

Alaska and Puerto Rico

National Forests in Alaska and Puerto Rico have very limited CL exceedance information due to the lack of geospatial deposition layers (CMAQ modeling was conducted only for the CONUS). Additional guidance for these unique situations is provided below.

Puerto Rico

Geospatial calculation of CL exceedance for Puerto Rico (PR) could not be done because deposition was not modeled and mapped for PR. PR has only one NTN site (FS operated since 1985) and NADP does not produce a deposition map because the sites are too isolated to allow for spatial interpolation using the same algorithms used in the CONUS. Spatial interpolation on PR would involve interpolation on a much finer spatial scale than is normally applied by NADP. In addition, one data point does not provide enough data for interpolation.

Geospatial calculation of CL exceedance for PR could also not be done due to a lack of CLs information. The nutrient N CLs are not reliable because there is no on-site data from this ecosystem (see [N CL GTR](#) section on humid tropical ecosystems).

Unfortunately, PR is at a disadvantage for CL assessments. Consider evaluating the sensitivity of the geology and soils to acidification, and monitoring surface water chemistry in sensitive areas to calculate aquatic CLs of acidity. Although PR has low N deposition, you could consider [lichen monitoring](#) to see whether there is any indication of N saturation concerns.

A USGS [special study](#) showed that PR gets the highest mercury wet deposition in the United States. El Yunque should work with FS research scientists to look for evidence of mercury impacts near the mercury monitoring site.

Reference the [Monitoring Strategy](#) for information on developing monitoring plans for atmospheric deposition, surface water chemistry, soil chemistry, and nutrient nitrogen receptors; proceed based on relevant concerns.

Alaska

Geospatial calculation of CL exceedance for Alaska was not completed because deposition was not modeled and mapped for Alaska. Although Alaska has several NTN sites, NADP does not produce a deposition map because the sites are too isolated to allow for spatial interpolation using the same algorithms used in the CONUS. Linda Geiser, lichenologist and Air Quality Specialist from FS Region 6, used throughfall and bulk deposition information from 10 sites (scattered among 3 national parks and the Tracy Fords Terror Wilderness in SE Alaska) to calculate an

annual deposition estimate used in the Watershed Condition Assessment (0.75 kg N/ha was used for all 6th level HUCs in AK). Alaska forests can incorporate this information into the air quality assessment (see [CL Strategy](#) Steps 4 and 5).

Although no CLs of acidity for terrestrial or surface water are available, partly due to the lack of geospatial coverage for deposition, both national forests are located along the coast, an area where [CLs for nutrient nitrogen](#) are considered reliable for several indicators.

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