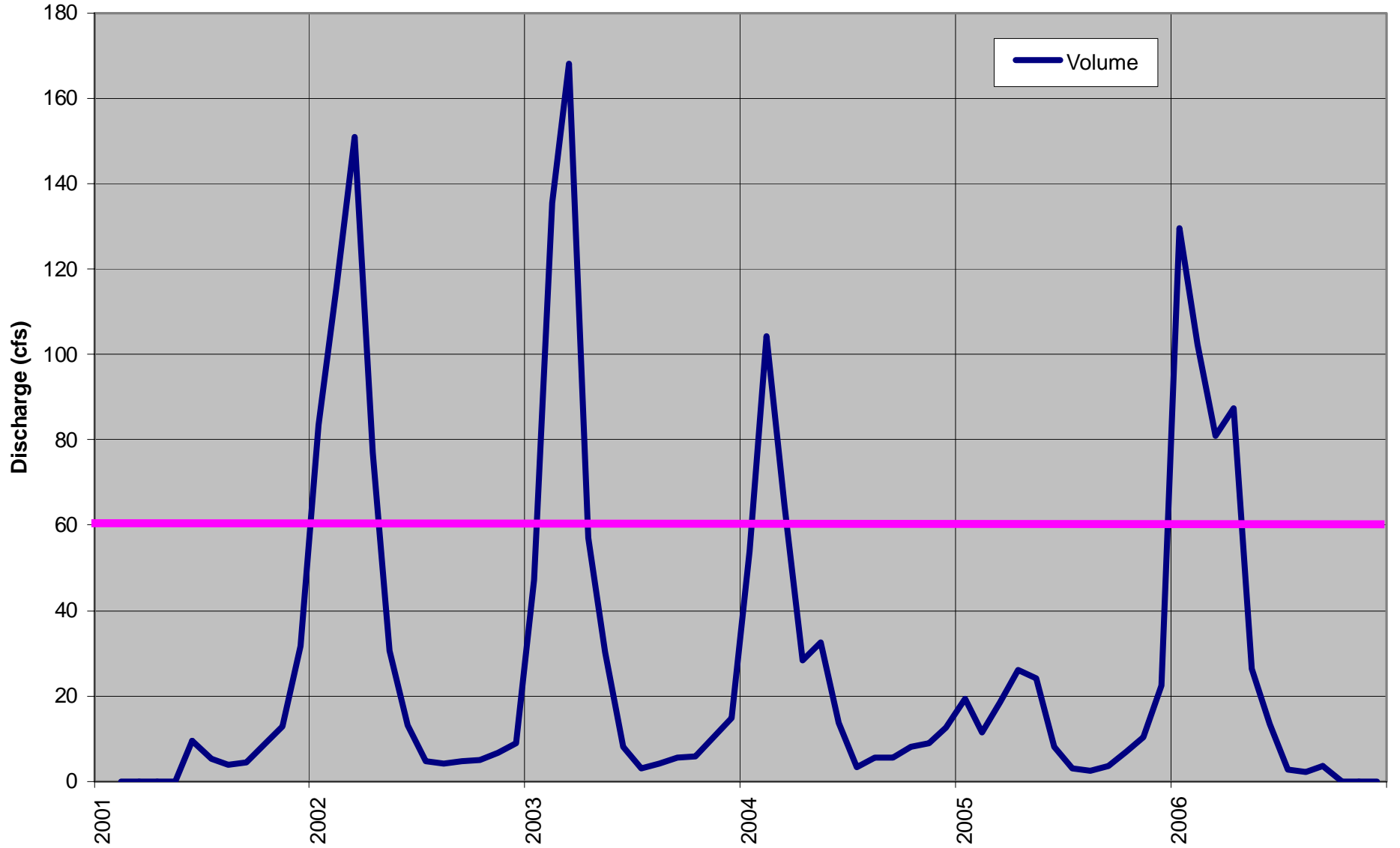
Proposal

- Acquisition of Watershed
 - Fee Title
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- Single or Multiple Surface Water Impoundments
 - On Stream Facility
 - Off Stream Facility
- Utilize Excess Peak Runoff Volumes by capturing flow before its leaves the area

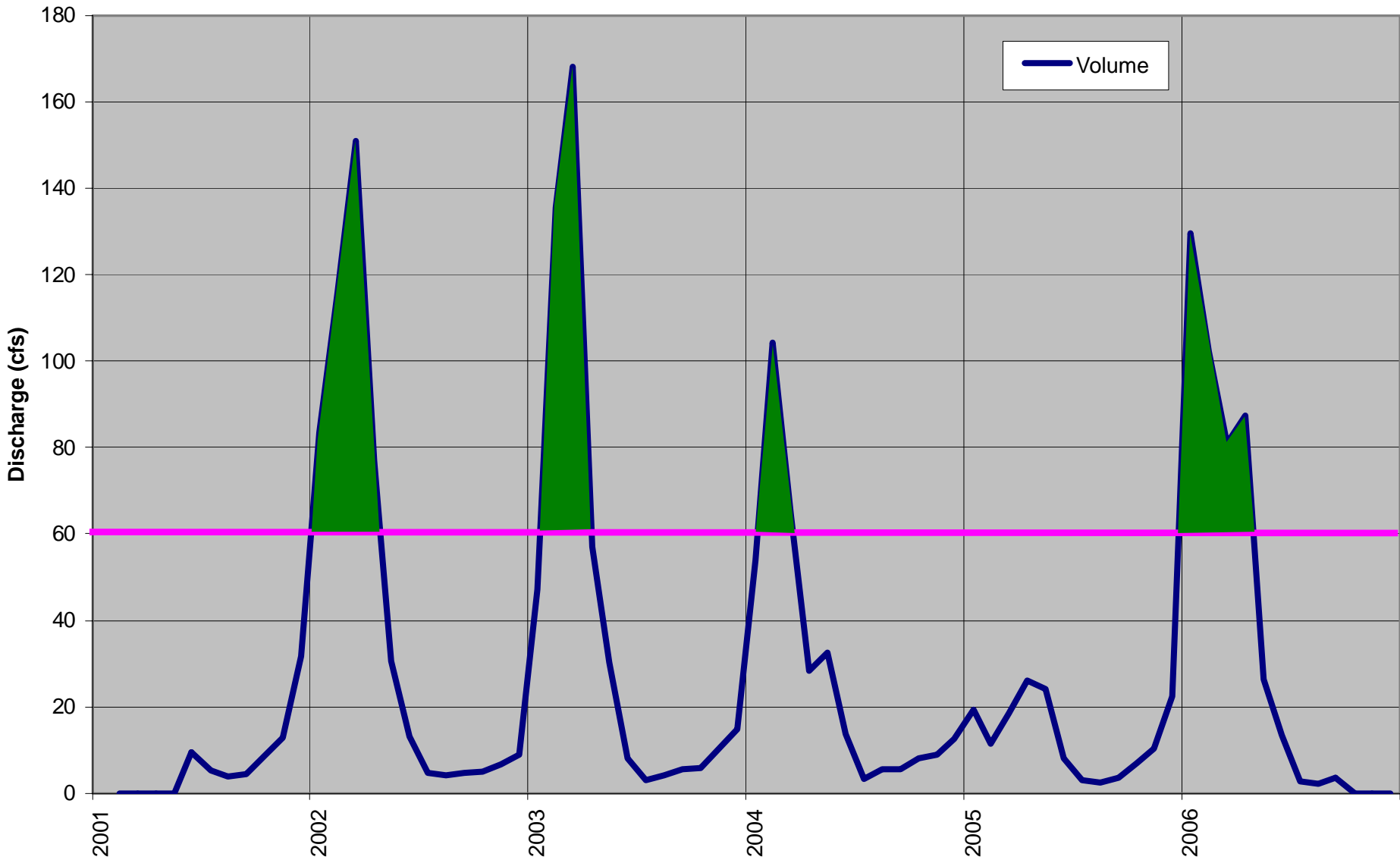
Monthly Mean Discharge South Fork Palouse River @ State Street



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Surface Water Reservoir Feasibility Study

Proposal

- Treatment of Water to Selected Standard
 - Direct Domestic Consumption
 - Aquifer Recharge (Indirect Domestic Consumption)
 - Non-Potable Use (i.e. Irrigation)

Surface Water Reservoir Feasibility Study

Proposal

- Treatment of Water to Selected Standard
 - Direct Domestic Consumption
 - Aquifer Recharge (Indirect Domestic Consumption)
 - Non-Potable Use (i.e. Irrigation)
- Transmission of Water to Point of Use
 - Connection to City Potable System
 - Connection to Groundwater Recharge Facility
 - Connection to Irrigation Distribution System

Surface Water Reservoir Feasibility Study

Proposal

Conceptual Regional Participation Plan

Latah County

City of Pullman

Whitman County

City of Palouse

City of Potlatch

Others??

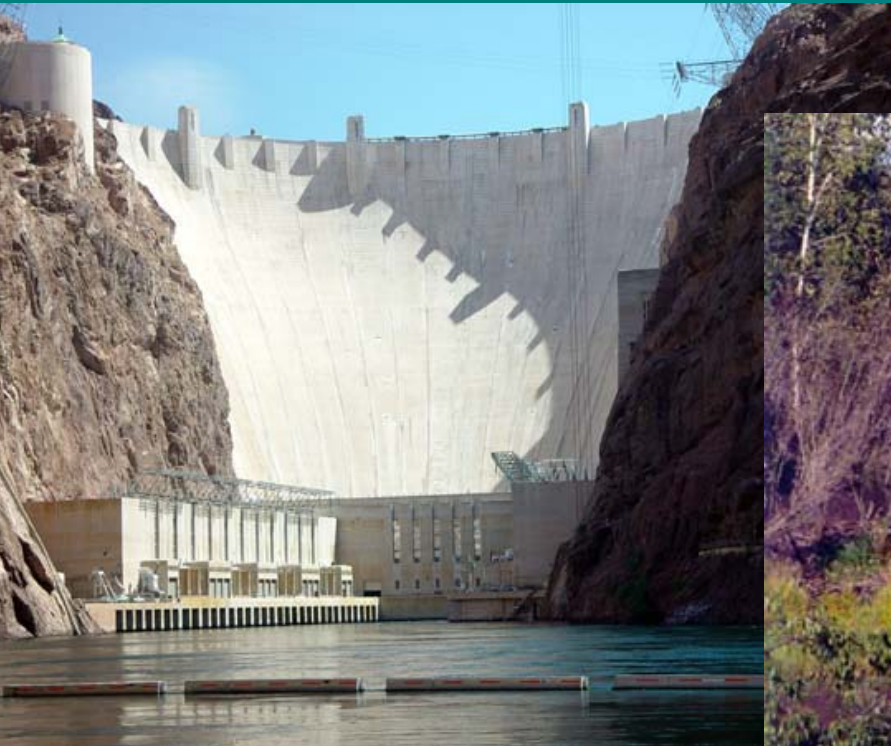


Surface Water Reservoir Feasibility Study

Process

- Technical Feasibility Study
Can It Be Done?

How to Do It?



Surface Water Reservoir Feasibility Study

Phase 1

- Evaluate Potential Sites
- Site Characteristics Assessment
- Conclusions

Surface Water Reservoir Feasibility Study

Phase 1

- Evaluate Potential Sites
- Site Characteristics Assessment
- Conclusions

Phase 2

- Preliminary Investigation
- Conclusions

Surface Water Reservoir Feasibility Study

Phase 1

- Evaluate Potential Sites
- Site Characteristics Assessment
- Conclusions

Phase 2

- Preliminary Investigation
- Conclusions

Phase 3

- Detailed Site Investigation
- Use, Transmission, and Treatment Analysis
- Financial Assessment
- Conclusions

Surface Water Reservoir Feasibility Study

Phase 4

- Detailed Engineering Studies and Permitting (Dual Path)
- Path A - 30, 60 and 100% Design
- Path B - Permitting

Surface Water Reservoir Feasibility Study

Phase 4

- Detailed Engineering Studies and Permitting (Dual Path)
- Path A - 30, 60 and 100% Design
- Path B - Permitting

Phase 5

- Plans, Specifications, Engineering, and Construction

Surface Water Reservoir Feasibility Study

Process

– Technical Feasibility Study

- Can It Be Done?
- How to Do It?

Phases
1 & 2



Surface Water Reservoir Feasibility Study

Process

- Technical Feasibility Study
 - Can It Be Done?
 - How to Do It?
- Financial Feasibility Assessment
 - How Much Will It Cost?
 - How Do We Pay For It?

Phases
1 & 2

Surface Water Reservoir Feasibility Study

Process

- Technical Feasibility Study
 - Can It Be Done?
 - How to Do It?
- Financial Feasibility Assessment
 - How Much Will It Cost?
 - How Do We Pay For It?
- Regional Participation Assessment
 - Who Joins In?
 - And How?

Phases
1 & 2

Surface Water Reservoir Feasibility Study

Product

- Identified Watershed(s)
- Basic Characteristics of Proposed Impoundments

Surface Water Reservoir Feasibility Study

Product

- Identified Watershed(s)
- Basic Characteristics of Proposed Impoundments
- Identification of Proposed Use
- Parameters of Treatment and Conveyance System

Surface Water Reservoir Feasibility Study

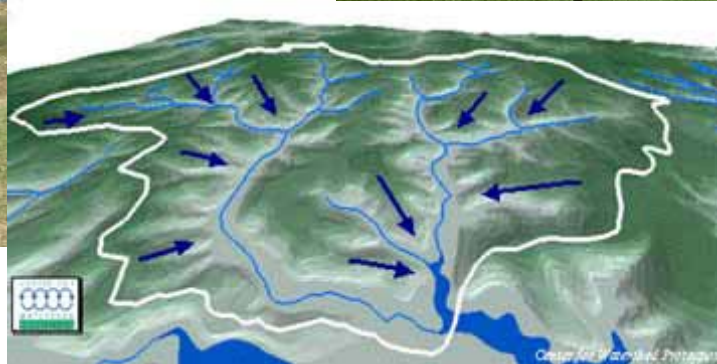
Product

- Identified Watershed(s)
- Basic Characteristics of Proposed Impoundments
- Identification of Proposed Use
- Parameters of Treatment and Conveyance System
- Assessment of Water Rights Attainability
- Conceptual Financing Plan
- Conceptual Regional Participation Plan

A scenic view of a lake with a large beaver dam in the foreground. The dam is constructed from a dense pile of sticks, branches, and logs, extending from the left bank towards the center of the frame. The water is calm and reflects the surrounding greenery and the overcast sky. In the background, a forested hillside rises on the right, and a large, dark rock formation is visible on the left. The sky is filled with soft, grey clouds.

QUESTIONS?





Operational costs
Aquifer recharge.
Treatment required
Identification and acquisition of suitable recharge sites
Conveyance to point of recharge
Consideration of potential impacts of mixed water
Regulatory issues
Operational costs
Assessment of benefit of recharge system
Direct domestic consumption.
Treatment required: Two Barrier Treatment (LT2ESWTR)
Filtration
UV, Membrane, etc.
Conveyance to point of use
Consideration of potential impacts of mixed water
Operational costs
Recreation.
State regulations pertaining to mixed use
Types of recreational use and potential benefits/detriments
Operational Costs
Assess other factors which could influence potential uses.
Watershed land use and controls
Potential for hydroelectric
ed potential development and operational costs together with storage costs to determine fu
Prepare an Engineering Report summarizing findings