Appendix E. Geomorphology

Appendix E1.

Summary of Geomorphology Assessment Results

Overview

The geomorphic rapid assessment project is one part of a larger effort to update the Middle Huron River Watershed Management Plan (WMP). For this plan, HRWC employed an assessment method to evaluate the stability of representative stream reaches (i.e. segments) throughout the watershed. In summary, the rapid evaluation method assesses the erodibility of a stream reach's banks and the hydraulic forces impacting those banks to estimate erosion rates for each bank. These bank assessments can then be compiled into an overall erosion rate for the stream reach or average rates for all evaluated streams within a tributary creekshed. The erosion estimates individually should only be used to get a general sense of the scale of erosion relative to other streams in the system, rather than taken as precise estimates of sediment load, as the techniques are designed for a rapid and broad assessment.

The geomorphic survey effort is designed to achieve the following objectives.

Objective 1: To determine which representative stream reaches in the watershed are physically stable, and which are actively eroding . This was determined by an evaluation of Bank Assessment for Non-point source Consequences of Sediment (BANCS) model, which includes Bank Erosion Hazard Index (BEHI) and Near Bank Stress (NBS) metrics computed at stream survey locations. Specifically, observational metrics such as bank height, substrate, angle and root depth are evaluated along both banks of an assessed stream reach, and referenced to the bankfull depth. The lengths of the erosive banks are then summed to get an overall erosion rate for the stream reach.

Objective 2: To develop a prioritized inventory of degraded stream reaches throughout the watershed. Stream reaches were ranked according to erosion rate estimates from the rapid BANCS assessments. Further, high-erosion potential reaches will be evaluated qualitatively for restoration potential. Reaches that are heavily altered by development (such as contained in concrete channels or heavily rip-rapped banks, i.e. stream channels not shown on Figure 1) will not be given high priority for stream restoration since restoration designs will be unlikely to be stable under such highly altered condition. Other physical, logistical or ownership issues may reduce the ability of watershed partners from restoring a stream segment, while other factors may make a segment more desirable. Factors such as existing nutrient, pollutant, and sedimentation issues in the reach's watershed will also contribute to higher restoration potential, since restoring or remediating an eroding streambank can reduce nutrient, pollutant and sediment loading.

HRWC assessed just over 50 miles of stream length using the method below in 2019. Using the method (described below and in the Quality Assurance Project Plan in Appendix L), stream banks and lengths are evaluated to determine erosivity and site and full-length erosion rate metrics are generated. The metrics for all the stream reaches in the inventory will be compared, and from that future stream restoration

targets will be prioritized. This analysis will result in a set of stream restoration recommendations for the WMP. Results can also be shared with interested land-owners by request.

Methods

Geomorphic analysis consisted of desktop and rapid field techniques that generally follow methods outlined in Watershed Assessment of River Stability and Sediment Supply (WARSSS) (Rosgen, 2006), specifically a slightly altered version of the BANCS model technique. The technique was only altered to separate it from the rest of the WARSSS assessment, and a single method for NBS determination was used following the guidance from EGLE staff. The analysis focuses on reaches that may be impaired by physical or previous hydrologic alterations. Specific selection criteria are discussed below. The study teams conducted rapid assessment using the BANCS model, with the goal of following-up with estimated bankfull dimensions of selected reaches and cross-sections to further evaluate restoration priorities.

The study began with an initial desktop analysis to identify and assess representative reaches. All mapped streams within the study watershed were subdivided into reaches designated as reasonable lengths between branch points. A reach contributing area (RCA, or drainage area) was created for each reach. A set of statistics was generated from available GIS and aerial data for each reach, including stream length, stream slope, valley slopes, and soil erosivity. Land use characteristics were generated for each RCA such as total area and percent cover in urban, impervious, agriculture, and natural (wooded/wetland).

HRWC did not have the resources to conduct the assessment for all reaches in the watershed. Reaches that are dominated (>80%) by urban piping and channelization were eliminated from field analysis consideration, as such reaches have lost natural geomorphology and function and must be treated for hydrologic alteration. Remaining stream reaches were generally evaluated for their possible contribution to known chemical (phosphorus, nitrogen, DO, TDS, TSS) and biological (bacteria, macroinvertebrate diversity) impairment, based previous monitoring results. Reaches were evaluated for the likelihood significant contribution to hydrologic or sediment impairment, based on contributing land uses and slopes. Finally, an attempt was made to assess reaches from all subcatchments of the watershed so that every reach could at least have an erosion rate implied for it based on values from similar neighboring reaches.

Reaches were then prioritized into three groups, based on priority for assessment: high, medium, and low priority. Criteria used for evaluation included length of open surface water, likelihood of erosion (based on land uses and slope), past observations within the area, accessibility, stream size (or drainage area), and representativeness. The high priority reaches were then segmented into “assessment” lengths that were between access points and between 0.5 and 1 mile in total length, which, following initial runs of the BANCS assessment method, was determined to be a reasonable length for an assessment session. These assessments were then mapped onto Google maps along with parking and access instructions. Assessments were then assigned to teams of 3-4 assessors.

These teams made observations of erosion and alteration using BEHI and NBS metrics, and made rough estimates of bankfull width and depth, bank angle, bank slope, and bank ratios, all following BANCs and NBS methods. From this analysis, a rank-order list of stream reaches for the watershed was developed

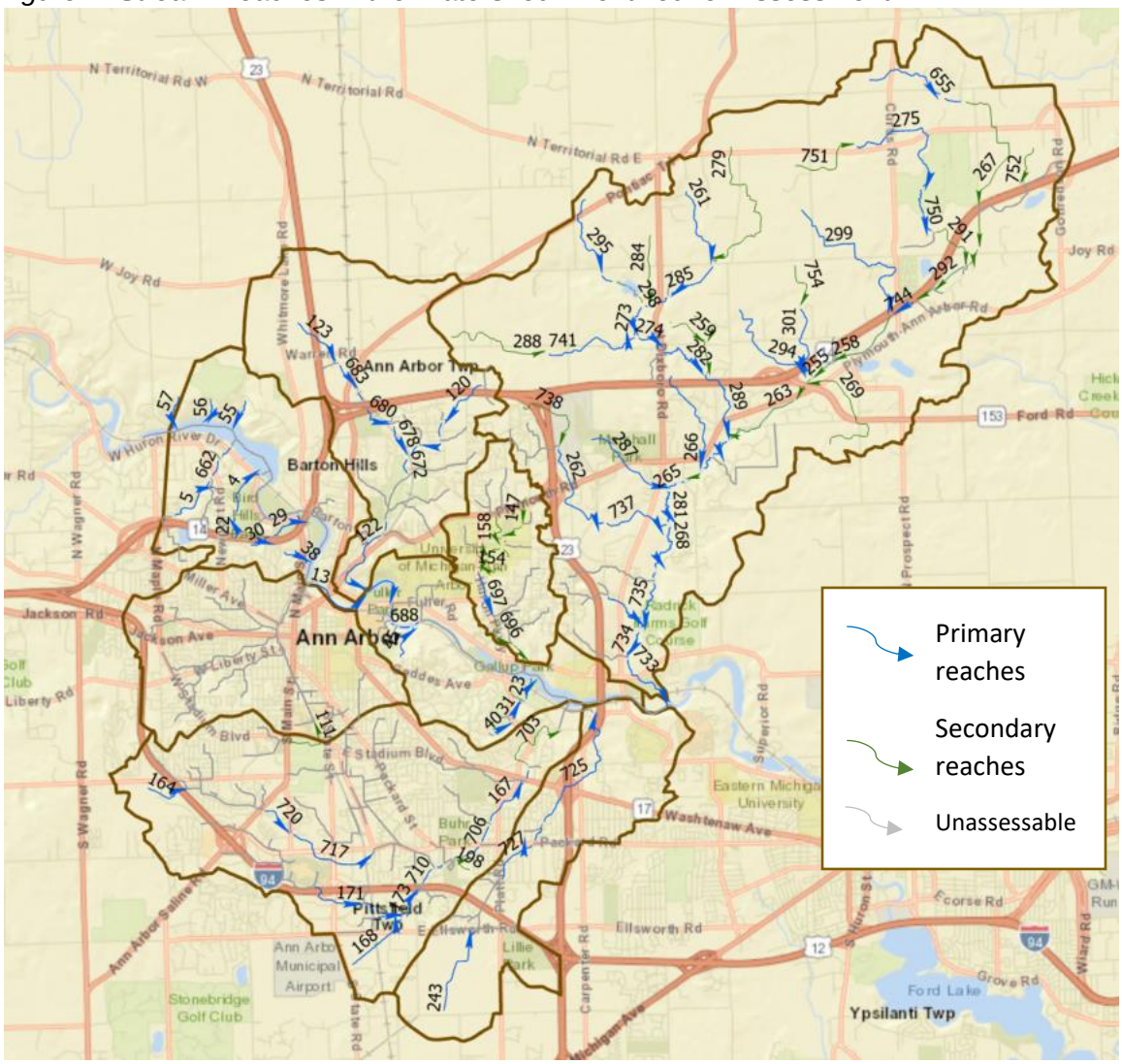
for making restoration or remediation recommendations in the WMP. Return surveys and pebble counts for high priority reaches were a goal for the plan to refine erosion rate calculations using more precise survey methods. However, time and resources did not permit these surveys, as the focus was on completing evaluations of as many reaches within the watershed as possible. It was also determined that further survey work would be part of initial restoration project planning efforts. Also, efforts are planned for the current year to conduct these refined techniques.

More detailed methods are included in the monitoring Quality Assurance Project Plan (see Appendix L).

Results

The desktop stream reach identification and segmentation generated over 750 separate reaches in the watershed (see Figure 1). Reaches were defined by connectivity, as confluence to confluence (or start point to confluence). They varied in stream length from 0.02 miles to 2.5 miles. Ultimately, 132 reaches were assessed with the BANCS/NBS techniques including all 90 high-priority (primary) reaches, and 42 medium-priority (secondary) reaches. Given the variety of reach lengths, some reaches were combined into a single assessment, while longer reaches were divided into multiple assessments.

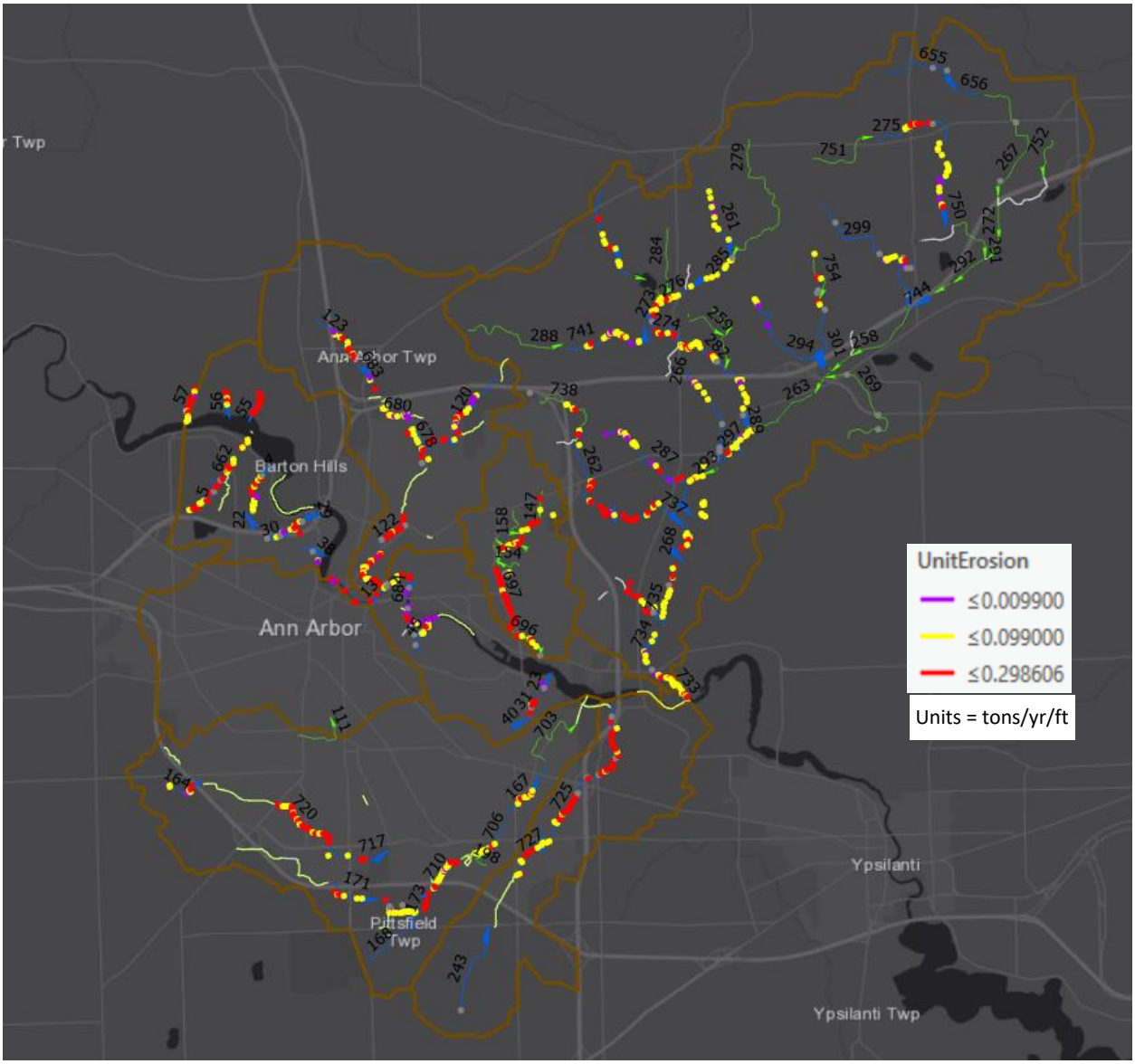
Figure 1. Stream Reaches in the Watershed Prioritized for Assessment



Data from all assessment observations were recorded on field sheets (see Appendix E2) and then entered into digital forms and transferred to the master database. Complete data tables from the database for Reaches, Assessments, and BANCS observations are included in Appendix E2 (separate spreadsheet file).

Results from the geomorphic assessment can be presented in a variety of ways. First, as each bank segment is assessed, an erosion estimate can be generated such that each assessment can have many banks segments assessed. Many lengths of streambank exhibit no significant observable erosion signs. In some cases, one bank is eroding, while the other bank is aggrading or unaffected. However, in downcutting or widening segments, both banks may be eroding at the same time. This may result in twice the estimated erosion of a single bank impact, or each side may be eroding at lower rates. Each potentially eroding bank length can be represented by a point location (see Figure 2) with its estimated unit erosion (in tons/yr per ft of stream length observed), and in an area the size of the study watershed patterns can be observed.

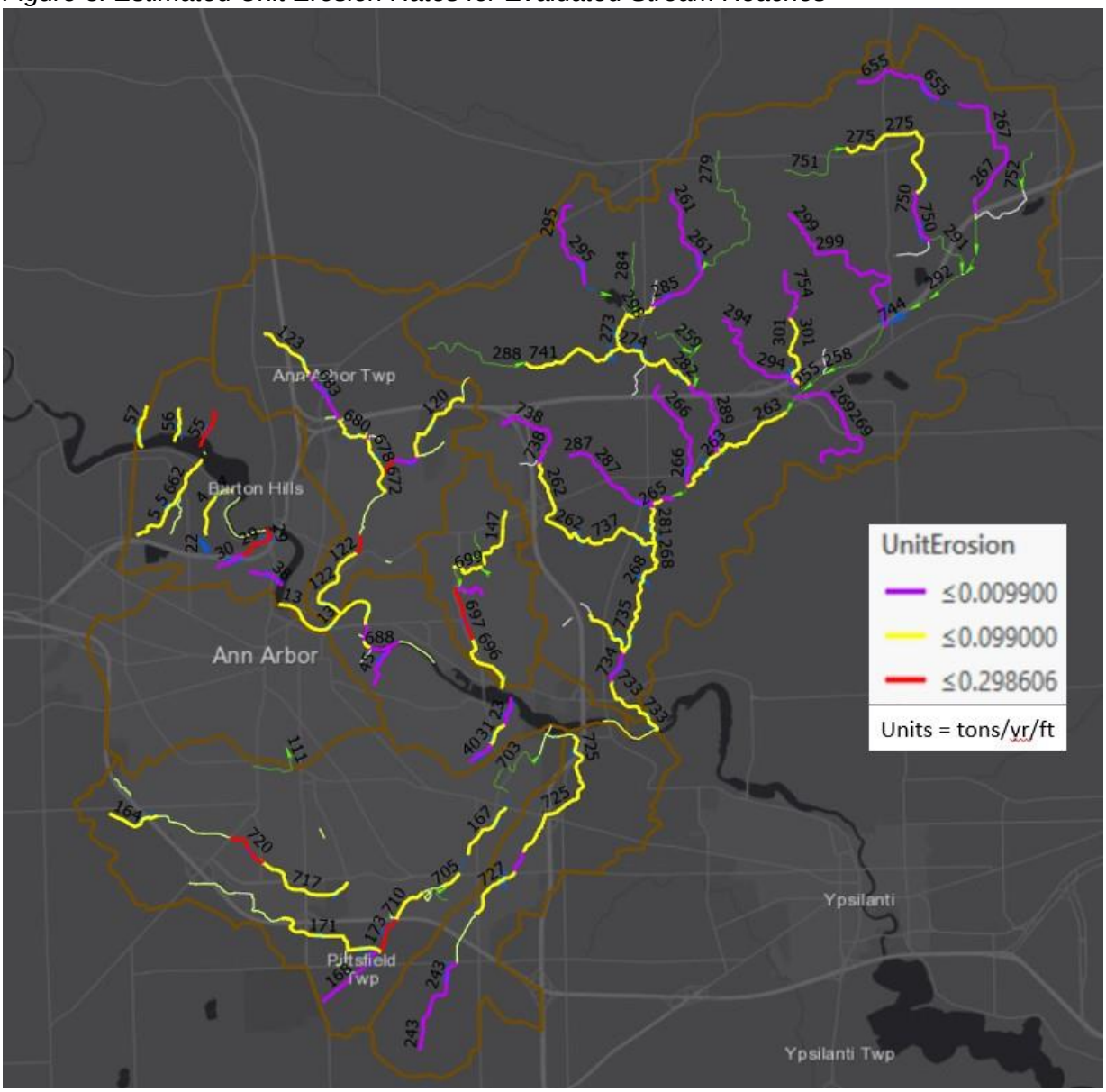
Figure 2. Estimated Unit Erosion from Observed Stream Banks. Note: unassessed reaches are colored blue (medium-priority for assessment) or green (low priority)



Immediately apparent is that urbanized streams in the southwest 2/3 of the watershed show much more evidence of potential erosion than the more ex-urban and rural northwest 1/3 of the watershed. One might also note that a large section of the watershed in Ann Arbor is blank. Most of the streams in the Allens Creek and Malletts Creek watersheds have been buried in the underground storm pipe system and were not evaluated given their low restoration potential. Another important use of this incremental data is to isolate target lengths within a longer reach that have higher erosion potential and could serve as the best targets for restoration.

A second step in analysis is to compile assessment observations into mean erosion rates for entire reaches. Given the size of the study watershed and the total evaluated reach length, a comparative ranking of stream reaches is a good approach to identify initial restoration targets. Figure 3 shows the evaluated stream reaches and their erosion rates. Within the watershed, there are a small number (7) of stream reaches with high erosion rates (> 0.1 and <0.30 tons/yr/ft, marked red). The majority of streams (54 of 94 evaluated reaches) fall within a moderate erosion rate range of 0.01 to 0.099 tons/yr/ft, marked yellow. The remaining reaches (24%) have stable banks with little evidence of active erosion (< 0.01 tons/yr/ft), marked purple.

Figure 3. Estimated Unit Erosion Rates for Evaluated Stream Reaches



An evaluation of the unit erosion distribution illustrates this skew of a few highly erosive reaches followed by reaches with progressively lower erosion rates (see Figure 4). The histogram shows that the division at > 0.1 tons/yr/ft isolates the most extreme eroding reaches, while the middle division represents the bulk of reaches in the watershed, and the low end represents the quartile with the lowest potential for streambank disturbance.

Figure 4. Estimated Unit Erosion Rates for Reaches, Overall and by Grouped Frequency

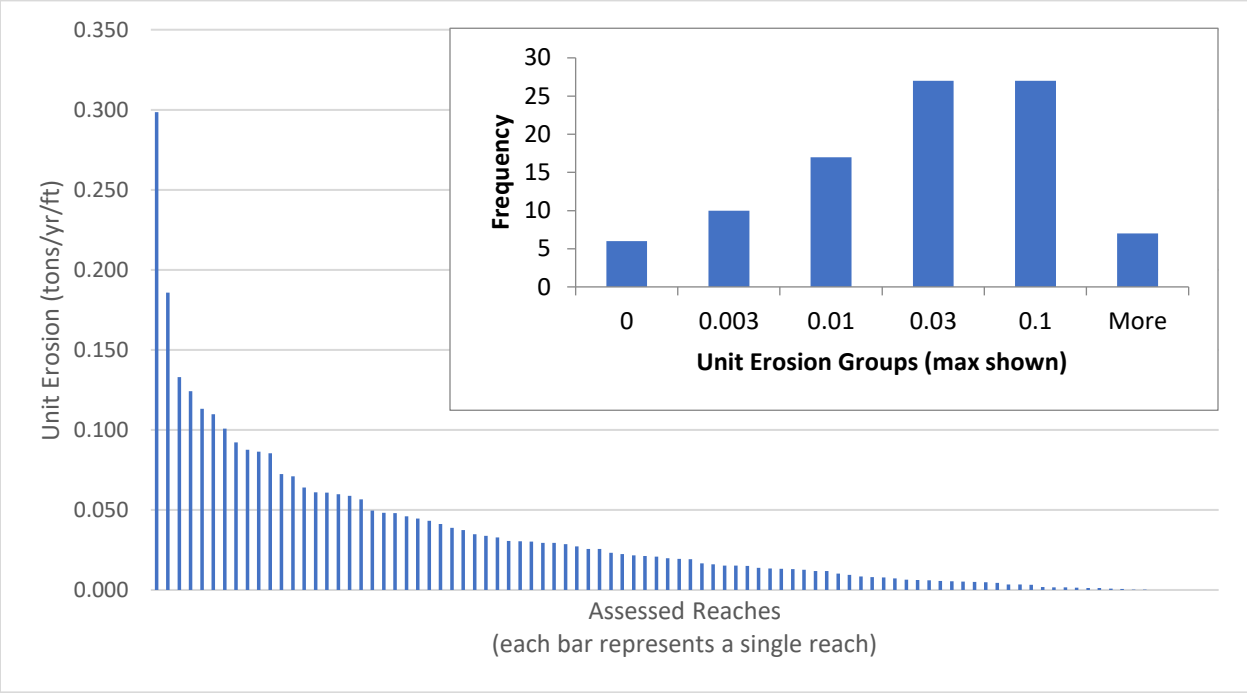


Table 1 lists the stream reaches with the highest erosion rates (above 0.05 tons/yr/ft), including those above the 0.1 tons/yr/ft break point. Examining this table along with the geographic distribution high erosion reaches in Figure 3 shows that the most
vulnerable reaches are fairly well distributed across the watershed. Of the seven reaches with erosion rates above 0.1 tons/yr/ft, at least one reach can be found in each of four different drainages: Traver, Millers and Malletts Creek, along with direct drainages to the Huron River. Neither the Huron River itself, Fleming Creek nor Swift Run have a represented reach on the list of problem reaches.

The other observation that can be made from Table 1 is that, while some stream reaches are highly erosive, many are short in length. While these reaches have high rates, they may not generate a total erosion rate that is as high as longer stream reaches.

Table 1. Stream Reaches with the 20 Highest Unit Erosion Rates

ReachID	ReachCode	Stream	Assessed Length (mi)	Total Erosion (tons/yr)	Unit Erosion (tons/yr/ft)
55	4090005022038	Direct Drainage	0.302	476.144	0.299
697	4090005006303	Millers	0.522	511.702	0.186
669	4090005000609	Traver	0.187	131.311	0.133
173	4090005000232	Malletts	0.352	230.700	0.124
674	4090005000611	Traver	0.214	127.921	0.113
29	4090005025711	Direct Drainage	0.34	197.080	0.110
720	4090005000191	Malletts	0.5	266.217	0.101
709	4090005000232	Malletts	0.152	73.964	0.092
13	4090005005711	Huron River	0.905	418.672	0.088
305	4090005020100	Fleming	0.73	332.639	0.086
725	4090005006304	Swift Run	1.36	613.647	0.085
5	4090005000235	Direct Drainage	0.76	290.237	0.072
701	4090005006303	Millers	0.079	29.594	0.071
717	4090005000191	Malletts	0.967	326.967	0.064
737	4090005000192	Fleming	0.534	172.204	0.061
123	4090005000610	Traver	0.303	97.343	0.061
740	4090005000102	Fleming	0.11	34.735	0.060
122	4090005000609	Traver	1.46	452.855	0.059
283	4090005000626	Fleming	0.103	30.799	0.057
699	4090005006303	Millers	0.383	100.158	0.050

Table 2 shows the twenty reaches with the overall highest *total* erosion rates for the entire reach length. While some reaches appear high on both lists (for example reach #697 in Millers Creek – the poster reach for excessive erosion, and #55, a direct drainage in Barton Hills) others do not. Reach #725 in the lower section of Swift Run is the best example. It is a long reach, a mile and 1/3 long, that has stretches of high erosion interspersed with stretches of modest erosion. Overall, it generates an estimated 613 tons/yr of erosion.

Finally, the different drainage watersheds can be evaluated on the whole. There are six distinct drainage areas, including direct drainages to the river, and the Huron River itself. Table 3 shows these drainages ranked by the mean unit erosion for all reaches within the drainage. Since the unit erosion rate includes the length of stream reaches assessed, the mean rate is effectively the mean erosion rate for all stream length assessed within each drainage area. Millers Creek has the highest overall average, which is not surprising since it has the highest average slope of all tributaries in the Huron River watershed. Direct drainages also have high rates, and the glacial geology in this region of the Huron River likely drives this, creating steep slopes with erosive material in several large areas. Fleming Creek sticks out as an exception on this list, with a relatively low unit erosion rate. It is the only drainage without significantly urbanized areas. Looked at by total erosion, though, because of its much greater size, Fleming Creek generates the greatest total amount of erosion.

Table 2. Stream Reaches with the 20 Highest Total Erosion Rates

Reach ID	Reach Code	Stream	Assessed Length (mi)	Total Erosion (tons/yr)	Unit Erosion (tons/yr/ft)
725	4090005006304	Swift Run	1.36	613.6	0.085
697	4090005006303	Millers	0.52	511.7	0.186
55	4090005022038	Direct Drainage	0.30	476.1	0.299
122	4090005000609	Traver	1.46	452.9	0.059
13	4090005005711	Huron River	0.91	418.7	0.088
305	4090005020100	Fleming	0.73	332.6	0.086
717	4090005000191	Malletts	0.97	327.0	0.064
5	4090005000235	Direct Drainage	0.76	290.2	0.072
720	4090005000191	Malletts	0.50	266.2	0.101
173	4090005000232	Malletts	0.35	230.7	0.124
262	4090005000192	Fleming	1.15	212.3	0.035
29	4090005025711	Direct Drainage	0.34	197.1	0.110
737	4090005000192	Fleming	0.53	172.2	0.061
696	4090005006303	Millers	0.61	154.9	0.048
733	4090005000100	Fleming	0.83	144.4	0.033
727	4090005006304	Swift Run	0.70	138.6	0.037
669	4090005000609	Traver	0.19	131.3	0.133
674	4090005000611	Traver	0.21	127.9	0.113
275	4090005000616	Fleming	1.51	121.9	0.015
57	4090005042038	Direct Drainage	0.50	118.0	0.045

Table 3. Mean Unit Erosion Rates for Drainages in the Study Watershed

Drainage	Total Erosion (tons/yr)	Total Assessed Length (mi)	Mean Unit Erosion (tons/yr/ft)
Millers	921.4	2.82	0.062
Direct Drainage	1416.8	5.21	0.051
Traver	1057.1	4.65	0.043
Malletts	1195.7	5.33	0.042
Swift Run	759.3	3.52	0.041
Huron River	525.9	2.65	0.038
Fleming	1864.2	26.05	0.014

Potential Restoration Targets

Eight stream reaches stand out as potential high-value restoration targets, based on the results of the rapid BANCS assessment. Each reach was evaluated to have a much higher than average potential for erosion along all or part of its length. While there may be other reaches that offer potential for restoration and reduction of erosion, sedimentation and nutrient transport, these eight reaches stand out among the rest of the inventoried stream reaches. After identifying the reaches with the highest erosion rates, each reach was qualitatively examined (i.e. reviewing aerial photography and notes from the assessments) to determine the relative feasibility of addressing the potential erosion along all or parts of the stream banks. Evaluation criteria included: ease of access for equipment, willingness of landowners to support restoration work, and the potential for control of upstream hydrology. Each of the target reaches is presented on the following pages with a brief description of conditions and considerations for the reach.

55 – Direct Drainage in Barton Hills

The hill slopes in Barton Hills are very steep for this part of the watershed. Past erosion is evident in the deposition into Barton Pond at the creek outlet. The stream channel has numerous high, exposed banks with little vegetation to anchor it. The entire reach was evaluated to have high erosion potential.

The unnamed stream that includes reach #55 runs entirely through the private residential establishment of Barton Hills Village. The Village expressed support for restoration work and could be a funding partner.

Given the slopes and unusual (to the rest of the Middle Huron River Watershed, at least) substrate (more larger material), detailed survey work should be completed to confirm active erosion, prior to designing solutions.

697 – Millers Creek

Reach #697 was identified as having the highest unit erosion rate in the Millers Creek watershed, and the second highest overall. The Sediment Accumulation Study conducted for the City of Ann Arbor also identified this reach as having the worst erosion potential. Both studies estimated similar erosion rates.

The relatively steep slopes and high impervious cover of the watershed concentrate storm flow along this reach to severely alter banks and stream bed (in some cases). The earlier study recommends remedial channel modification to stabilize banks in this reach. Channel reconstruction was deemed to be inappropriate, given the lack of connectivity to the floodplain and the limited room along Huron Parkway. Floodplain connectivity was originally recommended upstream to reduce downstream flows, but land owners have not been supportive.

See section 5.3.4 of the study for more detailed recommendations.

669 – Traver Creek

Reach #669 is in the middle section of the Traver Creek watershed, downstream of a small impoundment in Leslie Park Golf Course. Two sections of this reach have been highly impacted by previously altered flows and development of impervious surfaces within the creeks floodplain. A middle section with a better connection to the floodplain exhibits low erosion potential.

The upper section will be difficult to reconnect to its floodplain, of which little is remaining. It is likely that only streambank stabilization will be available in this section.

There is more available room in the lower section of the reach. This section follows an already stabile section, with less encroachment into the floodplain. A wider range of restoration techniques could be utilized here. However, the adjoining property is privately held and would need to be purchased to allow for proper restoration.

173 – Malletts Creek

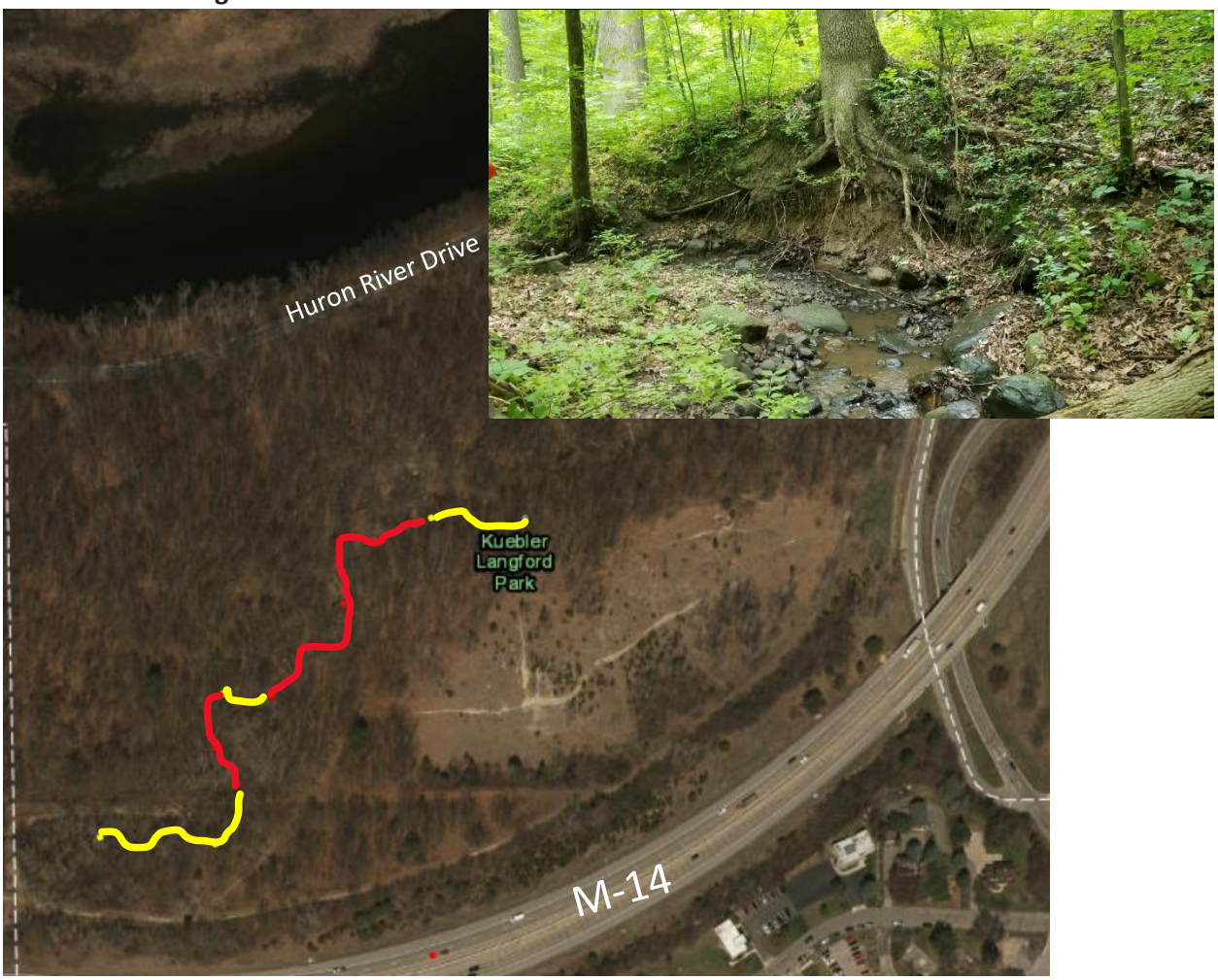
This somewhat longer reach (1,859 linear feet in length) in Malletts Creek (#173) suffers from some of the similar impacts as #669 previously. It also is downstream of an impoundment that may control flows somewhat. However, extensive urban development through the creek's floodplain has left little connection available. The middle section down to Stone School Road likely only would allow streambank stabilization to protect from further erosion.

In the lower section of the reach, there is some evidence that the conveyance under Interstate 94 is undersized, as there is evidence of impoundment (and accompanying deposition), and more modest evidence of scouring on the downstream side of the highway. The culvert under Stone School Road should likewise be evaluated. Between these two crossings, there is room for restoration, though the reach section is quite short.

674 – Traver Creek

Reach #674, the second eroding reach identified in the Traver Creek watershed stands out as unusual among the other target reaches. It seems to present ample opportunity for restoration. The reach lies between confluences at the upper and lower ends. Erosion of alternating banks is evident along three sections with intermittent stabile sections of very low erosion in between. There is ample available floodplain to work with, allowing for a variety of restoration techniques. The relatively small creek size, lighter development upstream, and existing sinuosity of the reach suggest good prospects for stable restoration. The north side of the creek borders a city-owned public park which should allow for a willing partner and access. Access to existing roadway may be a bit distant, however.

29 – Direct Drainage



This small direct drainage to the Huron River (reach #29) meanders its way through the City of Ann Arbor's Kuebler-Langford Park. Only a portion of this stream was assessed, so it is likely that additional sections down to its outlet are also actively eroding. The creek may have been altered by the construction of state highway Michigan-14, as much of the park is covered in construction spoils. Substrate soils are otherwise somewhat rapid draining and unstable. Slopes are intermittently steep. The combination of these factors lead to evidence of severe erosion in some areas, followed by relatively stable sections.

Restoration could consist of a combination of grade control, bank stabilization and floodplain restoration.

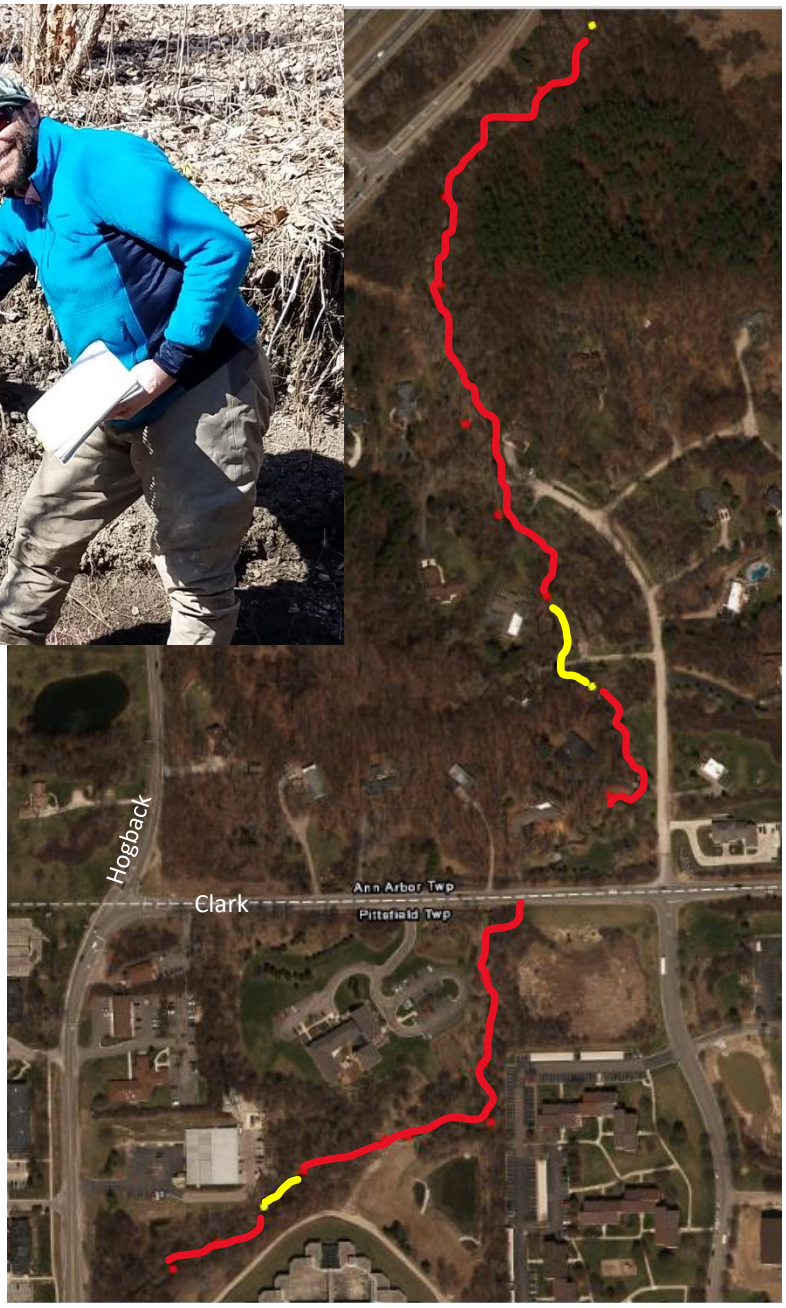
720 – Malletts Creek

This second identified reach in the Malletts Creek watershed (reach #720) offers decent restoration potential. The channel appears to have been altered into a straightened flow-way with trapezoidal banks. Evident erosion is modest in some sections, but severe in others.

Conveyance under roadways should be examined for proper sizing and placement, to begin.

Otherwise, the riparian cover along most of the stream reach is good, with ample space to reconnect the floodplain, or at least to reduce bank angles. This section is a county drain, with easements available for access and work. Additional property may need to be obtained, if floodplain connection is deemed feasible. Upstream flows should be evaluated to ensure proper restoration sizing.

725 – Swift Run



The final target reach (#725) is a long (7,181 linear feet) section of Swift Run. While the upper section of the creek upstream of the U.S. 23 highway crossing exhibits relatively modest evidence of active erosion, the downstream section has long stretches of quite significant erosion.

Two sections should be further evaluated for potential restoration. The first section runs through property owned by Washtenaw County in Pittsfield Township. The floodplain here is tightly contained between development, so likely would only allow for bank stabilization techniques. Downstream of the Clark Road crossing the development is more modest, with good riparian cover. Disconnection from the floodplain is significant, though, so restoration would likely require significant excavation and manipulation. Land ownership is mixed, but would likely be supportive of restoration.

Conclusions

HRWC's used of BANCS rapid geomorphic assessment applied across the middle section (section 2) of the Middle Huron Watershed proved to be useful in identifying stream erosion targets. The technique was able to be conducted with a modest amount of training and applied to a considerable proportion of available stream miles in the watershed (greater than 50 miles in total). Despite implementation by multiple teams assessing somewhat subjective metrics, the evaluation was found to be consistent with other surveys in the watershed (i.e. the Sediment Accumulation Study of Millers Creek watershed). While the ultimate erosion estimate values may not have a high level of accuracy taken individually, the calculations allow watershed planners to reasonably classify stream reaches into a range of categories from highly erosive to completely stable. The approach allowed HRWC to identify a small set of reaches on which to focus initial restoration efforts, and potentially reduce sedimentation and nutrient transport significantly. The targeted reaches were shown to have relatively high erosion rates. If confirmed, and if restoration can be designed to control erosion in a limited number of unstable segments, then such restoration could significantly reduce sediment and nutrient loading in the watershed overall. Such restoration projects would therefore be of high value within the watershed plan as a whole.

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Appendix 9HπM.

Geomorphic Survey Form

Bank Erosion Hazard Index (BEHI) Near-Bank Stress (NBS) Reach Assessment Worksheet

Stream:					Reach ID:							
Bkf W, D, Area:					Start Latitude:					Date:		
Field bkf W, D, Area:					Start Longitude:					Observers:		
		BEHI								NBS		
Bank Location Latitude/ Longitude	**Right/ Left Bank?**	**Study Bank Height (ft)**	**Study Bank Height Score**	**Root Depth Score**	**Root Density Score**	**Bank Angle Score**	**Surface Protection Score**	**Adjust-ments**	**Total Score**	**NBS Rating**	**Length of Bank (ft)**	**Notes**
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Appendix 9HπH.

Geomorphic Data Tables

Reaches Table

OBJECTID	ReachCode	Stream_Nam	areaPl	h2oAreaM	upDist	afvArea	rcaSlope	h2oMeanS	Shape_Ler	Evaluate	Priority	Length_mi	BkfWidth	BkfDepth	BkfArea
4	4090005004846	Unnamed	1	0.325826	144860.5	0.001136	0.083995	0.064338	3706.308	Y	H	0.700492	4.598763	0.917341	4.235802
5	4090005000235	Newport Creek	0.702724	0.765903	150896.9	0.002964	0.044369	0.027366	4046.988	Y	H	0.764881	6.872254	1.060798	7.38257
13	4090005005711	Huron River	0.968826	212.3741	128381.6	0.73792	0	0.019031	4787.051	Y	H	0.904753	96.66631	2.760134	285.8318
22	4090005004846	Huron River	1	0.185943	146819	0.001136	0.049551	0.049551	1958.515	Y	H	0.370159	3.533021	0.833907	2.941656
23	4090005010030	Huron River	0.0019	0.428745	110404.7	0.001478	0.024107	0.0626	1909.506	Y	H	0.360897	5.232042	0.961163	5.063189
29	4090005025711	Huron River	0.001236	0.255433	137770.8	0.000888	0.088103	0.073823	2931.868	Y	H	0.554123	4.10164	0.880157	3.615967
30	4090005025711	Huron River	1	0.146332	139672.8	0.000888	0.063176	0.063176	1902.04	Y	H	0.359486	3.156797	0.800628	2.517472
31	4090005030030	Huron River	0.791606	0.300508	112006.3	0.00117	0.065942	0.063676	1601.672	Y	H	0.302716	4.427209	0.904812	4.018845
38	4090005045711	Huron River	0.00074	0.153361	131990.9	0.000533	0.083979	0.083979	2244.554	Y	H	0.424221	3.227186	0.807039	2.595434
40	4090005050030	Huron River	0.632392	0.139036	113632.8	0.00074	0.064546	0.05942	1626.509	Y	H	0.30741	3.081817	0.793697	2.435156
45	4090005075878	Huron River	0.000799	0.175548	120377	0.00061	0.085404	0.085404	2846.396	Y	H	0.537969	3.438774	0.825791	2.833688
55	4090005022038	Unnamed	0.001736	0.35334	146755.7	0.001232	0.061294	0.061294	2497.249	Y	H	0.47198	4.77736	0.93007	4.464982
56	4090005032038	Unnamed	0.001271	0.258298	148063	0.000901	0.075577	0.075577	2137.88	Y	H	0.404059	4.1232	0.881827	3.642279
57	4090005042038	Unnamed	0.000687	0.139238	150747.9	0.000486	0.100866	0.100866	2690.726	Y	H	0.508547	3.083919	0.793892	2.437452
120	4090005000611	TRAVER	0.860959	0.562422	143650.9	0.002442	0.014775	0.017613	3946.851	Y	H	0.745955	5.943835	1.006546	6.039974
122	4090005000609	TRAVER	1	6.833663	129583.9	0.023744	0.053017	0.028356	5924.796	Y	H	1.119787	19.22315	1.538913	30.621
123	4090005000610	TRAVER	0.85612	1.49343	148148.7	0.006513	0.012551	0.012551	3984.069	Y	H	0.752989	9.405986	1.188323	11.39501
164	4090005000191	MALLETS	0.52909	0.620572	146789.3	0.003315	0.036877	0.036877	3320.929	Y	H	0.627656	6.225151	1.023523	6.438868
167	4090005000232	MALLETS	0.932753	9.645031	117819.3	0.035176	0.021801	0.027895	3805.254	Y	H	0.719193	22.60269	1.631754	38.30821
168	4090005000234	MALLETS	0.231099	0.618668	133143.4	0.002477	0.015473	0.015473	4879.771	Y	H	0.922277	6.216163	1.022988	6.426016
171	4090005000233	MALLETS	0.905098	1.526439	135840.7	0.006556	0.01801	0.024414	4251.478	Y	H	0.803529	9.503134	1.192747	11.55809
173	4090005000232	MALLETS	0.943046	2.75785	128263.7	0.010718	0.019716	0.020718	2283.274	Y	H	0.431539	12.5489	1.318925	16.97718
243	4090005006304	SWIFT	0.828434	1.132697	132936.2	0.006899	0.016531	0.016531	6313.917	Y	H	1.19333	8.259827	1.133763	9.520691
261	4090005000628	Fleming Creek	0.292944	0.589161	149791.2	0.002716	0.036757	0.036757	5788.954	Y	H	1.094112	6.075015	1.014525	6.225102
262	4090005000192	Fleming Creek	0.886268	1.560232	126902	0.006693	0.029833	0.026393	7823.863	Y	H	1.47871	9.60144	1.197196	11.72377
265	4090005000101	Fleming Creek	0.98073	25.6133	117645.5	0.091595	0.023099	0.023414	910.3206	Y	H	0.172051	35.76978	1.926469	72.27649
266	4090005000630	Fleming Creek	0.023851	0.569081	126984.9	0.002038	0.031717	0.031717	7409.814	Y	H	1.400455	5.976805	1.008562	6.086357
268	4090005000100	Fleming Creek	0.970991	28.64989	113765.6	0.100946	0.032536	0.024168	4291.907	Y	H	0.81117	37.70381	1.963513	77.7364
271	4090005000101	Fleming Creek	1	23.85996	119575.1	0.085432	0.047343	0.023243	101.4209	Y	H	0.019169	34.5973	1.903386	69.02078
273	4090005000622	Fleming Creek	0.665907	4.739758	138170.7	0.018455	0.052908	0.033886	2647.754	Y	H	0.500425	16.18612	1.446111	24.13993
274	4090005000621	Fleming Creek	0.959773	7.218261	135522.9	0.027714	0.039307	0.029096	2086.692	Y	H	0.394385	19.72426	1.553304	31.73041
275	4090005000616	Wagner Drain	0.877499	1.924249	160558.7	0.009342	0.020512	0.016537	9740.41	Y	H	1.840937	10.59596	1.240645	13.43583
276	4090005000626	Fleming Creek	0.901154	2.662179	140276	0.010694	0.04948	0.027009	1561.806	Y	H	0.295181	12.34238	1.311032	16.592
281	4090005000100	Fleming Creek	0.925189	26.25859	116735.2	0.093395	0.024968	0.02375	2969.508	Y	H	0.561237	36.19054	1.934635	73.45493
282	4090005000621	Fleming Creek	0.940961	7.712913	133436.3	0.028876	0.040694	0.029343	4487.211	Y	H	0.848083	20.34839	1.570906	33.12733
283	4090005000626	Fleming Creek	0.643045	2.960242	138714.2	0.011867	0.015855	0.029957	543.5026	Y	H	0.102722	12.97362	1.3349	17.77695
285	4090005000626	Fleming Creek	0.866833	2.260084	144002.2	0.00927	0.025466	0.024091	3726.197	Y	H	0.704251	11.42815	1.275041	14.91679
287	4090005000631	Fleming Creek	0.01927	0.503255	123479	0.0018	0.040518	0.040518	6743.85	Y	H	1.274588	5.641283	0.987704	5.618971
289	4090005000621	Fleming Creek	0.375495	8.535304	128949	0.030687	0.025694	0.029421	6043.069	Y	H	1.14214	21.34078	1.598197	35.38236
294	4090005000620	Fleming Creek	0.425268	0.708294	139239.2	0.002639	0.021103	0.021103	8014.093	Y	H	1.514663	6.624266	1.046789	7.016706
295	4090005000625	Fleming Creek	0.45903	0.506249	148158.5	0.002415	0.036781	0.036781	6096.456	Y	H	1.15223	5.657033	0.988701	5.640679
297	4090005000102	Fleming Creek	0.979989	22.79335	122906	0.081726	0.039701	0.022946	1860.662	Y	H	0.351665	33.86159	1.888645	66.99923
299	4090005000617	Fleming Creek	0.117814	1.146732	150729.1	0.004498	0.023869	0.023869	13035.5	Y	H	2.463709	8.307773	1.136139	9.597206
301	4090005000619	Fleming Creek	0.574732	0.95723	136403.7	0.003566	0.022553	0.025357	5178.572	Y	H	0.97875	7.631591	1.101782	8.534047
305	4090005020100	Fleming Creek	0.016486	0.508356	108853.6	0.001773	0.054414	0.045184	3916.149	Y	H	0.740152	5.668084	0.989399	5.655924
655	4090005000615	Nelson Drain	0.759299	0.550945	164920.1	0.004368	0.018606	0.018606	5996.708	Y	H	1.133378	5.886518	1.003024	5.959572
656	4090005000615	Nelson Drain	0.739721	0.845199	158923.4	0.005753	0.025791	0.023081	1450.896	Y	H	0.274219	7.197939	1.078713	7.870781
661	4090005000235	Newport Creek	1	1.342457	145379.3	0.004682	0.048298	0.037292	1223.502	Y	H	0.231242	8.946449	1.166987	10.63236
662	4090005000235	Newport Creek	0.900838	1.179701	146849.9	0.004218	0.052852	0.03503	1470.623	Y	H	0.277948	8.419191	1.141627	9.775667
669	4090005000609	TRAVER	0.964886	6.282855	130573.3	0.022911	0.125603	0.025963	989.385	Y	H	0.186994	18.47869	1.517084	28.99323
672	4090005000609	TRAVER	0.928721	4.729677	135614.2	0.017777	0.062703	0.021385	1428.743	Y	H	0.270032	16.16993	1.445587	24.10655
674	4090005000611	TRAVER	0.244172	1.13758	136749	0.004341	0.075224	0.026556	1134.794	Y	H	0.214476	8.276543	1.134592	9.547348
675	4090005000611	TRAVER	0.822462	0.911315	138372.8	0.00357	0.062277	0.02259	1623.892	Y	H	0.306916	7.457301	1.092614	8.265688
676	4090005000611	TRAVER	0.794442	0.691498	139704	0.002836	0.043778	0.018592	1331.175	Y	H	0.251592	6.54997	1.042527	6.908103
678	4090005000610	TRAVER	0.755828	3.521341	138025.8	0.013437	0.052491	0.018884	2411.635	Y	H	0.455799	14.07636	1.374875	19.90008
679	4090005000610	TRAVER	0.993305	3.392143	138282	0.013347	0.055319	0.017434	256.2409	Y	H	0.04843	13.83121	1.366166	19.42239
680	4090005000610	TRAVER	0.995879	3.376147	140701.4	0.013292	0.034698	0.017009	2419.378	Y	H	0.457262	13.80052	1.365069	19.36281
681	4090005000610	TRAVER	0.987039	3.193706	141052.3	0.013119	0.068804	0.015727	350.8949	Y	H	0.066319	13.44485	1.352238	18.6761
682	4090005000610	TRAVER	0.931185	2.963156	141972.3	0.012217	0.0324	0.014669	919.9687	Y	H	0.173874	12.97962	1.335123	17.78832
683	4090005000610	TRAVER	0.622697	1.840232	144164.7	0.007607	0.021653	0.01456	2192.4	Y	H	0.414364	10.37594	1.231264	13.05154
684	4090005005878	Huron River	0.99918	219.2077	123594.6	0.761665	0	0.019322	3434.357	Y	H	0.649093	98.11597	2.775035	291.7768
685	4090005005878	Huron River	0.999734	219.3877	120160.2	0.76229	0	0.019374	733.2866	Y	H	0.138591	98.15382	2.775422	291.9325
686	4090005005878	Huron River	0.999496	219.446	119426.9	0.762493	0	0.019398	274.7332	Y	H	0.051925	98.16609	2.775548	291.983
687	4090005005878	Huron River	0.999748	219.5567	119152.2	0.762878	0	0.019439	587.2335	Y	H	0.110987	98.18936	2.775786	292.0787
688	4090005005878	Huron River	0.999201	219.6121	118564.9	0.76307	0	0.019471	1034.333	Y	H	0.195489	98.20101	2.775905	292.1266
689	4090005005878	Huron River	0.999009	219.7877	117530.6	0.76368	0	0.019523	639.7148	Y	H	0.120906	98.23789	2.776282	292.2784
697	4090005006303	MILLER	0.850471	1.611046	117196.1	0.006032	0.052389	0.03402	3187.501	Y	H	0.602438	9.747161	1.203736	11.97056
704	4090005000232	MALLETS	0.989424	10.404	114014	0.037712	0.042746	0.029043	931.8286	Y	H	0.176116	23.42187	1.652902	40.24156
705	4090005000232	MALLETS	0.989648	8.870315	120431.6	0.033219	0.031933	0.027867	1163.677	Y	H	0.219935	21.73045	1.608691	36.27897
706	4090005000232	MALLETS	0.954234	9.021852	119268	0.033566	0.025702	0.027751	1448.688	Y	H	0.273802	21.90415	1.61333	36.68063
709	4090005000232	MALLETS	0.975072	8.469898	124276.3	0.032054	0.035711	0.027506	803.517	Y	H	0.151865	21.26377	1.596108	35.20589
710	4090005000232	MALLETS	0.359426	3.030111	125750.7	0.011521	0.021191	0.021058	1474.439	Y	H	0.278669	13.11665	1.340204	18.04856
712	4090005000233	MALLETS	0.768901	2.058402	130232.3	0.008241	0.009672	0.022333	1968.646	Y	H	0.372074	10.93696	1.25494	14.03748
713	4090005000233	MALLETS	0.878884	1.719324	131589.2	0.007243	0.022472	0.024111	1356.866	Y	H	0.256448	10.04976	1.217121	12.48754
717	4090005000191	MALLETS	1	2.490085	135636.3	0.009909	0.025294	0.031485	6543.768	Y	H	1.236772	11.96074	1.296222	15.8867
720	4090005000191	MALLETS	0.973928	2.127319	138273.6	0.00965	0.036681	0.032094	2637.32	Y	H	0.498453	11.10756	1.261986	14.34121
725	4090005006304	SWIFT	1	4.689525	117678.7	0.016239	0.014986	0.0165	9953.414	Y	H	1.881195	16.10527	1.443494	23.97332
726	4090005006304	SWIFT	0.954136	3.104362	119115.1	0.015494	0.035345	0.017357	1436.355	Y	H	0.271471	13.26675	1.345731	18.33482

727	4090005006304	SWIFT	0.857161	2.626756	122815.5	0.013281	0.014979	0.018196	3700.441	Y	H	0.699383	12.26492	1.30805	16.44816
733	4090005000100	Fleming Creek	1	31.78551	102862.4	0.109197	0.036265	0.025523	4819.619	Y	H	0.910908	39.58997	1.99849	83.16555
734	4090005000100	Fleming Creek	0.984762	31.02271	104937.5	0.107533	0.054132	0.025165	2075.05	Y	H	0.392184	39.14055	1.990254	81.86276
735	4090005000100	Fleming Creek	0.983514	30.32783	108723	0.10576	0.041339	0.024652	3785.497	Y	H	0.715459	38.72602	1.982604	80.66616
736	4090005000100	Fleming Creek	0.983	29.51946	109473.7	0.103962	0.035031	0.024259	750.7431	Y	H	0.14189	38.23741	1.973519	79.26199
737	4090005000192	Fleming Creek	0.074811	2.123267	119078.1	0.007552	0.032445	0.028278	5312.499	Y	H	1.004062	11.09762	1.261577	14.32345
739	4090005000101	Fleming Creek	0.978565	25.05229	118192.3	0.089632	0.026349	0.02314	546.8315	Y	H	0.103351	35.39939	1.91923	71.24352
740	4090005000102	Fleming Creek	0.976149	23.29074	121045.3	0.083394	0.049179	0.023035	1470.204	Y	H	0.277868	34.20689	1.895589	67.94597
741	4090005000629	Fleming Creek	0.334093	2.37799	142619.4	0.009259	0.025032	0.019118	7096.49	Y	H	1.341237	11.70459	1.286112	15.41811
743	4090005000625	Fleming Creek	1	1.181671	142062	0.005262	0.068199	0.035949	1220.963	Y	H	0.230762	8.425793	1.141951	9.786271
744	4090005000106	Fleming Creek	0.882186	8.586707	139420.2	0.033684	0.028149	0.018069	1726.573	Y	H	0.326322	21.40109	1.599829	35.52073
750	4090005000616	Wagner Drain	0.777316	2.45183	150818.3	0.010646	0.018256	0.017988	3482.925	Y	H	0.658273	11.87402	1.292815	15.72763
111	4090005007410	ALLEN	0.916908	0.676858	142953.1	0.003009	0.036411	0.030005	4248.532	Y	M	0.802973	6.484423	1.038742	6.812679
147	4090005006303	MILLER	0.520802	0.145888	125329.7	0.000825	0.024998	0.024998	1883.455	Y	M	0.355973	3.152292	0.800214	2.512505
154	4090005076303	MILLER	0.058949	0.081878	119278.2	0.000356	0.060078	0.060078	2082.065	Y	M	0.39351	2.402851	0.725374	1.726054
156	4090005096303	MILLER	0.04356	0.044519	122015.4	0.000214	0.04383	0.04383	1022.836	Y	M	0.193316	1.804479	0.653996	1.161572
158	4090005116303	MILLER	0.601425	0.49198	124618.7	0.00239	0.031401	0.025151	2897.191	Y	M	0.547569	5.581524	0.983907	5.53682
198	4090005070232	MALLETS	0.010382	0.091587	122407.7	0.000345	0.028266	0.028266	1976.036	Y	M	0.373471	2.532797	0.739325	1.85647
255	4090005000105	Fleming Creek	0.864404	10.63976	132502.4	0.039557	0.014571	0.018598	1682.866	Y	M	0.318062	23.66984	1.65921	40.83195
257	4090005004852	Fleming Creek	0.555805	0.198066	133764.3	0.001007	0.027856	0.027856	2460.793	Y	M	0.46509	3.639467	0.842909	3.064929
258	4090005000105	Fleming Creek	0.965246	10.24125	137693.6	0.038182	0.014465	0.01854	5191.209	Y	M	0.981139	23.24895	1.648477	39.83124
259	4090005004851	Fleming Creek	0.444195	0.158293	134234.9	0.000805	0.044713	0.045306	2931.348	Y	M	0.554025	3.275549	0.811393	2.649379
263	4090005000103	Fleming Creek	0.624505	14.19553	129040.8	0.051038	0.023234	0.01898	6134.793	Y	M	1.159476	27.10496	1.742564	49.2485
264	4090005000618	Fleming Creek	0.135596	1.669018	131225.1	0.006205	0.011742	0.023523	405.5892	Y	M	0.076656	9.910468	1.210992	12.24882
267	4090005000615	Nelson Drain	1	1.839377	157472.5	0.007777	0.013355	0.020866	9846.923	Y	M	1.861069	10.37368	1.231167	13.0476
269	4090005000614	Fleming Creek	0.087823	1.185569	139796.7	0.004406	0.01296	0.01296	9543.057	Y	M	1.803638	8.438846	1.14259	9.807243
272	4090005000107	Nelson Drain	0.829596	3.317706	147174.3	0.013653	0.008695	0.019039	2305.471	Y	M	0.435734	13.68773	1.361023	19.14429
277	4090005004854	Fleming Creek	0.059039	0.483934	131303.5	0.001812	0.02678	0.03328	2354.485	Y	M	0.444998	5.538431	0.981153	5.477788
278	4090005000624	Fleming Creek	0.798705	1.181671	140841	0.005262	0	0.035949	993.199	Y	M	0.187715	8.425793	1.141951	9.786271
279	4090005000627	Fleming Creek	0.707056	1.422011	155612.5	0.006555	0.018602	0.018602	11610.33	Y	M	2.194353	9.191828	1.178464	11.03777
280	4090005004855	Fleming Creek	1	0.544723	150262.5	0.00305	0	0.022538	379.8427	Y	M	0.07179	5.855176	1.001089	5.915734
284	4090005004848	Fleming Creek	0.098846	0.29201	143476.9	0.001173	0.057127	0.057127	4762.647	Y	M	0.90014	4.367916	0.90041	3.944599
286	4090005000104	Fleming Creek	0.912177	12.31395	130819.5	0.045762	0.019229	0.019265	565.8826	Y	M	0.106952	25.3527	1.700946	44.90067
288	4090005000629	Fleming Creek	0.838095	1.284929	150349.4	0.00776	0.014462	0.014462	7730.001	Y	M	1.46097	8.764166	1.15833	10.33394
291	4090005000616	Wagner Drain	0.450516	3.396388	147335.4	0.013696	0.013877	0.018364	3963.277	Y	M	0.749059	13.83935	1.366457	19.43819
292	4090005000106	Fleming Creek	0.993787	7.602504	143372.1	0.0304	0.01535	0.018058	2605.709	Y	M	0.492479	20.21097	1.56706	32.81832
293	4090005000101	Fleming Creek	0.953146	23.85996	119473.7	0.085432	0	0.023243	1281.385	Y	M	0.242182	34.5973	1.903386	69.02078
298	4090005000623	Fleming Creek	0.356955	1.643232	138933.5	0.006588	0.080252	0.039386	762.8278	Y	M	0.144174	9.838206	1.207791	12.12548
300	4090005004851	Fleming Creek	1	0.059716	134622.7	0.000805	0.046284	0.046284	387.8683	Y	M	0.073307	2.07157	0.687477	1.405895
695	4090005006303	MILLER	1	2.408861	111272.3	0.008307	0.081817	0.041856	1619.434	Y	M	0.306073	11.77576	1.288935	15.54791
696	4090005006303	MILLER	0.853719	2.002141	114008.6	0.007092	0.055304	0.037825	2736.332	Y	M	0.517167	10.79543	1.249042	13.78688
698	4090005006303	MILLER	0.941051	1.307099	118966.9	0.005676	0.068619	0.029267	1770.818	Y	M	0.334685	8.834917	1.161704	10.44949
699	4090005006303	MILLER	0.864318	1.080229	120992.6	0.004906	0.039546	0.026913	2025.685	Y	M	0.382854	8.07774	1.124658	9.231659
700	4090005006303	MILLER	0.95644	0.977479	121305.1	0.004692	0.127053	0.02539	312.4955	Y	M	0.059062	7.707047	1.10571	8.650963
701	4090005006303	MILLER	0.846919	0.825296	121721.5	0.003974	0.064474	0.025422	416.3716	Y	M	0.078694	7.117773	1.074352	7.749808
702	4090005006303	MILLER	0.398575	0.326044	123446.3	0.001584	0.039548	0.02496	1724.8	Y	M	0.325987	4.600208	0.917445	4.237643
703	4090005000232	MALLETS	1	10.86444	113082.2	0.038115	0.043713	0.029567	6062.029	Y	M	1.145723	23.90347	1.665115	41.39037
738	4090005000192	Fleming Creek	0.550186	0.536273	132690.8	0.003682	0.021878	0.021878	5788.779	Y	M	1.094079	5.812309	0.998432	5.855921
745	4090005000106	Fleming Creek	0.908155	7.757964	140766.4	0.03059	0.008023	0.017917	1346.215	Y	M	0.254435	20.40417	1.572462	33.25298
747	4090005000107	Nelson Drain	0.985206	4.081124	144868.8	0.016457	0.012795	0.017891	1422.773	Y	M	0.268904	15.08704	1.409794	21.90289
751	4090005000616	Wagner Drain	0.517642	0.610008	165937.7	0.004836	0.014185	0.014185	5379.034	Y	M	1.016637	6.175114	1.02054	6.367404
752	4090005000108	Fleming Creek	0.692687	0.537128	154520	0.002959	0.008463	0.013003	2910.898	Y	M	0.55016	5.816666	0.998703	5.861992
753	4090005000103	Fleming Creek	0.982953	13.60284	130253.6	0.050168	0.021808	0.018735	1212.869	Y	M	0.229232	26.56705	1.729976	47.90201
754	4090005000619	Fleming Creek	0.491083	0.323373	139702	0.001751	0.026923	0.026923	3298.318	Y	M	0.623382	4.582455	0.916163	4.215042

Assessments Table

AssessID	Stream	ReachID	SegmentID	StartLat	StartLon	BkfW	BkfD	BkfA	BkfAref	BkfADif	BkfDepUsed	Date	TimeStart	TimeEnd	Observers	AssessDist	ReachComplete	AssessTime	CoverRate
1	Fleming	262	262c	42.3019976	-83.6780743	17.5	1.3	22.75	11.72	11.03	1.2	4/11/2019	11:04	13:04	A Paine, R Lawson, L Scheer	0.1139859	N	2:00	17:32
2	Unnamed (in Arboretum)	45	45	42.282925	-83.720491	5	0.8	4	2.84	1.16	0.8	4/11/2019	14:00	15:30	A Paine, R Lawson, L Scheer, Miles	0.538	Y	1:30	2:47
3	Unnamed (Bird Hills)	4	4	42.30224	-83.76209		0.9		4.24		0.9	5/7/2019	13:00	15:00	R Lawson + 15 interns	0.25	N	2:00	8:00
4	Fleming Cr. Tributary	287	287a	42.30429	-83.76172	5.6	1	5.6				5/13/2019	10:05	12:35	Larry,Tina,Drew,Becca,Willow	0.79	N	2:30	3:09
5	Malletts	720	720	42.15071	-83.45362	11.1	1.3	14.3				5/15/2019	10:00	12:30	Ryan,Jesse,Sebastian,Drew,Jessica	0.5	Y	2:30	5:00
6	Traver	120	120	42.19345	-83.42559	5.9	1	6				5/14/2019			Drew,Andrea,Chrysanthe,Sebastian	0.54	N		
7	Traver	122	122b	42.2951638	-83.7317347	19.2	1.5	30.6				5/16/2019	9:43	11:25	Ryan,Jessica,Kyle	0.59	Y	1:42	2:52
8	Traver	122	122c	42.291288	-83.736431	19.2	1.6	30.6				5/16/2019	11:40	12:40	Ryan,Jessica,Kyle	0.35	Y	1:00	2:51
9	Swift Run	727	727	42.238838	-83.699925	12.3	1.3	16.4				5/16/2019	9:50	13:03	Tara,Tina,Nik,Jesse	0.7	Y	3:13	4:35
10	Traver	675	675/676	42.3156616	-83.7139013	7.5	1.1	8.3				5/14/2019	11:45	11:55	Larry,Jessica,Tara,Becca	0.22	Y	0:10	0:45
11	Traver	669	669/122a	42.301532	-83.726715	18.4	1.5	29				5/14/2019	9:42	13:06	Ric,Tina,Jesse	0.187	Y	3:24	18:10
12	Malletts	710	710/709	42.14259	-83.43106	1.3	1.5	1.95				5/20/2019	9:20	11:00	Ryan,Jesse,Sebastian,Lilly	0.279	Y	1:40	5:58
13	Traver Cr. Tributary	680	680/679	42.32055	-83.73083	13.8	1.4	19.4				5/13/2019			Kathryne,Ryan,Sebastian,Jesse	0.357	Y		
14	Fleming	262	262c	42.3075	-83.6824	9.6	1.2	11.7				5/20/2019	10:20	12:50	Sophia,Juliette,Becca,Larry	0.78	N	2:30	3:12
15	Fleming	285	285	42.346329	-83.649205	11.4	1.3	14.9				5/21/2019	10:00	14:30	Nik,Jessica,Kyle,Sebastian	0.704	Y	4:30	6:23
16	Fleming	266	266a	42.32476	-83.65833	5.98	1.01	6.09				5/22/2019	9:30	11:45	Jessica,Becca,Sebastian,Juliette	0.79	N	2:15	2:50
17	Barton	57	57	42.19409	-83.46534	3.08	0.79	2.44				5/22/2019	10:48	12:30	Ryan,Chrysanthe,Drew,Sophia	0.5	Y	1:42	3:24
18	Barton	56	56	42.19391	-83.46089	4.12	0.88	3.64				5/22/2019	9:42	10:30	Ryan,Chrysanthe,Drew,Sophia	0.324	Y	0:48	2:28
19	Traver	679	680/679	42.3187136	-83.7257956		1.4					5/13/2019			Kathryne,Ryan,Sebastian,Jesse	0.048	Y		
20	Traver	122	669/122a	42.2993721	-83.7273942		1.5					5/14/2019	10:15	13:06	Ric,Tina,Jesse	0.52		2:51	5:28
21	Traver	676	675/676	42.31912	-83.71359		1.1					5/14/2019	9:45	11:45	Larry,Jessica,Tara,Becca	0.252	Y	2:00	7:56
22	Malletts	709	710/709	42.2409839	-83.7153372		1.5					5/20/2019	11:00	11:40	Ryan,Jesse,Sebastian,Lilly	0.152	Y	0:40	4:23
23	Bird Hills	4	4b	42.30418	-83.7617	4.6	0.9	4.2				5/23/2019	9:45	11:18	Jessica,Elizabeth,Tara,Willow	0.474		1:33	3:16
24	Newport	5	5	42.30249	-83.77715	6.9	1.1	7.4				5/29/2019	9:53	12:00	Lily,Elizabeth,Sebastian,Brandon,Kyle	0.76	Y	2:07	2:47
25	Barton	55	55	42.1937	-83.45628	4.77	0.93	4.46				5/12/2019	9:33	11:30	Sebastian,Chrysanthe,Ryan,Jesse,Drew	0.302		1:57	6:27
26	Fleming	733	733b	42.274165	-83.667232	39.59	1.99	83.17				5/28/2019	9:40	12:05	Ryan,Jessica,Chuanli,Tina	0.431	N	2:25	5:36
27	Malletts	712	712/713	42.2322648	-83.7294306	10.93	1.25	14.04				5/28/2019	10:15	11:13	Chrysanthe,Drew,Kyle,Sebastian	0.302	Y	0:58	3:12
28	Miller	697	697	42.17533	-83.423	9.74	1.2	11.97				5/21/2019	11:30	13:15	Drew,Sebastian,Chrysanthe,Jesse,Ryan	0.522	Y	1:45	3:21
29	Fleming	287	287b	42.31049	-83.66814	5.64	0.987	5.618				6/3/2019	10:00	12:00	Juliette,Becca,Lily	0.485	Y	2:00	4:07
30	Mallets	173	173	42.2327	-83.7216	12.54	1.32	16.98				5/28/2019	11:14	12:00	Chrysanthe,Drew,Kyle,Sebastian	0.352	Y	0:46	2:10
31	Newport	662	662/661	42.18541	-83.4609	8.94	1.17	10.63				5/23/2019	9:35	10:40	Chuanli,Tina,Sophia,Jesse	0.278	Y	1:05	3:53
32	Fleming	737	737/262	42.30156	-83.67476	11.0976	1.2615	14.3234				5/21/2019	11:00	13:00	Elizabeth,Tina,Becca,Juliette,Kathryne	0.534	N	2:00	3:44
33	Fleming	741	741	42.29338	-83.7465	11.7	1.29	15.42				6/3/2019	10:00	12:12	Sebastian,Brandon,Sophia,Ryan	1.02	N	2:12	2:09
34	Fleming	261	261	42.35805	-83.6551	6.08	1.01	6.2				6/12/2019	10:00	12:23	Jessica,Drew,Kyle,Sam	1.094	Y	2:23	2:10
35	Malletts	705	705	42.24313	-83.70773	21.9	1.61	36.68				6/4/2019	10:20	11:15	Myles,Jessica,Chrysanthe,Becca	0.22	Y	0:55	4:10
36	Mallets	167	167	42.25111	-83.70005	22.6	1.63	38.31				6/4/2019	9:52	11:23	Tina,Elizabeth,Sophia,Tara,Sebastian	0.439	N	1:31	3:27
37	Malletts	717	717a/b	42.247142	-83.74922	11.96	1.3	15.89				6/4/2019	10:00	13:00	Jessica,Chrysanthe,Chuanli	0.967	Y	3:00	3:06
38	Malletts	164	164	42.2545	-83.78176	6.2	1.02	6.4				6/4/2019	9:35	11:05		0.328	Y	1:30	4:34
39	Traver	123	123	42.33333	-83.7431	9.4	1.18	11.39				6/5/2019	10:00	11:30	Elizabeth,Becca,Jesse	0.303	N	1:30	4:57
40	Fleming	297	297/740	42.31555	-83.64571	34	1.9	64.6				6/4/2019	10:30	11:15	Tina,Sebastian,Sophia,Myles	0.352	Y	0:45	2:07
41	Newport	661	662/661	42.3124987	-83.7659462		1.17					5/23/2019	10:40	11:15	Chuanli,Tina,Sophia,Jesse	0.231	Y	0:35	2:31
42	Fleming	740	297/740	42.3126248	-83.6496057		1.9					6/4/2019	11:15	12:00	Tina,Sebastian,Sophia,Myles	0.11	Y	0:45	6:49
43	Fleming	263	297/740	42.31649	-83.64449		1.9					6/4/2019	9:43	10:30	Tina,Sebastian,Sophia,Myles	0.19	N	0:47	4:07
44	Malletts	713	712/713	42.233	-83.7298		1.25					5/28/2019	9:49	10:15	Chrysanthe,Drew,Kyle,Sebastian	0.08	N	0:26	5:25
45	Malletts	707	705/707	42.24258	-83.7102		1.61					6/4/2019	10:00	10:20	Myles,Jessica,Chrysanthe,Becca	0.148	Y	0:20	2:15
46	Fleming	262	737/262	42.30186	-83.6775		1.2					5/21/2019	9:58	11:00	Elizabeth,Tina,Becca,Juliette,Kathryne	0.26	N	1:02	3:58
47	Traver	683	123	42.3291116	-83.7381397		1.23					6/5/2019	11:30	11:40	Elizabeth,Becca,Jesse	0.046	N	0:10	3:37
48	Fleming	274	274	42.33357667	-83.66723667	19.72	1.55	31.73				6/18/2019	9:48	10:55	Tina,Myles,Sam,Juliette	0.304	Y	1:07	3:40
49	Fleming	276	283/273	42.34037	-83.662	12.97	1.33	17.78				6/17/2019	9:53	12:25	Ryan,Sebastian,Jesse,Becca	0.18	N	2:32	14:04
50	Traver	674	674/672	42.31465	-83.7168	8.28	1.13	9.55				6/18/2019	9:47	11:20	Sophia,Brandon,Jesse,Sebastian	0.214	Y	1:33	7:14
51	Bluffs	38	38	42.29463	-83.7482	3.23	0.81	2.6				6/27/2019	9:53	10:30	Elizabeth,Tina,Jesse,Tara	0.424	Y	0:37	1:27
52	Nelson Drain	655	655	42.37936	-83.6022	5.9	1	6				6/25/2019			Chuanli,Brendan,Sebastian,Jesse	0.653	N		
53	Malletts	168	168	42.233579	-83.726905	6.22	1.02	6.43				6/19/2019			Ryan,Jessica,Lute	0.922	Y		
54	Traver	683	683/681	42.34117	-83.782	10.38	1.23	13.05				6/24/2019	9:50	10:38	Juliette,Tina,Becca,Sebastian	0.19	Y	0:48	4:12
55	Huron River	30	29/30	42.297	-83.7592	4.1	0.88	3.62				6/18/2019	9:40	11:30	Sebastian,Chrysanthe,Jessica,Chuanli	0.359	Y	1:50	5:06
56	Traver	678	678	42.31641	-83.7245	14.07	1.37	19.9				6/27/2019	9:40	11:20	Jessica,Sam,Lute,Chuanli	0.42	N	1:40	3:58
57	Fleming	275	275c	42.293515	-83.746686	10.6	1.24	13.44				7/1/2019	9:58	12:05	Drew,Tina,Krystia	1.04	N	2:07	2:02
58	Huron River	13	13a/b	42.315846	-83.725581	96.67	2.76	285.83				7/1/2019	9:46	11:16	Sophia,Becca,Sebastian	0.905	Y	1:30	1:39
59	Fleming	268	268	42.30062	-83.7503	37.7	1.96	77.74				6/19/2019	10:01	12:08	Elizabeth,Becca,Sebastian	0.811	Y	2:07	2:36
60	Fleming	275	275a/b	42.367804	-83.609597	10.59	1.24	13.43				6/29/2019	10:24	12:25	Jessica,Chrysanthe,Tara,Sam	0.47	N	2:01	4:17
61	Fleming	282	282a	42.3313	-83.6614	20.35	1.57	33.13				6/19/2019	10:00	13:00	Tina,Chrysanthe,Sam	0.51	N	3:00	5:52
62	Swift	726	726/725	42.24787	-83.6903	13.27	1.35	18.33				6/20/2019	9:54	11:26	Sebastian,Elizabeth,Tara,Willow	0.271	N	1:32	5:39
63	Fleming	739	281/739/265	42.18495	-83.9397	36.19	1.93	73.45				6/20/2019	10:10	12:15	Ryan,Jessica,Jesse,Lute,Chuanli	0.1	N	2:05	20:50
64	Fleming	299	299 a/b	42.29331	-83.7465	8.31	1.14	9.6				7/2/2019			Tara, Sebastian, Loot, Kyle	0.48	N		
65	Fleming	305	305 & 733a	42.288259	-83.674044	5.67	0.99	5.66				7/2/2019			Brandon, Sebastion, Gabby, Mickaela	0.73	N		
66	Traver	675	674/672									6/18/2019			Sophia,Brandon,Jesse,Sebastian	0.14	N		
67	Traver	672	674/672													0.24			
68	Traver	682	683/681													0.174	Y		
69	Traver	681	683/681													0.02	N		
70	Huron River	29	29/30													0.34	N		
71	Traver	672	678													0.23	N		
72	Fleming	736	268													0.142	Y		
73	Fleming	735	268													0.19	N		
74	Swift	725	726/725													0.53	Y		
80	Malletts	171	171/713	42.2361	-83.7429	0.5	1.19	11.56				7/11/2019	10:05	12:01	Lute,Jessica,AM	0.79		1:56	2:26
81	Fleming	733	733a	42.277884	-83.66993	39.59	2	83.17				7/3/2019	9:57	10:42	Jessica,Lute,Chuanli	0.4		0:45	1:52
82	Fleming	289	289	42.32523	-83.64799	21	1.6	35				7/9/2019	10:10	12:20	Jessica,Jesse,Rachel,Chuanli,Emily	0.82		2:10	2:38
83	Fleming	301	301/754	42.29338	-83.74677	7.63	1.1	8.53				7/8/2019	10:10	12:20	Sophia,Tina,Sebastian	0.2		2:10	10:50
84	Fleming	750	750a	42.35978	-83.60086	11.87	1.29	15.73				7/3/2019	9:30	11:30	Chrysanthe,Krystia,Noah,Sebastian	0.44		2:00	4:32
85	Fleming	735	735/734	42.28873	-83.66408	38	2	80				7/15/2019	9:55	11:45		0.51	N	1:50	3:35
86	Huron River	685	685/689	42.28577	-83.72539	98.16	2.8	292				7/8/2019	9:52	11:20	Juliette,Jesse,Becca	0.139		1:28	10:33
87	Huron River	684	684	42.28884	-83.73109	98.12	2.78	291.78				7/3/2019	9:45	11:15	Brandon,Sebastian,Becca	0.77	N	1:30	1:56
88	Swift	725	725	42.25275	-83.686	16.11	1.44	23.97				1/1/1900	13:00	0:00	Sophia,Tina,Tara	0.83	Y	11:00	17:35
89	Millers	696	695/696	42.28048	-83.69901		1.29					7/23/2019	9:48		Tara,Sebastian,Jesse,Brandon,Chuanli	0.16			
77	Millers	154	154	42.29173	-83.70108		1					7/16/2019	10:40		Jessica,Sebastian,Emily	0.394			
78	Fleming	294	294a/b	42.293023	-83.746568	6.6	1.04	7.01				7/16/2019	10:07	11:00	Willow,Noah,Drew	0.87	N	0:53	1:00
79	Millers	696	696	42.28387	-83.70092	9.74	1.2	11.97				7/16/2019	10:09	10:50	Tara,Brandon,Sebastian	0.45		0:41	1:31
90	Fleming	295	295a	42.354629	-83.681395		0.99					7/25/2019	9:55	12:10	Chuanli,Asia,Noah,Kyle	1.07		2:15	2:06
91	Fleming	295	295b	42.34552	-83.67596	8.426	1.142	9.786				8/5/2019			Sebastian, Chuanli, Krystia	0.1	Y		
92	Fleming	282	282c	42.32933	-83.65422	20.35	1.57	33.13				7/25/2019	9:50	11:15	Emily,Elizabeth,Sebastian	1.01		1:25	1:24
93	Millers	699	699	42.2967491	-83.6999001		1.16					7/17/2019	11:20	12:25	Chrysanthe,Lute	0.383		1:05	2:49
94	Millers	147	147/701/702	42.304372	-83.694283		1.03					7/17/2019	10:00		Jesse,Jessica	0.196			
95	Fleming	269	269	42.31639	-83.61485		1.14					7/24/2019			??	1.804			
96	Fleming	267	267b	42.36969	-83.58263		1.23					7/22/2019			Brandon, Sebastian	1.861			
97	Fleming	299	299c/d	42.18877	-83.45797	8.3	1.3	9.6				5/28/2019	9:50	12:00	Elizabeth,Juliette,Sebastian,Jesse	1.48		2:10	1:27
98	Direct Drainage	23	23/31/40	42.27214	-83.69378							9/19/2019	10:35		A Paine, L Scheer, N Krantz	0.18	Y		
99	Fleming	738	738	42.32093	-83.68827		0.99					8/28/2019	9:58		L Scheer, ??	0.714	Y		
100	Fleming	283	283/273	42.3390809	-83.6643254		1.33					6/17/2019			Ryan,Sebastian,Jesse,Becca	0.103	Y		
101	Fleming	273	283/273	42.3392506	-83.6660865		1.33					6/17/2019			Ryan,Sebastian,Jesse,Becca	0.33	Y		
102	Fleming	754	754/301	42.34691	-83.63001	4.58	0.92	4.22				7/8/2019	10:10	12:20	Sophia,Tina,Sebastian	0.623	Y	2:10	3:28
103	Miller	696	696	42.28041	-83.69871	11.78	1.29	15.55				7/23/2019	9:48		Tara,Sebastian,Jesse,Brandon,Chuanli	0.13	Y		
104	Fleming	265	281/739/265									6/20/2019			Ryan,Jessica,Jesse,Lute,Chuanli	0.172	Y		
105	Fleming	281	281/739/265									6/20/2019			Ryan,Jessica,Jesse,Lute,Chuanli	0.561	Y		
106	Millers	695	695/696				1.29					7/23/2019			Tara,Sebastian,Jesse,Brandon,Chuanli	0.306	Y		
107	Malletts	713	171/713				1.19					7/11/2019			Lute,Jessica,AM	0.22	N		
108	Fleming Creek	743	295/743													0.231	Y		
109	Millers	701	147/701/702				1.03					7/17/2019			Jesse,Jessica	0.079	Y		
110	Millers	702	147/701/702				1.03					7/17/2019			Jesse,Jessica	0.326	Y		
111	Direct Drainage	31	23/31/40									9/19/2019			A Paine, L Scheer, N Krantz	0.303	Y		
112	Direct Drainage	40	23/31/40									9/19/2019			A Paine, L Scheer, N Krantz	0.307	Y		
113	Millers	700	147/701/702				1.03					7/17/2019			Jesse,Jessica	0.059	Y		
114	Swift Run	243	243	42.2152487	-83.7131787										Ric as proxy for missed outing	1.193	Y		
115	Fleming	734	735/734									7/15/2019				0.392	Y		
116	Huron River	686	685/689				2.8					7/8/2019			Juliette,Jesse,Becca	0.052	Y		
117	Huron River	687	685/689				2.8					7/8/2019			Juliette,Jesse,Becca	0.111	Y		
118	Huron River	688	685/689				2.8					7/8/2019			Juliette,Jesse,Becca	0.195	Y		
119	Huron River	689	685/689				2.8					7/8/2019			Juliette,Jesse,Becca	0.121	Y		

ObsID	AssessID	Latitude	Longitude	Bank	BankHt	BkHtScore	RtDptScore	RtDenScor	BkAngScor	SurfProtSc	AdjScore	TotScoreCa	NBS	NBS_Score	Photos	Length	Notes
1	1	42.302	-83.6781	R	1.7	2	0	3	10	7	0	22	High	4		10	Tree
2	1	42.30213	-83.6784	L	3	9	6	9	4	6	5	39	V High	5		36	
3	1	42.30191	-83.6786	R	3.2	9	3	6	8	9	0	35	V High	5		32	
4	1	42.30175	-83.6784	L	3.3	9	5	9	6	9	5	43	V High	5		55	log jam
5	1	42.30178	-83.6786	R	3.6	9	3	7	8	9	5	41	Extreme	6		33	
6	1	42.30176	-83.679	L	1.7	5	3	8	3	7	0	26	High	4		46	
7	1	42.30167	-83.6788	R	3	9	3	6	8	10	5	41	Extreme	6		24	
8	1	42.30158	-83.6791	L	3.5	9	4	6	6	6	0	31	V High	5		29	
																	Rock outcrop. Change in channel to A type. Left bank
9	1	42.3019	-83.6794	R	3.7	9	6	8	7	6	-5	31	Extreme	6		141	also eroded, though not as far.
10	1	42.30214	-83.6794	L	2.9	9	3	5	8	9	0	34	V High	5		100	
																	Eroded section representative of several small
11	2	42.28277	-83.7204	R	1.3	7	0	1	9	2	0	19	High	4		21	sections upstream
12	2	42.2825	-83.7205	L	1.4	7	0	4	6	7	-3	21	High	4		49	
13	2	42.28218	-83.7207	R	2.3	9	2	3	5	6	-8	17	Extreme	6		16.5	
14	2	42.28205	-83.7212	Alt	2.2	9	1	7	8	7	0	32	Extreme	6		81	
15	2	42.28115	-83.7219	L	2	8	0	3	6	4	-10	11	V High	5		66	
16	2	42.28087	-83.7219	R	1.7	8	2	3	7	7	-10	17	High	4		46	
17	2	42.28102	-83.7221	L	1.6	8	7	9	3	4	-10	21	High	4		14	
18	2	42.28081	-83.724														Culvert location at end of trail-side drain
19	2	42.27897	-83.7237														Where is the creek bed?
20	3	42.30224	-83.7621														Start
21	3	42.30246	-83.762	B	2.2	8	2	3	6	7	-8	18	High	4		27	Bed erosion around culvert
22	3	42.30258	-83.7619	B	1.8	8	3	8	6	9	0	34	Moderate	3	2	52	2 pics from Ric
23	3	42.30266	-83.7618	B	2.1	8	2	8	6	9	5	38	High	4	2	34	2 pics from Ryan
24	3	42.30278	-83.7619	L	1.6	6	2	7	8	7	0	30	Moderate	3		29	
25	3	42.30319	-83.7618	A	1.5	6	6	8	7	6	-5	28	Moderate	3		35.5	Nik4 - NBS implied from BankHt
26	3	42.30326	-83.7618	B	1.2	7	2	7	6	5	0	27	High	4		31	Ryan4
27	3	42.3034	-83.7618	B	1.4	5	2	7	5	10	5	34	Moderate	3		33	Ryan5
28	3	42.30344	-83.7617	L	2	8	4	5	7	5	0	29	High	4		53	Nik5 - NBS implied from BankHt
29	3	42.30365	-83.7617	B	1.7	6	2	3	4	3	-8	10	Moderate	3		34.4	Ric4 - trail crossing, riffle
30	3	42.30372	-83.7615	B	1.5	5	2	6	9	7	-5	24	V High	5		45.2	Ric5
31	3	42.30387	-83.7616	B	2.7	8	3	7	8	5	-3	28	V High	5		36.6	Ric6
32	3	42.3041	-83.7616	R	1.75	7	2	7	6	5	0	27	Low	2		29	Ryan6
33	3	42.30429	-83.7617	B	1.8	8	3	9	7	7	-5	29	Moderate	3		40	Nik6
34	3	42.30327	-83.7616	B	1.3	8	2	7	7	7	-5	26	High	4		25	Ryan7
35	4	42.30429	-83.7617	Left	1.7	7	0	5	8	0	-5	15	V Low	1		47.3	very little erosion
36	4	42.31567	-83.6788	Both	1.1	1	2	5	8	2	-3	15	Low	2		39.7	large oil at tend of section
37	4	42.3161	-83.6761	Both	0.8	0	5	7	3	7	0	22	V Low	1		47.5	skipped some due to pond
38	4	42.31602	-83.6753	Left	1.4	6	4	7	6	8	0	31	Low	2		50	
39	4	42.31594	-83.6749	Right	1	1	4	6	6	7	-3	21	V Low	1		57.3	
40	4	42.31579	-83.6747	Both	1.5	6	6	7	8	5	5	37	High	4		49.8	
41	4	42.31541	-83.6743	Left	1.6	6	6	4	10	5	2	33	Moderate	3		50.5	
42	4	42.3153	-83.6742	Right	1.7	7	4	4	8	4	5	32	Moderate	3		37.4	site 62 sign
43	4	42.31518	-83.674	Both	2.1	8	7	6	5	5	0	31	High	4		59.5	
44	4	42.31482	-83.6738	Both	1.1	1	5	7	8	5	0	26	Low	2		18.2	
45	4	42.31424	-83.6725	Right	0.5	0	4	5	3	6	0	18	V Low	1		25.6	little pass sign 60d
46	4	42.3141	-83.6723	Both	2.1	8	3	5	10	4	7	37	High	4		36.2	weird sandy gravel on bed, extreme bed undercut
47	4	42.31397	-83.6722	Both	1.3	4	7	6	3	4	0	24	Moderate	3		32.5	big tree
48	4	42.3139	-83.6726	Both	1.6	6	7	7	3	7	10	40	Moderate	3		49.9	
49	4	42.31366	-83.672	Both	1.5	6	6	6	8	7	3	36	Moderate	3		49.2	
50	4	42.31355	-83.6718	Right	1.9	8	7	7	8	5	0	35	High	4		35.1	
51	4	42.31348	-83.6717	Both	1.5	6	5	5	9	7	5	37	Moderate	3		43.4	
52	5	42.25118	-83.756	Both	3.4	8	0	1	5	7	-7	14	Extreme	6	1	85	
53	5	42.25115	-83.7559	Both	3.9	9	3	4	8	5	-5	24	V High	5		100	
54	5	42.25073	-83.755	Right	3.7	8	0	2	4	7	-2	19	Extreme	6		50.2	
55	5	42.25083	-83.7548	Both	3.5	8	2	2	6	6	-3	21	High	4	10:19	55	
56	5	42.2508	-83.7546	Both	3	8	5	5	5	9	5	37	High	4	10:25	25	
57	5	42.25087	-83.7543	Both	3	8	3	3	8	5	-3	24	High	4	10:32	48	
58	5	42.25083	-83.7542	Both	1.8	0	2	5	5	6	2	20	High	4		100	
59	5	42.2508	-83.7539	Right	3.3	8	3	3	8	9	-2	29	Extreme	6		33	
60	5	42.25087	-83.7537	Both	3	8	1	2	6	10	2	29	High	4	10:41	31	
61	5	42.2509	-83.7544	Both	2.5	7	1	3	5	6	4	26	High	4	10:49	46	
62	5	42.25095	-83.7533	Both	3.5	8	2	5	5	10	-3	27	High	4	10:51	60	
63	5	42.25095	-83.7528	Left	3.6	8	0	2	6	5	-3	18	V High	5	10:58	60	
64	5	42.2508	-83.7528	Left	3.6	8	5	4	8	4	-2	27	Extreme	6	11:03	36	
65	5	42.25055	-83.7528	Both	3.4	8	2	3	6	7	0	26	V High	5	11:04	71	
66	5	42.25038	-83.7528	Both	3.6	8	3	3	6	7	-2	25	V High	5	11:12	55	
67	5	42.25022	-83.7527	Both	3.4	8	2	3	6	7	-2	24	V High	5	11:17	85	
68	5	42.2499	-83.7526	Both	3.7	8	0	3	5	8	3	27	V High	5	11:29	30	
69	5	42.24965	-83.7524	Left	3.7	8	0	3	4	6	-3	18	V High	5	11:30	43	
70	5	42.24952	-83.7524	Both	4	9	2	3	9	5	1	29	V High	5	11:34	94	
71	5	42.24923	-83.7523	Both	3.8	8	3	5	4	9	7	36	V High	5	11:38	57	
72	5	42.24905	-83.7523	Both	4	9	2	3	6	6	3	29	V High	5	11:42	55	
73	5	42.24888	-83.7521	Both	3.5	8	2	3	8	5	-2	24	V High	5	11:45	105	
74	5	42.24868	-83.7518	Right	3.5	8	3	5	8	6	4	34	V High	5	11:47	55	drain
75	5	42.2486	-83.7516	Both	2.9	8	2	2	8	7	-5	22	High	4	11:52	65	
76	5	42.24847	-83.7514	Both	3	8	0	3	5	7	-4	19	High	4	11:58	68	
77	5	42.24833	-83.7512	Both	3.1	8	2	2	5	7	-6	18	Extreme	6	12:02	70	
78	5	42.24812	-83.751	Both	4.2	9	1	2	10	7	-4	25	Extreme	6	12:03	60	drain
79	5	42.24795	-83.7509	Left	4	9	3	3	8	6	0	29	Extreme	6	12:08	82	
80	5	42.24777	-83.7509	Right	2.9	8	3	3	9	7	3	33	High	4	12:12	100	
81	5	42.24748	-83.7503	Both	4	9	2	4	8	6	-1	28	Extreme	6	12:20	75	
82	5	42.24735	-83.75	Right	6	10	3	5	6	10	-3	31	Extreme	6	12:26	45	
83	5	42.24728	-83.7498	Both	6	10	3	4	5	6	-4	24	Extreme	6	12:30	100	
84	6	42.32242	-83.7093	Right	1	1	7	10	6	9	0	33	Low	2		100	
85	6	42.32192	-83.7099	Both	1.2	3	0	3	5	4	0	15	High	4		280	trees down in middle
86	6	42.3212	-83.7103	Left	1.4	5	3	5	3	2	0	18	Moderate	3		110	
87	6	42.3211	-83.7105	Right	0.4	0	0	5	7	7	0	19	V Low	1		25	concrete deposit
88	6	42.31902	-83.7136	Left	1.6	6	3	9	3	7	0	28	Extreme	6		41.5	drove around to bottom of reach
89	6	42.3191	-83.7129	Right	1.3	5	3	6	3	7	-10	14	Moderate	3		66	
90	6	42.31905	-83.7126	Left	7	10	4	3	5	2	0	24	Extreme	6		200	
91	6	42.3192	-83.7125	Right	2.5	8	3	5	6	5	-5	22	Extreme	6		100	
92	6	42.31932	-83.7121	Left	2.5	8	3	3	6	5	0	25	Extreme	6		89	
93	6	42.31932	-83.7119	Right	1.4	5	3	2	5	6	0	21	Low	2		55	
94	6	42.31962	-83.7118	Right	1.5	6	0	5	5	5	0	21	Moderate	3		54	

95	6	42.31997	-83.7113	Right	1.9	7	0	2	5	6	0	20	High	4		85	
96	7	42.29494	-83.732	Right	5	10	3	5	4	10	-6	26	Extreme	6	9:55	39.4	drain
97	7	42.29471	-83.7319	Right	3	8	2	3	5	6	-4	20	High	4		41.5	
98	7	42.29447	-83.7319	Left	4	9	1	3	9	7	-4	25	Extreme	6	10:05	56.1	
99	7	42.29407	-83.7328	Left	2	4	2	5	8	1	-5	15	Moderate	3	10:08	61.6	
100	7	42.29386	-83.7334	Both	4.2	9	2	3	4	7	-7	18	Extreme	6	10:19	41.7	
101	7	42.29355	-83.734	Right	2.5	7	2	3	8	3	-3	20	High	4	10:30	58.4	
102	7	42.29328	-83.7344	Right	2.7	8	3	5	8	7	-1	30	High	4	10:33	32.5	
103	7	42.2931	-83.7346	Both	22.9	8	2	3	8	4	-2	23	Extreme	6	10:36	77.9	
104	7	42.29294	-83.7348	Both	4	9	2	3	5	7	0	26	Extreme	6		55	
105	7	42.29256	-83.7354	Right	2.2	6	2	3	9	3	0	23	High	4	10:49	100	
106	7	42.29239	-83.7358	Both	2.4	7	2	2	8	3	-3	19	V High	5	10:55	65.4	
107	7	42.29218	-83.736	Alt	2.9	8	2	2	6	3	-6	15	High	4	10:57	74	
108	7	42.29196	-83.7361	Alt	2.7	8	2	2	8	3	0	23	High	4	11:00	54.9	
109	7	42.29171	-83.736	Both	3	8	2	3	8	7	-2	26	V High	5	11:07	67.3	drain
110	7	42.29159	-83.736	Both	2.7	8	2	3	6	5	-5	19	High	4	11:11	42.3	
111	7	42.29118	-83.7363	Alt	3.1	8	2	3	8	4	-3	22	Extreme	6	11:17	53	
112	8	42.29061	-83.7358	Both	2.5	7	2	3	5	6	-2	21	Extreme	6	11:43	100	construction
113	8	42.29052	-83.7353	Right	2.2	6	2	3	5	7	-3	20	Moderate	3	11:51	90.5	
114	8	42.29046	-83.7347	Right	2.1	6	2	2	8	2	-3	17	V High	5	11:58	84.6	
115	8	42.29029	-83.7337	Both	4	9	2	3	6	10	-4	26	Extreme	6	12:02	100	road cover
116	8	42.29013	-83.7333	Both	2.5	7	2	5	8	7	-5	24	Extreme	6		89.2	
117	8	42.28987	-83.7327	Both	4	9	3	5	8	10	-4	31	Extreme	6	12:14	69.7	
118	8	42.28967	-83.7324	Both	4	9	3	3	6	10	-2	29	Extreme	6	12:20	100	
119	8	42.28942	-83.7321	Both	4.4	9	2	3	9	10	0	33	Extreme	6	12:24	100	
120	8	42.28929	-83.7319	Both	3.3	8	2	7	9	7	-2	31	Extreme	6	12:30	44.5	
121	9	42.23892	-83.6999	Right	2.5	8	0	4	5	10	0	27	High	4		58.6	Start of culvert
122	9	42.23904	-83.6991	Both	2	6	4	9	3	3	0	25	Extreme	6		92.9	lots of trash
123	9	42.23901	-83.6991	Right	1.3	1	4	9	4	5	5	28	High	4		100	strong odor
124	9	42.24106	-83.6988	Both	3.5	9	3	7	5	4	0	28	High	4		174	
125	9	42.24131	-83.6989	Alt	2	6	2	3	3	7	0	21	High	4		200	fun hiding spot, end of culvert
126	9	42.2423	-83.6977	Both	2.7	8	0	7	4	7	0	26	High	4		69.7	Start of culvert
127	9	42.24225	-83.6979	Right	3.2	9	2	4	5	7	2	29	V High	5		168	
128	9	42.24251	-83.6974	Left	4.5	10	2	4	6	10	5	37	Extreme	6		50.3	
129	9	42.24292	-83.697	Left	4.5	10	7	7	6	7	5	42	Extreme	6		100	stratification of layers
130	9	42.24348	-83.6955	Right	3.5	9	3	6	3	10	5	36	V High	5		73.7	
131	9	42.24365	-83.6951	Alt	2.1	6	3	5	6	3	5	28	V High	5		72.9	pipe between points
132	9	42.24412	-83.6941	Left	2.8	8	8	9	4	6	0	35	High	4		130	grass mowed to edge
133	9	42.24448	-83.6938	Right	2.5	8	2	3	5	9	-5	22	High	4		106	lots of imbedded cobble
134	9	42.24449	-83.6927	Alt	2.5	8	2	6	3	6	5	30	Moderate	3		83.6	
135	9	42.24483	-83.6923	Left	2	6	0	3	5	8	0	22	Moderate	3		86.4	end of culvert
136	21	42.31912	-83.7136	Right	1	1	7	6	6	4	0	24	V Low	1		39.4	
137	21	42.31896	-83.7137	Both	2.6	8	3	3	10	6	-5	25	V High	5	1	26.5	picture
138	21	42.31885	-83.7137	Both	2	8	2	5	8	7	-10	20	Extreme	6	1	19	picture
139	21	42.31855	-83.7139	Left	1.9	8	4	6	6	7	7	38	High	4		47.6	
140	21	42.31835	-83.7141	Both	2	8	2	5	8	6	0	29	V High	5		35.4	
141	21	42.31826	-83.7142	Both	2.7	9	3	7	8	5	10	42	Extreme	6	1	28.2	picture, culvert
142	21	42.31755	-83.7142	Left	1.5	6	2	5	8	3	5	29	High	4		35.8	
143	21	42.31742	-83.7144	Left	2.1	8	6	7	6	2	-10	19	Moderate	3	1	33.5	picture, road cover
144	21	42.31691	-83.7146	Right	2.5	9	2	5	10	3	0	29	V High	5	1	12.2	picture, end of road cover, cleaning storm drains
145	21	42.31598	-83.714	Left	0.8	0	3	7	4	9	10	33	V Low	1		32.4	
146	21	42.31572	-83.7138	Right	2.5	9	7	7	8	4	-6	29	Extreme	6		31.1	
147	10	42.31475	-83.7144	Right	1.5	6	9	9	3	9	0	36	V High	5		32.3	
148	11	42.30138	-83.7266	Left	6	10	2	5	6	3	0	26	Extreme	6	2	146	significant artificial protection upstream, 2 pics
149	11	42.30088	-83.7266	Both	4.5	9	0	3	5	4	-5	16	Extreme	6	2	181.3	whole channel, downcut; 2 pics
150	11	42.30023	-83.7266	Both	6	10	2	4	5	4	0	25	Extreme	6		100	cobble/stratification on lower layers, artificial dam at end
151	11	42.29964	-83.7263											many			end of dam; no assessment. Seawall(left), lots of photos
152	11	42.29923	-83.7272	Both	5.1	10	2	4	5	5	0	26	Extreme	6		80	
153	20	42.299	-83.7278	Left	4.5	9	4	8	3	10	-5	29	Extreme	6		100	
154	20	42.29885	-83.7283	Right	4.5	9	0	1	8	5	0	23	Extreme	6		70	log jam
155	20	42.29883	-83.7285	Both	5	10	0	2	4	6	-10	12	Extreme	6		100	rocks, cobble, quartzite
156	20	42.29837	-83.7289	Both	4.5	9	2	6	4	7	-5	23	Extreme	6	2	100	2 pics
157	20	42.29851	-83.7291	Both	3	8	2	3	6	7	-5	21	High	4		100	
158	20	42.29838	-83.7295	Alt	3.6	9	0	1	3	10	0	23	V High	5		100	side to side, shallow, no cutting down
159	20	42.29813	-83.73	Both	3.2	8	0	1	5	9	0	23	V High	5	2	100	2 pics
160	20	42.29796	-83.7303	Both	2.2	6	2	4	5	9	-3	23	Extreme	6	2	100	road colvert at end of the segment; 2 pics
161	20	42.29752	-83.7309	Left	4.5	9	2	1	5	10	-5	22	Extreme	6		78	between two bridges/culverts
162	20	42.29721	-83.7316														artificial banks, no assessment, large boulders on both banks
163	12	42.23767	-83.7185	Both	1.9	6	2	3	6	10	-5	22	High	4		40	
164	12	42.23787	-83.7183	Left	2	6	2	3	5	9	0	25	High	4		53	
165	12	42.23802	-83.7182	Both	2.7	8	2	3	5	7	3	28	V High	5	10:09	51	
166	12	42.23818	-83.7181	Both	2.2	7	2	3	5	9	5	31	High	4	10:17	67	
167	12	42.2384	-83.7179	Alt	1.7	5	2	3	5	8	3	26	High	4	10:22	101	
168	12	42.23885	-83.7176	Both	1.5	3	2	3	8	6	0	22	Low	2	10:29	131	
169	12	42.2393	-83.7173	Left	2.9	8	2	5	6	7	0	28	V High	5	10:36	55	
170	12	42.23957	-83.7171	Both	1.4	1	2	2	8	3	-2	14	Moderate	3	10:42	72	
171	12	42.23975	-83.717	Alt	2.1	6	2	3	6	8	0	25	High	4	10:46	71	
172	12	42.24008	-83.7167	Left	1.2	1	2	3	6	10	0	22	Low	2	10:52	101	
173	12	42.24025	-83.7164	Alt	2.3	7	2	2	5	9	0	25	Low	2	10:54	101	
174	12	42.2405	-83.7161	Both	1.7	5	2	1	9	8	0	25	Low	2	11:04	72	
175	12	42.24085	-83.7158	Alt	1.8	5	3	2	5	9	0	24	Moderate	3	11:09	49	
176	12	42.24102	-83.7156	Both	2	6	2	3	6	8	0	25	Moderate	3	11:12	46	
177	22	42.24107	-83.7153	Alt	3.1	9	2	2	8	10	5	36	Extreme	6	11:19	140	
178	22	42.241	-83.7145	Alt	3.5	9	2	3	9	7	0	30	Extreme	6	11:26	150	
179	22	42.2411	-83.7138	Both	2.8	8	2	3	9	10	-5	27	Extreme	6	11:32	83	
180	13	42.32034	-83.7309	Both	1.3	3	2	5	6	4	0	20	Moderate	3	9:50	64	
181	13	42.32022	-83.7306	Both	1.5	5	3	7	6	2	5	28	Low	2	9:56	39	fence down
182	13	42.32005	-83.7307	Both	1.7	3	3	8	4	7	6	31	Moderate	3	10:00	21	
183	13	42.32006	-83.731	Alt	1.2	6	2	5	4	4	0	21	High	4	10:04	25	
184	13	42.3201	-83.7311	Alt	1.5	5	3	5	3	7	0	23	High	4	10:10	77	silt fence
185	13	42.32013	-83.7314	Both	1.8	5	2	3	5	7	0	22	Moderate	3		34	road cover
186	13	42.31906	-83.7301	Both	4	10	3	7	3	8	0	31	Extreme	6		78	

187	13	42.31903	-83.7298	Left	1.7	9	2	6	4	4	-5	20	V High	5		87	
188	13	42.31889	-83.7296	Alt	2.2	9	3	7	8	3	0	30	High	4		53	turns into wetland
189	13	42.31871	-83.7289	Left	2	6	2	3	7	2	0	20	High	4		34	
190	13	42.31864	-83.7287	Right	1.9	5	4	9	6	3	-8	19	Moderate	3		20	
191	13	42.31866	-83.7282	Left	2	5	2	5	6	4	0	22	Low	2		40	
192	13	42.31863	-83.728	Both	1.8	5	3	7	6	1	3	25	Moderate	3		52	
193	13	42.31887	-83.7264	Right	2.3	7	2	2	7	2	0	20	High	4		25	
194	13	42.31894	-83.7263	Both	1.8	5	3	3	5	3	0	19	Moderate	3		55	
195	13	42.31869	-83.7261	Both	2	6	2	3	5	5	0	21	Moderate	3		31	
196	13	42.31873	-83.7259	Both	1.8	5	2	5	9	1	0	22	Moderate	3		37	
197	19	42.31864	-83.7258	Both	1.6	2	2	3	8	1	3	19	Moderate	3		25	
198	19	42.31852	-83.7255	Both	1.6	2	3	3	8	5	-2	19	Moderate	3		42	
199	19	42.31854	-83.7253	Left	1.9	5	2	5	6	2	0	20	Moderate	3		34	
200	19	42.31846	-83.7252	Right	2.4	7	0	2	9	1	0	19	Moderate	3		18	
201	14	42.3075	-83.6824	Right	2	7	5	8	6	5	0	31	High	4	3	29.3	3 pics; rocks as protection, high/turbid water
202	14	42.3073	-83.6823	Left	2.5	8	2	6	8	6	-7	23	Extreme	6		55	wider, flatter watter
203	14	42.3067	-83.6822	Left	2.8	8	9	8	5	7	0	37	V High	5		72	hairpin turn in stream
204	14	42.3065	-83.6827	Right	3.5	9	7	9	8	3	-5	31	Extreme	6		45	
205	14	42.3064	-83.6828	Right	2.5	8	3	6	5	6	-7	21	V High	5		40.2	concrete slab, bank measured at top
206	14	42.3061	-83.6828	Right	6	10	3	4	6	4	-10	17	Extreme	6		39	two outfalls, culvert, bank to top
207	14	42.306	-83.6828	Right	7	10	2	4	4	7	-10	17	Extreme	6		61	
208	14	42.3041	-83.6828	Alt	2.5	8	0	3	9	3	-10	13	V High	5		52	sharpturn
209	14	42.3039	-83.6826	Right	3.5	9	2	3	9	5	-7	21	Extreme	6		46	pipe and concrete
210	14	42.3032	-83.6803	Left	4	9	3	5	9	8	-3	31	Extreme	6		44	high, washed out bank
211	14	42.3029	-83.6799	Right	9	10	2	7	6	8	-5	28	Extreme	6		58	
212	14	42.3019	-83.6784	Alt	3	9	3	9	5	9	0	35	Extreme	6		60.5	
213	15	42.34633	-83.6492	Alt	1.4	1	0	3	4	3	0	11	Low	2		64	
214	15	42.34589	-83.6496	Alt	1.4	1	3	4	8	3	-2	17	V High	5		84	
215	15	42.34591	-83.6496	Alt	2	6	0	2	8	2	0	18	High	4		91	
216	15	42.34493	-83.6506	Alt	1.9	6	0	3	6	5	0	20	High	4		51	bridge
217	15	42.34492	-83.6507	Left	1.8	5	6	7	8	6	-5	27	High	4		24	
218	15	42.34453	-83.6509	Alt	1.7	5	2	7	7	7	0	28	Moderate	3		100	
219	15	42.34328	-83.6527	Right	1.9	6	3	4	8	3	0	24	High	4		50	
220	15	42.34289	-83.654	Alt	1.4	1	2	3	8	1	5	20	Moderate	3		75.5	
221	15	42.34269	-83.6553	Alt	2.1	6	4	4	8	1	2	25	High	4		53.7	
222	15	42.34129	-83.659	Alt	2	6	0	3	8	3	5	25	High	4		171.9	
223	16	42.32476	-83.6583	Both	1.2	3	7	7	3	5	0	25	Low	2	9:50	28.6	
224	16	42.32472	-83.6582	Alt	1.2	3	0	9	4	6	-5	17	Low	2	9:56	43.8	fence down
225	16	42.32465	-83.6581	Alt	1.5	6	5	7	4	5	0	27	High	4	10:00	40	
226	16	42.32455	-83.658	Alt	1.8	8	2	5	6	6	-5	22	V High	5	10:04	85.9	
227	16	42.32422	-83.6577	Alt	1.1	1	8	7	3	5	0	24	Low	2	10:10	63.3	silt fence
228	16	42.32384	-83.6574	Both	1.7	7	2	5	6	4	0	24	High	4		52.7	road cover
229	16	42.32389	-83.6572	Both	1.2	3	3	5	5	4	0	20	High	4		55	
230	16	42.32268	-83.656	Both	1.5	6	5	5	5	4	-3	22	High	4		80	
231	16	42.32158	-83.6551	Both	1.2	3	7	7	5	9	-5	26	Moderate	3		50	turns into wetland
232	16	42.31737	-83.6514														underground/can't find creek
233	16	42.31339	-83.6523														underground/can't find creek
234	16	42.31255	-83.6523														underground/can't find creek
235	16	42.31157	-83.653														underground/can't find creek
236	17	42.32348	-83.7756	Alt	1.8	7	3	6	9	3	0	28	Extreme	6		59.8	
237	17	42.32293	-83.7758	Alt	1.2	6	4	7	6	7	0	30	V High	5		36.5	
238	17	42.32222	-83.7758	Both	0.8	0	3	7	5	6	0	21	Low	2		18	
239	17	42.32187	-83.7763	Alt	2.6	9	3	4	9	6	-4	27	Extreme	6		37	
240	17	42.32162	-83.7767	Left	2.6	9	3	4	10	8	0	34	Extreme	6		53.5	
241	17	42.32123	-83.7767	Alt	1.8	8	3	4	10	8	3	36	Extreme	6		110	
242	17	42.32082	-83.7769	Alt	2.4	9	3	3	10	6	-3	28	Extreme	6		90	
243	17	42.32023	-83.7771	Alt	2.1	9	3	3	8	4	-4	23	Extreme	6		66	
244	17	42.32005	-83.7774	Right	2.4	9	4	4	8	6	0	31	Extreme	6		115	
245	17	42.31972	-83.7774	Right	2.2	9	4	5	8	7	-4	29	V High	5		37	
246	17	42.31942	-83.7773	Alt	2	9	5	4	9	4	-2	29	Extreme	6		59	
247	17	42.31928	-83.7773	Right	2.9	10	3	5	10	7	-2	33	Extreme	6		36	
248	17	42.319	-83.7772	Alt	2.6	10	2	3	10	7	-3	29	Extreme	6		62	
249	17	42.31898	-83.7772	Both	2.8	10	3	4	9	5	-4	27	Extreme	6		52	
250	17	42.31868	-83.7772	Alt	2.2	9	3	5	8	3	0	28	V High	5		37	
251	17	42.31848	-83.7772	Alt	1.4	7	0	3	9	3	0	22	High	4		44	
252	17	42.31823	-83.7771	Alt	1.6	7	3	5	9	3	0	27	High	4		35	
253	17	42.31807	-83.7772	Both	1	0	2	4	8	1	0	15	High	4		35	
254	17	42.31803	-83.7773	Both	1.6	7	3	4	10	5	0	29	Extreme	6		60	wires in water
255	17	42.31787	-83.7774	Both	1.6	7	2	4	9	7	-3	26	Extreme	6		25	
256	18	42.32293	-83.7683	Left	2.5	9	3	4	10	5	-3	28	Extreme	6	9:46	40.7	
257	18	42.3227	-83.7682	Alt	3.2	10	7	5	5	1	5	33	Extreme	6	9:49	57	
258	18	42.32233	-83.7682	Right	3.3	10	4	5	7	1	0	27	Extreme	6	9:55	68	
259	18	42.32188	-83.7681	Right	2.6	9	2	3	8	1	-5	18	V High	5	9:58	50	
260	18	42.32178	-83.7681	Left	1.6	6	5	5	8	1	0	25	Extreme	6	10:03	60	
261	18	42.3215	-83.7679	Alt	1.8	7	3	5	8	1	-3	21	High	4	10:07	35	
262	18	42.32135	-83.7679	Alt	3.3	10	5	7	9	6	0	37	Extreme	6	10:09	100	
263	18	42.32113	-83.7678	Alt	4	10	3	3	8	1	0	25	Extreme	6	10:15	100	
264	18	42.32078	-83.7681	Right	0.4	0	3	5	6	7	-4	17	Extreme	6	10:18	70	
265	23	42.30418	-83.7617	Both	1.8	8	3	9	8	6	0	34	High	4	9:55:00 AM	43.9	
266	23	42.30434	-83.7617	Alt	2	8	9	9	8	6	-3	37	Moderate	3	10:02:00 A	22	
267	23	42.30476	-83.7611	Right	0.5	0	2	4	4	4	-2	12	Moderate	3	10:12:00 A	54	
268	23	42.30505	-83.7619	Right	1.1	2	4	7	8	8	-3	26	Low	2	10:19:00 A	32	
269	23	42.30546	-83.7622	Right	2.4	9	3	6	8	6	-2	30	V High	5	10:28:00 A	26	
270	23	42.30564	-83.7622	Both	2.1	9	3	7	5	9	-2	31	Extreme	6	10:33:00 A	63	
271	23	42.30598	-83.7622	Both	2.6	9	3	9	4	10	-3	32	V High	5	10:40:00 A	36	
272	23	42.30648	-83.7617	Both	2.5	9	5	9	4	5	-10	22	High	4	10:51:00 A	88	
273	23	42.30689	-83.7613	Both	2.3	9	4	7	8	6	-7	27	Extreme	6		93	
274	23	42.3076	-83.7606	Left	1.1	2	6	9	6	10	0	33	Moderate	3		50	
275	23	42.30795	-83.7601	Both	2.6	9	5	7	6	7	0	34	Extreme	6	11:08:00 A	31	
276	23	42.30843	-83.76	Both	1.5	7	6	9	6	10	0	38	Moderate	3	11:15:00 A	24	
277	23	42.30857	-83.7598														end of reach
278	24	42.30251	-83.7769	Right	1.7	7	5	8	6	10	2	38	Extreme	6	10:06:00 A	20	5+ft deep dam
279	24	42.30249	-83.7769	Right	2.3	9	7	8	4	10	0	38	V High	5	10:06:00 A	31	dam
280	24	42.30252	-83.7765	Left	2	8	4	5	4	7	0	28	Moderate	3	10:07:00 A	78	
281	24	42.30266	-83.7761	Right	2.4	9	7	5	4	7	-2	30	Extreme	6	10:14:00 A	47	culvert
282	24	42.30276	-83.7752	Both	2.6	9	3	6	8	9	1	36	Extreme	6	10:19:00 A	86	out of culvert, some severe overhangs
283	24	42.30299	-83.775	Alt	2.2	8	2	2	10	10	0	32	Extreme	6	10:27:00 A	115	overhang

284	24	42.30321	-83.7747	Alt	2	8	9	9	9	10	7	52	Moderate	3	10:31:00 A	100	extreme overhang at NBS
285	24	42.30347	-83.7746	Alt	2.2	8	4	4	9	10	-2	33	High	4	10:36:00 A	85	
286	24	42.30358	-83.7743	Left	2.3	9	6	4	8	5	0	32	High	4	10:40:00 A	47	water underground
287	24	42.30396	-83.7736	Both	1.3	5	8	7	8	0	0	28	Moderate	3		37	
288	24	42.3041	-83.7731	Both	1.3	5	4	4	6	9	0	28	Low	2	10:55:00 A	70	sand bag on left bank
289	24	42.3041	-83.7731												11:00:00 AM		original creek dry, flooding connects
290	24	42.3041	-83.7728	Both	3.7	10	9	6	9	10	0	44	Extreme	6		173	stray piping
291	24	42.30548	-83.7721	Both	3.4	10	4	3	8	7	0	32	Extreme	6	11:10:00 A	170	culvert
292	24	42.30569	-83.7711												11:23:00 AM		
293	24	42.30645	-83.7708	Alt	1.8	8	7	7	8	7	-3	34	Extreme	6	11:26:00 A	125	
294	24	42.30681	-83.7703	Right	5.5	10	4	4	9	7	-5	29	Extreme	6	11:31:00 A	215	
295	24	42.30727	-83.7699	Left	3.4	10	3	4	6	7	0	30	Extreme	6	11:36:00 A	120	broken erosion netting
296	24	42.30754	-83.7695												11:40:00 AM		rocks and fences put in
297	24	42.30789	-83.7689	Alt	3.8	10	5	5	6	5	-2	29	Extreme	6	11:43:00 A	200	wire in water
303	25	42.32167	-83.7603	Alt	4	10	2	5	7	7	0	31	Extreme	6	9:55:00 AM	101	
304	25	42.32125	-83.7603	Alt	3.5	9	3	7	7	7	0	33	Extreme	6	10:00:00 A	101	
305	25	42.32097	-83.7603	Alt	3.5	9	5	9	7	7	0	37	Extreme	6	10:03:00 A	96	
306	25	42.3207	-83.7605	Alt	7	10	4	8	6	7	0	35	Extreme	6	10:07:00 A	67	
307	25	42.32065	-83.7608	Alt	3.2	9	3	7	8	6	0	33	Extreme	6	10:10:00 A	101	
308	25	42.32018	-83.761	Left	4	9	7	9	7	3	5	40	Extreme	6	10:13:00 A	101	wire running across
309	25	42.31988	-83.7613	Alt	2.5	9	6	9	6	2	5	37	V High	5	10:20:00 A	101	stratification
310	25	42.3197	-83.7616	Alt	3	9	3	9	6	3	6	36	Extreme	6	10:24:00 A	74	stratification
311	25	42.31928	-83.762	Alt	2.5	9	3	7	5	6	0	30	V High	5	10:28:00 A	53	sandy
312	26	42.27393	-83.667	Alt	2.5	5	3	2	8	3	-6	15	Moderate	3	9:47:00 AM	64.7	
313	26	42.27368	-83.6667	Left	3	7	3	3	8	4	5	30	High	4	9:54:00 AM	60.3	
314	26	42.27361	-83.6664	Both	2.9	7	2	3	8	4	0	24	High	4	10:00:00 A	74.5	
315	26	42.27346	-83.6661	Alt	2.8	7	3	4	6	5	-3	22	High	4	10:06:00 A	65.6	
316	26	42.27329	-83.6659	Both	2.7	6	3	4	8	4	-3	22	High	4	10:13:00 A	73.7	
317	26	42.27321	-83.666	Both	2.3	5	3	5	9	4	-2	24	Extreme	6	10:17:00 A	73.2	
318	26	42.27318	-83.6648	Both	2.8	7	3	5	8	4	5	32	High	4	10:25:00 A	93.4	
298	25	42.32283	-83.7605	Alt	5.5	10	3	5	6	6	0	30	Extreme	6	9:38:00 AM	50	
299	25	42.32248	-83.76	Alt	20	10	2	4	6	5	-3	24	Extreme	6	9:41:00 AM	76	Bank ht originally listed as >20
300	25	42.32212	-83.76	Alt	20	10	3	5	8	6	0	32	Extreme	6	9:45:00 AM	71	flashy. Bank ht originally listed as >20
327	26	42.27194	-83.6621	Both	3.2	8	3	4	8	3	2	28	Moderate	3	11:22:00 A	96.6	
328	26	42.27176	-83.6616	Alt	3.2	8	3	3	8	3	0	25	High	4	11:27:00 A	81.8	
329	26	42.2709	-83.6611	Alt	2.5	4	4	6	6	7	2	29	Low	2	11:33:00 A	83.8	
330	26	42.27058	-83.661	Right	3.2	8	3	2	9	7	0	29	High	4	11:39:00 A	86.5	
331	26	42.27044	-83.6606	Alt	3.3	8	3	6	6	6	-5	24	V High	5	11:45:00 A	96.6	
332	26	42.27011	-83.6602	Alt	3	7	3	6	8	4	-5	23	Moderate	3	11:53:00 A	96.6	
333	26	42.26999	-83.6598	Left	3.4	8	2	3	9	2	0	24	V High	5	12:00:00 P	96.6	
334	44	42.233	-83.7298	Both	2.2	5	3	9	8	6	0	31	High	4	9:56:00 AM	66	
335	44	42.2331	-83.7297	Alt	1.8	2	1	4	8	4	0	19	Extreme	6	10:00:00 A	54	
336	44	42.2329	-83.7296	Left	2	4	1	5	8	9	0	27	Low	2	10:07:00 A	53	
337	44	42.2327	-83.7296	Both	1.3	1	1	5	8	10	0	25	Low	2	10:09:00 A	50	
338	44	42.2324	-83.7297	Alt	2.1	5	2	9	8	7	0	31	High	4	10:12:00 A	68	
339	27	42.2323	-83.729	Left	2.1	5	3	9	8	4	0	29	Low	2	10:19:00 A	103	
340	27	42.2324	-83.7282	Left	1.9	5	4	9	5	8	0	31	Low	2	10:24:00 A	80	
341	27	42.2324	-83.7273	Alt	2	6	3	9	8	10	0	36	Moderate	3	10:31:00 A	100	
342	27	42.2324	-83.7267	Left	1.8	6	3	6	8	9	0	32	Low	2	10:35:00 A	100	
343	27	42.2326	-83.7265	Both	2.1	6	3	7	8	9	0	33	Low	2	10:39:00 A	59	
344	27	42.2326	-83.7258	Left	3.4	8	2	5	6	3	0	24	High	4	10:45:00 A	55	
345	27	42.2326	-83.7256	Left	2	4	2	4	8	3	0	21	Low	2	10:49:00 A	59	
346	27	42.2326	-83.7253	Alt	1.8	6	2	8	6	5	0	27	Low	2	10:53:00 A	100	
347	27	42.2326	-83.7248	Both	2.4	7	0	3	6	5	0	21	Moderate	3	10:59:00 A	79	
348	27	42.2324	-83.7241	Left	2.5	8	5	8	7	7	0	35	High	4	11:04:00 A	77	
349	27	42.2325	-83.7238	Right	2	6	2	4	8	9	0	29	Low	2	11:07:00 A	150	
350	28	42.29198	-83.7047	Left	6.5	10	3	4	9	4	-3	27	Extreme	6	11:30:00 A	62	cobble
351	28	42.29137	-83.7044	Left	6	10	0	5	8	4	-7	20	Extreme	6	11:42:00 A	73.2	cobble
352	28	42.29107	-83.7042	Left	8	10	3	7	8	7	0	35	Extreme	6	11:45:00 A	101	cobble/stratification
353	28	42.2907	-83.704	Left	7.5	10	5	7	6	7	0	35	Extreme	6	11:49:00 A	87.5	
354	28	42.29047	-83.7038	Both	7	10	4	4	8	7	0	33	Extreme	6	11:52:00 A	101	
355	28	42.2902	-83.7037	Left	8.5	10	2	4	9	7	0	32	Extreme	6	11:56:00 A	45	
356	28	42.28987	-83.7038	Alt	8.5	10	5	6	8	8	0	37	Extreme	6	12:00:00 P	100	
357	28	42.28945	-83.7037	Left	7	10	4	3	8	4	0	29	Extreme	6	12:06:00 P	130	
358	28	42.28888	-83.7034	Alt	4.5	10	3	3	8	5	-3	26	Extreme	6	12:09:00 P	140	cobble
359	28	42.28842	-83.7033	Left	2.8	8	3	4	8	3	0	26	High	4	12:15:00 P	140	
360	28	42.28768	-83.7029	Both	4.5	10	3	4	10	6	2	35	V High	5	12:20:00 P	83	sandy
361	28	42.28738	-83.7027	Right	4	9	3	3	10	7	0	32	V High	5	12:26:00 P	60	
362	28	42.28733	-83.7025	Left	4	9	3	4	8	3	5	32	V High	5	12:29:00 P	110	stratification
363	28	42.28693	-83.7024	Alt	3.5	9	2	4	9	2	0	26	V High	5	12:31:00 P	50	
364	28	42.28685	-83.7022	Left	3.5	9	2	3	10	5	0	29	V High	5	12:40:00 P	75	
365	28	42.28663	-83.7023	Alt	4	9	0	3	9	4	0	25	V High	5	12:44:00 P	130	
366	28	42.28627	-83.702	Alt	3.5	8	3	3	10	5	0	29	V High	5	12:48:00 P	70	
367	28	42.28602	-83.7021	Alt	3.5	8	2	4	10	6	0	30	V High	5	12:51:00 P	100	
368	28	42.28572	-83.7017	Left	3	8	2	5	9	6	0	30	V High	5	12:54:00 P	69	
369	28	42.28547	-83.7017	Alt	3	8	3	3	8	6	0	28	V High	5	12:58:00 P	100	
370	28	42.28525	-83.7015	Alt	3	8	2	4	9	5	0	28	V High	5	1:03:00 PM	120	
371	28	42.28488	-83.7013	Alt	4	9	2	3	9	6	0	29	Extreme	6	1:07:00 PM	110	
372	29	42.31049	-83.6681	Both	0.8	0	3	4	6	3	0	16	Low	2	10:12:00 A	40	
373	29	42.31015	-83.6671	Both	2	8	7	3	8	2	0	28	V High	5	10:19:00 A	59	
374	29	42.30927	-83.6663	Both	3	9	7	4	9	5	-3	31	Extreme	6	10:29:00 A	34	
375	29	42.30759	-83.6641	Left	1	1	6	6	6	6	-3	22	V Low	1	10:45:00 A	35	pipe is connecting stream underground, rocks
376	29	42.30769	-83.6623	Both	5	10	4	3	5	6	-5	23	Extreme	6	11:20:00 A	100	creek right off road, undercutting
377	29	42.30804	-83.6611	Both	2.8	9	3	3	8	2	-1	24	Extreme	6	11:29:00 A	43	
378	30	42.2331	-83.7215	Both	5	10	2	6	5	6	0	29	Extreme	6	11:19:00 A	100	
379	30	42.2335	-83.7213	Both	4.5	10	0	5	6	9	0	30	Extreme	6	11:22:00 A	100	
380	30	42.2337	-83.7213	Both	4.3	10	0	5	5	8	0	28	Extreme	6	11:26:00 A	100	
381	30	42.234	-83.7212	Both	5.5	10	3	5	7	7	0	32	Extreme	6	11:30:00 A	100	
382	30	42.2345	-83.7211	Both	5.2	10	0	4	8	8	0	30	Extreme	6	11:35:00 A	200	
383	30	42.2357	-83.7207	Right	4.5	10	2	4	8	7	0	31	Extreme	6	11:43:00 A	92	
384	30	42.2366	-83.7194	Both	3	8	3	6	8	6	0	31	High	4	11:54:00 A	100	
385	30	42.2368	-83.7191	Both	2.6	8	3	8	5	5	0	29	Extreme	6	12:00:00 P	100	
386	31	42.30902	-83.7682	Both	1.4	3	3	4	8	4	0	22	V High	5	9:41:00 AM	58	
387	31	42.30923	-83.7682	Left	2.3	8	3	4	10	4	-2	27	High	4	9:45:00 AM	36.6	
388	31	42.30943	-83.7681	Left	3.4	9	3	4	9	3	0	28	V High	5	9:51:00 AM	74.5	
389	31	42.30952	-83.7678	Both	2.8	8	0	6	8	4	0	26	V High	5	9:53:00 AM	63.7	sand/cobble in bank
390	31	42.30983	-83.7676	Left	3.7	9	0	6	9	3	10	37	Extreme	6	9:59:00 AM	24.8	sand, clay, sandy clay, loam

391	31	42.30975	-83.7676	Right	4	10	2	3	8	6	0	29	Extreme	6	10:06:00 A	27.7	
392	31	42.3101	-83.767	Alt	3.4	9	3	6	8	5	5	36	Extreme	6	10:16:00 A	87.4	
393	31	42.31058	-83.7665	Right	2.3	8	0	2	8	2	0	20	V High	5	10:21:00 A	20	rock dam
394	31	42.31102	-83.7666	Alt	2.3	8	3	4	8	3	-3	23	V High	5	10:29:00 A	62.8	
395	31	42.31117	-83.7666	Both	2.9	9	3	3	8	6	0	29	V High	5	10:33:00 A	115	foam
396	41	42.31328	-83.7647	Right	8	10	4	4	8	7	0	33	Extreme	6	10:49:00 A	44	
397	41	42.31334	-83.7645	Both	2.9	9	3	6	5	5	-3	25	High	4	10:57:00 A	73.2	
319	26	42.27324	-83.6643	Both	2.7	6	3	3	8	3	3	26	Moderate	3		51.6	
320	26	42.27333	-83.664	Left	4	9	3	3	9	5	0	29	Extreme	6	10:39:00 A	91.7	
321	26	42.27302	-83.6637	Right	2.9	7	4	4	8	4	3	30	High	4	10:47:00 A	79.4	
322	26	42.27277	-83.6634	Left	3	7	3	3	8	5	3	29	Moderate	3		96.6	
323	26	42.27259	-83.6632	Left	2.9	7	3	4	9	5	5	33	High	4	10:58:00 A	96.6	
324	26	42.27217	-83.6633	Alt	2.5	5	4	4	8	5	0	26	Low	2	11:06:00 A	73.4	
325	26	42.272	-83.663	Right	3	7	1	3	8	5	0	24	High	4	11:12:00 A	95	
326	26	42.27208	-83.6625	Both	3.2	8	2	2	8	4	0	24	High	4	11:16:00 A	96.6	
301	25	42.32198	-83.7601	Alt	4	10	3	7	10	7	0	37	Extreme	6	9:48:00 AM	93	
302	25	42.32177	-83.7602	Alt	20	10	3	7	8	5	0	33	Extreme	6	9:52:00 AM	66	switchbacks. Bank ht originally listed as >20
399	41	42.31427	-83.7635	Left	3.5	9	3	4	8	7	0	31	Extreme	6	11:11:00 A	84	
400	46	42.30186	-83.6775	Both	1.5	2	2	3	6	5	-10	8	Low	2	10:01:00 A	40	lots of boulders, tarp
401	46	42.30164	-83.6772	Left	3.5	9	4	7	6	7	2	35	Extreme	6	10:07:00 A	45	
402	46	42.30143	-83.6769	Left	2.4	7	3	6	6	10	0	32	Moderate	3	10:15:00 A	55.6	
403	46	42.30132	-83.6749	Both	4.5	10	2	5	7	1	0	25	V High	5	10:30:00 A	27.7	foam
404	32	42.30156	-83.6748	Left	5	10	3	5	10	7	0	35	Extreme	6	10:37:00 A	47.6	artificial cement wall
405	32	42.30077	-83.674	Right	6	10	0	4	6	5	0	25	Extreme	6	10:53:00 A	47.6	
406	32	42.30072	-83.6732	Alt	7	10	5	3	8	5	3	34	Extreme	6	11:00:00 A	64.7	
407	32	42.30073	-83.6726	Right	8	10	2	5	10	10	0	37	Extreme	6	11:10:00 A	85.8	lots of hanging roots
408	32	42.30088	-83.6717	Right	13	10	0	8	8	7	5	38	Extreme	6	11:17:00 A	40.5	
409	32	42.30116	-83.6716	Left	5	10	3	6	8	9	0	36	Extreme	6	11:27:00 A	51.5	foam
410	32	42.30158	-83.6693	Left	2.5	8	3	8	8	8	0	35	High	4	11:43:00 A	34.6	
411	32	42.30195	-83.6689	Right	3.7	9	4	5	8	7	0	33	High	4	11:53:00 A	40.1	
412	32	42.30301	-83.6679	Both	2	7	0	4	6	6	2	25	High	4	12:19:00 P	35.8	thick brush
413	32	42.30337	-83.6675	Both	3	9	3	5	6	5	3	31	Extreme	6	12:30:00 P	45	
414	32	42.30352	-83.6664	Alt	2	6	2	6	6	9	5	34	High	4	12:42:00 P	40	
415	33	42.33083	-83.6834	Alt	2.1	6	1	5	8	3	0	23	V High	5	10:06:00 A	52	
416	33	42.33086	-83.6834	Alt	2.3	7	3	4	8	2	0	24	High	4	10:12:00 A	38	
417	33	42.33093	-83.6829	Both	2.6	8	3	6	7	2	0	26	High	4	10:14:00 A	89	
418	33	42.33125	-83.6827	Both	2.3	7	2	5	6	3	0	23	V High	5	10:20:00 A	79	
419	33	42.33139	-83.6825	Alt	2.8	8	4	6	6	3	0	27	Extreme	6	10:22:00 A	34	fence across stream
420	33	42.33229	-83.6794	Alt	2.8	8	0	3	8	1	3	23	High	4	10:41:00 A	89	
421	33	42.33249	-83.679	Alt	2.4	7	3	5	8	1	0	24	High	4	10:45:00 A	89	
422	33	42.33274	-83.6786	Alt	1.9	5	3	6	8	3	0	25	High	4	10:48:00 A	105	
423	33	42.33306	-83.6782	Alt	1.8	5	0	3	8	2	0	18	Moderate	3	10:59:00 A	55	
424	33	42.33329	-83.6777	Alt	1.9	5	3	7	8	2	0	25	Moderate	3	11:04:00 A	70	
425	33	42.33348	-83.6774	Left	1.6	2	2	6	7	1	0	18	Moderate	3	11:08:00 A	43	
426	33	42.33328	-83.6766	Alt	2	6	0	1	8	1	0	16	High	4	11:14:00 A	44	
427	33	42.3333	-83.6764	Alt	2.6	8	0	2	8	1	0	19	High	4	11:18:00 A	58	
428	33	42.3332	-83.6761	Alt	2.2	7	0	2	9	1	0	19	High	4	11:21:00 A	59	
429	33	42.33296	-83.6758	Alt	2.2	7	1	4	8	1	0	21	High	4	11:26:00 A	90	
430	33	42.3329	-83.6755	Alt	1.7	4	1	3	8	3	0	19	High	4	11:31:00 A	83	
431	33	42.33279	-83.6751	Alt	2.5	8	3	4	8	2	0	25	High	4	11:35:00 A	96	
432	33	42.33261	-83.6747	Right	4	10	2	3	8	4	0	27	Extreme	6	11:39:00 A	40	
433	33	42.33248	-83.6743	Right	2.3	7	1	4	8	3	0	23	High	4	11:43:00 A	24	
434	33	42.33136	-83.673	Right	1.5	2	0	3	8	0	0	13	Low	2	11:53:00 A	15	
435	33	42.33145	-83.6729	Left	1.8	5	2	3	9	0	-3	16	Low	2	11:56:00 A	12	
436	33	42.33142	-83.6729	Left	1.8	5	0	2	9	0	0	16	Moderate	3	11:58:00 A	29	
437	33	42.33159	-83.6712	Right	2	6	0	3	9	0	0	18	High	4	12:04:00 P	29	
438	33	42.33171	-83.6713	Left	1.6	3	3	7	9	1	0	23	Moderate	3	12:06:00 P	41	
439	33	42.33172	-83.671	Alt	2.5	8	2	5	9	0	0	24	High	4	12:09:00 P	47	
440	34	42.35774	-83.6548	Right	1.9	8	0	3	4	2	0	17	High	4	10:12:00 A	42.7	
441	34	42.35677	-83.6542	Right	1.8	8	1	2	8	3	0	22	High	4	10:25:00 A	21.5	
442	34	42.35529	-83.6538	Left	1	0	0	0	5	1	0	6	Low	2		22	
443	34	42.35504	-83.6541	Alt	2.3	9	0	5	6	3	0	23	High	4		26.6	
444	34	42.35376	-83.6534	Alt	1.2	4	0	2	8	1	0	15	Moderate	3		34.8	
445	34	42.35326	-83.6533	Left	1.3	5	0	4	9	3	0	21	High	4		25	
446	34	42.35183	-83.6535	Left	1.8	8	3	4	8	3	0	26	High	4		63.3	
447	34	42.35117	-83.6525	Left	2.1	8	0	2	8	0	0	18	High	4		56.4	
448	34	42.34951	-83.65	Left	2	8	0	4	8	4	0	24	High	4		38	
449	45	42.24265	-83.7095	Both	1.2	1	2	1	5	2	0	11	Extreme	6	10:08:00 A	82	pipe coming out
450	45	42.24264	-83.7092	Both	1.5	1	4	7	7	4	0	23	Extreme	6	10:14:00 A	100	
451	45	42.24268	-83.7089	Right	3	7	4	5	6	3	-5	20	Extreme	6	10:16:00 A	27	
452	45	42.24277	-83.7087	Right	2.5	5	3	5	6	4	0	23	V High	5	10:23:00 A	100	
453	45	42.24287	-83.7084	Right	2.7	5	3	5	6	6	0	25	High	4	10:27:00 A	66	
454	45	42.24299	-83.7081	Left	2.5	5	2	4	8	4	0	23	V High	5	10:31:00 A	88	bridge
455	35	42.24313	-83.7077	Left	2	4	2	6	8	3	-3	20	V High	5	10:38:00 A	100	
456	35	42.24335	-83.7069	Left	2.5	5	3	7	8	7	0	30	High	4	10:45:00 A	100	
457	35	42.2436	-83.7062	Left	2.5	5	3	6	8	3	-2	23	V High	5	10:51:00 A	27	
458	35	42.24382	-83.7056	Right	2	4	3	5	8	3	0	23	Extreme	6	10:56:00 A	90	
459	35	42.2443	-83.7052	Both	1.8	1	1	5	8	6	-3	18	High	4	11:01:00 A	75	right before packard intersection
460	36	42.25143	-83.6997	Both	3.8	9	0	5	8	6	0	28	High	4	10:04:00 A	162	artificial wire, rocks at end
461	36	42.25213	-83.6993	Left	2.5	6	2	6	6	7	0	27	Moderate	3	10:15:00 A	45	storm drain
462	36	42.25233	-83.699	Left	3.8	9	2	5	8	7	0	31	Extreme	6	10:18:00 A	161	foam, pipe
463	36	42.25244	-83.6982	Left	3.2	8	0	5	8	9	0	30	High	4	10:30:00 A	151	silt fencing
464	36	42.25251	-83.6976	Both	2.8	7	0	4	8	6	0	25	High	4	10:37:00 A	100	dead fish
465	36	42.25287	-83.697	Left	4.2	9	3	6	8	8	0	34	Extreme	6	10:42:00 A	16	pipe
466	36	42.25298	-83.6966	Both	2.4	6	0	4	8	4	0	22	High	4	10:48:00 A	110	stick/log jam
398	41	42.3142	-83.7633	Right	2.2	7	0	6	8	5	0	26	High	4	11:06:00 A	42	
467	36	42.25337	-83.6963	Right	6	10	0	4	6	10	-1	29	Extreme	6	10:53:00 A	50	
468	36	42.25365	-83.6961	Left	3.2	8	3	3	9	6	-2	27	High	4	11:02:00 A	35	
469	37	42.24714	-83.7492	Both	5.5	10	2	4	9	5	-4	26	Extreme	6	10:03:00 A	100	
470	37	42.24699	-83.7489	Left	3	9	0	5	8	5	0	27	Extreme	6	10:11:00 A	83.6	caged rocks on right bank
471	37	42.24677	-83.7487	Right	4.2	10	4	5	8	6	-3	30	Extreme	6	10:14:00 A	73.6	
472	37	42.24639	-83.7479	Left	2	6	2	7	6	7	0	28	High	4	10:30:00 A	110	bank tarp
473	37	42.24612	-83.7474	Alt	4	10	2	3	8	5	-3	25	Extreme	6	10:36:00 A	130	
474	37	42.24605	-83.7469	Both	4	10	2	2	8	6	-2	26	Extreme	6	10:44:00 A	130	
475	37	42.24606	-83.7463	Both	3	9	3	5	8	7	-2	30	High	4	10:50:00 A	81.4	
476	37	42.24611	-83.7459	Both	2.5	8	3	2	8	6	0	27	High	4	11:00:00 A	53.1	
477	37	42.24603	-83.7454	Both	4	10	1	3	8	6	-2	26	Extreme	6	11:10:00 A	170	
478	37	42.24593	-83.7447	Left	4	10	3	7	6	6	-5	27	Extreme	6	11:22:00 A	110	
479	37	42.24568	-83.7441	Alt	3	9	0	5	8	5	-2	25	Extreme	6	11:30:00 A	140	

480	37	42.2453	-83.744	Alt	3	9	3	6	9	6	-7	26	Extreme	6	11:41:00 A	94.5	
481	37	42.24456	-83.7442	Alt	3.5	9	3	6	8	6	-7	25	Extreme	6		130	large concrete chunks
482	37	42.24234	-83.7441	Left	2.2	7	0	4	8	5	-1	23	High	4		86	rock wall along right bank
483	37	42.24224	-83.7397	Alt	2	6	4	8	5	6	-3	26	High	4	12:20:00 P	53	
484	37	42.24154	-83.7367	Right	5.5	10	1	7	6	7	-2	29	Extreme	6		43.5	
485	37	42.24151	-83.7362	Both	5.5	10	1	9	4	6	-10	20	Extreme	6	12:45:00 P	74.3	
486	37	42.2415	-83.7355	Both	4	10	3	9	4	6	-10	22	Extreme	6	12:59:00 P	99.6	
487	38	42.2545	-83.7818	Alt	0.4	0	3	5	5	3	0	16	Low	2	9:42:00 AM	57	
488	38	42.25443	-83.7815	Left	1.4	5	6	7	6	2	0	26	Moderate	3	9:48:00 AM	22.3	
489	38	42.25442	-83.7814	Both	2.5	9	3	6	10	2	-2	28	V High	5	9:51:00 AM	100	
490	38	42.2543	-83.7814	Both	2.2	8	2	3	9	5	0	27	High	4	9:58:00 AM	60	
491	38	42.2531	-83.7775	Both	1	1	2	3	6	2	0	14	Low	2	10:22:00 A	62	narrow stream
492	38	42.25323	-83.7773	Right	1.1	1	0	4	8	4	0	17	Low	2	10:26:00 A	91	
493	38	42.25341	-83.7767	Alt	2.1	8	3	4	10	2	0	27	High	4	10:33:00 A	89	
494	38	42.25357	-83.7768	Both	1.8	7	2	5	8	3	0	25	High	4	10:41:00 A	48	
495	38	42.25375	-83.7768	Both	1.4	5	2	0	9	5	0	21	High	4	10:45:00 A	43	
496	38	42.2539	-83.7766	Alt	2.3	7	3	1	10	4	0	25	Extreme	6	10:50:00 A	143	
497	38	42.25441	-83.7764	Both	2.5	9	0	2	9	1	0	21	Extreme	6	11:01:00 A	75	nearest to highway
499	39	42.3329	-83.7426	Right	2.5	8	6	7	6	6	0	33	High	4	10:14:00 A	83.5	
500	39	42.33244	-83.7414	Right	2	7	2	7	4	6	1	27	High	4	10:22:00 A	100	lots of fallen trees on right bank
501	39	42.33221	-83.7409	Right	3.5	9	0	2	6	1	-3	15	Extreme	6	10:33:00 A	94.5	
502	39	42.33168	-83.7397	Alt	1.5	5	2	5	5	7	0	24	High	4	10:42:00 A	48	
503	39	42.3309	-83.7395	Alt	2	7	2	5	8	2	-1	23	V High	5	10:50:00 A	52	
504	39	42.33046	-83.7395	Alt	3	9	4	6	4	4	-4	23	Extreme	6	10:58:00 A	56	exit culvert, cut down trees, crossing street
505	39	42.33016	-83.7393	Both	4	10	4	6	3	3	-2	24	Extreme	6	11:02:00 A	154	
506	39	42.32949	-83.7385	Right	3	9	0	4	4	1	-1	17	Extreme	6	11:14:00 A	80	
507	39	42.32928	-83.7384	Alt	3.5	9	3	6	6	3	-1	26	Extreme	6	11:19:00 A	103	
508	47	42.32875	-83.7379	Right	3	9	3	8	8	6	-2	32	V High	5	11:27:00 A	30	too thick to go through
509	43	42.31649	-83.6445	Right	1.5	0	2	6	8	2	0	18	Low	2	9:47:00 AM	34	
510	43	42.31622	-83.6445	Left	3.5	6	3	4	9	2	2	26	High	4	9:55:00 AM	55	debris in stream
511	43	42.3162	-83.6447	Left	2.6	5	3	5	10	7	0	30	Moderate	3	10:03:00 A	26	
512	43	42.3162	-83.645	Right	2.7	5	3	7	8	2	0	25	Moderate	3	10:09:00 A	30	log jam
513	43	42.31594	-83.6451	Alt	2	2	3	4	9	7	0	25	Low	2	10:15:00 A	58	
514	43	42.31586	-83.6454	Left	2.2	4	0	4	8	3	0	19	Low	2	10:20:00 A	56	
515	43	42.3159	-83.6456	Right	3.2	7	3	4	8	7	0	29	Moderate	3	10:24:00 A	75	
516	40	42.31555	-83.6457	Right	2.5	5	3	2	8	5	0	23	Low	2	10:28:00 A	30	
517	40	42.3154	-83.6461	Both	2.8	6	2	3	8	7	-3	23	Moderate	3	10:39:00 A	120	
518	40	42.31514	-83.6469	Right	2.6	5	0	4	8	6	0	23	High	4	10:50:00 A	74	
519	40	42.31508	-83.6474	Right	2.7	5	0	3	8	3	0	19	Low	2	10:57:00 A	79	
520	40	42.31464	-83.6475	Left	3.1	7	2	4	9	5	0	27	Moderate	3	11:06:00 A	115	
521	40	42.31405	-83.6481	Right	3	7	3	4	8	3	0	25	Moderate	3	11:19:00 A	85	
522	40	42.3132	-83.6484	Both	3	7	2	5	8	6	-2	26	Moderate	3	11:34:00 A	145	
523	40	42.31322	-83.6491	Left	3.2	7	4	3	9	1	0	24	Moderate	3	11:44:00 A	100	
524	42	42.31227	-83.65	Left	3.1	7	0	3	8	6	0	24	Moderate	3	11:55:00 A	71	
525	42	42.31232	-83.6504	Right	6	10	2	5	8	4	0	29	Extreme	6	11:59:00 A	96	end of reach after, deep waters
498	39	42.33333	-83.7431	Both	1	0	0	2	3	3	0	8	Moderate	3	10:01:00 A	100	
606	58	42.29004	-83.7424	Left	6.4	8	0	3	8	6	0	25	High	4	10:08:00 A	80	
607	58	42.31585	-83.7256														Argo casscades join river, very large cobble
608	58	42.2884	-83.7402	Both	6	8	0	5	7	6	-5	21	High	4	12:26:00 A	115	
609	58	42.28645	-83.7382	Right	15	10	0	5	7	7	0	29	Extreme	6	10:40:00 A	90	low with cobble on left
610	58	42.28632	-83.7378	Right	15	10	0	5	7	4	-5	21	Extreme	6	10:45:00 A	300	
611	58	42.28658	-83.7344	Left	6.1	8	2	8	5	3	-6	20	High	4	10:57:00 A	70	
612	58	42.28783	-83.7328	Left	6.9	9	0	2	7	2	0	20	V High	5	11:08:00 A	100	
613	58	42.28955	-83.7305														end of reach
638	60	42.36952	-83.6051	Right	3.3	9	4	7	8	7	0	35	V High	5	12:10:00 P	81.8	
639	60	42.36967	-83.6029	Right	2.3	7	4	7	5	4	0	27	Extreme	6	12:16:00 P	44.9	
640	60	42.36962	-83.6027	Right	4	10	5	7	5	7	0	34	Extreme	6	12:22:00 P	78.5	
641	60	42.36961	-83.6022	Right													end of reach
642	61	42.3311	-83.6613	Both	2.5	5	2	3	8	5	-1	22	High	4	10:18:00 A	77	GPS went out; large pool before
643	61	42.3309	-83.6611	Right	3.8	9	0	3	9	5	0	26	V High	5	10:22:00 A	91.7	
644	61	42.3307	-83.6611	Alt	3	8	3	3	10	3	0	27	High	4	10:28:00 A	100	foam
645	61	42.3309	-83.6608	Alt	3	8	2	4	8	4	0	26	High	4	10:39:00 A	92.7	crayfish spotted
646	61	42.3309	-83.6602	Alt	3	8	5	5	8	5	0	31	Extreme	6	10:47:00 A	42.7	log jam
647	61	42.3305	-83.6596	Both	2	4	2	5	8	4	-1	22	Low	2	11:14:00 A	85.5	
648	61	42.3306	-83.6592	Right	3.1	8	3	4	10	6	0	31	V High	5	11:19:00 A	47.5	
649	61	42.331	-83.659	Both	2.2	5	4	6	8	3	0	26	V High	5	11:30:00 A	65.32	
650	61	42.3312	-83.6585	Both	2.5	5	2	6	9	3	0	25	Moderate	3	11:42:00 A	55.2	
651	61	42.3313	-83.6581	Left	3	8	4	5	8	7	0	32	High	4	11:53:00 A	35.2	dead crayfish
652	61	42.3313	-83.6578	Left	2.5	5	0	7	6	5	0	23	Moderate	3	12:04:00 P	81.5	
653	61	42.3316	-83.6578	Alt	1.7	3	0	5	8	4	-2	18	High	4	12:10:00 P	32.8	
654	61	42.3313	-83.6572	Both	3	8	3	5	8	3	0	27	High	4	12:26:00 P	75.6	
655	61	42.3308	-83.6567	Left	2.5	5	3	6	8	3	0	25	Moderate	3	12:35:00 P	100	
656	61	42.3307	-83.6567	Alt	3	8	4	5	9	4	0	30	High	4	12:46:00 P	167.6	
657	61	42.34633	-83.6492														end of reach
658	62	42.24792	-83.6903	Left	2.7	8	3	7	8	3	3	32	High	4	10:01:00 A	52	
659	62	42.24819	-83.691	Alt	2.6	7	2	3	8	1	5	26	Moderate	3	10:06:00 A	100	
660	74	42.24855	-83.6899	Right	3.9	9	4	6	8	3	4	34	Extreme	6	10:12:00 A	70	
661	74	42.24912	-83.6895	Right	4.5	10	3	9	5	9	5	41	Extreme	6		44	
662	74	42.24929	-83.6893	Right	3.8	9	2	5	8	7	7	38	V High	5		60	
663	74	42.24954	-83.6892	Alt	2.5	7	0	3	9	8	0	27	High	4		66	metal in left bank
664	74	42.24972	-83.689	Right	3.7	9	3	8	6	3	3	32	V High	5		60	
665	74	42.25019	-83.6879	Both	3.2	8	0	8	6	6	0	28	Extreme	6		40	
566	54	42.32521	-83.7344	Left	1.8	6	3	5	9	3	0	26	High	4	10:02:00 A	25	
567	54	42.32512	-83.7344	Right	2.5	8	4	5	8	4	0	29	V High	5	10:05:00 A	40	
568	68	42.32357	-83.7332	Both	3.5	9	5	6	6	5	0	31	Extreme	6	10:23:00 A	35	
569	55	42.29739	-83.7585												9:48:00 AM		no water, erosion present
570	55	42.2977	-83.7564	Right	1.8	8	3	6	8	9	0	34	V High	5	9:58:00 AM	41	fence across stream
571	55	42.29794	-83.7555												10:09:00 AM		drain, stream underground
572	55	42.29861	-83.7553												10:15:00 AM		end of 29
573	55	42.29863	-83.7545	Right	0.9	1	4	4	8	7	0	24	Low	2	10:27:00 A	25	fence across stream
574	70	42.29899	-83.753	Both	2	8	4	8	8	9	-4	33	High	4	10:45:00 A	32	
575	70	42.29896	-83.7523	Both	2.3	9	3	7	6	8	-2	31	V High	5	10:53:00 A	44	
576	70	42.29942	-83.7523	Alt	3	9	3	5	8	9	-3	31	Extreme	6	10:56:00 A	70	
577	70	42.29967	-83.7522	Left	1.7	8	3	4	9	7	-3	28	Extreme	6		45	
578	70	42.29966	-83.7519	Right	7.5	10	3	4	8	6	-2	29	Extreme	6	11:05:00 A	39	
579	70	42.29925	-83.7521	Left	12.3	10	8	9	6	7	0	40	Extreme	6	11:10:00 A	50	

580	70	42.3001	-83.7515	Alt	2.4	9	3	4	8	6	0	30	V High	5	70	
581	70	42.29843	-83.7509	Alt	20	10	3	6	8	6	0	33	Extreme	6	83	
582	70	42.30051	-83.7509	Both	2.6	9	4	8	9	5	0	26	V High	5 11:27:00 A	61	
583	70	42.30051	-83.7503													end of reach; unfinished of Site 30
584	56	42.31641	-83.7245	Left	3.1	8	4	4	8	4	-2	26	High	4 9:40:00 AM	46.8	
585	56	42.31617	-83.7246	Alt	2	5	4	5	8	4	-2	24	High	4 9:50:00 AM	86.2	
586	56	42.31589	-83.7242	Alt	1.8	4	3	3	8	4	0	22	Moderate	3 9:56:00 AM	79.9	
587	56	42.31556	-83.7239	Alt	2	5	3	4	8	4	-1	23	High	4 10:03:00 A	76.5	
588	56	42.31459	-83.7233	Right	1.7	4	3	3	9	7	0	26	High	4 10:14:00 A	55	
589	56	42.31414	-83.7231	Alt	3	8	6	4	8	3	0	29	High	4	53	
590	56	42.31317	-83.7222	Alt	1.9	4	2	3	8	9	0	26	High	4	68.7	
591	56	42.31296	-83.7218	Left	3.4	9	2	4	9	4	-2	26	Extreme	6	75.2	
592	57	42.29352	-83.7467	Rihgt	1.5	3	4	6	5	7	0	25	Moderate	3 10:05:00 A	57.6	enter at bridge
593	57	42.36611	-83.6005	Both	1.8	6	3	4	7	4	-2	22	Moderate	3 10:24:00 A	54.5	
594	57	42.36527	-83.6009	Both	2	7	3	3	8	6	0	27	Moderate	3 10:32:00 A	72.6	storm drain
595	57	42.36494	-83.6008	Both	2	7	3	5	8	6	0	29	Moderate	3 10:45:00 A	55	
596	57	42.36424	-83.6	Left	2.2	7	3	4	8	2	0	24	Moderate	3 10:58:00 A	32.8	
597	57	42.36256	-83.5986	Left	2.7	9	4	5	5	6	-2	27	High	4 11:20:00 A	20	
598	57	42.36199	-83.5983	Left	2.2	7	2	3	9	3	0	24	High	4 11:28:00 A	83.2	
599	57	42.36174	-83.5985	Alt	1.8	6	3	4	8	3	0	24	Moderate	3 11:32:00 A	65.8	
600	57	42.36149	-83.5984	Alt	2.5	8	2	3	8	4	0	25	High	4 11:40:00 A	100	
601	57	42.3611	-83.5987	Left	2.2	7	3	4	7	3	0	24	High	4 11:48:00 A	79.8	
602	57	42.36051	-83.599	Left	1.8	6	3	4	8	6	0	27	Moderate	3 11:55:00 A	54.9	
603	58	42.31585	-83.7256	Both	6.5	8	2	5	5	6	-5	21	High	4 9:52:00 AM	175	
604	58	42.29036	-83.7436	Left	6.8	9	0	2	4	4	3	22	High	4 9:58:00 AM	100	Cobble and grass on right
605	58	42.2901	-83.7428	Left	3.2	3	0	2	8	4	0	17	Low	2	50	
614	59	42.29844	-83.6598	Left	3.1	6	6	6	8	5	0	31	Moderate	3 10:06:00 A	35	
615	59	42.29826	-83.6597	Left	3.9	8	3	4	9	2	0	26	High	4 10:14:00 A	38	
616	59	42.29784	-83.6601	Right	2.9	6	3	5	6	5	0	25	Moderate	3 10:20:00 A	55.5	
617	59	42.29775	-83.6591	Alt	2.9	6	3	5	6	5	0	25	Moderate	3 10:30:00 A	30	
618	59	42.29735	-83.6595	Right	4	8	2	7	8	6	0	31	V High	5 10:36:00 A	150	
619	59	42.29633	-83.66	Left	2.7	6	3	3	9	4	2	27	V High	5 10:49:00 A	20	caused by house
620	59	42.2959	-83.661	Alt	3.1	6	5	6	9	5	0	31	V High	5 10:56:00 A	91	
621	72	42.2925	-83.6628	Left	3.1	6	7	5	10	5	0	33	V High	5 11:30:00 A	100	
622	72	42.29231	-83.6632	Left	2.9	6	2	3	6	6	0	23	V High	5 11:35:00 A	100	
623	59	42.29069	-83.6632	Left	2.7	6	2	3	10	5	-2	24	V High	5 11:50:00 A	40	
624	59	42.29082	-83.6631	Right	4.5	9	7	7	6	9	-2	36	V High	5 11:55:00 A	100	
625	59	42.28926	-83.6638	Left	3.9	8	3	2	9	0	0	22	V High	5 12:04:00 P	100	
626	59	42.28944	-83.6643													end reach
627	60	42.36881	-83.6085	Right	2.5	8	3	6	8	7	0	32	High	4 10:41:00 A	25.5	
628	60	42.36871	-83.6084	Right	2	7	2	5	9	5	0	28	High	4 10:46:00 A	34	
629	60	42.36907	-83.608	Alt	1.8	6	4	7	8	6	0	31	High	4 10:53:00 A	68	
630	60	42.3691	-83.6079	Right	2	7	3	6	9	9	0	34	High	4 10:59:00 A	16.5	
631	60	42.36921	-83.6077	Alt	2.5	8	3	5	8	6	-2	28	High	4 11:06:00 A	24.4	fence crossing end of a
632	60	42.3693	-83.6074	Left	2.5	8	5	8	8	7	0	36	Extreme	6 11:29:00 A	15.1	start of b
633	60	42.36951	-83.6069	Alt	3	9	2	6	8	7	0	32	V High	5 11:32:00 A	73.3	
634	60	42.36951	-83.6061	Right	2.7	8	3	6	6	8	-2	29	V High	5 11:40:00 A	140	
635	60	42.3695	-83.6057	Alt	3.2	9	3	7	8	7	0	34	V High	5 11:45:00 A	79.1	
636	60	42.3695	-83.6052	Right	3	9	3	8	6	6	0	32	V High	5 11:50:00 A	50	
637	60	42.36961	-83.6048	Right	3	9	3	8	8	7	0	35	V High	5 11:59:00 A	100	
666	74	42.25031	-83.6876	Left	3.5	9	3	6	8	3	2	31	V High	5	58	
667	74	42.2505	-83.6874	Right	3.4	8	0	4	6	7	0	25	V High	5	52	
668	74	42.25081	-83.6873	Left	5.2	10	4	9	8	5	5	41	Extreme	6	113	
669	74	42.25126	-83.6869	Alt	3.4	8	0	5	8	3	0	24	V High	5	54	
670	74	42.25174	-83.6867	Left	4.5	10	2	5	8	3	0	28	Extreme	6	21	
671	74	42.25229	-83.6862	Left	4.2	9	3	6	8	1	2	29	Extreme	6	25	
672	74	42.25269	-83.686	Left	4.5	10	0	3	8	6	2	29	Extreme	6	55	
673	74	42.25285	-83.6859													end of reach
674	63	42.30825	-83.6562	Left	3.2	6	3	5	8	4	-3	23	High	4 10:11:00 A	15	
675	63	42.30835	-83.6572	Left	2.7	5	4	6	9	0	5	29	High	4 10:17:00 A	58.5	
676	104	42.30817	-83.6576	Both	3.4	7	4	4	8	1	5	29	High	4 10:24:00 A	22	
677	104	42.30802	-83.6579	Both	3.2	6	3	4	8	1	5	27	High	4 10:28:00 A	98	
678	104	42.30761	-83.6586	Left	4.6	8	4	4	8	6	-5	25	Extreme	6 10:38:00 A	35	
679	104	42.30756	-83.6588	Left	2.6	5	4	4	9	5	-5	22	High	4 10:42:00 A	25	
680	104	42.30753	-83.6593	Right	2.8	6	3	4	9	1	0	23	High	4 10:49:00 A	40	
681	105	42.30391	-83.656	Right	2.4	4	0	3	9	2	0	18	High	4	36	lost GPS, use phone GPS
682	105	42.30391	-83.656	Both	3.3	7	3	4	9	0	3	26	High	4 11:07:00 A	104	
683	105	42.30383	-83.6557	Right	3	6	3	3	9	0	0	21	High	4 11:13:00 A	49	
684	105	42.30377	-83.6559	Left	2.7	6	3	4	9	0	5	27	High	4	53	
685	105	42.30353	-83.656	Right	2.6	5	4	5	9	1	0	24	High	4	49.5	
686	105	42.30336	-83.656	Left	2.5	4	4	4	9	1	-3	19	High	4 11:24:00 A	55	
687	105	42.30327	-83.6563	Left	3.2	7	2	3	8	2	0	22	High	4 11:29:00 A	75	
688	105	42.30329	-83.6563	Right	3.5	7	3	4	8	1	0	23	High	4 11:44:00 A	65	
689	105	42.30172	-83.6564	Right	3.9	8	3	4	8	1	0	24	High	4 11:05:00 A	20	
690	105	42.30148	-83.6562	Both	2.7	6	4	5	9	1	0	25	High	4 11:55:00 A	120	
691	105	42.3101	-83.6559	Left	3.5	7	5	6	8	1	0	27	High	4 12:05:00 P	35.5	
692	105	42.30138	-83.6556	Left	2.9	6	5	7	8	1	0	27	High	4 12:15:00 P	35.3	
693	105	42.35241	-83.625													End. Lots of vegetation in creek
694	65	42.28826	-83.674	Both	3.5	10	2	2	8	7	0	29	Extreme	6 10:33:00 A	200	
695	65	42.28853	-83.6735	Alternating	2.7	9	4	6	9	9	0	37	Extreme	6 10:35:00 A	200	
696	65	42.2898	-83.6733	Alternating	3.2	9	3	4	8	5	0	29	Extreme	6 10:43:00 A	150	
697	65	42.28764	-83.6724	Alternating	3.5	10	6	8	8	3	2	37	Extreme	6 10:47:00 A	210	
698	65	42.2872	-83.6711	Both	4.8	10	5	5	10	3	0	33	Extreme	6 10:55:00 A	175	No water in stream; very eroded.
699	65	42.28666	-83.6705	Both	2.2	7	3	3	8	2	0	23	High	4 11:05:00 A	200	
700	65	42.2861	-83.67	Alternating	2	5	5	5	8	3	0	26	High	4 11:08:00 A	80	
701	65	42.28549	-83.6675	Both	3.1	9	4	3	9	3	0	28	High	4 11:18:00 A	50	
702	65	42.28512	-83.6695	Alternating	3.4	10	5	7	8	4	2	36	Extreme	6 11:22:00 A	200	
703	65	42.28477	-83.6695	Right	5.5	10	2	3	10	7	2	34	Extreme	6 11:27:00 A	200	
704	65	42.28459	-83.6683	Right	3	9	2	5	10	3	3	32	Extreme	6 11:36:00 A	20	
705	65	42.28449	-83.6677													End
530	48	42.33324	-83.6634	Left	3.5	9	4	8	8	4	0	33	Extreme	6 10:30:00 A	53	log debris
531	48	42.33265	-83.6628	Left	4	9	3	3	8	3	0	26	V High	5 10:41:00 A	54	culvert at end
532	49	42.33968	-83.6621	Alt	1.5	2	3	8	7	0	0	20	Moderate	3 9:58:00 AM	86.5	Moved GPS
533	49	42.3396	-83.6625	Alt	1.7	3	2	4	8	0	0	17	Moderate	3 10:06:00 A	47.3	Edited GPS
534	49	42.33958	-83.6627	Alt	2.4	7	3	7	9	0	5	31	High	4	52.9	Edited GPS
535	49	42.33944	-83.6629	Alt	2.1	7	4	7	9	2	0	29	V High	5 10:17:00 A	37	Edited GPS
536	49	42.33943	-83.6632	Alt	2.5	8	6	9	8	0	5	36	High	4 10:28:00 A	23.5	Edited GPS
537	49	42.33933	-83.6639	Left	2.9	8	4	8	8	0	0	28	V High	5 10:37:00 A	15	Edited GPS

538	49	42.33924	-83.6641	Alt	2.6	8	5	8	9	0	0	30	V High	5	10:40:00 A	36	Edited GPS
539	49	42.33913	-83.6642	Alt	2.3	7	3	6	8	0	0	24	High	4	10:48:00 A	81	Edited GPS
540	100	42.33904	-83.6647	Left	3	9	3	6	8	1	0	27	V High	5	10:59:00 A	98.5	Edited GPS
541	100	42.33895	-83.6652	Left	3	9	5	7	9	2	0	32	Extreme	6	11:00:00 A	65	Edited GPS
542	100	42.33931	-83.6658	Alt	2.5	8	3	4	9	2	0	26	V High	5	11:13:00 A	101	Edited GPS
543	101	42.33904	-83.6662	Alt	2.8	8	3	6	8	0	0	25	V High	5		71	Edited GPS
544	101	42.33868	-83.6665	Alt	2.5	8	3	3	9	0	0	23	V High	5	11:28:00 A	45.7	Edited GPS
545	101	42.33828	-83.6661	Alt	2.8	8	3	4	9	1	0	25	High	4		53.5	Edited GPS
546	101	42.33785	-83.6671	Alt	3	9	3	4	9	1	0	26	V High	5	11:41:00 A	63	Edited GPS
547	101	42.33724	-83.6672	Alt	2.5	8	4	7	8	2	0	29	High	4		101	Edited GPS
548	101	42.33708	-83.668	Both	2.5	8	3	7	8	2	0	28	High	4		38	Edited GPS
549	101	42.33676	-83.6679	Alt	2.8	8	4	7	8	1	0	28	V High	5		83.5	Edited GPS
550	101	42.33643	-83.6677	Both	3.5	9	3	7	8	2	3	32	Extreme	6		80.5	Sand
551	101	42.3352	-83.668														End point
552	50	42.31465	-83.7168	Both	5	10	5	7	8	9	3	42	Extreme	6	9:47:00 AM	22	
553	50	42.31464	-83.717	Alt	3.5	9	3	2	8	9	2	33	Extreme	6	9:57:00 AM	100	
554	50	42.31475	-83.7175	Both	5	10	3	7	9	6	-2	33	Extreme	6	10:03:00 A	98	
555	50	42.31475	-83.7175	Alt	4	10	6	7	9	4	5	41	Extreme	6		100	duplicate coordinate, metal pipe in stream
556	50	42.31461	-83.7195	Alt	3	9	5	7	9	5	0	35	Extreme	6	10:24:00 A	150	
557	50	42.3142	-83.7202	Alt	3.5	9	7	5	9	8	0	38	Extreme	6		60	
526	48	42.33358	-83.6672	Right	2.5	5	3	3	9	2	0	22	Extreme	6	9:53:00 AM	65	foam
527	48	42.33319	-83.6664	Right	1.5	0	3	5	9	5	0	22	Low	2	10:00:00 A	15	undercut
528	48	42.33306	-83.6659	Right	2.5	5	5	5	8	3	0	26	Extreme	6	10:03:00 A	58	
529	48	42.3332	-83.6644	Both	2.5	5	4	4	9	3	0	25	V High	5	10:20:00 A	59	log jam after
558	67	42.31174	-83.7222	Both	2.9	9	7	8	8	8	-1	39	V High	5	11:05:00 A	120	
559	67	42.31122	-83.7208	Right	2.7	8	6	7	8	2	2	33	Moderate	3	11:16:00 A	37	
560	67	42.31056	-83.7222														end coordinate
561	51	42.2951	-83.7478														Small stream of water, most likely groundwater. No clear banks and does not appear to be eroded. Shallow drain. Narrow, No noticeable erosio within accessible sections. Well vegetated. Section A flows into a swamp
562	52	42.37936	-83.6022														Found stream
563	52	42.37877	-83.5988														Stream only accessible by end point no erosion at lower end. Stream not accessible above Varsity Ave. Wetland.
564	53	42.23358	-83.7269														
565	54	42.32539	-83.7345	Both	1	0	0	2	3	2	0	7	Low	2	9:57:00 AM	45	
710	78	42.33836	-83.6432	Alt	2	2	2	4	6	3	0	17	V High	5	10:25:00 A	77	No water in bed
711	78	42.33798	-83.6429	Both	1	1	2	4	7	3	0	17	Low	2	10:30:00 A	55	No water in bed
712	78	42.33453	-83.6409	Left	1	1	6	7	4	8	0	26	Low	2	10:59:00 A	100	Water in streambed
713	79	42.28387	-83.7009	Alt	4.3	10	2	6	6	7	0	31	Extreme	6	10:09:00 A	120	
718	79	42.28237	-83.701	Both	2.9	9	3	8	8	7	0	35	Extreme	6	10:33:00 A	130	
719	79	42.28192	-83.7014	Alt	1.6	6	3	7	9	9	-2	32	Extreme	6	10:38:00 A	150	
720	79	42.28061	-83.7	Alt	1.7	6	3	5	9	9	2	34	Extreme	6	10:47:00 A	45	End of Reach
721	80	42.2359	-83.7427	Right	2.8	8	2	3	8	5	-2	24	Extreme	6	10:06:00 A	74	Used phone GPS
722	80	42.2355	-83.7421	Both	2.2	7	3	4	8	1	-2	21	V High	5	10:27:00 A	29	
723	80	42.2354	-83.7419	Both	2.6	8	2	6	8	8	-1	31	V High	5	10:33:00 A	81	
724	80	42.2352	-83.7413	Both	2.1	7	3	4	5	9	-4	24	Extreme	6	10:40:00 A	81.5	
725	80	42.2353	-83.7406	Both	0.25	8	5	5	7	7	-1	31	Extreme	6	10:48:00 A	112	
726	80	42.2347	-83.7376	Left	1.9	6	3	5	8	10	0	32	High	4	11:10:00 A	91	
727	80	42.2347	-83.7364	Both	2	7	4	6	9	6	0	32	V High	5	11:16:00 A	57	
728	80	42.2346	-83.7308	Both	2	7	3	3	8	5	3	29	Extreme	6	11:44:00 A	82.5	
729	80	42.2335	-83.7298														End of reach
730	81	42.27781	-83.6698	Left	2	1	3	2	8	6	0	20	Low	2	10:00:00 A	65.1	
731	81	42.27757	-83.6696	Right	2.1	1	2	2	8	4	-2	15	Low	2	10:06:00 A	100	
732	81	42.27705	-83.6695	Alt	2.4	4	6	6	8	5	-2	27	High	4	10:11:00 A	130	
733	81	42.2763	-83.6695	Right	3	6	2	1	9	2	0	20	High	4	10:17:00 A	96.2	
734	81	42.27603	-83.6692	Alt	3.2	6	2	2	8	1	0	19	High	4	10:22:00 A	83.5	
735	81	42.27455	-83.6682														End of reach
736	82	42.32516	-83.648	Both	2	1	4	5	8	7	0	25	Low	2	10:20:00 A	70	
737	82	42.32496	-83.6473	Left	3.2	6	2	3	9	7	0	27	High	4	10:29:00 A	25.5	
738	82	42.32494	-83.647	Left	3.2	6	3	5	9	9	0	32	Moderate	3	10:37:00 A	38.5	
739	82	42.32466	-83.6472	Right	2.2	1	1	2	8	2	0	14	Low	2	10:43:00 A	100	
740	82	42.3238	-83.6469	Both	2.5	4	3	4	8	5	0	24	Low	2	11:07:00 A	80	
741	82	42.32264	-83.6465	Alt	3.7	7	3	4	9	4	0	27	High	4		80	
742	82	42.32182	-83.6457	Alt	3	6	3	4	9	5	0	27	Moderate	3		100	
743	82	42.3211	-83.6457	Right	3.1	6	4	4	9	5	0	28	Moderate	3	11:56:00 A	70	
744	82	42.32011	-83.6468	Both	2.5	4	2	4	9	3	0	22	Low	2	12:10:00 P	100	
745	82	42.31895	-83.6468														end of reach
746	102	42.29338	-83.7468	Right	1.4	2	3	2	8	4	0	19	Low	2	10:13:00 A	12	
747	102	42.34691	-83.63	Left	1.3	2	3	5	5	7	0	22	Moderate	3	10:30:00 A	36	
748	102	42.3428	-83.6292	Alt	2.8	9	4	5	7	5	0	30	Extreme	6	10:45:00 A	62	
749	102	42.34272	-83.6284	Alt	1.8	7	4	4	8	6	0	29	High	4	10:55:00 A	80	
750	102	42.34074	-83.629														Flood plane, is not flowing, narrow creak; lost stream multiple times
751	102	42.34025	-83.6292														rejoined stream at 11:36
752	83	42.3385	-83.6289	Alt	2.5	8	0	2	8	3	0	21	Extreme	6		73	
753	83	42.33815	-83.6286	Right	2.2	8	2	5	9	3	0	27	V High	5		33	
714	79	42.2834	-83.7006	Alt	3.3	9	2	4	8	4	0	27	Extreme	6	10:14:00 A	200	
715	79	42.28316	-83.7004	Left	4.6	10	4	9	8	4	0	35	Extreme	6	10:18:00 A	20	
716	79	42.28309	-83.7003	Alt	4.5	10	2	7	8	4	5	36	Extreme	6	10:20:00 A	91	
717	79	42.28257	-83.7011	Both	3.5	9	3	5	8	9	0	34	Extreme	6	10:28:00 A	30	
754	83	42.33718	-83.6276														pond; end point
755	84	42.35978	-83.6004	Left	0.6	0	0	7	5	3	0	15	V Low	1	9:56:00 AM	14	
756	84	42.35954	-83.6002	Left	1.3	1	0	9	5	4	0	19	Low	2	10:02:00 A	24	
757	84	42.35932	-83.6003	Alt	1.1	1	1	4	6	4	0	16	V Low	1		24	Vegetation oo dense to follow spots
758	84	42.35859	-83.6004	Right	1.8	5	3	10	4	8	0	30	Moderate	3	10:27:00 A	32	
759	84	42.35784	-83.6006	Left	1.2	1	5	9	7	5	0	27	High	4	10:40:00 A	23	
760	84	42.3565	-83.6005	Alt	1	0	4	9	5	4	0	22	Low	2	10:54:00 A	22	
761	84	42.35556	-83.5999	Left	2.2	7	1	5	9	3	-4	21	High	4	11:02:00 A	8	
762	84	42.35532	-83.5998	Both	2	6	3	9	8	3	0	29	High	4	11:06:00 A	33	
763	84	42.35499	-83.5997	Alt	2.7	8	3	5	8	7	-3	28	Extreme	6		89	
764	85	42.28843	-83.6638	Right	3.7	7	3	5	8	4	0	27	High	4		40	
765	85	42.28806	-83.664	Alt	3.5	7	2	6	9	4	0	28	High	4	10:05:00 A	110	
766	85	42.28772	-83.6642	Alt	2.4	4	4	5	8	5	0	26	High	4	10:10:00 A	80	
767	85	42.28737	-83.6645	Left	3.1	6	5	6	8	6	0	31	High	4	10:16:00 A	60	
768	85	42.28641	-83.665	Left	4.1	8	3	3	10	1	0	25	High	4	10:47:00 A	50	
769	85	42.28586	-83.6652	Alt	4	8	2	3	9	1	0	23	High	4	10:54:00 A	140	
770	85	42.2854	-83.6655	Alt	3.3	6	7	9	8	2	0	32	High	4	10:59:00 A	80	erosion is very bad

771	85	42.28462	-83.6654	Right	3.11	6	9	9	8	2	0	34	High	4	11:05:00 A	80	
772	85	42.28386	-83.6655	Alt	2.8	5	4	7	8	1	0	25	Moderate	3	11:33:00 A	80	
773	115	42.28081	-83.6674	Left	2.7	4	4	6	5	4	0	23	Moderate	3		120	
774	115	42.27955	-83.6681	Alt	2.1	0	3	4	7	5	0	19	High	4	11:45:00 A	200	log jams protect bank
775	86	42.28577	-83.7254	Left	3.8	5	0	0	6	3	-3	11	Low	2		30	cobble
776	86	42.28533	-83.7256														log jam, protecting bank
777	116	42.28442	-83.7258	Left	2	0	1	2	8	2	0	13	V Low	1		100	right bank has rock cover
778	117	42.28402	-83.726	Both	1.5	0	0	2	6	4	-4	8	V Low	1	10:29:00 A	60	cobble
779	117	42.28368	-83.7258	Right	5	7	3	7	5	5	-1	26	High	4	10:33:00 A	30	cobble
780	117	42.28319	-83.7249	Right	6.5	8	3	7	8	5	0	31	V High	5		50	
781	118	42.28306	-83.7242	Both	2.5	0	3	5	8	2	0	18	V Low	1	10:47:00 A	100	tree coverage on left
782	118	42.28286	-83.7235	Right	3.5	4	2	2	6	2	-2	14	Moderate	3		50	tree coverage on left
783	118	42.28292	-83.7222	Both	2.5	0	3	5	8	1	0	17	Low	2	11:04:00 A	200	less dense tree coverage
784	119	42.28354	-83.7207	Left	3.4	3	2	2	9	1	0	17	V Low	1		150	
785	119	42.28369	-83.7192	Right	2	0	1	2	8	2	0	13	V Low	1		80	
786	87	42.28884	-83.7311	Right	3.1	4	2	3	8	3	0	20	Low	2	9:46:00 AM	100	
787	87	42.28904	-83.7309	Right	2.8	1	2	4	8	5	0	20	V Low	1	9:54:00 AM	125	
788	87	42.28917	-83.7305	Left													heavy cobble; no visible erosion
789	87	42.28981	-83.7291	Right	2.5	0	1	1	8	2	0	12	V Low	1	10:02:00 A	110	
790	87	42.28986	-83.7289	Right	3	2	7	6	5	3	0	23	Low	2	10:06:00 A	35	
791	87	42.2905	-83.728	Right	5.5	8	2	6	5	3	-2	22	High	4	10:15:00 A	90	
792	87	42.2905	-83.728	Left													cobble wall
793	87	42.2907	-83.7278	Right	3.5	5	2	4	8	7	0	26	Low	2	10:21:00 A	25	
794	87	42.29098	-83.7279	Left	3.8	5	1	3	7	8	0	24	Low	2	10:25:00 A	75	
795	87	42.29113	-83.7267	Left	7	9	3	3	5	4	-2	22	V High	5	10:34:00 A	150	
796	87	42.29082	-83.7253	Left	6.5	9	3	6	9	4	2	33	V High	5	10:42:00 A	30	
797	87	42.29039	-83.7251	Left	7	9	2	3	8	5	0	27	V High	5	10:48:00 A	100	
798	87	42.28878	-83.7253	Left													wooden planks lining property
799	87	42.28799	-83.7257	Right	2.8	1	2	2	9	2	0	16	V Low	1	11:14:00 A	50	
800	88	42.25275	-83.686	Alt	4.5	9	3	4	8	9	0	33	Extreme	6	9:56:00 AM	69	start before highway
801	88	42.25307	-83.6856												9:58:00 AM		culvert under highway
802	88	42.25623	-83.6805												10:21:00 AM		starting after highway
803	88	42.25664	-83.6799	Alt	3.6	9	3	3	9	6	0	30	High	4	10:31:00 A	40	
804	88	42.25681	-83.6796	Both	3	8	3	3	8	3	0	25	V High	5	10:34:00 A	155	lots of trash and brown foam at end
805	88	42.25704	-83.6792	Alt	3.5	9	2	4	9	7	0	31	High	4	10:48:00 A	67	
706	77	42.29159	-83.7016	Both	1.1	2	9	10	4	10	0	35	Low	2		47.5	
707	77	42.29137	-83.7026														streambed dried up
708	78	42.33899	-83.6439	Both	1.5	2	3	5	9	3	0	22	High	4	10:11:00 A	48	No water in bed
709	78	42.33877	-83.6437	Both	1.5	2	4	5	6	4	0	21	High	4		31	No water in bed
806	88	42.25727	-83.6788	Left	2.8	8	3	4	6	10	0	31	Extreme	6	10:53:00 A	140	
807	88	42.25747	-83.6781	Right	5	10	7	7	8	5	-2	35	Extreme	6	10:56:00 A	25	
808	88	42.25749	-83.6779	Alt	6.6	10	6	6	8	7	-2	35	Extreme	6	11:02:00 A	130	
809	88	42.25758	-83.6772	Both	3.3	9	4	5	9	3	0	30	Extreme	6	11:06:00 A	82.4	second photos at 11:10
810	88	42.25796	-83.6773	Both	4.5	10	3	4	8	4	0	29	Extreme	6	11:18:00 A	150	
811	88	42.2585	-83.6773	Alt	3.2	8	2	4	10	5	0	29	V High	5	11:21:00 A	100	
812	88	42.25927	-83.6766												11:32:00 AM		
813	88	42.25966	-83.6762	Left	4	9	3	6	8	8	0	34	V High	5	11:36:00 A	41	bridge at end
814	88	42.26035	-83.6763	Right	3.4	9	2	3	8	8	0	30	High	4	11:44:00 A	30	
815	88	42.26093	-83.6767	Both	3.3	9	4	5	8	6	0	32	V High	5	11:54:00 A	120	
816	88	42.26145	-83.6771	Left	4.7	10	2	4	8	5	0	29	Extreme	6	12:00:00 P	80	between two bridges
817	88	42.26202	-83.6774	Alt	4	9	3	6	10	6	0	34	Extreme	6	12:06:00 P	190	foam,wire along bank
818	88	42.26291	-83.6776	Alt	5	10	3	3	9	3	0	28	Extreme	6	12:17:00 P	129	
819	88	42.26347	-83.6776	Alt	4.5	10	3	7	7	8	0	35	Extreme	6	12:23:00 P	150	
820	88	42.26415	-83.6768	Both	3.8	9	3	5	9	10	0	36	Extreme	6	12:31:00 P	140	
821	88	42.26456	-83.6763	Both	3.5	9	0	3	9	5	0	26	High	4	12:38:00 P	32	
822	88	42.26565	-83.678	Alt	5.5	10	4	7	7	7	0	35	Extreme	6	12:48:00 P	100	
823	88	42.26591	-83.6778	Both	4	9	2	5	8	8	0	32	V High	5	12:54:00 P	160	
824	88	42.26645	-83.6775														end of reach
825	89	42.28041	-83.6987	Left	2	6	8	9	9	2	-3	31	Moderate	3		70	cobble in bank
826	106	42.28008	-83.6969	Both	2.3	7	3	8	9	2	0	29	Moderate	3		30	
827	106	42.27991	-83.6966	Both	3	9	3	7	8	7	0	34	V High	5		200	
828	106	42.27944	-83.6961	Both	2.3	7	8	8	8	9	0	40	High	4		150	
829	106	42.27881	-83.6952	Both	2.1	6	7	8	9	4	0	34	High	4		100	
830	106	42.2771	-83.6944														end of reach
831	90	42.35308	-83.6805	Right	1.9	8	4	5	8	3	-3	25	Extreme	6	10:26:00 A	32.1	
832	90	42.35033	-83.6797	Left	1.5	6	3	4	9	1	0	23	Moderate	3	10:57:00 A	14	
833	90	42.3492	-83.6794	Left	2.7	9	3	7	6	1	-5	21	V High	5	11:04:00 A	35.4	
834	90	42.34876	-83.6791	Right	1.58	7	2	3	6	6	2	26	Extreme	6	11:14:00 A	64	
835	90	42.3481	-83.6779	Right	6.5	10	3	3	6	4	0	26	Extreme	6	11:24:00 A	32	
836	90	42.34796	-83.6765	Right	2.5	9	3	3	10	2	0	27	V High	5	11:39:00 A	56.4	
837	90	42.34564	-83.6761														End of Reach
838	91	42.34552	-83.676	Left	1.7	6	4	3	9	4	0	26	High	4		24	
839	91	42.34528	-83.6758	Both	1.9	7	4	3	8	3	0	25	High	4		46	
840	91	42.34486	-83.6757	Both	1.4	4	4	4	8	7	0	27	High	4		17	
841	91	42.34485	-83.6757	Both	1.8	7	7	4	9	3	0	30	High	4		36	
842	92	42.32933	-83.6542	Both	3.2	8	2	1	9	4	5	29	V High	5	9:57:00 AM	86	
843	92	42.32932	-83.6539	Left	3.7	9	3	5	9	5	0	31	Extreme	6	10:07:00 A	51	
844	92	42.32901	-83.6538	Left	3.2	8	0	4	9	4	0	25	High	4	10:13:00 A	30	
845	92	42.32898	-83.6534	Left	3.3	8	3	4	8	4	0	27	High	4		40	
846	92	42.32874	-83.6536	Right	3.1	8	4	2	9	2	0	25	High	4		22	
847	92	42.32863	-83.6531	Left	2.8	7	5	1	10	3	0	26	High	4	10:57:00 A	20	
848	92	42.32861	-83.6531	Left	3.1	8	4	1	9	4	0	26	Moderate	3	11:03:00 A	30	
849	92	42.32843	-83.6532	Right	3.5	9	2	5	9	4	0	29	High	4	11:13:00 A	16	
850	92	42.32831	-83.6527														End; could not get through brush
851	93	42.29675	-83.6999	Alt	2.5	8	2	3	6	5	-2	22	V High	5	11:27:00 A	120	Started at bridge
852	93	42.29655	-83.7001	Left	2.4	8	3	5	8	2	0	26	V High	5	11:34:00 A	73	
853	93	42.29644	-83.7003	Alt	3.3	9	3	7	9	7	2	37	Extreme	6	11:40:00 A	120	
854	93	42.29653	-83.7009	Both	2.3	8	1	2	9	7	-4	23	V High	5	11:45:00 A	87	Rocks lined up on banks
855	93	42.29666	-83.7013	Alt	2.6	9	1	6	6	8	0	30	V High	5	11:53:00 A	80.5	Small, thin black pipe running across/in stream
856	93	42.29643	-83.7018	Alt	1.9	7	4	7	6	9	0	33	V High	5	12:00:00 P	115	Behind building
857	93	42.29619	-83.7021	Right	2.2	8	2	6	5	7	0	28	High	4	12:08:00 P	95.7	
858	93	42.2959	-83.7024	Right	1.9	7	9	9	8	10	-3	40	High	4	12:13:00 P	121	
859	93	42.29574	-83.7029	Alt	2.2	8	3	9	8	6	0	34	V High	5	12:20:00 P	100	
860	93	42.29583	-83.7033	Alt	2	7	2	5	5	5	-1	23	Extreme	6	12:25:00 P	130	
861	94	42.30437	-83.6943	Right	1.9	8	3	4	8	5	0	28	High	4		80	
862	94	42.30439	-83.6943	Both	2.3	9	4	9	8	6	0	36	Extreme	6		70	
863	94	42.30238	-83.6944	Both	1.4	5	3	4	8	6	4	30	V High	5		203	

864	94	42.30144	-83.6914	Both	2.2	8	3	5	7	9	0	32	High	4		86	
865	110	42.30038	-83.6949	Alt	2.9	9	2	3	9	3	0	26	Extreme	6		94	
866	110	42.30009	-83.6959	Left	5	10	10	10	9	1	0	40	Extreme	6		20	
867	110	42.30012	-83.6962	Alt	2.5	9	3	9	8	3	5	37	V High	5		110	Stratification
868	110	42.29979	-83.6968	Right	2.7	9	9	10	8	1	0	37	V High	5		60	
869	110	42.29915	-83.6975	Alt	2.2	8	6	9	8	1	-2	30	High	4		82	701 start
870	110	42.29881	-83.6988	Both	1.9	8	4	7	6	2	2	29	High	4		200	
871	109	42.29739	-83.6985	Alt	3.1	9	3	8	8	7	0	35	Extreme	6		150	
872	111	42.29664	-83.6992	Left	5	10	3	7	8	5	0	33	Extreme	6		20	
873	95	42.31639	-83.6149														Very marshy. No banks.
874	95	42.31893	-83.6149														Very marshy. No banks.
875	95	42.32603	-83.6224														Very marshy. No banks. Inaccessible.
876	96	42.36969	-83.5826														Wetland. Low erosion
877	96	42.35961	-83.586														Wetland. No visable banks. Middle section is inaccessible due to no trespassing signs.
878	97	42.31462	-83.7633	R	1.8	7	3	5	6	3	2	26	High	4	10:01:00 A	40	lots of grasses surrounding creek
879	97	42.34693	-83.6145														No erosion - 100% grass coverage
880	97	42.34588	-83.6135	B	1.4	5	4	5	8	3		25	V Low	1	10:12:00 A	42	
881	97	42.34608	-83.6132	B	1.8	7	4	5	5	4		25	High	4	10:15:00 A	27	
882	97	42.34592	-83.6128	B	1.9	8	4	5	9	0		26	Moderate	3	10:19:00 A	24	
883	97	42.34597	-83.6125	B	1.6	6	3	7	4	5	-1	24	V High	5	10:24:00 A	82	
884	97	42.3462	-83.6119	B	1.1	4	4	5	6	3	-2	20	High	4	10:34:00 A	120	
885	97	42.3465	-83.6108	L	1.7	6	5	7	6	5		29	Moderate	3	10:35:00 A	47	
886	97	42.34622	-83.6092												10:46:00 AM		stream goes underground
887	97	42.3446	-83.6088	B	2.2	8	3	3	8	0	-3	19	Moderate	3	10:51:00 A	50	
888	97	42.34592	-83.6095	L	2.6	9	7	7	6	6	-2	33	High	4	10:52:00 A	15	
889	97	42.34582	-83.6084	A	3.3	10	5	8	9	1	1	34	Extreme	6	10:56:00 A	65	some stratification - sand
890	97	42.3445	-83.6072												11:19:00 AM		swampland - dense reeds
891	97	42.34442	-83.6082														no erosion - dense, tall surrounded by grasses
892	97	42.34	-83.6079												11:49:00 AM		end of D - some oil from the road
893	98	42.27214	-83.6938													200	Flat creek. 2 ft wide. 6 in deep
894	98	42.27215	-83.6939	A	1	1	0	0	7	0	10	18	High	4	10:50:00 A	400	
895	98	42.27154	-83.6933	A	1	1	0	0	7	0	10	18	High	4		400	same as previous
896	98	42.27157	-83.6934														End section
897	112	42.25577	-83.6834														Start headwaters. No erosion
898	112	42.25581	-83.6833														Stream goes into pipe
899	112	42.25567	-83.6831	R	2.5	9	3	6	8	7	0	33	V High	5	11:40:00 A	20	Where water comes out of 2 culverts
900	111	42.26707	-83.6969	R	2.5	9	1	7	8	6	0	31	Extreme	6	12:00:00 P	40	Middle reach. At culvert by Huron Pkwy and Elmwood Dr.
901	111	42.26732	-83.6967	B	2	8	0	5	7	6	5	31	Extreme	6	12:10:00 P	100	
902	111	42.26854	-83.6965	A	1.8	7	2	3	7	7	0	26	V High	5	12:17:00 P	42	
903	111	42.26808	-83.6966													100	Too thick to pass. Flat and marshy
904	111	42.26856	-83.6961	R	2	8	4	8	6	8	0	34	Extreme	6	12:29:00 P	30	
905	111	42.269	-83.6959	R	3.5	10	4	7	6	9	0	36	Extreme	6	12:35:00 P	40	7 ft extreme bank
906	111	42.26907	-83.6957	B	2	7	1	4	7	7	0	26	Extreme	6		50	
907	111	42.26925	-83.6956	B	2.5	9	3	6	7	8	10	43	Extreme	6		50	
908	99	42.32279	-83.6969														No creek until this point where flow starts.
909	99	42.32072	-83.6881	A	1.5	6	5	5	5	5		26	Low	2	10:25:00 A	36	
910	99	42.3208	-83.6881	R	1.9	8	3	5	6	3		25	High	4	10:30:00 A	16	
911	99	42.32003	-83.6867	B	2.5	9	3	5	7	5		29	V High	5	10:51:00 A	78.5	
912	99	42.31993	-83.6862	B	2.5	9	7	9	5	10		40	V High	5	10:58:00 A	38	
913	99	42.31618	-83.6851	B	2.6	9	3	7	3	3		25	V High	5	11:37:00 A	100	Cobble on bed
914	99	42.3138	-83.6853	R	1.6	7	7	5	6	3		28	Moderate	3	11:41:00 A	21	
915	99	42.31564	-83.6853	R	1.4	5	5	3	3	1		17	Low	2	11:43:00 A	40	
916	99	42.31546	-83.6854	B	2.6	9	9	5	7	7		37	V High	5	11:49:00 A	90	
917	114	42.21525	-83.7132														Wetlands. Not able to access creek. Mostly wetlands and landfill at Morgan, access rd, and Ellsworth.

Reach Calculations Table

ReachID	ReachCode	Stream	Assessed Length (mi)	Total Erosion (tons/yr)	Unit Erosion (tons/yr/ft)
55	4090005022038	Direct Drainage	0.30	476.1	0.299
697	4090005006303	Millers	0.52	511.7	0.186
669	4090005000609	Traver	0.19	131.3	0.133
173	4090005000232	Malletts	0.35	230.7	0.124
674	4090005000611	Traver	0.21	127.9	0.113
29	4090005025711	Direct Drainage	0.34	197.1	0.110
720	4090005000191	Malletts	0.50	266.2	0.101
709	4090005000232	Malletts	0.15	74.0	0.092
13	4090005005711	Huron River	0.91	418.7	0.088
305	4090005020100	Fleming	0.73	332.6	0.086
725	4090005006304	Swift Run	1.36	613.6	0.085
5	4090005000235	Direct Drainage	0.76	290.2	0.072
701	4090005006303	Millers	0.08	29.6	0.071
717	4090005000191	Malletts	0.97	327.0	0.064
737	4090005000192	Fleming	0.53	172.2	0.061
123	4090005000610	Traver	0.30	97.3	0.061
740	4090005000102	Fleming	0.11	34.7	0.060
122	4090005000609	Traver	1.46	452.9	0.059
283	4090005000626	Fleming	0.10	30.8	0.057
699	4090005006303	Millers	0.38	100.2	0.050
56	4090005032038	Direct Drainage	0.32	82.6	0.048
696	4090005006303	Millers	0.61	154.9	0.048
662	4090005000235	Direct Drainage	0.28	67.4	0.046
57	4090005042038	Direct Drainage	0.50	118.0	0.045
167	4090005000232	Malletts	0.44	100.4	0.043
120	4090005000611	Traver	0.54	117.3	0.041
661	4090005000235	Direct Drainage	0.23	47.3	0.039
727	4090005006304	Swift Run	0.70	138.6	0.037
262	4090005000192	Fleming	1.15	212.3	0.035
31	4090005030030	Direct Drainage	0.30	54.2	0.034
733	4090005000100	Fleming	0.83	144.4	0.033
702	4090005006303	Millers	0.33	52.6	0.031
736	4090005000100	Fleming	0.14	22.7	0.030
273	4090005000622	Fleming	0.33	52.7	0.030
147	4090005006303	Millers	0.20	30.5	0.029
713	4090005000233	Malletts	0.08	12.4	0.029
687	4090005005878	Huron River	0.11	16.8	0.029
164	4090005000191	Malletts	0.33	47.2	0.027
274	4090005000621	Fleming	0.30	41.3	0.026
695	4090005006303	Millers	0.31	41.4	0.026
705	4090005000232	Malletts	0.22	26.9	0.023
265	4090005000101	Fleming	0.17	20.4	0.022
710	4090005000232	Malletts	0.28	31.7	0.022
680	4090005000610	Traver	0.36	40.2	0.021
684	4090005005878	Huron River	0.77	84.6	0.021
276	4090005000626	Fleming	0.18	18.8	0.020

Reach Calculations Table

735	4090005000100	Fleming	0.51	52.2	0.019
268	4090005000100	Fleming	0.81	82.5	0.019
712	4090005000233	Malletts	0.30	26.6	0.017
676	4090005000611	Traver	0.25	21.2	0.016
4	4090005004846	Direct Drainage	0.72	58.5	0.015
275	4090005000616	Fleming	1.51	121.9	0.015
678	4090005000610	Traver	0.42	33.3	0.015
297	4090005000102	Fleming	0.35	25.6	0.014
282	4090005000621	Fleming	1.52	107.4	0.013
281	4090005000100	Fleming	0.56	39.3	0.013
672	4090005000609	Traver	0.24	16.4	0.013
171	4090005000233	Malletts	0.79	52.6	0.013
301	4090005000619	Fleming	0.20	12.6	0.012
741	4090005000629	Fleming	1.02	63.7	0.012
263	4090005000103	Fleming	0.19	10.2	0.010
287	4090005000631	Fleming	1.28	63.4	0.009
682	4090005000610	Traver	0.17	7.8	0.008
738	4090005000192	Fleming	0.71	30.6	0.008
739	4090005000101	Fleming	0.10	4.2	0.008
750	4090005000616	Fleming	0.44	16.9	0.007
683	4090005000610	Traver	0.24	8.1	0.007
23	4090005010030	Direct Drainage	0.18	6.0	0.006
45	4090005075878	Direct Drainage	0.54	17.3	0.006
285	4090005000626	Fleming	0.70	20.7	0.006
295	4090005000625	Fleming	1.17	33.7	0.005
679	4090005000610	Traver	0.05	1.3	0.005
726	4090005006304	Swift Run	0.27	7.1	0.005
289	4090005000621	Fleming	0.82	20.9	0.005
754	4090005000619	Fleming	0.62	14.6	0.004
734	4090005000100	Fleming	0.39	7.1	0.003
299	4090005000617	Fleming	1.48	26.4	0.003
266	4090005000630	Fleming	0.79	13.6	0.003
675	4090005000611	Traver	0.22	2.0	0.002
30	4090005025711	Huron River	0.36	3.3	0.002
688	4090005005878	Huron River	0.20	1.7	0.002
261	4090005000628	Fleming	1.09	8.2	0.001
40	4090005050030	Direct Drainage	0.31	2.1	0.001
294	4090005000620	Fleming	0.87	5.6	0.001
689	4090005005878	Huron River	0.12	0.6	0.001
686	4090005005878	Huron River	0.05	0.2	0.001
154	4090005076303	Millers	0.39	0.6	0.000
685	4090005005878	Huron River	0.14	0.2	0.000
38	4090005045711	Direct Drainage	0.42	0.0	0.000
168	4090005000234	Malletts	0.92	0.0	0.000
243	4090005006304	Swift Run	1.19	0.0	0.000
267	4090005000615	Fleming	1.86	0.0	0.000
269	4090005000614	Fleming	1.80	0.0	0.000
655	4090005000615	Fleming	0.65	0.0	0.000