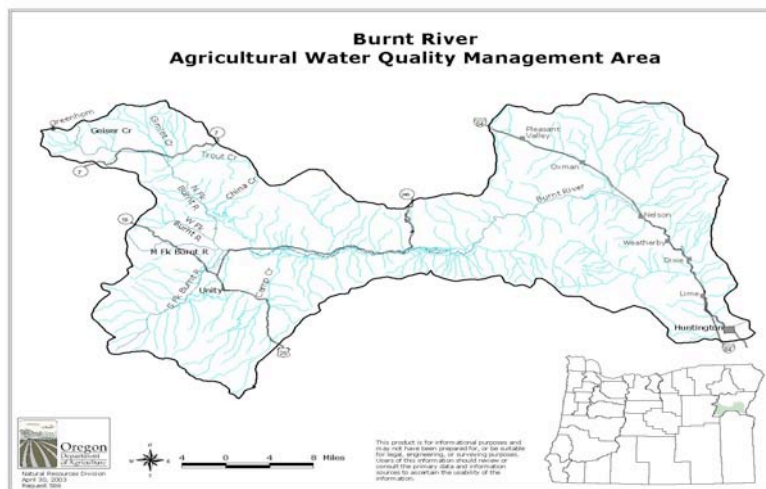


BURNT RIVER AGRICULTURAL WATER QUALITY MANAGEMENT AREA PLAN AND RULES

BIENNIAL REVIEW REPORT TO THE OREGON STATE BOARD OF AGRICULTURE

April 2008



I. Introduction

The Burnt River Local Advisory Committee submits this report to the Board of Agriculture to summarize and evaluate implementation of the Burnt River Agricultural Water Quality Management Area Plan and Rules.

The Area Plan and Rules were created following passage of the Agricultural Water Quality Management Act in 1993. The Oregon Legislature adopted the Act to address concerns about agricultural effects to water quality.

From 2001 through 2003, the Oregon Department of Agriculture (ODA) and a Local Advisory Committee (LAC), consisting primarily of affected landowners, worked to develop a management plan and associated administrative rules for the Burnt River. ODA adopted the Area Plan and Rules in May 2003. The Burnt River Soil and Water Conservation District (SWCD) assisted in nominating the LAC, supported it during development of the Plan, and is the local entity responsible for implementing the Plan.

II. Background

When developing the Burnt River Area Plan and Rules, the LAC identified several objectives and strategies to protect and improve water quality.

The Burnt River Area Plan addressed the following water quality issues and conditions related to lands in agricultural use:

- Streambank erosion remaining within expected levels.
- Maintaining or improving the ability of riparian vegetation to function within the

capabilities of the site.

Goals of the Area Plan

The goals of the Area Plan are to:

- A. Work toward a reduction in any identified undesirable water quality areas by attempting to prevent and control characteristics on agricultural lands in the plan area that contribute to undesirable water quality.
- B. Aid in achievement of attainable water quality standards within the plan area.
- C. Continue and expand, if necessary, the current water quality monitoring program established by the SWCD and the Burnt River Irrigation District.
- D. Apply the lessons learned from the Burnt River Temperature Study.

Strategies to Achieve Area Plan Goals

Providing information, education, technical assistance, and grant writing assistance to landowners is the primary strategy for the ODA and the SWCD to achieve water quality improvement in the sub basin.

The SWCD, acting as the Local Management Agency (LMA), is the lead organization responsible for implementing this strategy of education and assistance.

Area Rules

In addition to the voluntary strategies listed above, there are Administrative Rules to be used as regulatory backstops if needed.

The ODA will use these regulatory mechanisms where appropriate and necessary to gain compliance, and ODA will

take enforcement actions only when reasonable attempts at voluntary solutions have failed.

Although compliance with the rules is required, landowners may choose the best strategies for their operation to meet the rules.

III. Area Plan and Rules Implementation Activities, 2006-2008

Burnt River SWCD Activity Summary 2006-2008

Through technical assistance, outreach and education the SWCD has accomplished the following projects to improve water quality in the Burnt River Watershed.

Old Nelson Homestead Spring Development

Livestock and wildlife were historically restricted to watering at undeveloped spring sites, causing water quality issues, damage to riparian vegetation, and hindering the ability for the producer to manage grazing.

Two springs were developed and water troughs placed in the proximity of the springs. The spring seep areas were fenced to protect vegetation from livestock grazing and tromping. This project has helped to relieve livestock use of the streams that flow into the Burnt River reducing sediment transport and leaving more water in the system.



Moore Push Up Dam Replacement

The Moore Ditch lies on the Burnt River near Durkee and serves 880 acres of cropland. For years water was diverted into the ditch to convey water to those acres via a gravel push up dam. This meant annual operation of heavy equipment in the river to place and remove the push up dam which created sediment disturbance and bank erosion.

The Burnt River SWCD in cooperation with OWEB and landowners installed a permanent concrete structure, which eliminates the need for the push up dam. The structure not only reduces sedimentation and bank erosion it allows the irrigators to be more efficient in their water management. The landowners and the SWCD are looking for funding and cooperation to upgrade several other structures in the near future.



Moore Diversion head gate and concrete structure.



Completed Moore Diversion

Juniper Rip Rap Study

Recently, the SWCD, with help from the ODA and funding from the Oregon Department of Environmental Quality’s 319 program, conducted a comparison of 10 juniper rip-rap sites on the Burnt River.

The goal of the study was to compare a range of sites with similar characteristics, but different length of time since the rip-rap was installed. The results of the study showed a steady progression of riparian vegetation being established. At the sites that had yet to be treated, shrubs made up zero percent of the overall riparian but at the site where rip rap had been in place the longest shrubs made up 60 percent of the plants. The sediment trapped by the juniper provided the conditions needed by willows to establish.

The results of the study show that the conservation work being done along the Burnt River is having a positive effect.

Lower Burnt River Rangeland Improvement

The pervasive invasion of juniper and leafy spurge in the lower burnt river area has

created a reduction in rangeland forage, degradation of the water holding capacity of the watershed and increased soil erosion.

The Burnt River SWCD, Baker County Weed Control District and landowners in cooperation with OWEB implemented an aggressive leafy spurge and juniper control project. This project removed 370 acres of juniper, installed 7,950 feet of fence, treated 200 acres of leafy spurge, reseeded 340 acres with native grasses, and developed 2 springs with watering facilities.

The removal of juniper and the treatment of leafy spurge will increase the available water for watershed recharge and decrease soil erosion with improved vegetation. Other improvements include: better managed grazing, decrease of wildfire hazards and an increase in the livestock and wildlife carrying capacity.



Burnt River Stream Bank Enhancement Project

One of the major problems on the Burnt River is stream bank cutting due to early spring flood waters. Most of the bank erosion occurs when the water is at bank height. We have learned through other projects that the addition of juniper riprap to the bank will help to mitigate the problem. The landowner, through the SWCD obtained a small grant from the Oregon Watershed

Enhancement Board (OWEB) to remove juniper from their rangeland and install it as riprap on the river.

This was a win-win situation for the river system, watershed and the landowner. The juniper is an invasive species that needs to be controlled to improve rangeland and water holding capacity. The juniper skeletons serve as an excellent form of riprap that virtually stops erosion and allow sediment to be deposited around the juniper. With the addition of some grass seeding and woody vegetation plantings the cut banks is rapidly healing.

Conservation Reserve Enhancement Program

The purpose of the Conservation Reserve Enhancement Program (CREP) is to establish riparian vegetation on agricultural land along streams, protecting water quality and restoring fish and wildlife habitat. Agricultural landowners can enroll eligible riparian lands into a 10 to 15-year CREP contract and receive an annual conservation payment for the contract period, reimbursement for 75% of the eligible costs of riparian restoration practices, and other financial incentives. Within the Burnt River Plan Area over the past two years 6 producers have enrolled in 7 new contracts. These contracts include 61,647 feet of riparian fencing and 438 acres.



Before CREP



After CREP

Newspaper articles – One article outlining the purpose of the SWCD was published in July of 2007. The article discussed the purpose behind the local agricultural water quality management area plans for both the Burnt and Powder Rivers.

Coordination with other agencies –

The SWCD has worked closely with NRCS, Burnt River Irrigation District, US Forest Service, Oregon Department of Fish and Wildlife (ODFW), US Bureau of Land Management (BLM), Oregon State University (OSU), Upper and Lower Burnt River Weed Control Districts, Baker County Weed Control District, Tri County Cooperative Weed Management Area, Oregon Department of Forestry and landowners to establish priorities for water quality management and coordination of projects.

Fact Sheets – The District distributed fact sheets at the Annual Conservation Tour in 2007 and an IWM Workshop in 2008.

Clearinghouse of Info— The SWCD and NRCS have served the local agricultural community as resources of technical information related to positive management practices.

Grant projects developed by the Burnt River SWCD during 2005-2007

- Moore Push Up Dam Removal
- Lower Burnt River Rangeland Improvement
- Burnt River Juniper Control II
- Old Nelson Homestead Spring Development
- Burnt River Streambank Enhancement Project

Employment of an Ag Conservation Technician and other staff

During 2005-2007, the SWCD employed one part time conservation technician, one district manager, and a CREP Technician. The four Soil and Water Conservation Districts in Baker County share these employees.

USDA Natural Resource Conservation Service and Farm Service Agency Accomplishments

The USDA Natural Resources Conservation Service (NRCS) and Farm Service Agency (FSA) administer several federal conservation-funding programs and provide technical assistance to landowners who enroll.

Environmental Quality Incentive Program - EQIP

Since 2006 the USDA NRCS has awarded \$250,000 to upland water quality projects within the Burnt River Watershed. These projects have implemented practices designed to improve the hydrology in the uplands by increasing the soils ability to capture, store and beneficially release precipitation. These practices have also facilitated grazing management plans in areas where livestock are present. Special consideration was given to riparian area and specific habitat types (i.e. Mahogany Woodlands, Aspen Stands). In the forested sites practices were implemented to reduce potential effects of wildfire hazard and improve the sites' ability to capture and store precipitation. In these areas fuel loads have been significantly reduced by pre-commercial thinning. These projects have treated more than 3,000 acres of riparian and uplands.

Upper and Lower Weed Boards

There are two active weed control boards in the Burnt River management area. They are working diligently to control weeds in the riparian areas.

IV. Monitoring and Evaluation

One site was found on the LASAR database that met ODA criteria for analysis. This monitoring station is located on the Burnt

River at Snake River Road, near the confluence with the Snake River, and is apparently still being monitored. Water quality data for this site show elevated E. coli, phosphate, Total Suspended Solids (TSS), and turbidity. While no trends in these constituents are evident, the phosphate in particular is of concern because the minimum concentration exceeds standards used by the Department of Environmental Quality (DEQ) in existing Total Maximum Daily Loads (TMDLs) for other basins.

It would be useful to have at least two more monitoring stations on the Burnt River. The Burnt River Irrigation District is considering two sites. One site would be at Pine Creek. This site separates Hereford Valley from Bridgeport. The other site would be below Durkee at the Ashgrove Cement Plant. This site would provide information from the Durkee valley. Overall, these would provide more detailed information on the relative impacts of agricultural development for two separate reaches of the river.

The Burnt River Irrigation District (BRID) continues its water quality monitoring program. BRID also continues to explore ways and methods to improve water quality, while looking for ways to refine monitoring methods.

Changes to the federal Clean Water Act 303(d) List

The DEQ has developed a “2004/2006 Water Quality Integrated Report”, listing all the parameters and concerns for each basin in Oregon. In this report, DEQ has proposed new listings for the Burnt River basin. For those interested in learning more, DEQ’s web page containing the Integrated Report is:

www.deq.state.or.us/wq/303dlist/WQ2004IntgrRpt.htm.

Snake River-Hells Canyon Total Maximum Daily Loads

The Snake River – Hells Canyon Total Maximum Daily Loads (TMDLs) was developed jointly by the Idaho and Oregon Departments of Environmental Quality to comply with each state’s responsibilities within the Clean Water Act and state-specific TMDL schedules.

The scope of these TMDLs extends from where the Snake River intersects the Oregon/Idaho border near Adrian, Oregon (Snake River Mile (RM) 409) to immediately upstream of the inflow of the Salmon River (RM 188). The Burnt River empties into the Snake within this reach. The EPA approved this document in 2004.

The TMDLs address several water quality issues. Perhaps the primary issue for the Burnt River is the target set for total phosphorus. All inflowing tributaries have been assigned load allocations so that the Burnt River will meet the 0.07 mg/L total phosphorus target at the mouth of the river.

The total phosphorus levels at the mouth of the Burnt River average 0.203 mg/L. This average is based on 92 samples taken from 1975 to 2000. Maximum levels reached 2.33 mg/L and minimum levels were 0.081 mg/L. The Burnt River’s contribution to the total non-point source load for this stretch of river is less than 1 percent.

The U.S. Environmental Protection Agency, Oregon DEQ and Idaho DEQ, who are responsible for the preparation and approval of the Snake River TMDLs, recognize that long time-frames (potentially 50 to 70 years) may be required for all water quality standards to be consistently met. For those interested in learning more, the entire document can be found at:

www.deq.state.id.us/water/data_reports/surface_water/tmdls/snake_river_hells_canyon/snake_river_hells_canyon.cfm#SBA.

V. Complaints

Since the last biennial review, ODA received no complaints in the Burnt River planning area.

VI. Plan and Rules Review Process

The LAC reconvened on April 28, 2008. The following members were present:
Lynn Shumway, Chair
Jerry Franke

The LAC recommended no changes to the Area Rules.

The LAC acknowledges and supports the previously described success and progress.

VII. Summary and Conclusions

The LAC believes the Burnt River Plan and Rules have been implemented successfully. No changes were recommended.

The continuing progress in implementing conservation projects has made improvements in conditions on the ground.

Water quality improvements will take more time for measurable changes.

Landowners are more aware of water quality issues because of the numerous outreach activities and SWCD projects completed and ongoing.