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United States Government **Department of Energy**

memorandum

Bonneville Power Administration

DATE: August 14, 2002

REPLY TO ATTN OF: KEC-4

SUBJECT: Supplement Analysis for the Watershed Management Program EIS (DOE/EIS-0265/SA-86)

TO: Joe DeHerrera - KEWN
Fish and Wildlife Project Manager

Proposed Action: Upper Grande Ronde Direct Seed Incentive Program

Project No: 1992-026-01

Watershed Management Techniques or Actions Addressed Under This Supplement Analysis (See App. A of the Watershed Management Program EIS): 3.3 Conservation Tillage

Location: Various locations throughout the Upper Grande Ronde Basin, Union County, Oregon.

Proposed by: Bonneville Power Administration (BPA), and Union Soil & Water Conservation District (Union SWCD).

Description of the Proposed Action: The goal of this project is to implement direct seeding of agricultural crops and reduce soil disturbance and erosion from conventional tillage practices. Incentive payments to farmers will encourage agricultural producers to implement direct seeding by offsetting high initial start-up costs for these techniques. A refinement of direct seeding techniques can be applied to future agricultural seeding practices.

Analysis: The compliance checklist was completed by Lyle Kuchenbecker, Grande Ronde Model Watershed Program (GRMWP) Project Planner, and meets the standards and guidelines for the Watershed Management Program Environmental Impact Statement (EIS) and Record of Decision (ROD).

BPA proposes to cost-share a direct seed program on agricultural lands that is expected to benefit aquatic species by reducing sediment input into streams. The project would be coordinated with the Oregon Department of Agriculture (ODA) and Oregon State University (OSU) Extension. Farmers participating in the program would be trained and educated in direct seeding techniques. This is a method of farming that virtually eliminates plowing and should result in healthier soil conditions, which in turn would lead to environmental benefits.

Direct seeding involves leaving the residue from the harvested crop on the soil surface and using a special drill to plant the seed for the next crop right into the stubble. These drills cut a thin opening in the soil and seed (and sometimes fertilizer) is dropped in and then the slice is closed

up. There is very little soil disturbance and no bare soil. This combination of minimal soil disturbance and residue management may lead to environmental benefits.

Direct seeding would occur on private croplands with a goal of 3,000 acres. Direct seeding would improve current croplands by producing more uniform stands of seeded plants, favoring infiltration and moisture storage, offering wind protection, and resulting in long-term creation of increased organic matter and vigorous plant communities. Landowners would restrict access including limited recreational admissions.

This watershed restoration and enhancement project proposes offering private landowners a cost-sharing program to offset high initial equipment and supply start-up costs. Studies and practical experience have shown that fields may produce less for 5 to 7 years until organic matter increases, earthworm populations increase and farmers learn the best ways to manage under the new system. In the long run, improved air and water quality and a sounder agricultural economy in the basin are expected.

The project management plan incorporates appropriate mitigation measures and Best Management Practices (BMPs) that would be used to protect water quality and limit soil erosion. The Union SWCD conducts a water quality monitoring program throughout the Grande Ronde valley. Any fertilizer applications would be similar to conventional tillage practices. No aerial herbicide applications are involved. If farming practices require herbicide use, all applications would be under label restrictions.

Activities include:

- Erosion level monitoring of croplands within the upper Grande Ronde.
- Increased interest in watershed management by offering a cost-sharing program and education of landowners in direct seeding methods.

There would be no land disturbance activities that could affect cultural resources as all project sites are previously disturbed areas. Individual site assessments would identify erosion problems, cropland conditions and physical site characteristics. Quality control of project plans would be through technical review by the GRMWP Technical Committee, ODA and Union SWCD.

The only known threatened or endangered species present in the project areas are grey wolf, Canada lynx, bald eagle, Snake River Basin bull trout and steelhead, and Snake River spring/summer and fall runs chinook salmon, Howell's spectacular thelypody and Ute ladies'-tresses. Project activities would have no effect to listed species. The project would result in improved vegetative and soil conditions, which could benefit upland birds and big game. Cover, straw and a food source could result from the residue management process.

Proposed Action:	Impacts:
Direct Seeding/Crop Residue Management	No negative impacts. Long-term beneficial impacts expected. Direct seeding farming methods use specialized equipment to improve efficacy by placing the seed, and in some cases fertilizer, into the soil with minimal disturbance. A key component of this type of farming would be crop residue management. Unlike normal plowing, the residue would be

	left on the surface and allowed to naturally decompose. Environmental benefits are expected to include: reduced sheet and rill erosion (water erosion); reduced wind erosion; increased water infiltration into the soil profile; improved air quality by reducing field burning and wind erosion; and increased carbon sequestration. Project does not directly affect aquatic habitat or species. Permits would not be required.
Monitoring with annual reports and data collection	No impact. Project areas would be monitored by the Union SWCD with erosion monitoring and evaluation. BPA annual reporting requirements are met by the GRMWP reporting process of a project completion report due in the fall of 2003 and upon completion of the project. ODA and Union SWCD would assess results to adapt direct seeding techniques to local conditions.
Education of landowners	Indirect benefits include the education of landowners to a watershed-based perspective in the upper Grande Ronde. Use of direct seeding would require a farming plan focused on a long-term strategy of rotation, weed control and plant varieties suited to the project area. The incentives program would help local farmers defray some of the costs of converting to Direct Seeding.
Reduced yield for start-up years	Minimal impact. Increased economic efficiency is the primary advantage of direct seeding in the long-term; however, start-up years may have a reduced yield. Participating farmers using local suppliers and labor, and program funding to be provided for rental of start-up equipment and supplies during conversion period would minimize any economic impacts.
Disease/Weed Control	Low to minimal impact. Herbicide impacts are limited (wind and groundwater erosion) due to the method of introduction into the soils during the direct seeding process. No aerial herbicides would be used. Appropriate crop rotation schemes would be developed to curtail disease and weed control.

This project has been reviewed and approved by the GRMWP Technical Committee and Board of Directors. The Board's representatives include the Oregon Department of Fish & Wildlife, Tribes and local government. The GRMWP Technical Committee is composed of resource specialists representing the natural resource management agencies in the Grande Ronde Basin. Development of an effective public involvement program includes primary contacts made by the Union SWCD through mailings and workshops designed to solicit landowner participation in the direct seeding program.

Findings: The project is generally consistent with the Northwest Power Planning Council's Fish and Wildlife Program, as well as BPA's Watershed Management Program EIS (DOE/EIS-0265) and ROD. This Supplement Analysis finds that: 1) implementing the proposed action will not result in any substantial changes to the Watershed Management Program that are relevant to environmental concerns; and 2) there are no significant new circumstances or

information relevant to environmental concerns and bearing on the Watershed Management Program or its impacts. Therefore, no further NEPA documentation is required.

/s/ Patricia R. Smith 8-14-2002
Patricia R. Smith
Environmental Protection Specialist - KEC

CONCUR:

/s/ Thomas C. McKinney DATE: *8-12-2002*
Thomas C. McKinney
NEPA Compliance Officer

Attachments:
NEPA Compliance Checklist

cc:
Ms. Sarah Hendrickson, Manager, Union SWCD
Mr. Lyle Kuchenbecker, Project Planner, GRMWP
Mr. Ken Diebel, Technical Contact, Oregon Department of Agriculture