



**NRD WATER QUALITY PROGRAM
AGRICULTURAL WATER QUALITY MANAGEMENT AREA
BIENNIAL REVIEW SUMMARY**



Management Area: Middle Deschutes

Meeting Date(s): February 24, 2016

LAC Members Present: Lori Campbell, Lloyd Foreman, Brad Klann, Kirk Holcomb

Progress Measurement:

Data for Mud Springs Focus Area using two different riparian classification methods and one method for evaluating pollution from croplands.

Table x. Mud Springs Streamside Vegetation Assessment.

Map Category	Pre- Assessment (2015)	Post-Assessment (2017)
Ag Infrastructure	47.4	
Bare	1.3	
Bare Ag	2.7	
Grass	110.5	
Grass Ag	11.2	
Not Ag	2.3	
Shrub	35.0	
Shrub Ag	0	
Tree	37.5	
Tree Ag	0	
Water	5.0	
TOTAL ACRES	252.9	

Mud Springs Riparian Conditions					
Class	Description	Stream miles (total miles = 15.2)			
		2008	2012	2015	2017
I	Provides functions. SVAP = 9-10. Ag activities (grazing) were discontinued, vegetation is filling in the stream corridor and the riparian vegetation is sufficient to provide water quality function.	0	0	0.5	
II	Not yet providing functions. SVAP = 5-8.9. Ag activities are not hampering water quality functions of riparian vegetation; however the vegetation is not sufficient to protect water quality.	0	5.9	6.4	
III	Functions impeded by agricultural activity. SVAP < 5.	7.7	1.8	0.8	
IV	Functions impeded by non-agricultural activities, e.g. the railroad had created a berm to relocate the stream channel.	2.5	2.5	2.5	
V	Legacy agricultural issues that are not likely to change in the immediate future, for instance where Mud Springs Creek was piped under a field at the upper end of the watershed in the 1940s and has since been farmed over.	5	5	5	

Mud Springs Creek Focus Area: likelihood of runoff containing sediment or E. coli				
Class	Class II	Agricultural acreage (total = 14,580 acres)		
		2012	2015	2017
1	Agricultural properties have no potential for run-off of <i>E. coli</i> or sediment delivery to Mud Springs Creek.	5,686	5,686	
2	Agricultural activities are not likely to cause <i>E. coli</i> or sediment to enter into the stream.	6,686	7,873	
3	Agricultural activity likely causing discharges of <i>E. coli</i> and sediment delivery to the stream. This includes all agricultural tax lots, with seasonal or perennial streams or irrigation run off. If possible, agricultural use was verified through aerial photo analysis or field.	2,208	1,021	

Conservation activities that contributed to the landscape improvements:

- 58-11 piping project phases 2 and 3
- 58-11 landowner hookups
- One drip irrigation system installed
- 3 wheel-lines upgraded to pivots
- 5 pipeline/water control structures installed
- 5 irrigation water management plans implemented

Implementation Summary outside Focus Areas

Outreach and Education:

- 3 tours on Willow Creek with Forest Service and Culver high school students
- 2 tours with Forest Service on 1,800-acre juniper treatment site
- 2 Farm Fair presentations addressing riparian vegetation, irrigation water improvements, and uplands
- Discussed riparian conditions at watershed council meetings
- 1 tour of irrigation ponds at Rattlesnake Drain
- Contacted and provided assistance to landowners: 20 on riparian issues, 60 on irrigation water, and 20 on uplands

Planning and Projects:

- 1 shrub planting project along 1/3 mile of Deschutes River
- 1 blackberry removal project along 1/3 mile of Campbell Creek
- Reconstructed 411 feet of Trout Creek, including relocating a bridge and road
- Treated 40 acres of noxious weeds in riparian areas
- Agency Plains: implemented 2 drip irrigation systems (80 acres), 3 pivot upgrades (240 acres), 4 irrigation water management plans (235 acres)
- Treated juniper on 352 acres at 5 locations: Ashwood, Upper Mud Springs, and lower Crooked River uplands
- Implemented 2 post-fire seeding/fencing projects on 3,777 near Antelope

Monitoring:

- Turbidity monitored at least once per month in Campbell and Rattlesnake Creeks
- Pesticide stewardship monitoring for 8 months on Campbell, Trout, Mud Springs, and Willow Creeks

Funding and Grants:

- Grants totaled over \$1,146,124

Summary of Impediments:

- Uncertainty regarding Oregon Spotted Frog litigation and potential loss of irrigation water is reducing landowner interest in implementing projects
- NUID had to spend money to defend itself in the Oregon Spotted Frog lawsuit instead of on conservation projects

Recommendations for Modifications:

- No recommendations; LAC is satisfied with implementation of the program

DEQ Recommendations:

- None

Compliance:

Letter of Compliance -0

Water Quality Advisory -0

Letter of Warning -0

Notice of Noncompliance -0

Civil Penalty -0

Alternative Measures -0

Total New Investigations: 0

Notes: