

Frenchman Valley Appraisal Study – Plan of Study
Initial Alternatives – modeling needs

1. Future Without Condition

How much water in Enders before the District calls for releases?

What will the future Reservoir supplies be?

- Future reservoir operations with irrigation releases
- Future reservoir operations without irrigation releases
- With existing restrictions on groundwater pumpers above Enders
- With additional restrictions on groundwater pumpers above Enders

What are the future supplies at the Culbertson Diversion Dam?

- Future supplies available without reservoir releases.
- Future supplies combining storage releases and natural flows.
- With existing restrictions on groundwater pumpers above Diversion Dam
- With additional restrictions on groundwater pumpers above Diversion Dam

Can the Irrigation District's continue to operate?

2. Optimizing existing facilities to Enders and Irrigation Districts

(This could be considered an irrigation benefit alternative)

(This alternative will most likely be vary similar to the future without condition)

What are the future reservoir supplies?

- Storage Releases every year?
- Storage Releases when available (every other year, every third year)
- With existing restrictions on groundwater pumpers above Enders
- With additional restrictions on groundwater pumpers above Enders

What are the future supplies at the Culbertson Diversion Dam?

- Future supplies available without reservoir releases
- Future supplies combining storage releases and natural flows.
- With existing restrictions on groundwater pumpers above Diversion Dam
- With additional restrictions on groundwater pumpers above Diversion Dam

Can the Irrigation Districts continue to operate?

3. Providing Lake Level Benefits at Enders Reservoir

(This could be considered a recreation benefit alternative condition)

What will the future Reservoir supplies be?

- Future levels at Enders without any releases.
- Future levels at Enders with reduced irrigation releases.

With existing restrictions on groundwater pumpers above Enders
With additional restrictions on groundwater pumpers above Enders
Future levels with increased minimum pool (El. 3089.40)
What allocations needed to meet this minimum pool?
Future levels with increased minimum pool (El. 3099.00)
What allocations needed to meet this minimum pool?

Most likely result in no or minimal irrigation releases from Enders.
Can the Irrigation Districts operate with no or minimal storage releases?

4. Providing Groundwater Recharge

What are the future supplies at the Culbertson Diversion Dam?
Future supplies available without reservoir releases.
Future supplies combining storage releases and natural flows.
With existing restrictions on groundwater pumpers above Enders
With additional restrictions on groundwater pumpers above Enders
With existing restrictions on groundwater pumpers above Diversion Dam
With additional restrictions on groundwater pumpers above Diversion Dam

Could there still be some surface water deliveries in areas of no wells?

Is there a need for additional off canal storage to capture flood flows?

Identify areas of benefits for groundwater recharge

Balance of groundwater use in the study area

Should upper study area groundwater pumpers be limited to provide recharge
for groundwater pumpers in the lower portions of the study area

5. Optimizing operations to benefit the State of Nebraska for Republican River Compact requirements.

Only utilizing natural flows.

Utilizing natural flows and storage water from Enders.

Reducing irrigated acres (project acres without groundwater)

6. Other concerns

Any changes of use of Enders storage water or project water may require legislation
or contract with Reclamation.

Effects of eliminating reservoir releases on groundwater pumpers between Enders
Reservoir and Culbertson Diversion Dam

Effects of EQIP and CREP programs on water supplies

Economic benefits of all alternatives

Possible reduced yield of reduced allocations in upper basin?

Possible increased yield in lower portions of the basin?

Increased recreation benefits from higher or more stable reservoir levels

Effects of eliminating surface water deliveries

What type of District would be needed to operate a groundwater recharge project?

Determination of beneficiaries of groundwater recharge and to set up repayment.