

ETWG Hydrography - Algorithms



This is a prototype set of pages. Please feel free to edit as you like here, but also be aware that there is a [discussion forum](#) going on now (Summer 2015) on how this group should operate. Please post your thoughts about what you like/don't like/want from this group there.

This group is very much meant to be a "let's work it out" group. Please don't feel that you need to wait until the thing you want to talk about is "solved." The whole point is that others might be able to contribute to your problem based on their experiences.

The pages immediately below are meant to be topical dividers. This level should only contain the problem definition and no implementation details. The level below that is where an algorithm implementation should be provided. The idea being community members can provide, for example, implementations of the same algorithm in both Python and R, each on its own page. Down the road, we may reorganize/curate pages for clarity, especially if we do things like present speed or quality comparisons of different algorithms that attempt to solve the same problem. The code that is submitted here is really only for the purpose of illustration--one could think of it as "pseudo-code." We are working out protocols for us all sharing more substantial bodies of code using some version control system (git, most likely, with some front end such as github/gitlab/stash/whatever).

We expect to keep each topic fairly narrow in the hope that the algorithm definitions and implementations are not overwhelmed with supporting details, like file formats. As such, we encourage folks to be very clear about the structure and meaning of any input and output content so that readers can follow the logic as easily as possible.

Algorithm Topics

- [Finding Basin Outlets](#)
- [Upslope Navigation](#)
 - [Finding upstream flowlines](#)
 - [Finding upstream flowlines - recursion \(Python\)](#)
 - [Batch mode method of creating headwater basins from upstream flowlines](#)
 - [Accumulate characteristics upslope](#)
 - [Based on Python recursion](#)
 - [Statistics of Upslope Area](#)
- [Downslope Navigation](#)
 - [Navigating downstream on non-diverging network](#)
 - [Set "downId" based on shared geometry](#)
 - [Navigating downstream on a diverging network](#)
 - [Using SAS on NHD from Greg Schwarz](#)
 - [Downslope Navigation on the Watershed Boundary Dataset](#)
 - [recursive R scripts and 12-digit results from Dave Blodgett](#)
 - [WBD Navigation ArcGIS toolbox](#)
 - [Accumulating characteristics downstream](#)
- [Find the main stem of network for an arbitrary basin](#)
 - [Early use case](#)
- [Assigning Z elevation values to stream networks](#)
- [Summarization of Landscape Information to Ecological and Political Units](#)
 - [CDI Project: Standardizing Stream-Landscape Summaries](#)
 - [CDI Stream Summarization Face to Face Meeting \(August 3-5th\)](#)
 - [Proposed Comparison of Allocation and Accumulation Methods/Results on NHDPlus v2](#)
 - [Accumulation / Aggregation of Upstream Networks - Comparison of Methods](#)
 - [Attribution / Allocation of Information to Local Catchments - Comparison of Methods](#)
- [Getting Attributes from Downstream](#)

User	Edits	Comments	Labels
Viger, Roland	11	0	0
Langseth, Madison Lee	1	0	0
