



# The National Aquatic Resource Surveys: Applying NHDPlus



## The National Aquatic Resource Surveys

Report on the condition of the nation's waters

Help build state capacity for monitoring and assessment

Promote collaboration across jurisdictional boundaries in the assessment of water quality

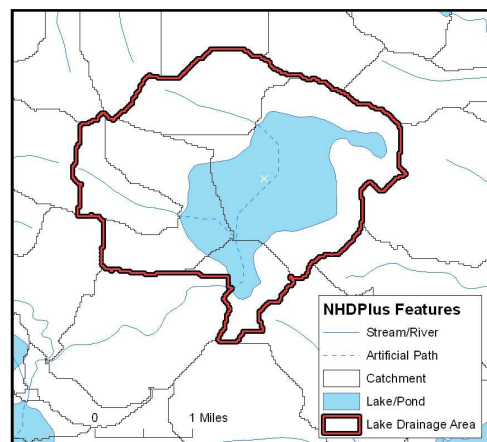
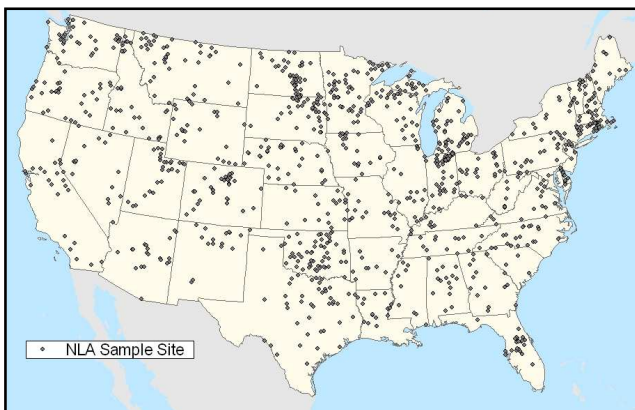
## What are the National Aquatic Resource Surveys?

The National Aquatic Resource Surveys are a series of statistically-representative surveys of our nation's waters. The U.S. Environmental Protection Agency, states, tribes, and other partners are conducting these surveys of lakes, rivers and streams, coastal waters, and wetlands in a revolving sequence. The purpose of these surveys is to provide nationally-consistent, comprehensive, unbiased estimates of the condition of our aquatic resources.

## How do the Surveys use NHDPlus?

NHDPlus data and tools are an integral part of the survey design and data analysis for the National Aquatic Resource Surveys.

NHDPlus serves as the basis for establishing the sample frame for these surveys. The first step in the site selection process for each survey is to derive a list of waterbodies for potential inclusion. NHDPlus is used to identify the target population of waterbodies of interest. For example, in the case of the National Lakes Assessment, the target population was natural and man-made freshwater lakes, ponds, and reservoirs greater than 10 acres (4 hectares) in size. Lakes were selected to represent five size class categories, as well as to provide relatively even spatial distribution across the lower 48 states. Lake centroids were calculated from NHDPlus, and sample sites were randomly selected from the target population using an unequal probability design.



Sample Site Locations for the National Lakes Assessment (right) and Lake Drainage Area (far right)

NHDPlus is also being used in the data

analysis phase of the National Aquatic Resource Surveys. Drainage areas and their characteristics (such as land use and road density) will be delineated for each of the waterbodies sampled (approximately 1,200 per survey). These calculations rely on the hydrography, elevation-based catchments, and value-added attributes featured in

NHDPlus. Newly developed tools such as the NHDPlus Basin Delineator Tool and the Catchment Attribute Allocation and Accumulation Tool will help automate this process. Drainage area calculations are an important aspect of the analysis of survey results because they enable us to identify potential influences on water quality at each site.

Additional information on NHDPlus can be found at <http://www.epa.gov/waters>

For more information on the Surveys, visit:

<http://www.epa.gov/owow/monitoring/reporting.html>

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