

Hydrologic Analysis for Fish and Wildlife Technical Working Group

Briefing for CAMP Advisory Committee

May 29, 2008

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Fish and Wildlife Technical Working Group

- Aberdeen Springfield
- CDR Associates
- IDEQ, IDWR, IFG
- Idaho Power
- Nature Conservancy
- Trout Unlimited
- U.S. Bureau of Reclamation
- U.S. Fish and Wildlife Service

Goal

“identify and discuss possible impacts on fish and wildlife resources, positive and negative, from actions to be taken under the ESPA Comprehensive Aquifer Management Plan”

Requirements for Assessment

- River flows
- Spring flows
- Reservoir storage
- Water quality and temperature
- Species and habitats
- Other info for evaluating impacts

Requirements for Hydrologic Analysis by IPCO and IDWR

- Evaluate seasonal impacts of CAMP measures on flow and storage
- Agree upon a single set of assumptions and method of analysis
- Independent modeling to verify results

Method

- 3 IDWR computer programs
 - Snake River Planning Model (SRPM)
 - Eastern Snake Plain Aquifer Model (ESPAM)
 - Recharge Water Availability (RWA)
- Iterative modeling
 - SRPM for years 0 and 1 → RWA program for year 1
→ superposition ESPAM to predict reach gains for years 1 through XX → SRPM for years 1 and 2

Status

- Agreed upon methodology and assumptions
- IPCO and IDWR have begun collaborative evaluation of scenarios
- Preliminary results for 4 scenarios
 - Base case
 - Full CAMP
 - Full CAMP w/o CREP
 - CREP only

To Do

- Finalize preliminary results
- Process output for additional locations
- Run/evaluate additional scenarios
- Develop database application

Need for Database Application

- 26 years for each scenario
- 4 scenarios (so far)
- 3 computer programs for each year
- 312 separate model runs

→ Lots of input/output data

Potential Advantages

- Less time
- Less prone to errors
- Improved I/O functionality (easier to process and interpret)
- Facilitates archiving
- Applicable to future studies involving GW/SW interaction

IDWR Water Right Accounting

River System

SNK

Local File Path:

D:\WRA\Snake\

Load HST

HST

Run Accounting

Load ALC

ALC

DPL

RCH

RTS

STO

RRT

RESTARTS

IND

Audit Trail

Configuration

Irrig Year 2008

Irrig Year

Yesterday

Start Day 2008148

Days

End Day 2008148

Start Date 05/27/2008

1

End Date 05/27/2008

May 2008

May

2008

Mon	Tue	Wed	Thu	Fri	Sat	Sun
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

May 2008

May

2008

Mon	Tue	Wed	Thu	Fri	Sat	Sun
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
2	3	4	5	6	7	8

Program File Path: D:\WRA\Snake\Program\

Browse

Build Input Files

Run WRA

Build Projected Data

A landscape photograph showing a calm body of water in the foreground, reflecting the surrounding environment. In the middle ground, there are several brown, rocky hills or mountains. The sky is a clear, bright blue with a few wispy clouds. The overall scene is peaceful and scenic.

Questions?

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Assumptions

- Conversions
 - Require diversions of 3 acre-feet/acre
 - Soft conversions
 - Phased in over 10 years
 - Limited by canal capacity
 - Hard conversions
 - Initiated in year 10 at full implementation
 - Not limited by canal capacity
 - Storage in Lake Walcott increased from 97 KAF to 147 KAF

Assumptions cont'd

- Exchange flow
 - Augmentation flows at Milner decreased for July, August, and September
 - High lift pump acreage below King Hill reduced by 1.2 acres for every soft conversion acre
- CREP
 - 200 KAF phased in over 10 years

Assumptions cont'd

- Recharge
 - Uniformly distributed along
 - Egin
 - Great Western
 - Aberdeen Springfield
 - Recharge sites
 - Milner Gooding (2)
 - NSCC (4)
 - 10-year phase-in

Assumptions cont'd

- Priority
 1. Hard Conversions
 2. Soft Conversions
 3. Recharge on NSCC
 4. Recharge on Milner Gooding
 5. Recharge on Aberdeen Springfield
 6. Recharge on Egin
 7. Recharge on Great Western