

## Steve Gaul

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**From:** Jack Wergin [JWERGIN@gp.usbr.gov]  
**Sent:** Tuesday, July 18, 2006 3:02 PM  
**To:** sgaul@dnr.state.ne.us  
**Cc:** Jill Manning; Michael Kube  
**Subject:** Frenchman Valley Appraisal Study - Modeling

**Attachments:** Frenchman Valley Appraisal Study-modeling-071806.doc



Frenchman Valley  
Appraisal Stu...

Steve,

As I mentioned in our phone conversation, I was hoping we could get some estimates for some of the modeling needs for the study.

If we get the estimates, our current plan to utilize FY06 funding would be to enter into a cooperative agreement with the Nebraska Department of Natural Resources for the modeling needs. Our fiscal year ends September 30th, and we will need some lead time for completing the cooperative agreement.

I've attached a description of some of the alternatives with my shot at the initial modeling needs for these alternatives. I believe as this study develops we will identify additional modeling needs, which could be funded through modifications to the cooperative agreement.

If you can contact your modeling consultant and see if you can come up with an estimate for the modeling.

Earlier this year, in my discussions with Mark Phillips, the model may have to use the groundwater model (Republican River Compact Model) as input for a surface water model.

I will plan on meeting with you to discuss these issues at 2:00 on Thursday at the Nebraska DNR Office. I am flexible on this time so if you need to slide the time just let me know.

Let me know if you have any questions.

See you Thursday.

Jack

Frenchman Valley Appraisal Study  
McCook Field Office  
August 24, 2007 – 10:00

1. Introductions
2. Review of Purpose, Objectives, Problems, Opportunities
3. Phase I Modeling Results
  - a. Dry, Normal, Wet year
  - b. Imperial Gage, Palisade & Stinkwater Gages, Culbertson Gage
  - c. Reductions in pumping to meet target inflows
4. Future without / No Action Alternative
  - a. Estimated pumping restrictions required for Compact compliance
  - b. Estimated supply for FVID and H & RW ID
5. Alternatives
  - a. Recreation Alternatives
    - i. Enders Elevation 3089.40
    - ii. Enders Elevation 3099.00
    - iii. Methods of agreeing to higher alternatives
  - b. Groundwater Recharge Alternative
  - c. Irrigation Alternatives
    - i. Current Project Operations
    - ii. Groundwater Irrigation
  - d. Compact Compliance Alternatives
6. Narrowing of Alternatives to advance for further study
7. Determine benefits of various alternatives
  - a. Irrigation Benefits
  - b. Recreation Benefits
  - c. Compact Compliance Benefits
  - d. Flood Control Benefits

How about  
A few mixed-  
multi-objective  
alternatives.

Recreation Alternatives

Methods of agreeing to higher alternatives

- Re-authorization – similar to Cedar Bluff
- Contract amendment – similar to contract renewal
- Long Term Agreement - similar to Mirage Flats
- Unofficial – similar to CREP/EQIP accounting

Groundwater Recharge Alternatives

Methods of Groundwater Recharge

- Re-authorization of project
- Continue operations as is
  - With limited deliveries
  - With no deliveries
- Would off-canal storage sites be beneficial?
- Would Enders storage be released for Groundwater recharge?

Irrigation Alternatives - Project Deliveries

Will project deliveries be included in allocations?

- If project deliveries are included in allocations
  - is there an interest in delivering water
  - How much supply (in/ac) would be need in order to deliver?
  - Continue diverting natural flows for recharge?

- If project deliveries are not included in allocations
  - how much supply (in/ac) would be needed in order to deliver?
  - Continue diverting natural flows for recharge?

Flood Control Benefits

1996 - \$2,255,000

2000 - ? most likely higher than 1996

1951 - \$200,000, 1956 - \$104,000, 1960 - \$412,000, 1965 - \$137,000