



## **Eastern Snake Plain Aquifer (ESPA) Comprehensive Aquifer Management Plan**

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### **Weather Modification Working Group Meeting**

**Meeting Summary  
September 15, 2009  
1:00 p.m. – 3:00 p.m.  
Teleconference**

#### **Overview**

The Weather Modification Working Group achieved the following during their September 15, 2009 meeting:

1. Group review of the draft budget for 2008/2009 season through the 2013/2014 season for a cloud seeding program in the Upper Snake
2. Group agreement on an Idaho Power Company (IPC)-led weather modification program in the upper Snake basin under the umbrella of the ESPA CAMP, although a formal relationship has yet to be agreed upon.
3. Group input on the draft Weather Modification FAQ document that is in development for outreach
4. Group input on presentations to be made the IWRB and the Implementation Committee
5. Group discussion regarding Idaho Fish & Games concerns for wildlife when conditions necessitate a staff member to travel to generator sites.

#### **Review of Idaho Power Company's Draft Budget for a Five-Year Cloud Seeding Program in the Upper Snake**

Shaun Parkinson (IPC) presented the draft budget for a pilot cloud seeding program in the Upper Snake that would run through the 2013/2014 season. The draft budget which is based on the "Cadillac model" for a weather modification program (includes the use of aircraft) is approximately \$6M. Generally speaking, the WG supports the presented budget with the exception of the costs associated with the use of aircraft, which has not been discussed as part of the ESPA Plan process.

Dave Radford, Bonneville County, indicated that the \$117K attributed to counties/local entities is the minimum that is likely to be spent on an annual basis.

The following revisions were recommended for editing the draft budget before it is presented to the Implementation Committee on October 13<sup>th</sup>:

- The next draft budget should clarify which program the costs are attributed to: the counties/local entities or IPC
- The aircraft costs should be separated from the rest of the budget, as it is still unclear if the ESPA Plan will include the use of aircraft for cloud seeding
- Revision of a few numbers identified as needing additional information (i.e. aircraft for 09/10 will not be used and should be eliminated from the budget, costs for sampling background silver, etc)
- Clarification regarding which numbers are annual and which are total (i.e. number of generators versus is total that will be in operation for a particular year versus the annual cost of operating those remote generators).

## **Idaho Power Company-led Cloud Seeding Program in the Upper Snake**

The Weather Modification WG is confident in moving forward with an IPC-led cloud seeding pilot program in the Upper Snake under the umbrella of the ESPA Plan. The formal relationship has not been developed between IPC and the ESPA Plan in regards to the weather modification activities. One key element of this formalized relationship is the issue of how IPC financial contributions to a weather modification program will fit into their contributions for ESPA Plan implementation (\$1-1.5M annually for Phase 1). IPC is fully committed to moving forward with the proposed cloud seeding program, and would like to evaluate other opportunities for IPC participation in the ESPA Plan process. Prior to that conversation, discussion and agreement must occur place between IPC and the Public Utilities Commission in determining what role the rate payers may/may not play in financial contributions to a cloud seeding program.

Counties/local entities will continue to play a part in any weather modification program. The formal relationship with counties/local entities under the ESPA Plan has not been formalized either. IPC will continue to develop relationships and work cooperatively with the counties and local entities that are engaged in weather modification programs in the upper Snake basin. The Weather Modification WG will continue to serve as the forum for discussing issues including understanding the financial relationships with the county program and the ESPA Plan.

## **Weather Modification Frequently Asked Questions (FAQ) Document**

The Weather Modification WG reviewed the draft FAQ document that was distributed prior to the meeting. The WG made a number of suggestions. Another draft FAQ document will be circulated electronically, and input will be solicited for additional revisions/comments/suggestions. After this point, the FAQ document will be presented to the Implementation Committee on October 13<sup>th</sup> as part of the Weather Modification WG outreach strategy. The revisions addressed on the call include:

- Each question should include a general answer *and* an ESPA-specific answer, and consistent formatting to indicate which answer is general and which is ESPA related.
- Questions that are similar should be grouped together.
- Additional information for the question: How do we know weather modification works?, including the addition of a website for those interested in learning more
- In response to the question *Does the silver iodide have adverse effects on humans or the environment?*, there should be a sentence explaining that there have been no lawsuits that have determined legal injury because of silver iodide toxicity.
- An additional question, such as: *Why would cloud seeding operations cease in the winter storm season?* should be added
- Updated information on the anticipated benefits of cloud seeding
- Information on the effectiveness of winter storm cloud seeding versus rain season cloud seeding, as this is the nature of the IPC/ESPA weather modification program

## **Presentations to the IWRB and Implementation Committee**

The WG supports additional presentations (based on Shaun's presentation at the August 12<sup>th</sup> Weather Modification WG meeting in Chubbuck) to the IWRB and the Implementation Committee on the fundamentals and benefits of weather modification programs, particularly sharing data from the Payette, modeling on the Upper Snake, and raw data results from the first year (08/09) of the Upper Snake weather modification program. Initial findings from Don Griffiths are quite positive, and demonstrate a significant return on the investment. Other entities may appreciate a similar presentation. Finally, information on weather modification and its benefits is important to provide to

the IWRB and the Implementation, but the weather modification program is already been agreed upon as one component of the ESPA Plan. Therefore, the presentations should be compiled with this in mind.

Counties/local entities would also like to present information to the Implementation Committee on their programs and their benefits for additional snow pack.

**Update on Wildlife Concerns**

At the August 13<sup>th</sup> Implementation Committee meeting, Walt Poole expressed concern about the impacts on wildlife when staff need to travel to the generators for maintenance issues. Initial indications point to no impact. Walt Poole would like local field officials from Idaho Fish & Game to visit the sites. Shaun Parkinson indicated that the next time IPC needs to service a generator, they will invite Walt along.

**Next Steps**

Action	Responsible
Revise the draft budget for the 5 year weather modification pilot program	IPC
Develop a draft monitoring plan for the program – that may use a 3rd party for technical support/oversight to lend credibility to the program.	IPC
Continue coordination with Wyoming at the ‘grass-roots’ level	IDWR
Determine how many storms may have been missed as a result of a smaller program in 2009 and prepare an estimate the amount of precipitation not realized during a storm.	IPC
Evaluate the next iteration of the draft budget via electronic communication	WG
Develop a formal relationship regarding the implementation of a weather modification program between IWRB and IPC under the ESPA Plan	WG members, the Implementation Committee, IWRB and IPC
Evaluate the next iteration of the draft Weather Modification FAQ document for outreach purposes	CDR & WG
Prepare presentations for the IWRB and the Implementaion Committee	IPC, IDWR, CDR
Invite Walt Poole along when performing maintenance at generator sites	IPC

**Meeting Materials Distributed/Presented**

- IPC Draft Budget for 5-Year Pilot Cloud Seeding Program
- Weather Modification FAQ Document

**Next Meeting:** Monday, November 2<sup>nd</sup> 1:00pm - 3:00pm (Teleconference)

**List of Participants**

**Weather Modification Working Group**

NAME	AFFILIATION
Rebecca Casper	Land Developers
Jim Tucker	Hydropower
Rich Rigby	Bureau of Reclamation

**Ex Officio Members & Other Attendees**

<b>NAME</b>	<b>AFFILIATION</b>
Dave Radford	Bonneville County
Joan Kathol	CDR Associates
Stephen Goodson	Governor's Office
Brian Patton	IDWR
Lynn Tominaga	IGWA
Jon Bowling	Idaho Power Company
Shaun Parkinson	Idaho Power Company