Hydro Flattening/Hydro Enforcement Examples from Windham County, VT (USGS Task Order G15PD00865)

At the request of Pat Emmett, USGS, I am providing examples of the differences between a hydro flattened versus hydro enforced dataset. In each of these examples, it was determined where the connector was between the hydro features via visual inspection of the bare earth surface model and verification via some imagery product (Google Earth/Bing Maps/In-House imagery). Each of these examples are only around areas where breaklines have been collected to the required collection specification of USGS V1.0/1.2 spec of 100' wide double line drains/2 acre lake-pond features. If it is difficult to determine the location of the culvert feature, then no hydro enforcement is performed

Each of the following examples have been created to a 0.7 meter ERDAS IMG Raster in the Windham County dataset, using only the LAS Class 2 (Ground) and hydro breaklines collected for the project area. In all examples, the RED line represents the connector between hydrographic features.

After the 2 examples for each area, there is a view from Global Mapper showing the profile along the centerline of each "enforcement breach" ensuring that the water features are continuing to flow monotonically between body of water.

Windham County, VT Location Map:



Hydro Flattened between 2 ponds

Found on Windham County, VT (tile N4683E315) at XY=467640,31443





Path Profile/Line of Sight		A.							- ×
ile Path Setup Display Opt	ions Calculate	- 0							
From Pos: 467640.611, 3	1424.108						To Po	s: 467641.534, 3	31467.710
1485.90 ft - · - · - · -									
1485.80 ft									
1485.70 ft									
1485.60 ft									
1105.00 M	5 m	10 m	15 m	20 m	25 m	30 m	35 m	40 m	43.6 m
Line of Sight Cut-and	Fill Volumes	Help	ок						

Hydro Flattened Dam along River

Found on Windham County, VT (tile N4837E609) at XY=483553,61429



25 m

Line of Sight... Cut-and-Fill Volumes...

50 m

Help OK



75 m

100 m

125 m

150 m

164 m

Hydro Flattened Pond / River combination

Found on Windham County, VT (tile N5047E763) at XY=504501,75680



Hydro Enforced Pond/River combination



Path Profile/Line of Sight			N				×
File Path Setup Display Options C	alculate		NS.				
From Pos: 504492.035, 75675.10	2					To Pos: 504509.294	4, 75684.690
289.61 ft - · - · - · - · - · - ·							
289.60 ft							
289.59 ft							
289.58 ft				- · - · - · - · - · - · - · -			
289.57 ft							
2	.5 m 5.0	m 7.5 m	10.0 m	12.5 m	15.0 m	17.5 m	19.74 m
Line of Sight Cut-and-Fill Volum	es Help	OK					

Hydro Flattened Pond/River combination

Found on Windham County, VT (tile N4963E357) at XY=496174,36209



