

Update on Early Warning System

Rocky Mountain National Park Subcommittee

November 6, 2014

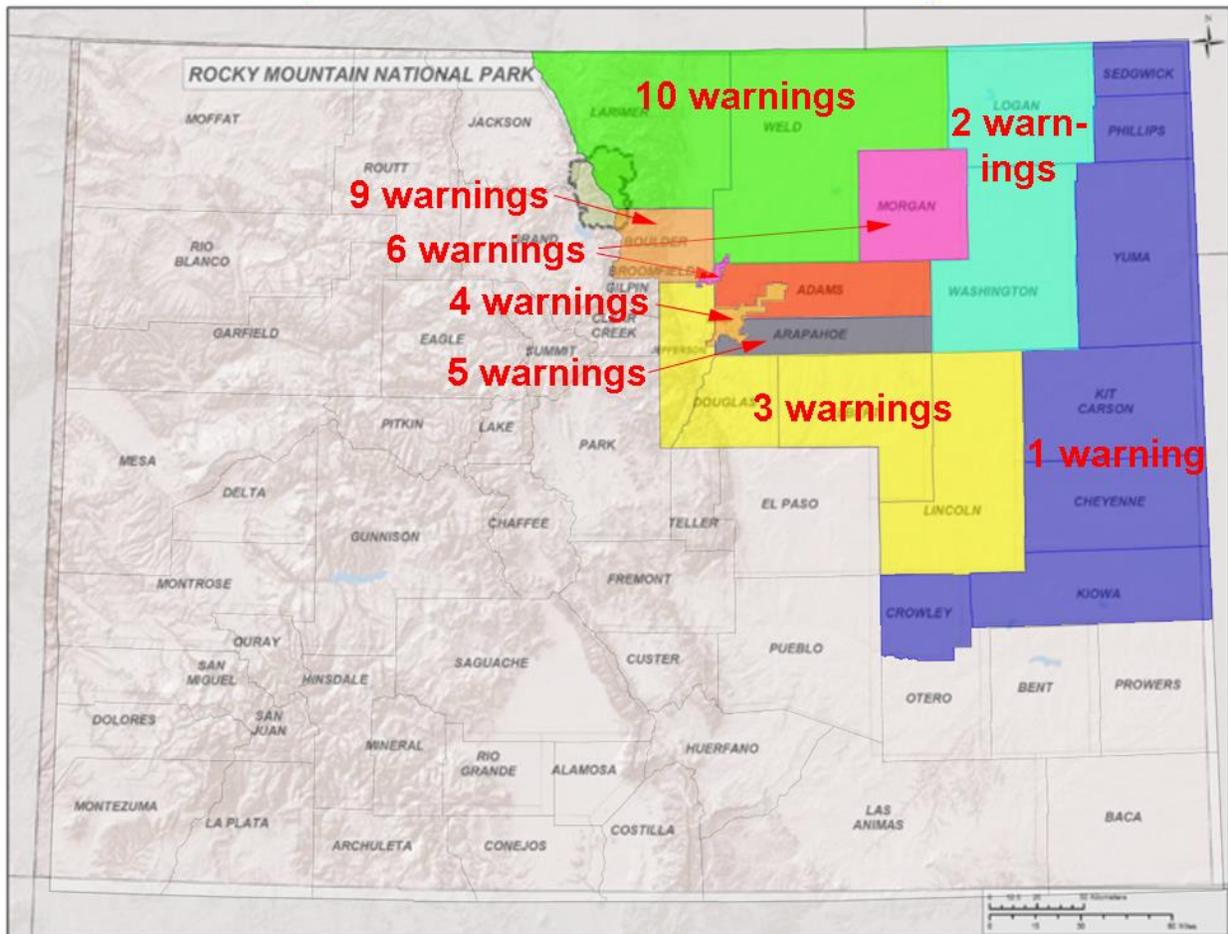


Figure 1. Warnings issued in 2014 (through November 6, 2014).

- From April 1 to November 6, 2014, ten warnings were issued. Counties affected by a given warning varied (Figure 1), and the total number of producers participating in the pilot project and affected by a given warning ranged from 15 to 27.
- Warning response rates ranged from 33 to 69 percent of producers to whom a warning was issued.
- Among those responding, between 60 and 90 percent changed practices based on the warning for either the complete warning period or for part of the warning period (excluding the first warning issued, which had a low response rate).

Table 1. Pilot-scale warning system participants.

Operation Type	Participants ^[a]
Feedyards	17 (11)
Dairies	7 (6)
Swine producers	8 (5)
Poultry producers	2 (1)
Crop producers	9 (9)
Composters	2 (2)
Biosolids applicators	2 (1)
“Non-responding” recipients	24
Total People Receiving Warnings	71

[a] Number of individuals shown first; number of operations represented in parenthesis.

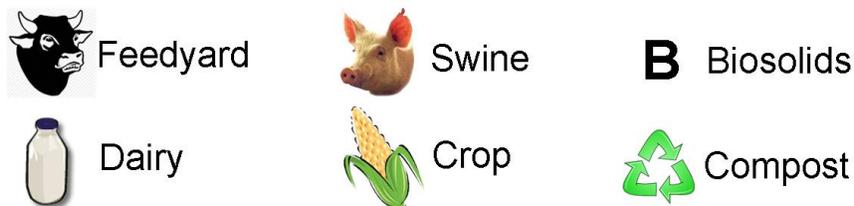
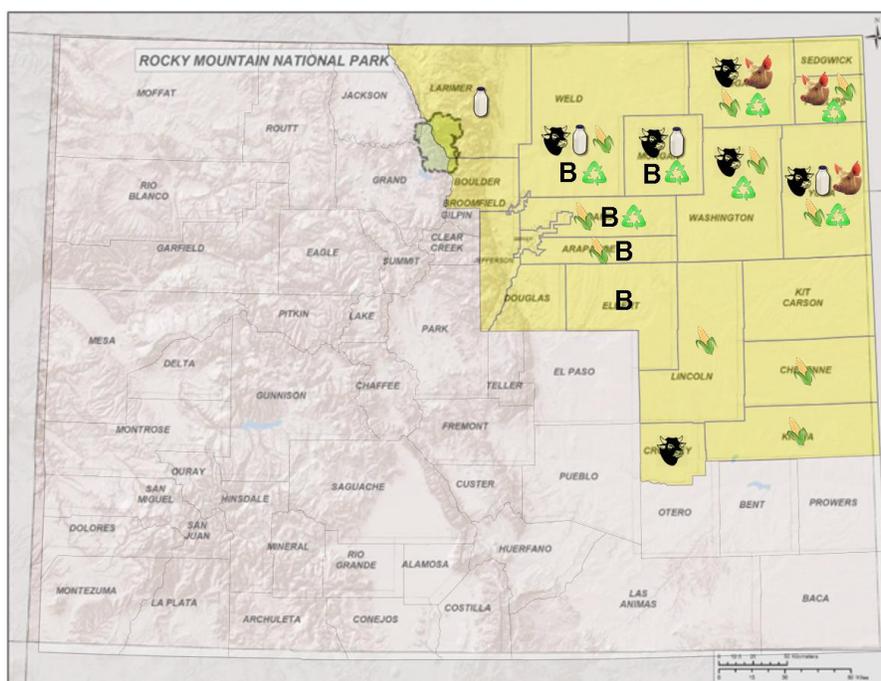


Figure 2. Agricultural producer participants by county.

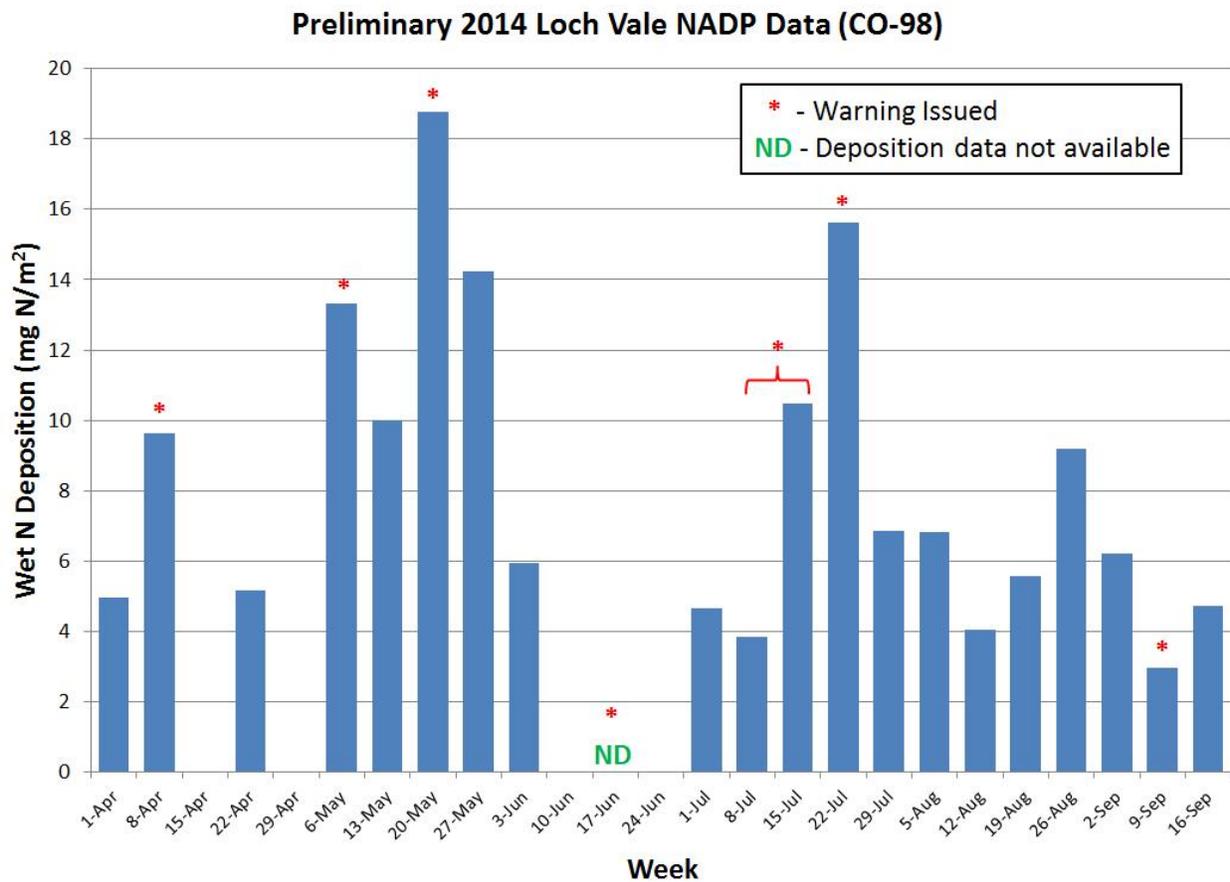


Figure 3. Preliminary deposition data from Loch Vale and warnings issued (2014).

Next Steps

- Analyze performance of upslope detection methodology and move towards automating meteorological analyses.
- Conduct debriefing meetings with participants to solicit feedback and determine how the user interface may be improved.
- As able and in coordination with Jay Ham’s group, determine if downwind concentrations of ammonia were reduced on days that cooperating producers indicated they were responding to warnings by changing their practices.
- Determine the “readiness” of the system for wider promotion in 2015.