

STEP 6: Use CL exceedance to conduct a closer examination of atmospheric pollution impacts.

In this step you will examine CL exceedance patterns across the forest to better understand the extent and severity of potential impacts to resources, as well as the reliability of the CLs exceedance information. [CL exceedance data](#) for each of the nationwide CL efforts are hosted on the portal. If you have used site-specific data to create refined exceedance information, we recommended using that data to examine the extent, severity, and reliability of CL exceedance. For each type of CL identified in Steps 1 through 5, examine the extent, severity, and reliability of the exceedances. “Extent” refers to the percent of landscape in exceedance, while “severity” refers to the amount/quantity of exceedance. For example, one forest may exhibit exceedance in only 1% of land area while another forest exhibits exceedance in 75% of land area (extent); deposition in one forest may be only slightly above the CL while deposition in another forest may exceed the CL by a large amount (severity). Reliability is an expression of the certainty of the CL and exceedance estimates. Understanding the extent, severity, and reliability of exceedance on your forest can help you interpret patterns and make appropriate management recommendations.

Spatial representation of CL exceedance information is provided on the portal for the three nationwide CLs efforts. The portal also hosts important Forest Service boundaries including national forest, Class I Area, wilderness area, 6th level HUC, and landscape-scale analysis units, so that exceedance information can be examined by unit for management purposes. Special attention should be given to national forest and Class I boundaries.

Detailed instructions on assessing these [CL exceedance metrics](#) are available on the portal. A tabular description and example of this analysis is shown below.

Exceedance Metrics	Critical Loads			
	Acidity: Surface Waters	Acidity: Forested Ecosystems	Nutrient N: lichens	Nutrient N: others
Extent	Number of Streams/Lakes exceeding CL and Number of Streams/Lakes sampled	% of land exceeding CL	% of land exceeding CL	% of land exceeding CL
Severity – Range of exceedance amount	Minimum & Maximum Exceedance Values (meq/m ² /yr)	Minimum & Maximum Exceedance Values (eq/ha/yr)	Minimum & Maximum Exceedance Values (kg/ha/yr)	Minimum & Maximum Exceedance Values (kg/ha/yr)
Severity - 95% exceedance value	95% of sites exceed by X meq/m ² /yr (only relevant when number of data points > 25)	95% of grid cells exceed CL by X eq/ha/yr	95% of grid cells exceed CL by X kg/ha/yr	95% of grid cells exceed CL by X kg/ha/yr
Reliability	High	Low	High	Variable*

*The variable reliability rating for the empirical CLs of nutrient nitrogen (non-lichens) will be important when interpreting exceedance information and making management recommendations in Step 7.

Complete this analysis and proceed to [Step 7](#) for guidance on interpreting exceedance information.