

Pilot Project: Creating High Resolution NHDPlus Data

Introduction

The NHDPlus is a suite of geospatial datasets that contain hydrography with value added attributes such as flow volume, velocity estimates and catchments characteristics. This data is based on the National Hydrography Dataset, the National Elevation Dataset, the National Land Cover Dataset and the Watershed Boundary Dataset. Currently, the NHDPlus is available at the 1:100,000 level. However, Horizon Systems Corporation, in association with the USGS and the EPA Office of Water, has developed tools that can be applied to 1:24:000, high resolution NHD to create high resolution NHDPlus data. IDWR proposes to test those new tools to create high resolution NHDPlus data in three selected areas in Idaho. IDWR will select three 12-digit watersheds, one mountainous, one low relief agricultural, and one area that contain a mix of rural, urban and agricultural uses.

The mean size of a 12 digit Hydrologic Unit (HU) in Idaho is 34.4 square miles. Three such HUs would be an estimated 103 square miles. The actual size of the chosen HUs may be slightly different.

Benefit to the USGS and NHD Community

- A test to see whether the NHDPlus tools for high resolution NHD work for different areas in Idaho. IDWR will apply the tools to three 12-digit watersheds: one mountainous, one low relief agricultural, and one area that contains a mix of rural, urban and agricultural uses.
- At least one of the HUs would have an inflow so we can test setting boundary conditions.
- Updates to the NHD that are required for successful deployment of the NHDPlus Tools.

Proposed work

- Work with Cindy McKay at Horizon Systems Corporation to obtain the NHDPlus Tools and apply those to three selected 12-digit HUCs as described under "Benefits to the USGS and NHD Community."
- Edits to NHDFlowlines that are required for successful NHDPlus Tool execution will be submitted to the USGS for inclusion into the NHD.

Deliverables

- NHDPlus Data for selected areas
- Report describing the process and difficulties encountered in using the NHDPlus Tools
- A list of the edits that need to be done to NHD linework and tables to implement the tools