

# Hydropower New Stream-reach Development Resource Assessment

National Hydropower Asset Assessment Program (NHAAP)  
<http://nhaap.ornl.gov>

The New Stream-reach Development (NSD) project uses an innovative geographic approach to analyze the potential for new hydropower development in U.S. stream segments that do not currently have hydroelectric facilities. Developed and implemented by Oak Ridge National Laboratory (ORNL) for the U.S. Department of Energy (DOE) Water Power Program, the assessment leverages recent advancements in various geographic datasets on topography, hydrology, and environmental characteristics to develop the highest resolution and most rigorous national evaluation of U.S. hydropower potential to date.

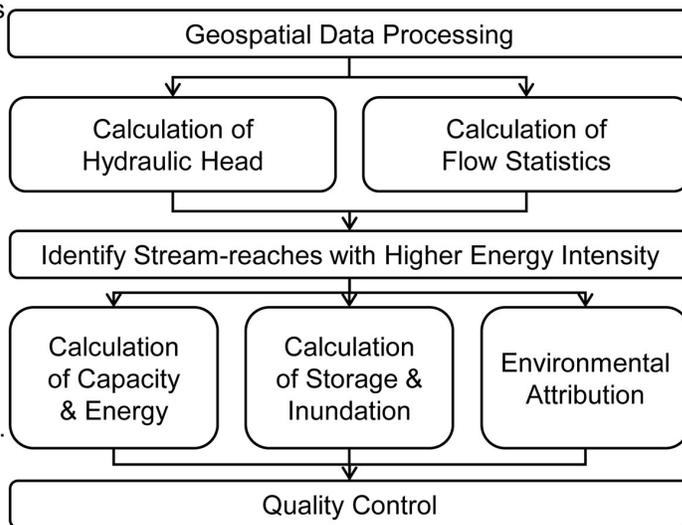
**Intended Usage:** Our mission is to provide a national scale reconnaissance-level analysis to identify high energy intensity stream-reaches, and classify new potential areas using a range of technical, socio-economic, and environmental characteristics. However, this research is not intended to determine economic feasibility or to justify financial investments for individual site development.

**Main Objectives:**

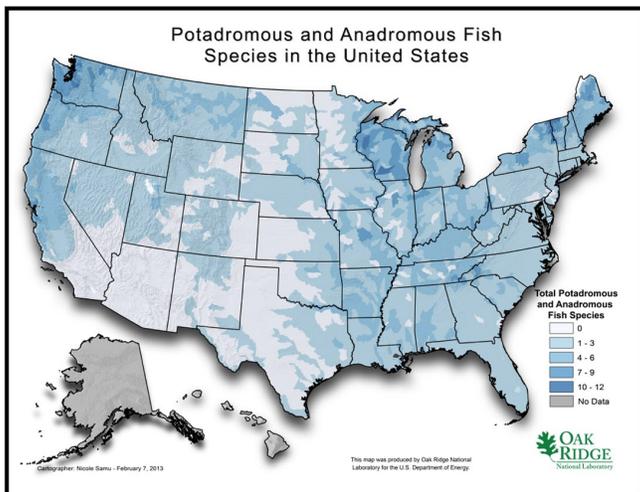
- Identification of stream reaches with potential for development.
- Calculation of potential hydropower capacity, energy, reservoir storage, and inundation.
- Detailed geospatial integration of environmental data with NSD assessment results. Environmental attribute data include critical habitat, federally listed fish, fish traits, landscape disturbance, land ownership, recreation, water use, and water quality.

**Data Availability:** The publicly accessible results and underlying data will be distributed through <http://nhaap.ornl.gov/>.

**NSD Methodology Overview**

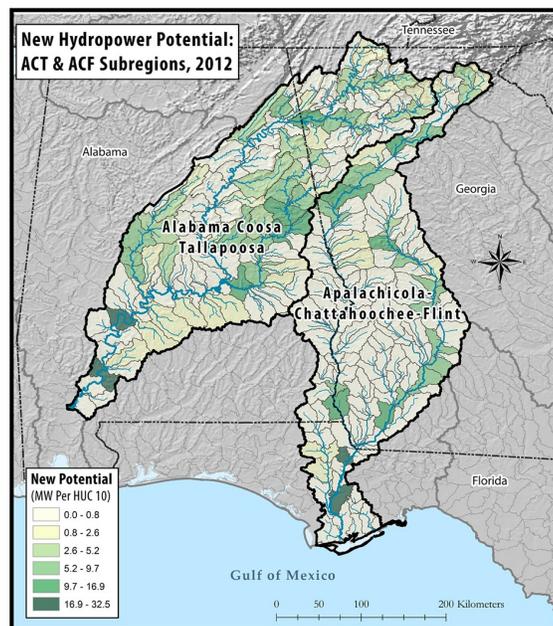


NSD flowchart



Example of summarized environmental attribute data.

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Pilot study at Alabama-Coosa-Tallapoosa & Apalachicola-Chattahoochee-Flint subregions  
<http://nhaap.ornl.gov/nsd/actaf>