

Lacustrine Wetlands Project

OKLAHOMA WATER RESOURCES BOARD

Refining Identification in National Wetlands Inventory (NWI) Through Modern Dataset Mapping Analysis and Risk-Stressor Assessment

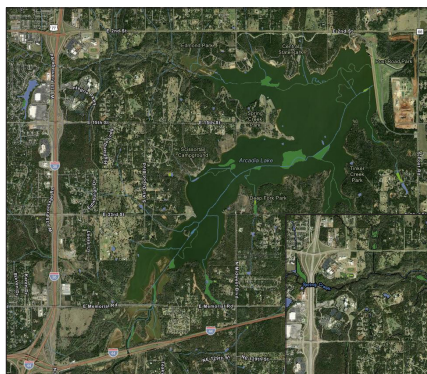
This project was funded under the federal Wetlands 104(b)3 Development Program, following United States Fish & Wildlife Service (USFWS) requirements to update NWI maps. The project focuses on wetlands in watersheds with gauged reservoirs throughout nine Hydrologic Unit Code-12 (HUC 12) sub-watersheds.

What is the NWI?

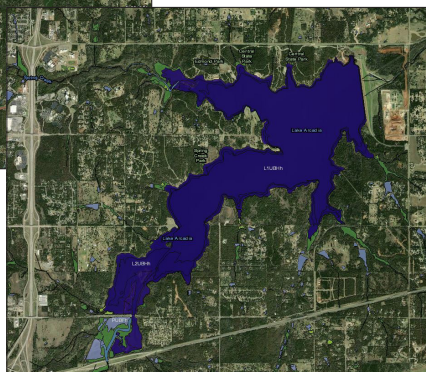
The 1986 Federal Emergency Wetlands Resources Act directed the USFWS to map, digitize, and archive the nation's wetlands, which resulted in the NWI. The USFWS disseminates this data through the [Wetlands Mapper](#) and its related tools to promote the understanding, conservation, and restoration of wetlands.

In many areas of Oklahoma, the NWI has not been updated since the 1980s. As aerial imagery technologies increase in accuracy and detail, and land use and climatic conditions change, the inaccuracies of the NWI have become more evident.

Most notable are the cases where large reservoirs were constructed after 1980. These lakes are missing entirely as lacustrine wetland features on the national map viewer, which still shows the areas where lakes have been constructed with historical rivers and smaller wetlands.



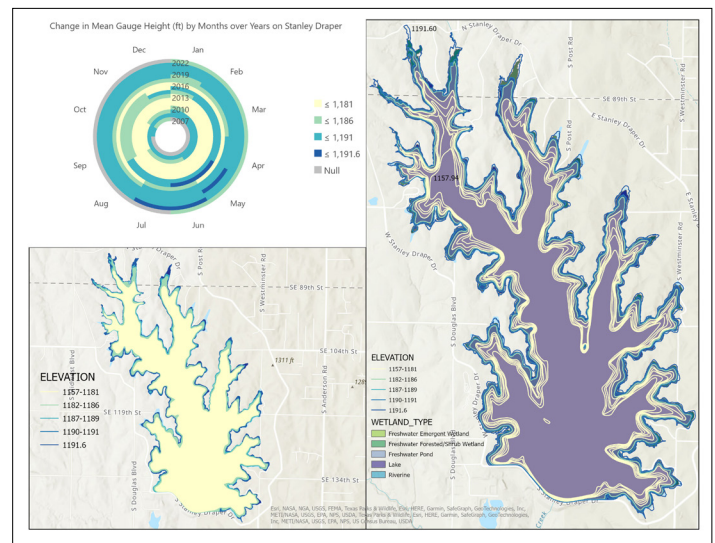
Left: NWI map with legacy data showing the North Fork River instead of Lake Arcadia, which was not fully constructed until 1986.



Right: the updated NWI map shows Lake Arcadia in blue, which indicates lacustrine wetlands.

As the landscape changes over time, the OWRB and its partner agencies are working to keep the NWI as accurate as possible.

The information provided by the project also gives policy makers and land managers a better understanding of the importance of wetlands to the wider hydrological system. Through improved understanding, the potential for voluntary conservation and restoration can be heightened.



Data clocks and maps combining gauge data with lake elevation contours and associated wetlands for Stanley Draper lake create a visual representation of the extent of wetland community presence and the effects of changes to lake elevations.

Future projects to collect data on the nature and extent of Oklahoma wetlands are critical. The data can be used for multiple purposes, such as analyzing the contribution of wetlands to maintaining environmental flows and reducing flooding as well as developing a better understanding of the contribution of wetlands as buffers for groundwater resources.

For more information, see the [interactive Lacustrine Wetlands Project ArcGIS StoryMap](#) or [download the project report](#).



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