

Memo

To: Jonathan Bartsch, CDR Associates

From: Brian Patton

Date: June 24, 2009

Re: ESPA CAMP - Status of Weather Modification

This is a summary of weather modification (cloud seeding) information on the Eastern Snake Plain.

- The Phase 1 CAMP has a target goal of 50,000 AF from weather modification.
- A modest program has been run by several eastern Idaho counties on a limited budget. This program could be incorporated into the ESPA CAMP program in some way. It is estimated this program achieves a 2-3% increase in precipitation. A contractor for the Idaho Water Resource Board estimated that a 7-10% increase is possible with an expanded program.
- The Idaho Power Company has run a successful program in the Payette River Basin in south-western Idaho for several years designed to produce water for power generation at their Hells Canyon Complex. Idaho Power has expressed interest in being involved with an ESPA CAMP program in some manner. Their involvement (i.e. joint partner, contractor, operator in lieu of CAMP contributions, etc.) needs to be determined.
- In support of CAMP, the Water Resource Board contracted with North American Weather Consultants (NAWC) to complete a feasibility study for a large-scale weather modification program in the Upper Snake. NAWC estimated that, in the Idaho part of the basin only, the following amounts of water could be generated:

| | Ground-based generators | Ground-based generators plus aircraft |
|------------------------------------|-------------------------|---------------------------------------|
| Average annual streamflow increase | 78,150 AF | 149,350 AF |
| Average annual cost | \$230,280 | \$673,680 |
| Cost/AF | \$2.95 | \$4.51 |

- Additional increases could be made if the Wyoming part of the basin were brought into the program. The State of Wyoming is also investigating weather modification, and the potential may exist for a joint program in the future.
- The Water Resource Board has also contracted with NAWC to conduct a follow-on feasibility study for the Wood Rivers Basin. The Wood River system is the only other major river system to cross the Eastern Snake Plain, so additional aquifer benefits may be obtained by weather modification in the Wood Rivers Basin.

Please let me know if you have any questions.