FFMP Basin Customization Course Content

Potential Audience: Service Hydrologist, Hydrology Focal Points or GIS Focal Points

FY 02

Potential Instructors: Ami Arthur and Gina Cox/NSSL
Michael Mercer/NWSH
Andrea Bair/WRH
Dennis Johnson/Contractor
Bob Davis/NWSFO PBZ
Paul Jendrowski/NWSFO HNL
Matt Kelsch/COMET

DAY 1

Content	Develop Course Material	1	2	3	4	5	6
FFMP Overview/Logistics (2 hours) New forecast process using AWIPS AWIPS Demo - Display Operational benefits & scientific reasoning Case Study - Zion/PBZ	**Bob Davis** **(Matt to talk to Bob)**	Mar 11-15	Apr 8-12	Jul 22-26	Jul 29 thru Aug 2	Sept 6-20	Sept 23-27
ArcView Primer Instruction/Lab (4 hours) Project, View and Themes Points, Polygons, Images, coverages and grids Active theme, Interface layouts - change from view to table Attribute tables Toolbar (Zoom, Pan, Select, etc.) Legend Edit, color, fill, etc/ Hide legend Properties (View/Theme) Identify Joins (table and spatial) Query How to turn on/load (sample) extensions Projection (cant mix diff. projections) Manage Data Sources Shapefile, Grids (a web of links)	**Andrea Bair**						

DAY 1 Cont (3:00 - 5:00) & Day 2 (8:00 - 10:00)

Content	Develop Course Material	1	2	3	4	5	6
GIS Approach (4 hours) NSSL methodology Source of Data - NED Blind Pass Processing Projection, Fill (sinks), Flow acc/dir, NHD, Threshold, basins Pfafstetter - small basin and radar merging, theory Pfafstetter example/exercise (not part of lab) NHD (stream naming and need to edit) Compare NHD to synthetic stream network Problems with DEM **LAB** Conduct lab using Spatial Analyst and go through delineation process by providing flow acc/dir for a small area to demonstrate the stream network using different thresholds.	**Ami Arthur** **Gina Cox**						

DAY 2 Cont (3:00 - 5:00)

Content	Develop Course Material	1	2	3	4	5	6
Introductory Lecture (15 min)							
Basin naming (1 hour) Working with users for stream naming and the use of other land use maps - schools, hospitals, streets	**Ami/Gina**						
Extension (15 min) adding up/downstream fields	**Paul**						
Establish new threshold **(Pauls agg/no lab - 15 min)**	**Paul**						
Deleting/Splitting/Merging (4 hours) Delete basins Deleting interbasins that fall in a mainstem, large river, Working with beam blockage, how to narrow down from 230 km. Merging selected basins Upstream tool (selection) by Paul Select tool (ArcView)	**Paul**						

DAY 3

Content	Develop Course Material	1	2	3	4	5	6
Acct for large bodies of water (lakes/res) (1 hour)	**Paul**						
Manually creating shapes (3 hour) (polygons for urban areas) Starting with small basins, streets, streams and drawing an urban boundary (example - street) General edit of attribute table (pfafstetter/downstream links) Split basins (manually draw line) Assign Phafstetter Working with XTools	**Paul**						
Final steps/Preparing for localization (2 hour) Area, projection bin to basin (menu item) basin centroid *** Ask MDL if this is important Thinning/smoothing shapefile line (data points on D2D)	**Paul**						
Conclusions/Summary (30 min) Recognizing when to re-delineate DEMS not matching up flat areas natural sinks One basin shared by 2 radars - why could it be different	**Ami/Gina**						
NOAA 2 Filer/Localization Issues (1 hour) How to add shapefiles as a map background on the D2D If number or basins change, does it affect anything If change shapefile to you need to re-localize? Are there any required fields needed in the shapefile (required by localization) If we get another dataset from the outside, what format and fields are required?	**Michael**						
Evaluations (30 min)	**Matt**						