Appendix 1

Review of FIS Stream Restudy Needs

Review of FIS Stream Restudy Needs

Stream	Reason for Restudy	Benefit of Restudy	H&H cost*	Priority Scoring			
				Potential Area Impacted	Change in Regulatory Outcome	Model Changes	Overall Score
Airport Trib	Completed 1D/2D study but not yet submitted due to IDNR requirement to include all proposed projects at the same time.	lower BFE	(3.2 miles)		1		1
Big Slough	Some long reaches with no cross sections	More accurate representation of the flood risk in localized areas, could put additional ground east of the stream into the floodplain	$11-23,000 (3+ bridges, 3.1 miles)	1	1	1	3
Catherine Ck	A few long reaches between cross sections, missing cross sections at a few significant locations, modeled bridge is a little different than the plans show	More accurate representation of the flood risk in localized areas, North edge of floodplain is steep topography but floodplain may be added to the southern edge	$8-10,000 (1.4 miles)	2	0	1	3
Clifty Ck	A few long reaches between cross sections, CR 500 E may be larger than modeled, profiles upstream of Sloan Branch may be low for a given frequency since high water marks plot at a higher frequency than gage record analysis would indicate should be expected	More accurate representation of the flood risk in localized areas, could add some residential and commercial area to the floodplain	$28-77,000 (4+ bridges, 12.8 miles)	1	1	1	3
Denios Ck	Long reaches between cross sections, 2 bridges may be modeled differently than existing bridge, some roughness coefficient values may be low	More accurate representation of the flood risk, east of I-65 subdivisions could be impacted, west of I-65 is steeper topography so could add only pockets of area to the floodplain	$20-54,000 (10+ bridges, 9.0 miles)	2	2	2	6
Denios Ck Trib	Long reaches between cross sections but reaches are fairly consistent	More accurate representation of the flood risk in localized areas, edge of floodplain topography is steep so only small areas that could be added to the floodplain	$8-9,000 (3+ bridges, 0.9 miles)	1	0	1	2
Driftwood R, downstream	High Water Marks plot reasonably compared to expected frequency based on gage data analysis so profiles are probably resonable but could incorporate SR46 overflow modeling	Edge of floodplain is steep topography so only small pockets could be added to the floodplain, computation of proper floodway in City jurisdiction was completed via LOMR	$10,000 (1 bridge, 2.7 miles)	1	0	1	2
Driftwood R, upstream	High Water Marks plot reasonably compared to expected frequency based on gage data analysis so profiles are probably resonable but could incorporate SR46 overflow modeling	Edge of floodplain is steep topography so only small pockets could be added to the floodplain, computation of proper floodway so provides protection from increased surcharges if development occurs	$22-35,000 (2+ bridges, 5.7miles)	1	2	1	4
EFK White Ck	Long reaches with no cross sections, modeled CR 600 S may be different from existing bridge	More accurate representation of the flood risk, the south side upstream of the tributary has steep floodplain edge topography but small corridor of floodplain could be added to other reaches	$21-30,000 (5+ bridges, 4.6 miles)	1	0	2	3
EFK White Ck Trib 1	Long reaches with no cross section, stream rerouted in one location changes bridges that are modeled, discharge locations are not all correct	Better representation of the flood risk, updated to reflect changes to stream location, the south side has steep floodplain edge topography but small corridor of floodplain could be added	$11-15,000 (1+ bridges, 1.9 miles)	1	1	2	4
EFK White Ck Trib 2	Long reaches with no cross sections, CR 550 bridge may be coded differently from the existing bridge, floodplain/floodway does not include the stream in all locations	More accurate representation of the flood risk and inclusion of the stream in the floodway/floodplain, could add small corridor to floodplain	$12-19,000 (3+ bridges, 2.5 miles)	1	1	1	3
EFK White R	June 2008 High Water marks plot at a much higher frequency flood on the FIS profiles than the gage data indicates, USGS has a model calibrated to the gage rating curve for use in creating inundation map library so the current FIS model was not reviewed	Potential for adding significant amounts of land to east side of the floodplain if BFE is increased in the southern part of the City, floodplain extent would not change in other reaches due to steep ground slopes at the edge of the floodplain	$33-54,000 (3+ bridges, 8.3 miles)	2	2	2	6
Flatrock R (USGS completed a separate model for inundation mapping)	High Water Marks plot at a higher frequency on the FIS profiles than the gage data would indicate should be expected, upstream of CR 400 N there are few data points in the overbanks so long flat areas are missed, at least one bridge modeled different than plans show, location of CR 550 N bridge in model may be in error, overbank roughness coeeficient values may be a bit low	More accurate representation of the flood risk, increase floodway in areas, north of CR 400 N floodplain edges have steep topography so floodplain extent would not increase much, south of CR 400 N the east side has steep sides but additional floodplain area could be added on the west	$19-52,000 (6+ bridges, 8.7 miles)	1	2	2	5
Haw Ck	2018 1D-unsteady state model is in use by City for flood response & regulatory purposes	Another model by IDNR contractor is basis for post 2014 preliminary FIS. Community decided the preliminary FIS was adequate for their needs since they also use the 1D-unsteady model for local regulations.			1		1
North Ogleville Trib	Needs some non-bridge reach cross sections added	Could improve the flood risk identification in localized areas, could add small corridor of floodplain	$8-9,000	1	0	1	2
Opossum CK	Some long reaches with no cross sections, CR 200 South bridge may be coded differently from the existing bridge, may have used non-coordinated discharges	More accurate representation of the flood risk and ability to identify the interaction between Oppossum Ck, Denois Ck and Airport Tributary, increases could add ground to floodplain but existing homes are on high ground	$21-31,000 (8+ bridges, 4.8 miles)	1	2	2	5
Wolf Ck	Long reaches between cross sections, some of the cross sections don't seem to match topography, CR325 plans show bridge differently than is coded in model	More accurate representation of the flood risk, agricultural area could be added to floodplain	$24-40,000 (5+ bridges, 6.1 miles)	1	1	2	4

* Hydrologic & Hydraulic (H&H) assumes whole stream reach in jurisdictional area converted to detailed study with minimal additional hydrologic analysis. Cost estimate in 2012 dollars.