

CHUCL: a contributing watersheds tool



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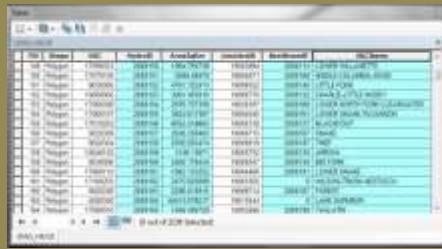
Purpose



For a given USGS gauge station on a stream, determine the upstream extent of the contributing watershed

Data

- USGS_HUC8.shp
 - HucName
 - HydroID
 - NextDownID
 - AreaSqKm



Operation

- Open USGS_HUC8
- Select target HUC
- Verify Target
- List Contributing HUCs
- Compute Area



Algorithm

A screenshot of a Microsoft Access database table titled "HUCs". The table contains the following columns: ID, HydroID, Min, Max, NextDownID, PreviousID, and HUCName. The data shows a hierarchical structure of HUCs, with many entries having the same HydroID but different NextDownID values. The table is sorted by HydroID.

- Get Target HUC HydroID
- Find instances where target HydroID = NextDownID
- Add HydroID of upstream HUC to workqueue
- Repeat until all HUCs processed
- Output Results

Code

- Open File sub
 - Uses IGXDialog
- Select Target sub
 - Calls FindCommandAndExecute Function
 - Runs esriArcMapUI.SelectFeatures Tool
- Verify Target sub
 - Populates Target HUC Text Box
- Show Selection sub
 - Sets target variable
 - Creates workqueue
 - Calls GetUpstreamIDs function
- GetUpstreamIDs f'n
 - Processes table
 - Returns HydroIDs
 - Updates selection set
 - Updates counters
 - Updates list

Limitations / Enhancements

- Tool reliant on single dataset
- Data quality Issues
- Junctions
- ✓ Multiple Select
- ✓ Select by Attributes
- ✓ BAGIS integration