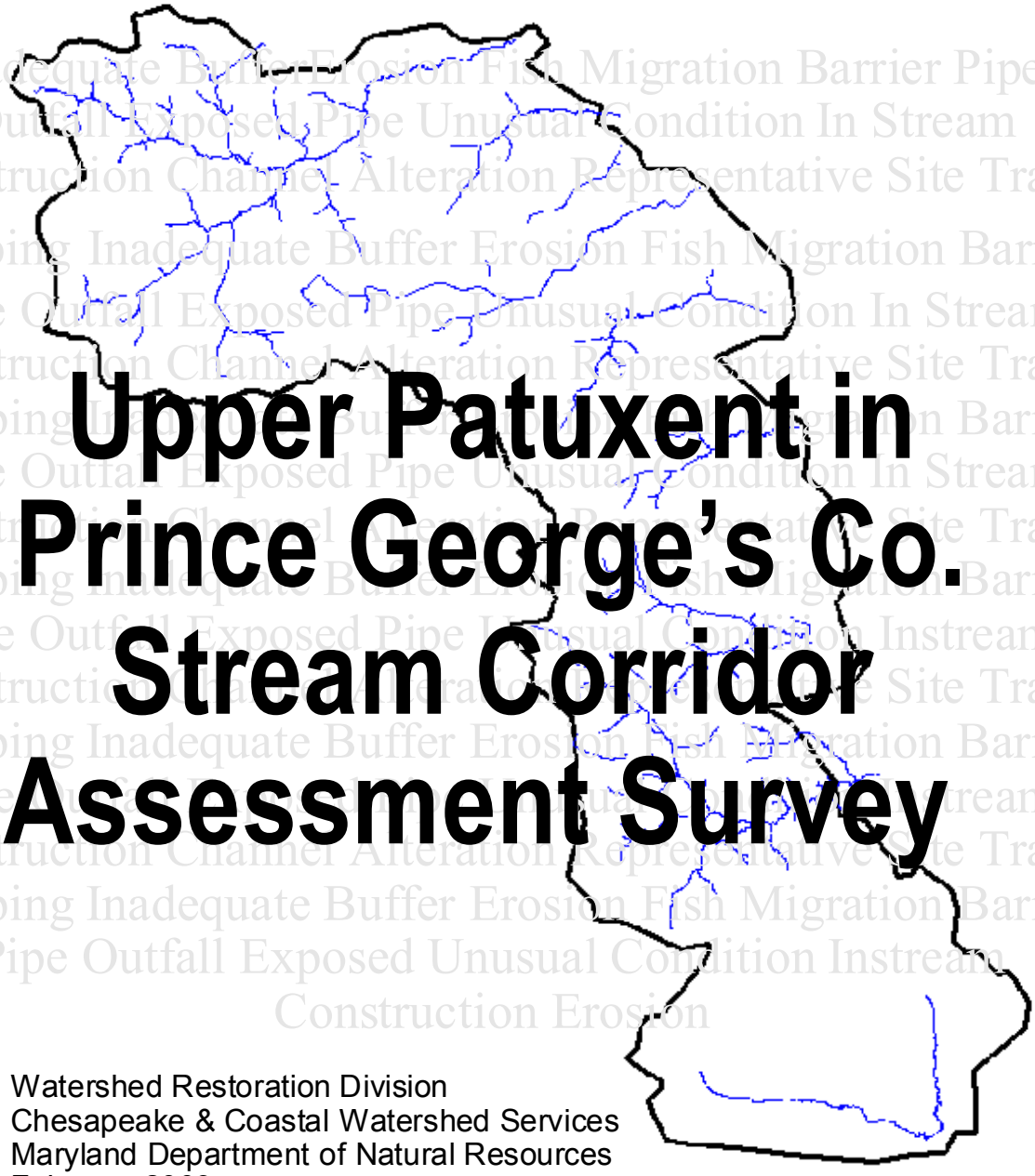

Upper Patuxent in Prince George's Co. Stream Corridor Assessment Survey

Watershed Restoration Division
Chesapeake & Coastal Watershed Services
Maryland Department of Natural Resources
February 2003

Robert L. Ehrlich, Jr.
Governor

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UPPER PATUXENT IN PRINCE GEORGES CO. STREAM CORRIDOR ASSESSMENT SURVEY

AUTHORS

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PREPARED BY

WATERSHED RESTORATION DIVISION
CHESAPEAKE AND COASTAL WATERSHED SERVICES
MARYLAND DEPARTMENT OF NATURAL RESOURCES
ANNAPOLIS, MARYLAND

February 2003

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SUMMARY

The Upper Patuxent River Watershed encompasses 56,399 acres (88 square miles). Most of the watershed lies in Anne Arundel and Prince George's Counties with a small portion (3 %) of the watershed extending into Howard and Montgomery Counties**.** In 1998, the Maryland Clean Water Action Plan identified the Upper Patuxent River as one of the State's water bodies that did not meet water quality requirements. In 2002, the Maryland Department of Natural Resources formed a partnership with Anne Arundel and Prince George's Counties to develop a Watershed Restoration Action Strategy for the Upper Patuxent Watershed. One of the first steps in developing a Watershed Restoration Action Strategy is to perform an overall assessment of environmental conditions in the watershed. One of the tools that has been developed by DNR to help assess the present environmental condition of the stream network in a watershed is the Stream Corridor Assessment survey. This report presents the results of the Stream Corridor Assessment survey that was done in the Prince George's portion of the Upper Patuxent River Watershed. A separate report has already presented the results of another Stream Corridor Assessment survey that was done in the Anne Arundel portion of the watershed.

This survey is not intended to be a detailed scientific evaluation of the watershed. Instead, the SCA survey was designed to provide a rapid overview of the entire stream network to determine where potential environmental problems are located and to collect some basic information about the stream. Results for this survey will be combined with an overall watershed characterization and a synoptic water quality survey about the Upper Patuxent River Watershed to develop a Watershed Restoration Action Strategy.

Prince George's County encompasses approximately 57 % (32,410 acres) of the Upper Patuxent Watershed. Between November and December, 2002 approximately 60 miles of stream in selected sub-basins in the Upper Patuxent Watershed were surveyed. During the survey, 630 potential environmental problems were identified. The most common environmental concern seen during the SCA survey was pipe outfalls, which was reported at 197 sites. Other potential environmental problems recorded during the survey include: 145 fish migration barriers, 85 erosion sites, 72 sites with inadequately vegetated stream buffers, 41 unusual condition sites, 31 channel alteration sites, 31 trash dumping sites, 26 exposed pipes and 2 in/near stream construction sites.

At each site, data was collected about each problem, its location noted, and photographs taken to document existing conditions. To aid in prioritizing future restoration work, field crews rated all problem sites on a scale of 1 to 5 in three categories. They were: 1) the severity of the problem; 2) how correctable the specific problem was; and 3) how accessible the site was. In addition, field teams also collected information on both in and near stream habitat condition at 68 representative sites that were spaced at approximately ½ to 1 mile intervals along the stream.

One of the main goals of the SCA survey is to compile a list of observable environmental problems so that future restoration efforts can be better targeted. It is important to note that all the problems identified can be addressed through existing State or Local government programs. The value of the present survey is that it can help to place the problems in a watershed context, and can be used by a variety of resource managers to plan future restoration work.

ACKNOWLEDGEMENTS

Without the hard work and dedication of the Chesapeake Bay Crew of the Maryland Conservation Corps, this survey would not have been possible. The crew chief during the survey was Tina Stevens. The crewmembers Frank Simmons, Zach Smith, Emma White, Jessica Hunicke, Abbey Tyrna, Lauren DeWitt, Manny Citron, Sarah Scott, and Sarah Stankorb.

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INTRODUCTION

In 1998, Maryland's Clean Water Action Plan identified bodies of water that failed to meet water quality related requirements. One of the water bodies identified in the report was the Upper Patuxent River. A map showing the location of the Upper Patuxent River Watershed is presented in Figure 1. The watershed encompasses 56,399 acres and lies entirely within Maryland's Coastal Plain. While most of the watershed is in Anne Arundel (22,244 acres) and Prince George's Counties (32,410 acres), a small portion of the watershed also extends into both Howard and Montgomery Counties (1,745 acres). In response to the findings of the Maryland Clean Water Action Plan, the Maryland Department of Natural Resources has formed a partnership with Anne Arundel and Prince George's Counties to work together to assess and improve environmental conditions in the Upper Patuxent Watershed. The main goal of this partnership is to develop and implement a Watershed Restoration Action Strategy (WRAS) for Upper Patuxent Watershed

The first step in developing a Restoration Action Strategy for the Upper Patuxent Watershed is to do an overall assessment of the condition of the watershed and the streams within it. This initial step is being accomplished using two approaches. First, a watershed characterization is done to compile and analyze existing water quality, land use, and living resources data about the Upper Patuxent Watershed. While the watershed characterization provides good overall information on environmental conditions within the Upper Patuxent Watershed, for the most part, information on the location of specific environmental problems is limited. To provide specific information on the location of environmental problems and restoration opportunities, a synoptic water quality survey and a Stream Corridor Assessment (SCA) survey of the Upper Patuxent Watershed were also done. The synoptic survey was done in the spring of 2002 and results of the survey can be found at http://www.dnr.state.md.us/watersheds/surf/proj/wras.html

The Stream Corridor Assessment survey is a new survey that has been developed by DNR's Watershed Restoration Division as a watershed management tool to identify environmental problems and helps prioritize restoration opportunities on a watershed basis. As part of the survey, specially trained personnel walk the watershed's entire stream network and record information on a variety of environmental problems that can be easily observed within the stream corridor. Field surveys were done from November 2002 through December 2002.

This report presents results of the Stream Corridor Assessment survey that was done on the Prince George's County side of the watershed. Results of the Stream Corridor Assessment survey on the Anne Arundel County side of the watershed has already been presented in a separate report. The Prince George's County portion of the watershed encompasses 57% of the total watershed area and there are approximately 184 miles of stream within the whole watershed, of which 60 miles were surveyed.

The Prince George's County's portion of the Upper Patuxent River Watershed encompasses 32,410 acres (50 square miles). Approximately 48.3% of this portion of the watershed is in urban land use and includes the communities of Beltsville, Laurel, Lanham, and

Bowie. Figure 1 shows the geographic location of the watershed targeted in this survey. Figure 1a shows the Prince George's portion of the watershed. A digital orthophoto map of the Upper Patuxent watershed is shown in Figure 2. The map is based on aerial photographs taken in April 1993. Figure 3 shows the same watershed boundaries superimposed on a seven and ½ minute USGS topographic quadrangle map. Due to budget and time constraints Stream Corridor Assessment surveys on the Prince George's portion of the watershed was limited to 60 miles of streams. Figure 4 shows the areas in the Prince George's portion of the Upper Patuxent Watershed where the SCA survey was done. The watershed was broken into Northern and Southern areas. The southern area contains all the streams surveyed for this report.

As mentioned earlier the Maryland Department of Natural Resources is working with Anne Arundel and Prince George's Counties to develop a Watershed Restoration Action Strategy (WRAS) of the Upper Patuxent River Watershed. As part of this process, data collected during the SCA survey will be used to help define present environmental conditions, as well as possible restoration opportunities in the watershed. This information combined with the watershed characterization, synoptic water quality survey and other local knowledge of the watershed, will be used to develop and Action Strategy for the Upper Patuxent Watershed. The Watershed Restoration Action Strategy in turn, will help guide future restoration efforts with the ultimate goals of restoring the areas natural resources and meeting State water quality standards.

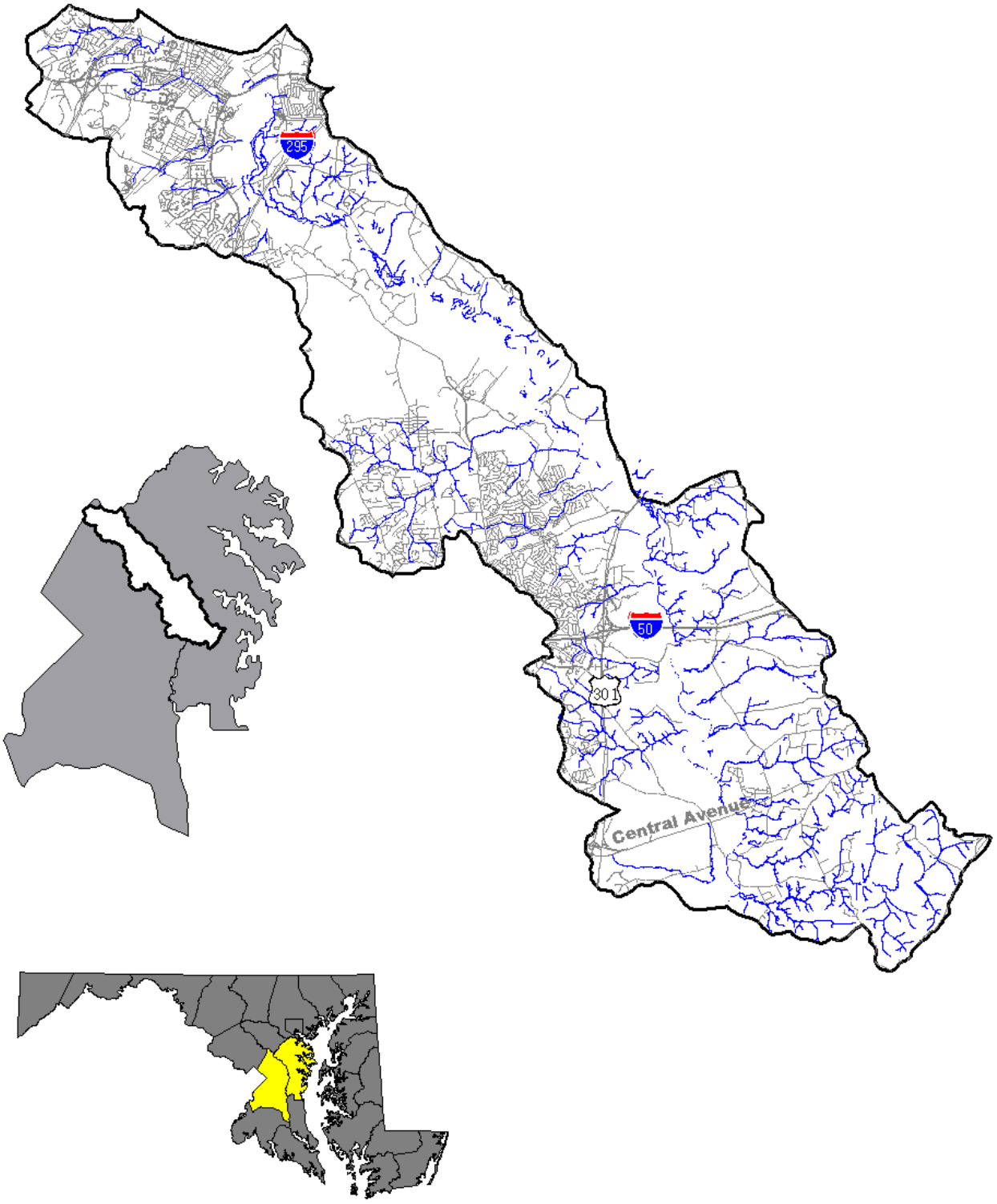

Figure 1: Map showing location of the Upper patuxent Watershed

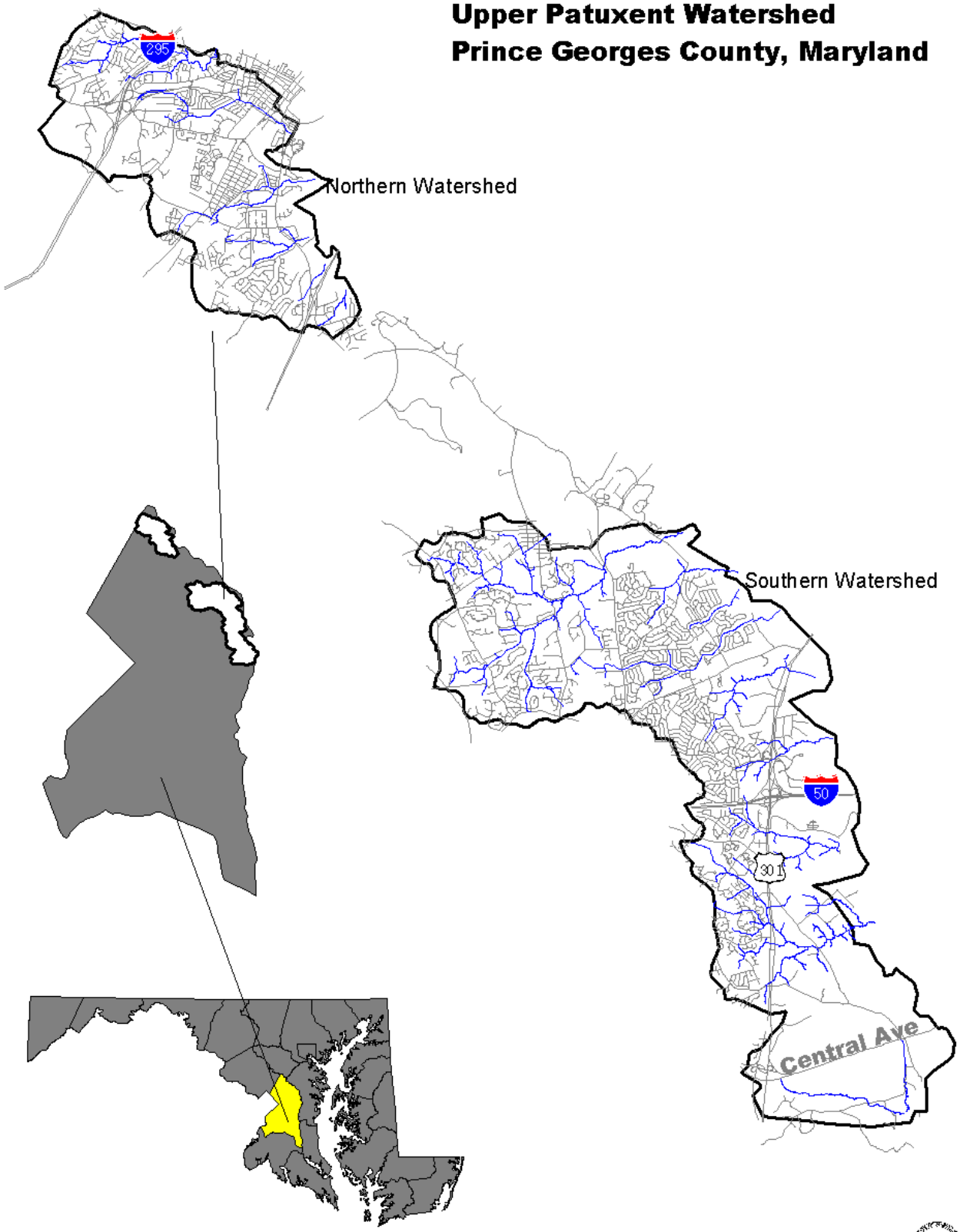

Figure 1a: Map showing the location of the Prince George's Area of the Upper Patuxent Watershed

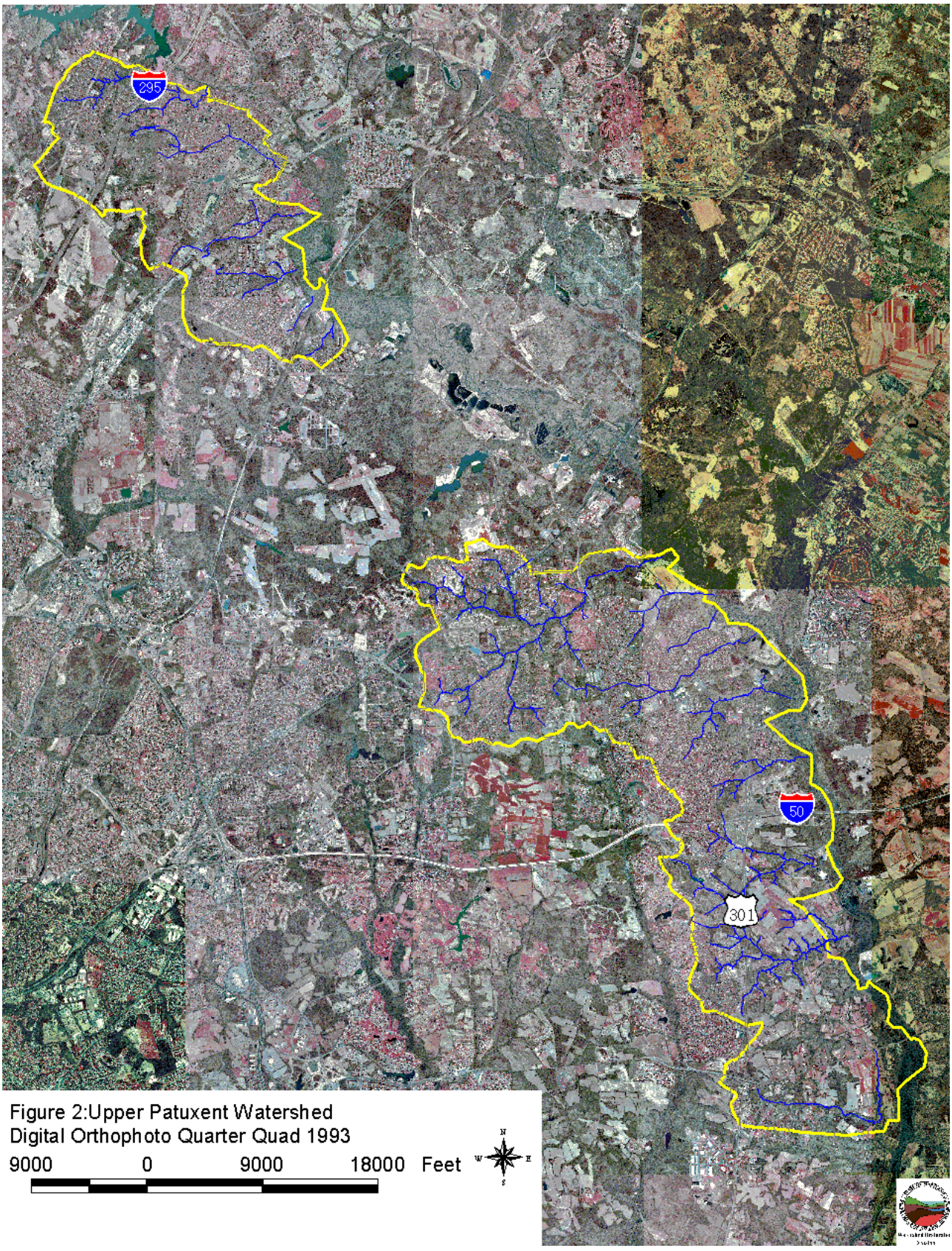

Figure 2:Upper Patuxent Watershed
Digital Orthophoto Quarter Quad 1993

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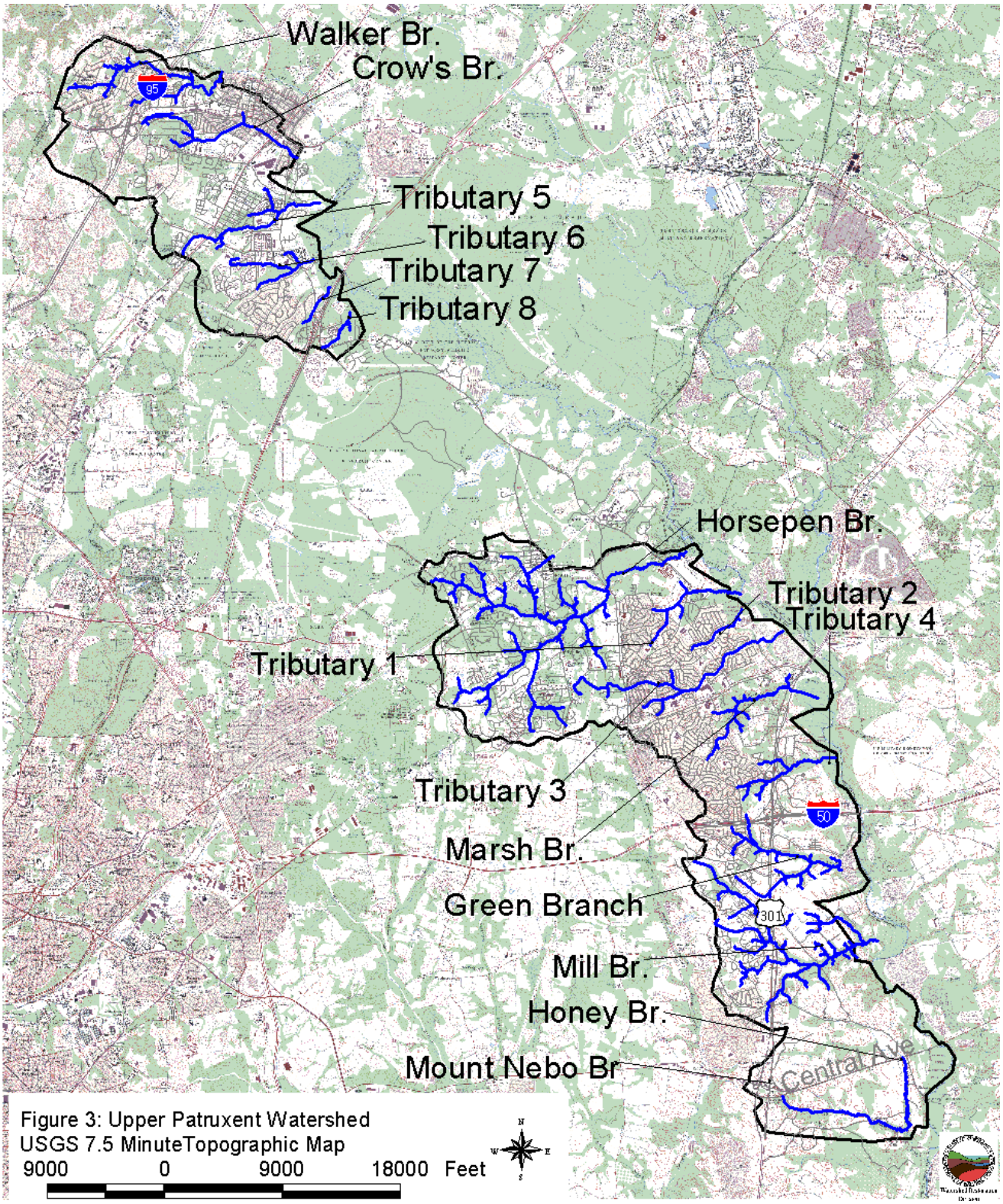

Figure 3: Upper Patruxent Watershed
USGS 7.5 MinuteTopographic Map

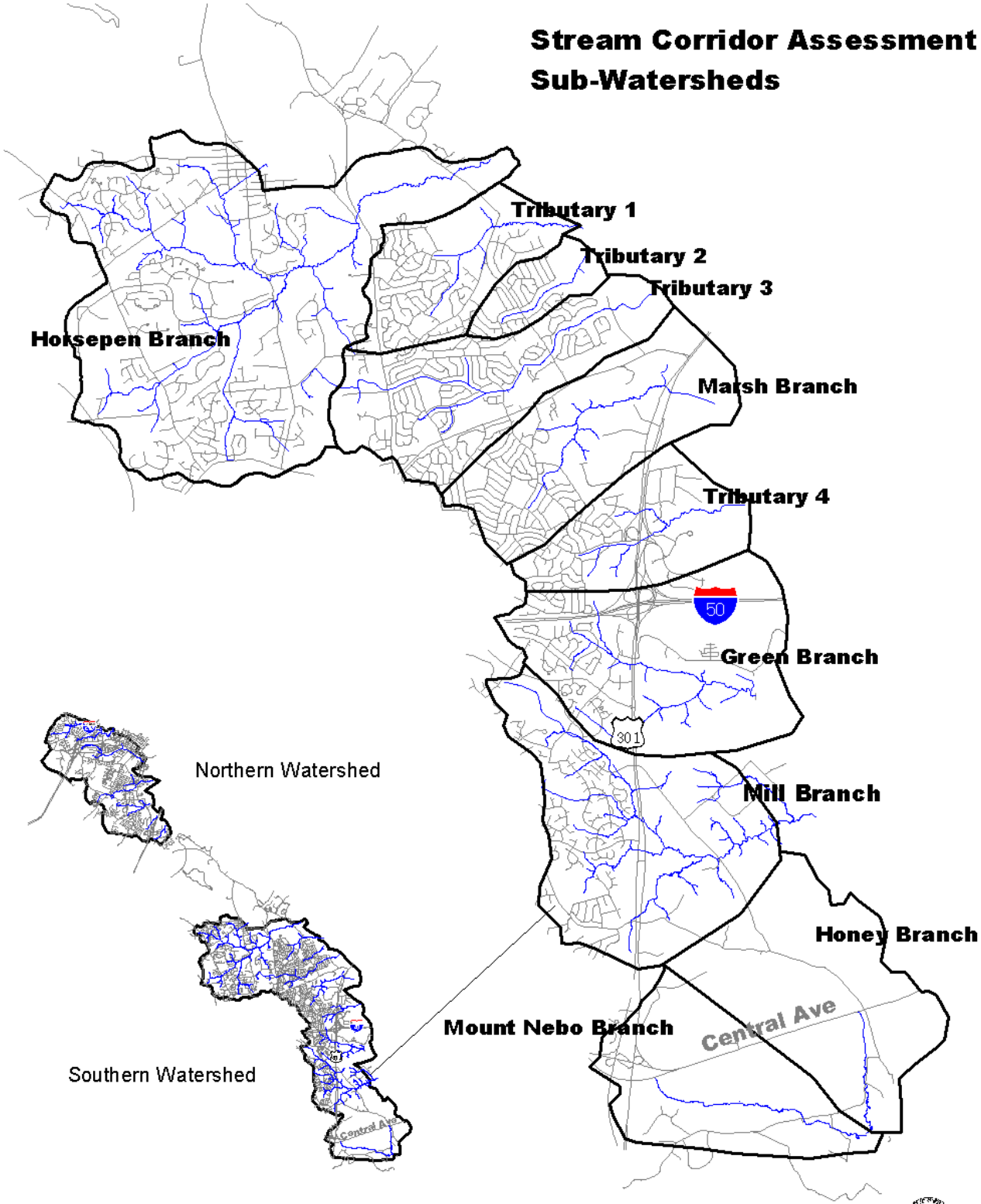

Figure 4: Map showing the sub-watersheds surveyed for the Stream Corridor Assessment Survey

METHODS

To help identify some of the common problems that affect streams in a rapid and cost effective manner, the Watershed Restoration Division of the Maryland Department of Natural Resource has been working for the last several years to develop the Stream Corridor Assessment (SCA) survey. The four main objectives of the survey are:

1. To provide a list of observable environmental problems present within a stream system and along its riparian corridor.

2. To provide sufficient information on each problem so that a preliminary determination of both the severity and correctability of a problem can be made.

3. To provide sufficient information so that restoration efforts can be prioritized.

4. To provide a quick assessment of both in- and near-stream habitat conditions so that comparative assessments can be made of the condition of different stream segments.

It is important to note that the SCA survey is not intended to be a detailed scientific survey, nor will it replace the more traditional chemical and biological surveys. Instead, the SCA survey provides a rapid method of examining an entire drainage network so that future monitoring, management and/or conservation efforts can be better targeted. One advantage of the SCA survey over chemical and biological surveys is that the SCA survey can be done on a watershed basis both quickly and at relatively low cost.

Maryland's SCA survey is really not a new concept but a refinement of an old approach, which in its simplest form is often referred to as a stream walk survey. Many of the common environmental problems affecting streams, such as excessive stream bank erosion or blockages to fish migration, are fairly easy to identify by an individual walking along a stream. Furthermore, an advanced degree in forestry is not needed to identify a stream segment that doesn't have any trees along its banks, nor does one need a degree in sanitary engineering to see that a sewage pipeline has been exposed by stream bank erosion and is leaking sewage into the stream. With a limited amount of training, most people can correctly identify these common environmental problems.

As mentioned earlier, a walking survey of stream systems is not a new concept and there have been several attempts to standardize this approach over the years. Many earlier approaches such as EPA's, "Streamwalk Manual" (EPA, 1992), Maryland Save our Stream's "Conducting a Stream Survey," (SOS, 1970) and Maryland Public Interest Research Foundation "Streamwalk Manual" (Hosmer, 1988) were designed to be done by citizen volunteers with little or no training. While these surveys can be a good guide for citizens that are interested in looking at their community streams, the data collected during these surveys can vary significantly based on the background of the surveyor. In the Maryland Save our Stream "Stream Survey," for example, citizen groups are given some guidance on how to organize a survey and are provided a

slide show explaining how to do the survey. After approximately one hour of training, citizen volunteers are then sent out in groups to walk designated stream segments. During the survey, volunteers usually walk their assigned stream segment in a couple of hours and return their data sheets to the survey organizers to be analyzed. While these surveys can help make communities more aware of the problems present in their local stream, citizen groups normally do not have the expertise or resources to properly analyze or fully interpret the information collected. In addition, the data collected is usually only enough to indicate that a potential environmental problem exists at a specific location but does not provide sufficient information to judge the severity of the problem.

Other visual stream surveys, such as the National Resources Conservation Service's "Stream Visual Assessment Protocols" (NRCS, 1998), are designed to be done by trained professionals looking at a very specific stream reach, such as at a stream passing through an individual farmer's property. While this survey can provide useful information on a specific stream segment, it is usually not done on a watershed basis.

The Maryland SCA survey has been designed to bridge the gap between these two approaches. The survey is designed to be done by a small group of well-trained individuals that walk the entire stream network in a watershed. While the individuals doing the survey are usually not professional natural resource managers, they do receive several days of training in both stream ecology and SCA survey methods.

While almost any group of dedicated volunteers can be trained to do a SCA survey, the Maryland Conservation Corps (MCC) has proven to be an ideal group to do this work in Maryland. The Maryland Conservation Corps is part of the AmeriCorps Program, which was started to promote greater involvement of young volunteers in their communities and the environment. The MCC program is managed by DNR's Forest and Park Service. Volunteers with the MCC are 17-25 years old and can have educational backgrounds ranging from high school to graduate degrees. With the proper training and supervision, these young, intelligent and motivated volunteers are able to significantly contribute to the State's efforts to inventory and evaluate water quality and habitat problems from a watershed perspective. For more information on the Maryland Conservation Corps call their main office in Annapolis at (410) 260-8166 or visit their web site at: www.dnr.state.md.us/mcc.

Prior to the start of the Upper Patuxent SCA Survey, the members of the MCC's Chesapeake Bay Crew received several days of training. As part of this training, crewmembers learn how to identify common problems observable within the stream corridor, how to record problem locations on survey maps and how to fill out data sheets for specific problem. Procedures for documenting general stream conditions at reference sites were also reviewed during training. Reference sites are located at approximately 1/2-mile intervals along the stream. In addition to filling out a half page data sheet, field crews took photographs at all problem and reference sites to help document existing conditions. Detail information on the procedures used in the Maryland SCA survey can be found in, "Stream Corridor Assessment Survey – Survey Protocols" (Yetman, 2001). A copy of the survey protocols can found on DNR's web site at http://www.dnr.state.md.us/streams/pubs/other.html . Copies of the protocols can also be obtained by contacting the Watershed Restoration Division of the Maryland Department of

Natural Resources in Annapolis, MD.

Several weeks prior to the beginning of the survey, letters were sent out to individual that own land along the stream. The letter was used to inform property owners that the survey was being done and gave them a phone number to call if they did not want MCC crews surveying the stream on their property. In addition, survey crews were instructed not to cross fence lines or enter any areas that are marked "No Trespassing" unless they have specific permission from the property owner.

Field surveys of the Upper Patuxent River Watershed began in November 2002 and over the next several months the survey teams walked much of the area's drainage network collecting information on potential environmental problems. Potential environmental problems commonly identified during the SCA Survey include: channelized stream sections, inadequate stream buffers, fish migration blockages, excessive bank erosion, near stream construction, trash dumping sites, unusual conditions, and pipe outfalls. In addition, the survey records information on the location of potential wetlands creation sites and collects data on the general condition of in-stream and riparian habitats.

It is not unusual for an SCA survey to identify large number of problems in each problem category. For example, in an earlier survey of the Swan Creek Watershed in Harford County, a total of 453 potential environmental problems were identified along 96 miles of stream. The most frequently reported problem during the survey was stream bank erosion, which was reported at 179 different locations (Yetman et. al., 1996). Follow up surveys found that while stream bank erosion was a common problem throughout the watershed, the severity of the erosion problem varied substantially among the sites and that the erosion problems at many sites were fairly minor. Based on this experience the SCA survey has field crews evaluate and score all problems on a scale of 1 to 5 in three separate areas: problem severity, correctability, and accessibility. A major part of the crews training is devoted to how to properly rate the different problems identified during the survey.

While the ratings are subjective, they have proven to be very valuable in providing a starting point for more detailed follow-up evaluations. This is because in many cases, resource professionals such as fisheries biologists, foresters, hydrologists and engineers do not have the time to walk hundreds of miles of streams to determine where the problems are. What the SCA survey does is train the MCC and other groups to walk streams for them and collect some very basic information about commonly seen problems. Once the SCA survey has been completed, the data collected can then be used by different resource professionals to help target future restoration efforts. A regional forester for example can use data collected on inadequate stream buffers to help target future riparian buffer plantings, while the local fishery biologist can use the data on fish blockages to help target future fish passage projects to reestablish spawning runs. The inclusion of a rating system in the survey gives resource professional an idea of which sites the field crew believed were the most severe, easiest to correct and easiest to access. This information combined with photographs of the site can help resource managers focus their own follow up evaluations and fieldwork at the most important sites.

A general description of the rating system is given below. More specific information on the criteria used to rate each problem category is provided in the SCA – Survey Protocols (Yetman, 2000). It is important to note that the rating system is designed to contrast problems within a specific problem category. When assigning a severity rating to a site with an inadequate stream buffer for example, the rating is only intended to compare the site to other in the State with inadequate stream buffers. The rating is not intended to be applied across categories. A trash dumping site with a very severe rating may not necessarily be a more significant environmental problem than a stream bank erosion site that received a moderate severity rating.

The **problem severity** rating has generally been found to be the most useful rating and indicates how bad a specific problem is relative to others in the same problem category. The severity rating is used to answer questions such as, where are the worst stream bank erosion sites in the watershed, or where is the largest section of stream with an inadequate buffer. The scoring is based on the overall impression of the survey team of the severity of the problem at the time of the survey.

* A very severe rating of 1 is used to identify problems that have a direct and wide reaching impact on the stream's aquatic resources. Within a specific problem category, a very severe rating indicates that the problem is among the worst that the field teams have seen or would expect to see. Examples would include a discharge from a pipe that was discoloring the water over a long stream reach (greater than 1000 feet) or a long section of stream (greater than 1000 feet) with high raw vertical banks that appear to be unstable and eroding at a fast rate.

* A moderate severity rating of 3 is used to identify problems that appear to be having some adverse environmental impacts but the severity and/or length of stream affected is fairly limited. While a moderate severity rating would indicate that field crews did believe it was a significant problem, it also indicates that they have seen or would expect to see much worse problems in that specific problem category. Examples would include: a small fish blockage that was passable by strong swimming fish like trout, but a barrier to resident species such as sculpins; or a site where several hundred feet of stream had an inadequate forest buffer.

* A minor severity rating of 5 is given to problems that do not appear to be having a significant impact on stream and aquatic resources. A minor rating indicates that a problem was present but compared to other problems in the same category it would be considered minor. Examples would include: an outfall pipe from a storm water management structure that is not discharging during dry weather and does not have any erosion problem either at the outfall or immediately downstream, or a section of stream that has stable banks and some trees along both banks but the forest buffer is less than 50 feet.

The **correctability rating** provides a relative measure on how easily the field teams believe the problem can be corrected. The correctability rating can be helpful in determining which problems can be easily dealt with when developing a restoration plan for a drainage basin.

One restoration strategy would initially target the severest problems that are the easiest to fix. The correctability rating can also be useful in identifying simple projects that can be done by volunteers, as opposed to projects that require more significant planning and engineering efforts.

* A minor correctability rating of 1 is assigned to problems that can be corrected quickly and easily using hand labor, with a minimum amount of planning. These types of projects would usually not need any Federal, State or local government permits. It is a job that small group of volunteers (10 people or less) could fix in a day or two without using heavy equipment. Examples would be removing debris from a blocked culvert pipe, removing less than two pickup truck loads of trash from an easily accessible area or planting trees along a short stretch of stream.

* A moderate correctability rating of 3 is given to sites that may require a small piece of equipment, such as a backhoe, and some planning to correct the problem. This would not be the type of project that volunteers would usually do by themselves, although volunteers could assist in some aspects of the project, such as final landscaping. This type of project would usually require a week or more to complete. The project may require some local, State or Federal government notification or permits, however, environmental disturbance would be small and approval should be easy to obtain.

* A very difficult correctability rating of 5 is given to problems that would require a large expensive effort to correct. These projects would usually require heavy equipment, significant amount of funding ($100,000 or more), and construction could take a month or more. The amount of disturbance would be large and the project would need to obtain a variety of Federal, State and/or local permits. Examples would include a potential restoration area where the stream has deeply incised several feet over a long distance (i.e., several thousand feet) or a fish blockage at a large dam.

The **accessibility rating** is used to provide a relative measure of how difficult it is to reach a specific problem site. The rating is made at the site by the field survey team, using their field map and field observations. While factors such as land ownership and surrounding land use can enter into the field judgments of accessibility, the rating assumes that access to the site could be obtained if requested from the property owner.

* A very easy accessibility rating of 1 is assigned to sites that are readily accessible both by car and on foot. Examples would include a problem in an open area inside a public park where there is sufficient room to park safely near the site.

* A moderate accessibility rating of 3 is assigned to sites that are easily accessible by foot but not easily accessible by a vehicle. Examples would include a stream section that could be reached by crossing a large field or a site that was accessible only by 4-wheel drive vehicles.

* A very difficult accessibility rating of 5 is assigned to sites that are difficult to reach both on foot and by a vehicle. Examples would include a site where there are no roads or trails

nearby. To reach the site it would be necessary to hike at least a mile. If equipment were needed to do the restoration work, an access road would need to be built through rough terrain.

Following the completion of the survey, information from the field data sheets were entered into a Microsoft Access database and verified by the field teams. In addition**, 231** photographs were taken during the survey were labeled and organized by site number in a binder so they can be easily worked with. The photographs were also digitized using a flat bed scanner and placed on a photo CD so they can be distributed to interested parties. Finally, all data collected during the survey was incorporated into an ArcView Geographical Information System (GIS). A final copy of the ArcView files were given to Prince George's County for their use in developing a Watershed Action Strategy for the Upper Patuxent Watershed.

RESULTS

A total of 630 problem data sheets, and 68 representative data sheets, were filled out during the survey. Included in the problem data sheets were 197 pipe outfalls, 145 fish migration barriers, 85 erosion sites, 72 sites with inadequately vegetated stream buffers, 41 unusual condition sites, 31 channel alteration sites, 31 trash dumping sites, 26 exposed pipes and 2 in/near stream construction sites. Seventeen comment data sheets were also completed during the survey to provide additional information about specific problems.

An overall summary of survey results is presented in Table 1, while Table 2 summarizes the data by major stream segments. All data collected during the survey is presented in Appendices A and B. Appendix A provides a listing of information by problem number along with its location, using Maryland State Plane northing and easting coordinates. The coordinates are meters. Information in this format is useful when working with maps showing the location of problem sites to determine what problems may be present along a specific stream reach. In Appendix B the data is presented by problem type with more detailed information about each problem. Presenting the data by problem type allows the reader to see which problems the field crews rated the most severe or easiest to fix within each category.

Table 1. Summary of results from Upper Patuxent River SCA Survey.

Potential Problems Identified	Number	Estimated Length	Very Severe	Severe	Moderate	Low Severity	Minor
Pipe Outfalls	**197**	**NA**	1	9	104	8	75
Fish Barriers	**145**	**NA**	-	1	16	24	104
Erosion Site	**85**	**101,985feet (19.3 miles)**	13	9	40	17	6
Inadequate Buffers	**72**	**68,700feet (13 miles)**	3	5	20	28	16
Unusual Conditions	**41**	**NA**	1	1	21	10	8
Channel Alterations	**31**	**7,850 feet (1.5 miles)**	-	1	1	7	22
Trash Dumping	**31**	**NA**	-	-	14	8	9
Exposed Pipes	**26**	**137.5 feet**	-	2	6	7	11
In/Near Stream Construction	**2**	**NA**	-	-	1	-	1
TOTAL	**630**		18	28	223	109	252
Comments	**17**						
Representative Sites	**68**						

Table 2. Summary of survey results by major stream segments

Stream Segment	Channel Alteration	Construction	Erosion	Exposed Pipes	Fish Barrier	Inadequate Buffer	Pipe Outfall	Representative Sites	Trash Dumping	Unusual Conditions	Total
Green Branch	4		7	6	19	8	20	10	2	5	81
Honey Branch			4		3	1		2	1		11
Horsepen Branch	11	1	25	10	54	24	57	21	10	13	226
Marsh Branch	2		7		7	2	13	2	1		34
Mill Branch	7		17	2	20	12	19	9	7	13	106
Mount Nebo Branch		1	11		8	11	5	6	3	2	47
Tributary 1	2		5	2	7	4	11	3	6	3	43
Tributary 2	1			1	1	1	18	1		2	25
Tributary 3	1		4	4	9	7	49	12	1		87
Tributary 4	3		5	1	17	2	5	2		3	38

Pipe Outfalls

Pipe outfalls include any pipes or small man made channels that discharge into the stream through the stream corridor. Pipe outfalls are considered a potential environmental problem in the survey because they can carry uncontrolled runoff and pollutants such as oil, heavy metals and nutrients to a stream system. A total of 197 pipe outfalls were identified during the survey. The locations of pipe outfalls in the southern watersheds are shown in Figure 5c,d,e,f. Most of the pipe outfalls are located in the more urbanized portion of the watershed.

Fifty-eight percent or 114 of the 197 outfall pipes observed during the survey were found to have some type of discharge coming out of them. Of these, only one outfall was given a very severe rating. At site UP872401 the discharge was reported to be brown with a sewage odor. Four other sites were reported as having a sewage odor and one site was recorded as having a gasoline odor (Appendix B). The field crews reported the sites to local officials for follow-up action. The field crews did not participate in any follow up actions that were taken to determine the source of the color and/or odor coming from the pipes. Most of the remaining discharges were recorded as clear with no odor. There weren't any estimates of the amount of fluid coming from the pipes.

Figure 5b shows the frequency of the severity rating given to pipe outfalls during the survey. As can be seen from the graph, most of the pipe outfalls were given either a moderate to minor severity rating.

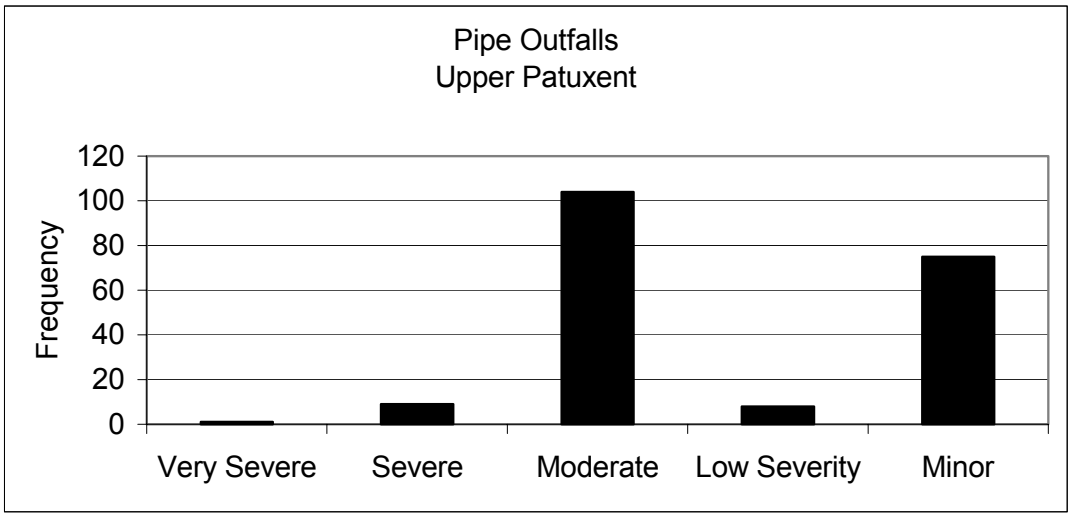

Figure 5b Histograph showing the frequency of severity ratings given to pipe outfall sites during Upper Patuxent River SCA survey.

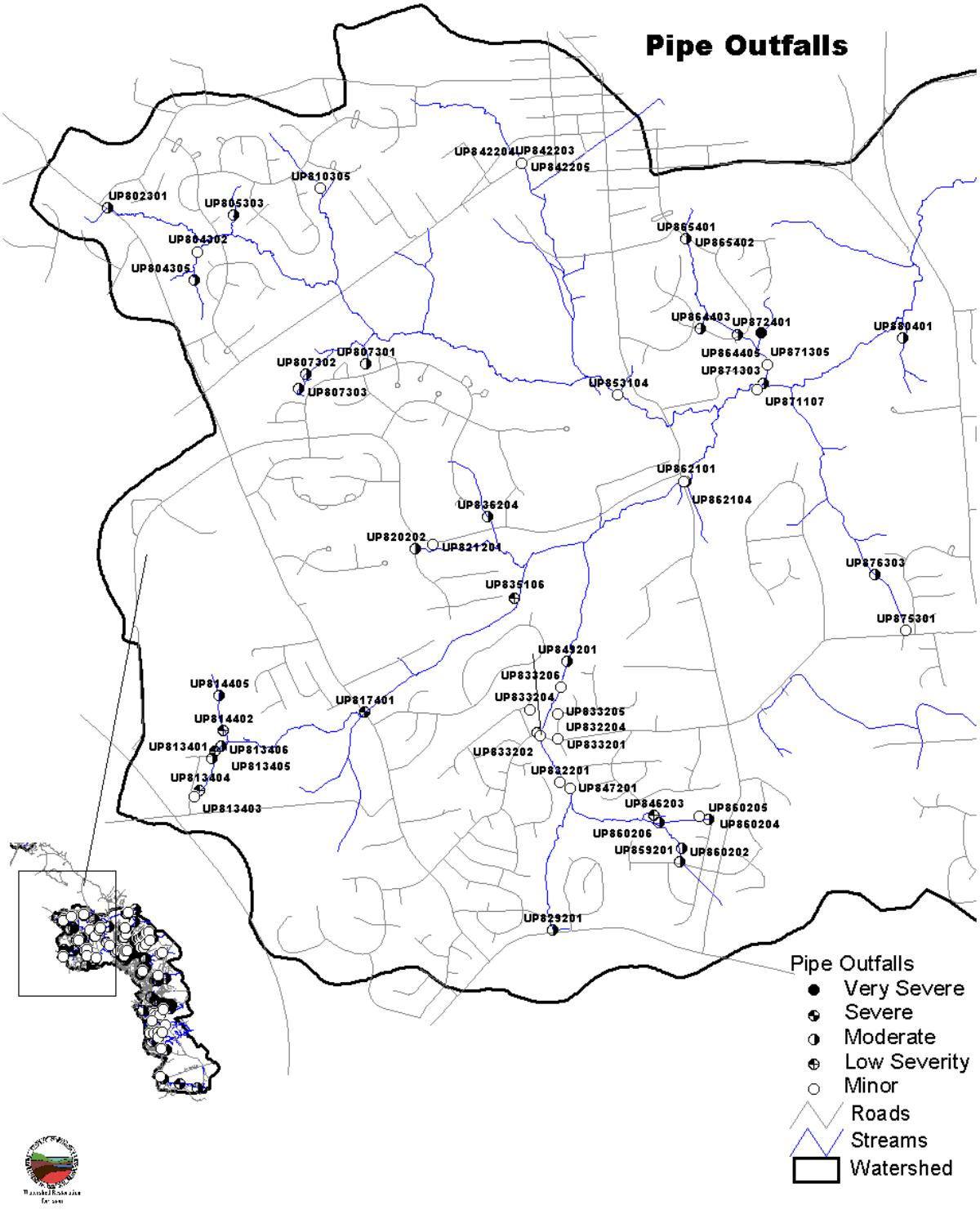

Figure 5c: Map showing the Pipe Outfalls locations in one section of the Prince George's Upper Patuxent Watershed

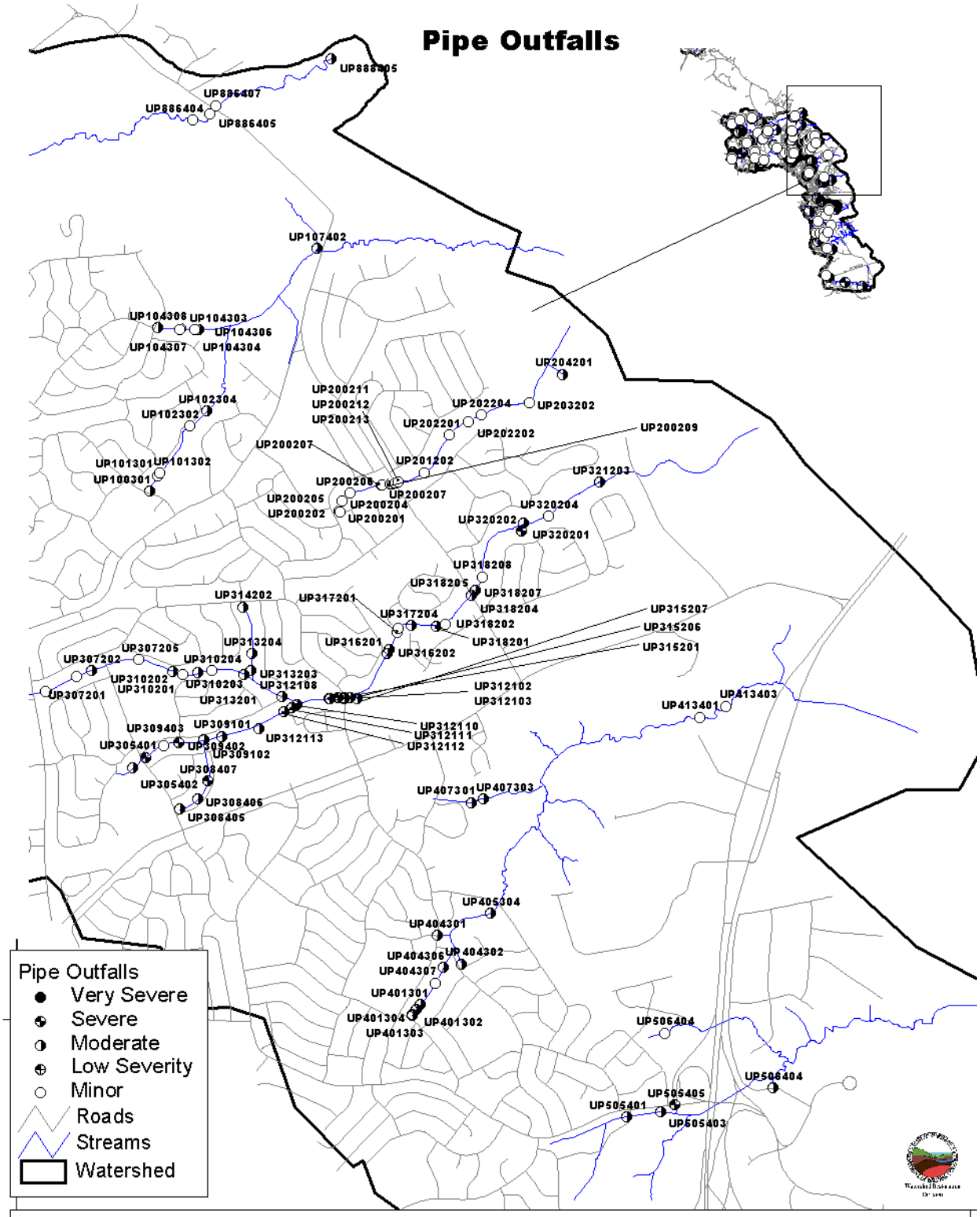

Figure 5d: Map showing the Pipe Outfalls locations in one section of the Prince George's Upper Patuxent Watershed

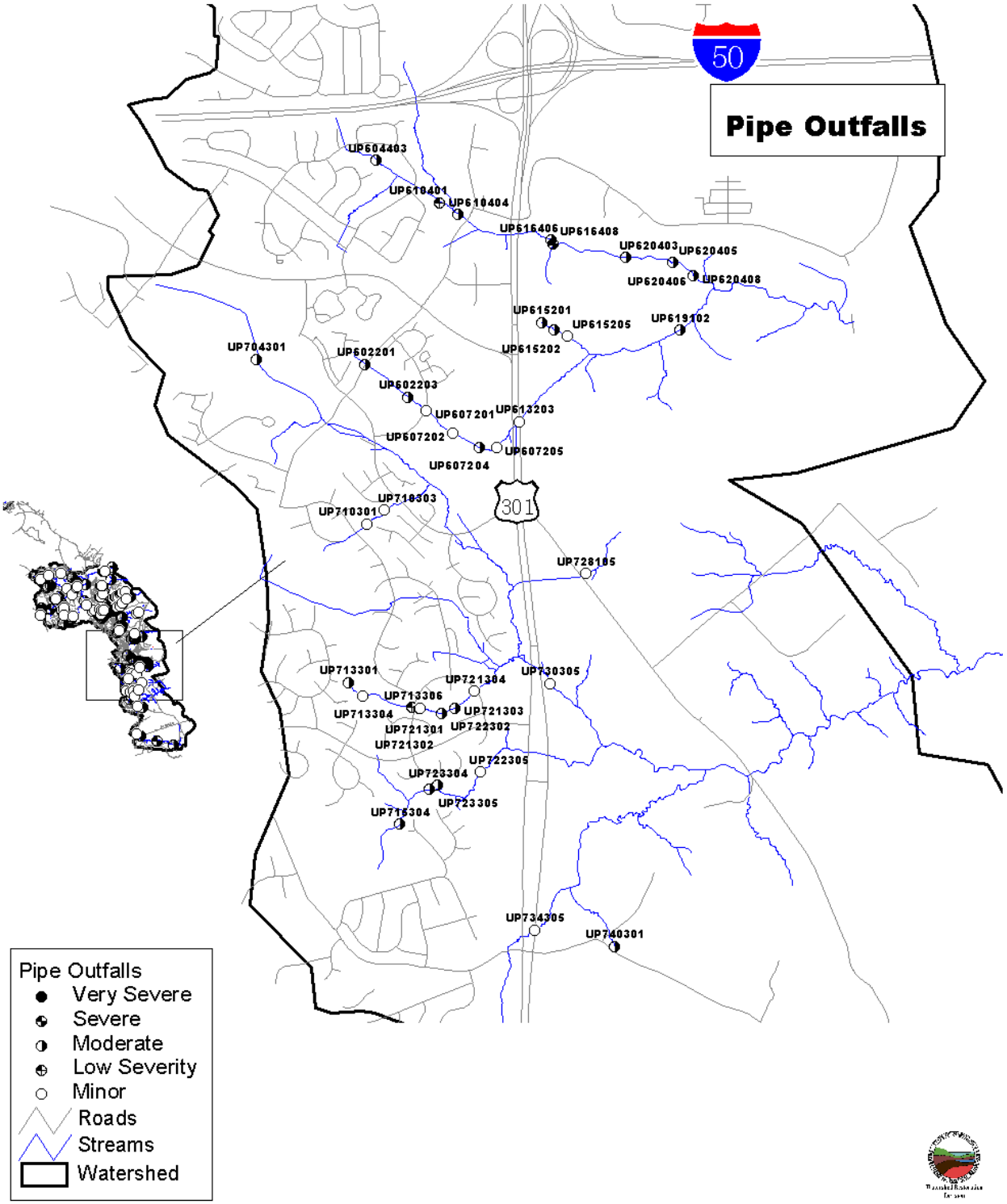

Figure 5e: Map showing the Pipe Outfalls locations in one section of the Prince George's Upper Patuxent Watershed

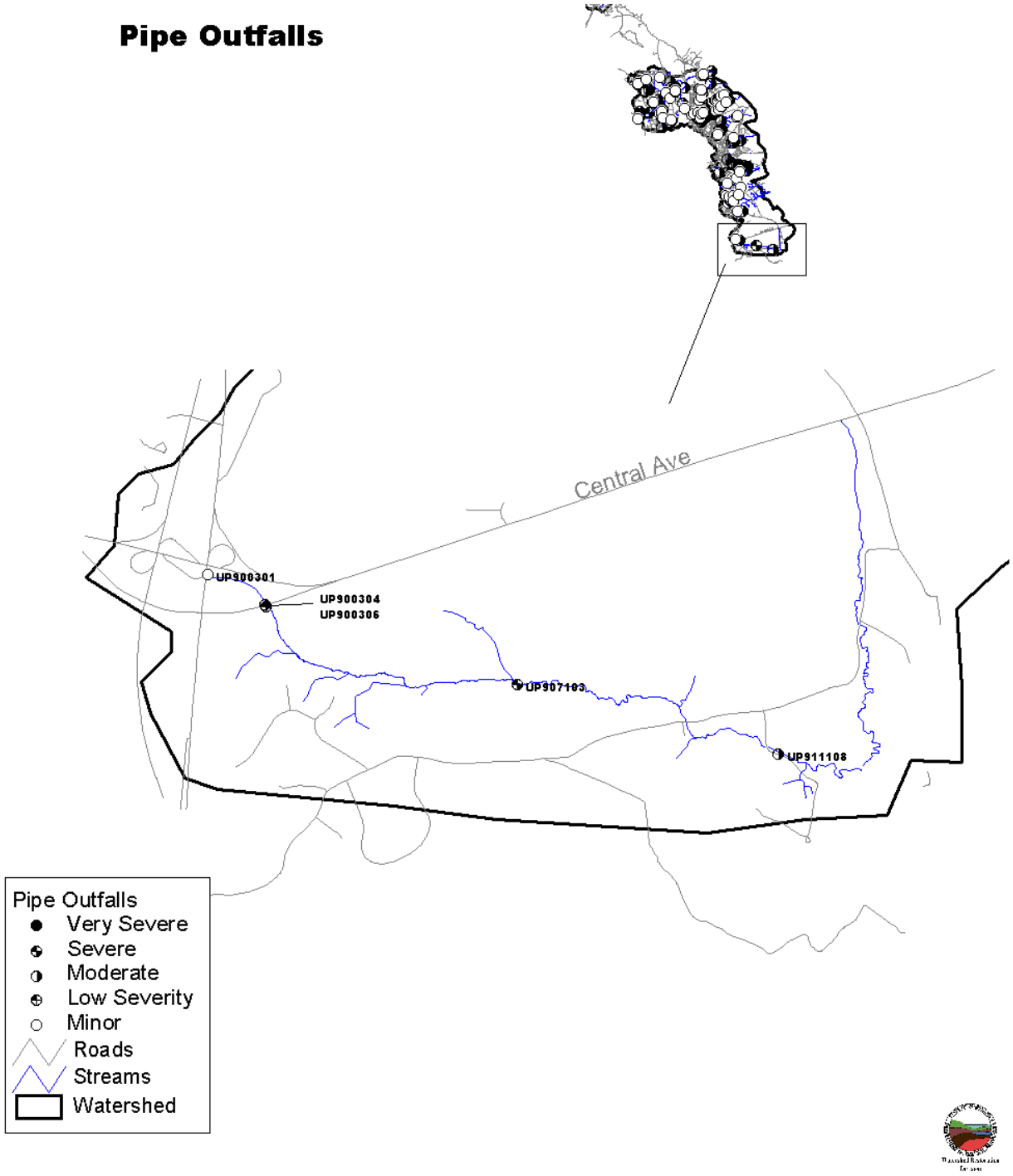

Figure 5f: Map showing the Pipe Outfalls locations in one section of the Prince George's Upper Patuxent Watershed

Fish Migration Barriers

Fish migration barriers are anything in the stream that significantly interferes with the free movement of fish upstream. Unimpeded fish passage is especially important for anadromous fish that live much of their lives in tidal waters but must move into non-tidal rivers and streams to spawn. Unimpeded upstream movement is also important for resident fish species, many of which also move both up and down stream during different parts of their life cycle. Without free fish passage, some of the sections in a stream network can become isolated. If a disturbance occurs in an isolated stretch of stream, such as a sewage line break that discharges a large amount of raw sewage into a small tributary, some or all fish species may be eliminated from that isolated section of stream. With a fish blockage present and no natural way for a fish to repopulate the isolated stream section the diversity of the fish community in an area will be reduced and the remaining biological community may be out of natural balance.

Fish blockages can be caused by man-made structures such as dams or road culverts, and by natural features such as waterfalls or beaver dams. Fish blockages occur for three main reasons. First, a vertical water drop such as a dam can be too high for fish to jump or swim over the obstacle. A vertical drop of 6 inches may cause a fish passage problem for some resident fish species, while anadromous fish can usually move through water drops of up to 1 foot, providing there is sufficient flow and water depth. The second reason a structure may be a fish passage problem is because the water is too shallow. This can often occur in channelized stream sections or at road crossing where the water from a small stream has been spread over a large flat area and the water is not deep enough for fish to swim through. Finally, a structure may be a fish blockage if the water is moving too fast through it for fish to swim through. This can occur at road crossings where the culvert pipe has been placed at a steep angle and the water moving through the pipe has a velocity that is higher than a fish's swimming ability.

One hundred and forty-five fish migration barriers were reported during the survey. The locations of fish migration blockages are shown in Figure 6. The blockages were due to a number of reasons including road crossings (22), small dams (14), channelized stream sections (9), instream ponds (3), beaver dams (11), debris dams (67) and natural falls (13).

A number of anadromous fish including, alewife, river herring, yellow perch, white perch, American shad and hickory shad spawn in the Upper Patuxent River Watershed. One site received a severe rating. Site UP624101 is at a road crossing. This site totally blocks Green Branch from the Patuxent River. Several miles upstream this tributary is blocked at Route 301.

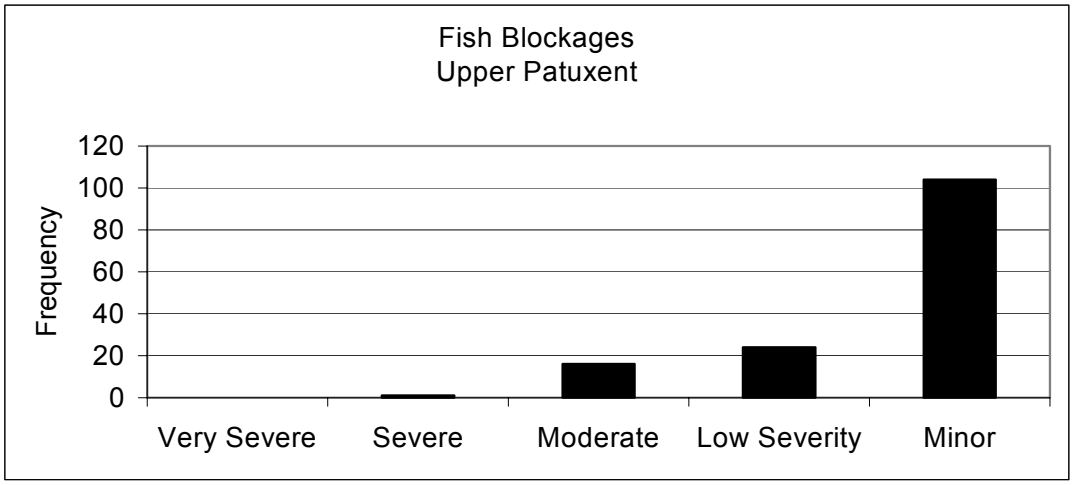

Figure 8b Histograph showing the frequency of severity ratings given to fish blockage sites during Upper Patuxent River SCA survey.

Figure 6: Map showing the Fish Barrier locations in the Prince George's Upper Patuxent Watershed

Erosion Sites

Erosion is a natural process and necessary to maintain good aquatic habitat in a stream. Too much erosion, however, can have the opposite effect, destabilizing stream banks, destroying in-stream habitat and causing significant sediment pollution problems downstream. Severe erosion problems occur when either a stream's hydrology and/or sediment supply have been significantly altered. This often occurs when land use in a watershed changes. As a watershed becomes more urbanized, forest and agricultural fields are developed into residential housing complexes and commercial properties. As a result, the amount of impervious surfaces in a drainage basin increase, which then causes the amount of runoff entering a stream to also increase. In the Upper Patuxent watershed, 23.8% of the landscape surface is impervious (Conn, personal communication). The stream channel will, over time, adjust to the new flows by eroding the streambed and banks to increase its size. This channel readjustment can extend over decades, during which time excessive amounts of sediment from unstable eroding stream banks can have very detrimental impacts on the stream's aquatic resources.

Unstable eroding streams are areas where the stream banks are almost vertical and the roots from the vegetation along the stream's banks are unable to hold the soil on the banks. Unstable eroding stream banks were reported at 85 sites during the survey (Figure 7). The majority of the erosion sites showed moderate to minor erosion that extended over long distances. The lengths of stream segments that were recorded as having unstable banks varied from 10 feet in some areas, to other areas where up to 6,200 feet of stream was found to have an erosion problem (Appendix B). Overall, results indicate approximately 19.3 miles of unstable eroding banks in the Upper Patuxent watershed. Figure 7b shows the frequency of the severity rating given to erosion sites. Thirteen sites received a very severe rating. These sites had high banks over long distances.

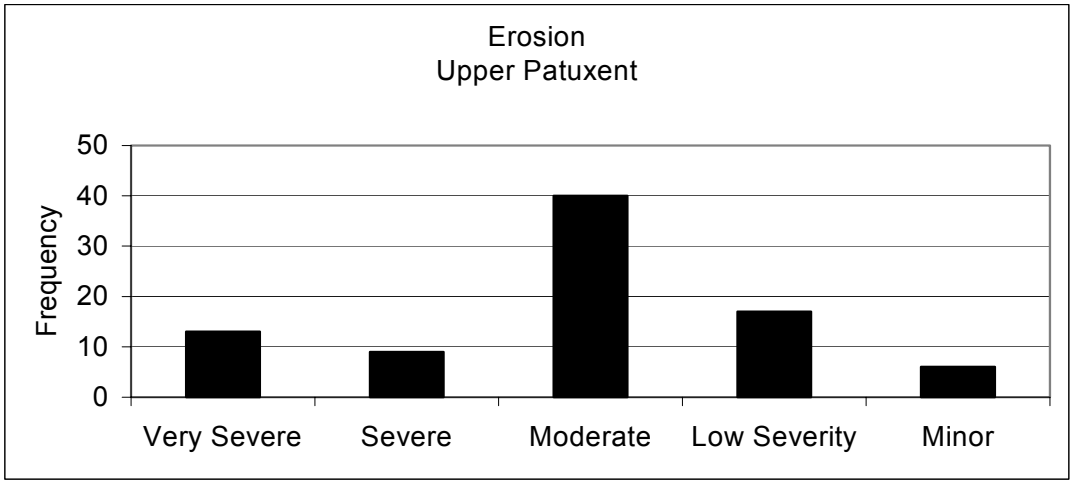

Figure 5b Histograph showing the frequency of severity ratings given to erosion sites during Upper Patuxent River SCA survey.

Figure 7: Map showing the Erosion locations in the Prince George's Upper Patuxent Watershed

Inadequate Buffers

Forested stream buffers are very important for maintaining healthy Maryland streams. They help shade the stream to prevent excessive solar heating and their roots stabilize the streams banks. Forest buffers also help remove nutrients, sediment and other pollutants from runoff and the leaves from trees are a major component of the stream's food web. Because of the importance of stream buffers not only in maintaining healthy streams, but also in reducing nutrient loadings to the Chesapeake Bay, Maryland is committed to recreating forest buffers along streams wherever it is practical.

While there is no single minimum standard for how wide a stream buffer should be in Maryland, for the purposes of this study a buffer is generally considered inadequate if it is less than 50 feet wide, measured from the edge of the stream. Inadequate buffers were reported at 72 sites during the survey as shown in Figure 8. The field crew provided a rough estimate of the length of the inadequate stream buffer at all sites (Appendix B). Based on the data that was collected, there is approximately 68,700 feet (13 miles) of inadequate buffer in the areas where the survey was done. Field teams found inadequate buffers ranging in distance from 20 feet to 3,400 feet. This survey was done in a mostly urban area, with lawn, and shrubs and small trees reported as the dominant adjacent land use at inadequate buffer sites, accompanied by a moderate amount of paved areas. Most sites received a moderate to minor severity rating (Figure 8b). This would indicate that in these stream reaches the inadequate buffers were not very long or some trees were already present at many of the sites.

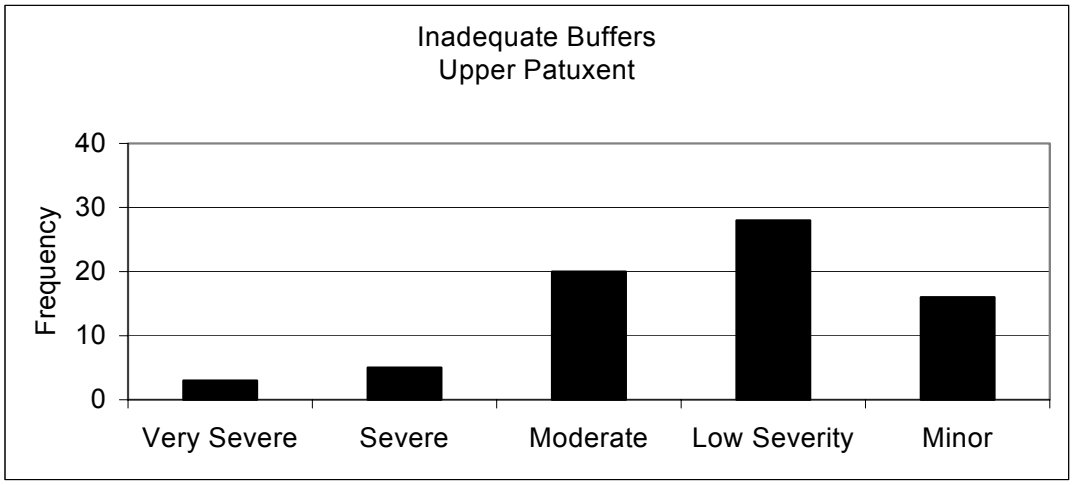

Figure 8b Histograph showing the frequency of severity ratings given to inadequate buffer sites during Upper Patuxent River SCA survey

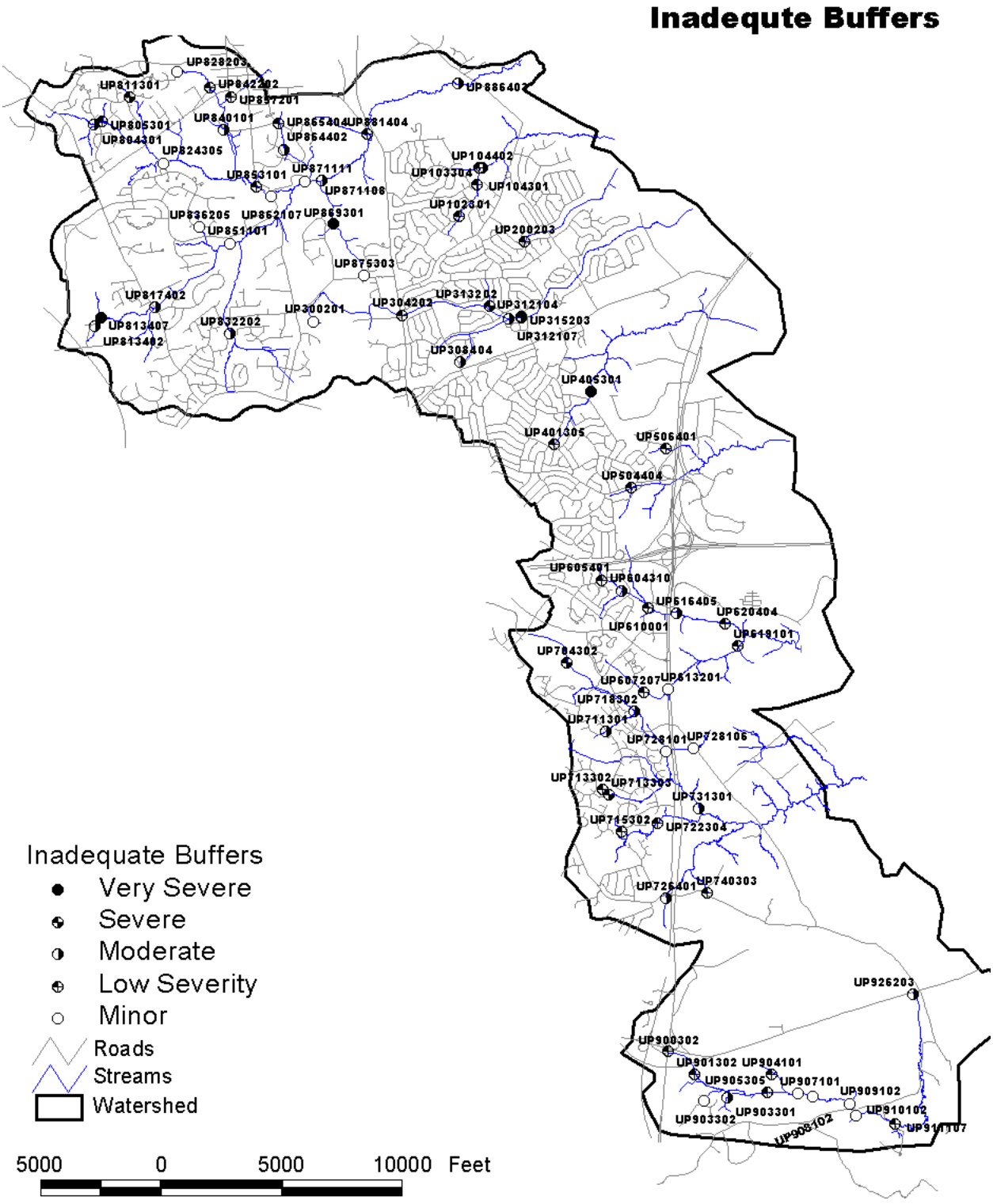

Figure 8: Map showing the Inadequate Buffer locations in the Prince George's Upper Patuxent Watershed

Unusual Conditions

The unusual condition/comment data sheets are used by survey teams to record the location of anything out of the ordinary seen during the survey or to provide some additional written comments on a specific problem. Forty-one unusual condition sites were found during the Upper Patuxent survey (Figure 9). Only one site received a very severe rating. At site UP103301 sewage was leaking from top of manhole into water, which is murky, gray, and had strong odor. One site received a severe rating. At site UP907102, the stream is blue-gray for a few hundred feet. At two sites, UP730303 and 724306, the walls around the culverts are reported as cracked and failing. Both of these sites received moderate ratings. At six sites the streams had been piped underground. There were four sites that had water clarity/odor issues. A majority of the unusual condition sites were where a red precipitate or "red flock" was observed in the water. Red flock can occur naturally and is an indication of elevated iron levels in the water. This is not unusual in Maryland coastal plain streams. These sites were give lower severity ratings (Figure 9b).

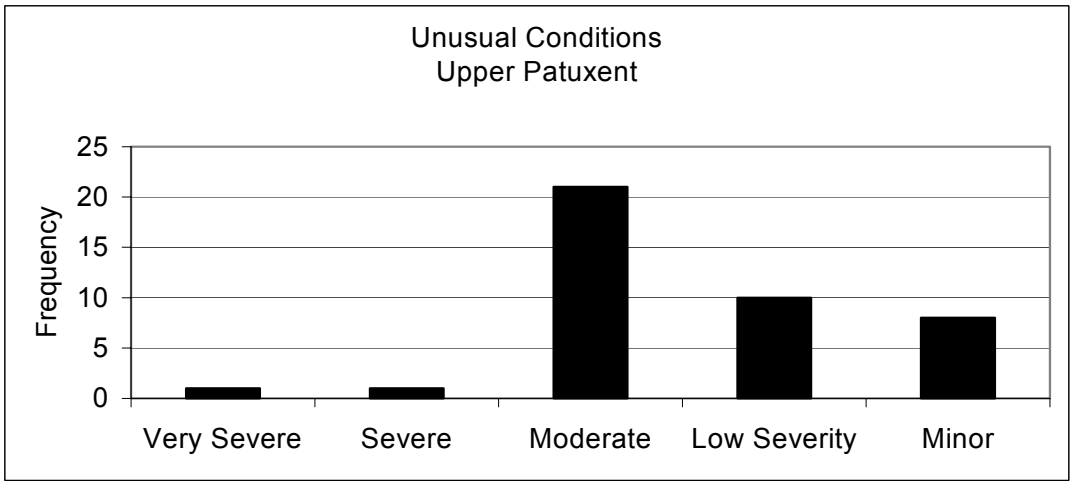

Figure 11b Histograph showing the frequency of severity ratings given to unusual condition sites during Upper Patuxent River SCA survey.

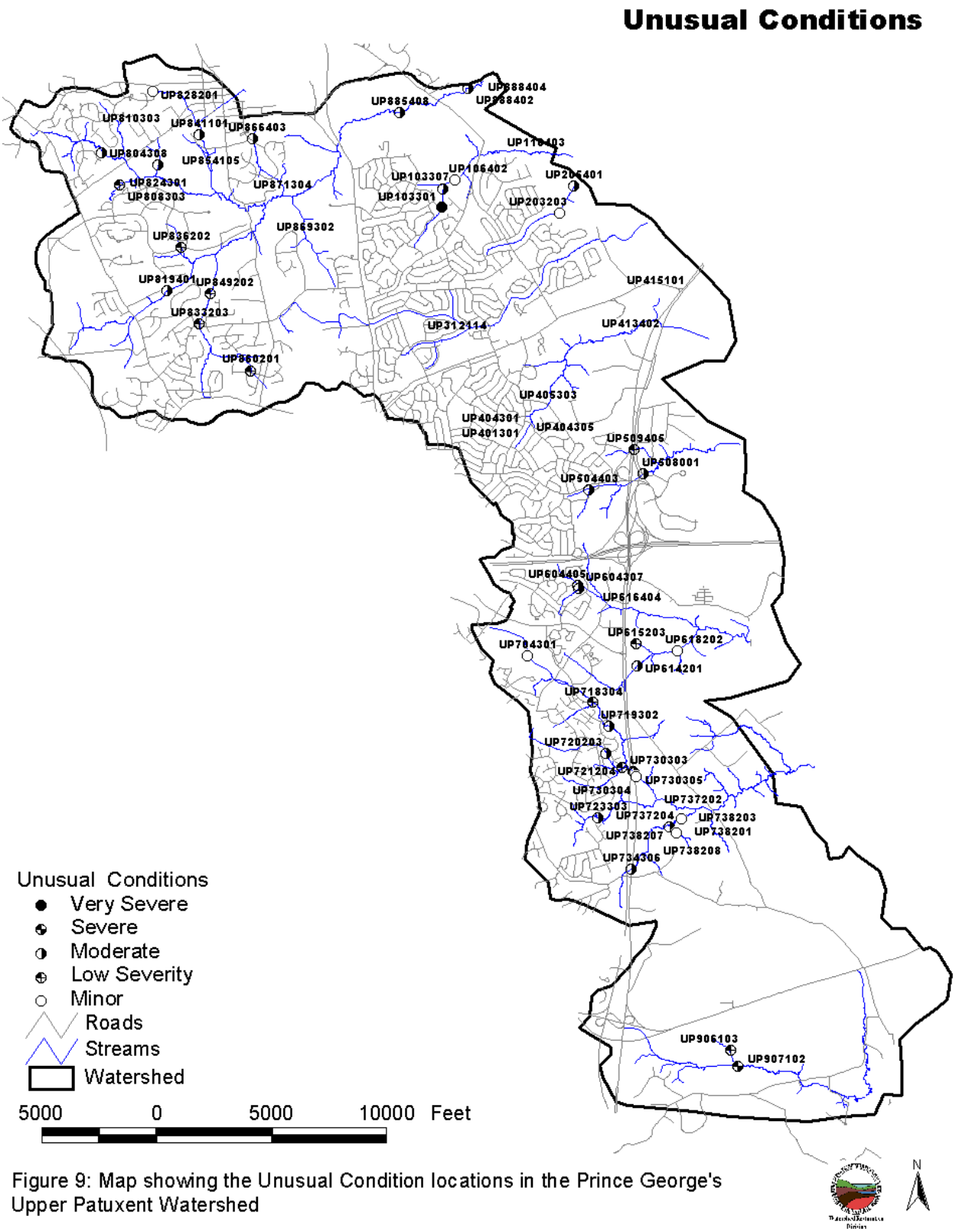

Figure 9: Map showing the Unusual Condition locations in the Prince George's Upper Patuxent Watershed

Channel Alterations

Channel alteration is found in stream sections where the stream's banks and channel have been significantly altered from a natural condition. This includes areas where the stream may have been straightened and/or where the stream banks have been hardened using rock, gabion baskets or concrete over a significant length (usually 100 feet or more). It does not include road crossings unless a significant portion of the stream above or below the road has also been channelized. In addition, places where a small section of only one side of the stream's banks may have been stabilized to reduce erosion were not reported as channel alterations. For the purposes of this survey, channel alteration also does not include tributaries where storm drains were placed in the stream channel and the entire tributary is now piped underground. While these stream sections have been significantly altered, it is not possible to tell by walking the stream corridor precisely where this was done.

Results of this survey indicate that the stream has been recognizably altered in 31 areas and their locations are shown in Figure 10. The total length of stream affected by channelization was estimated to be 7,850 feet or about 1.5 miles. Only one site received a severe rating. At site UP810304 the stream was in a concrete channel. The rest of the sites were given a moderate to minor severity rating (Figure 10b). Four sites were lined with concrete, two stream banks were lined with concrete blocks, five sites were earth channels, sixteen sites were lined with rip-rap, one with gabion, one with stone blocks, and one was place in a metal pipe.

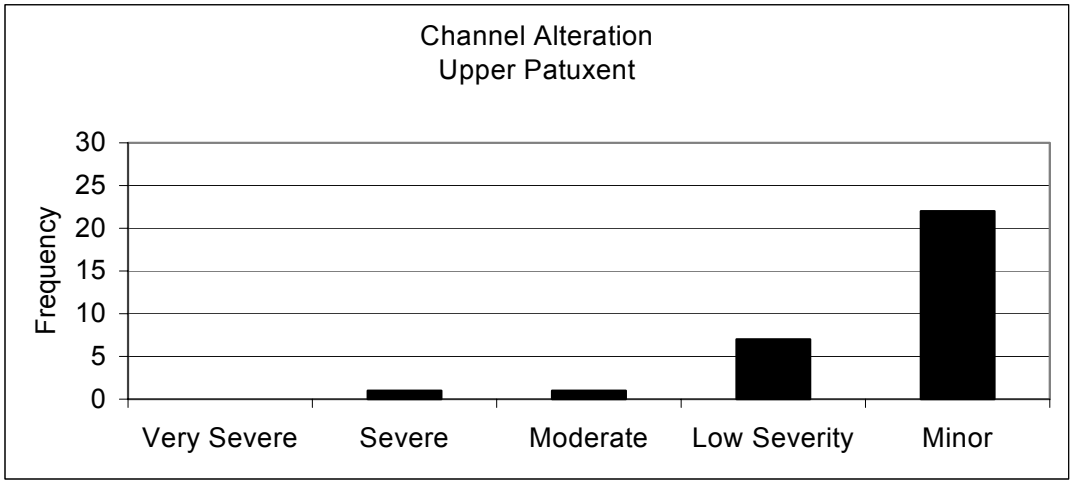

Figure 10b Histograph showing the frequency of severity ratings given to channel alteration sites during Upper Patuxent River SCA survey.

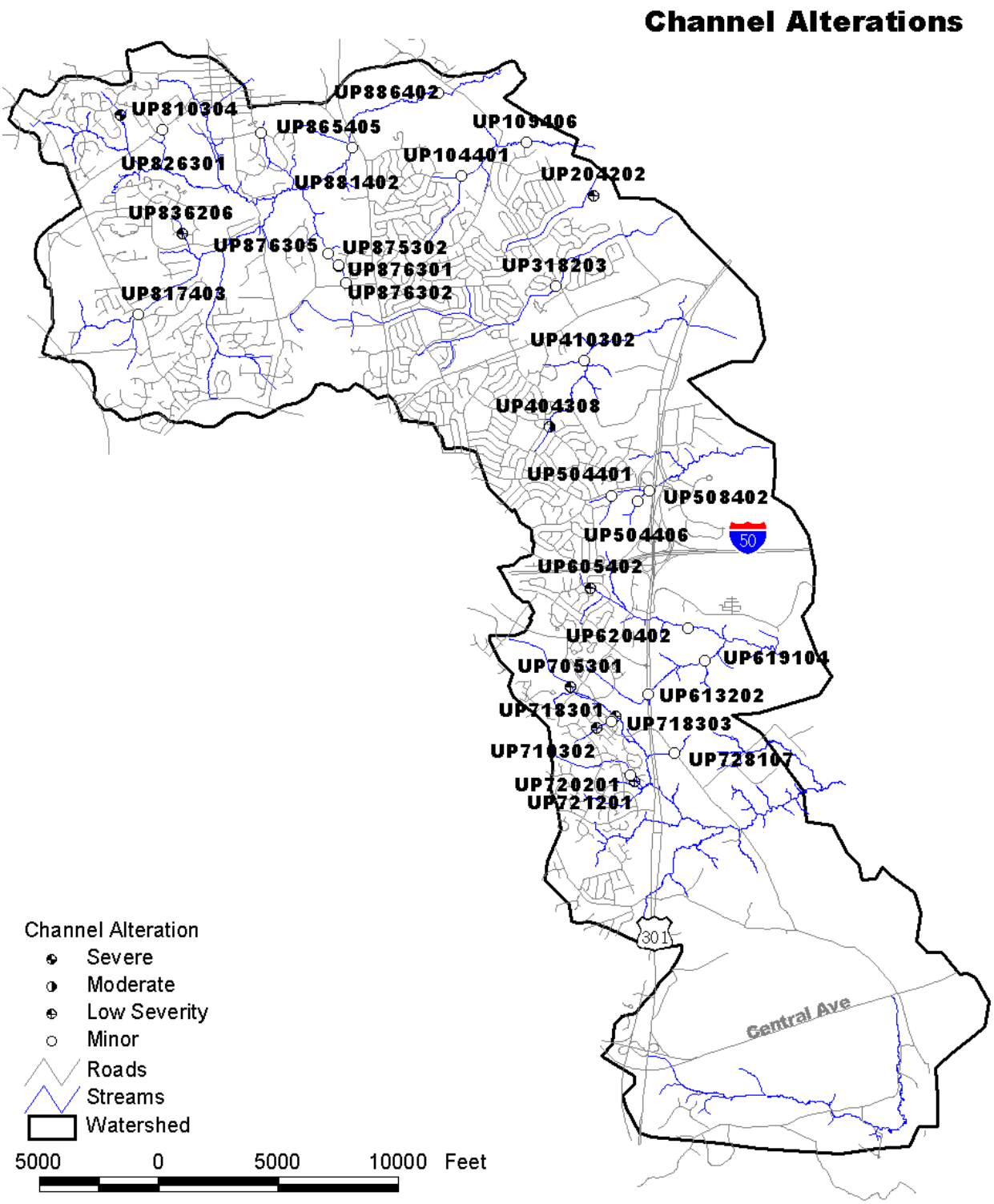

Figure 10: Map showing the Channel Alteration locations in the Prince George's Upper Patuxent Watershed

Trash Dumping Sites

The trash dumping data sheets are used to record the location of places where large amounts of trash has been dumped inside the stream corridor or to note places where trash tends to accumulate. The field survey crew found 31 sites where there was excessive trash and their locations are shown in Figure 11. All the sites were given severity ratings ranging from moderate to minor (Figure 11b). The sites had a wide range of the types of trash. They were construction (1), floatables (3), industrial (1), lumber (1), mixed (8), machinery (1), residential (9), and yard waste (6).

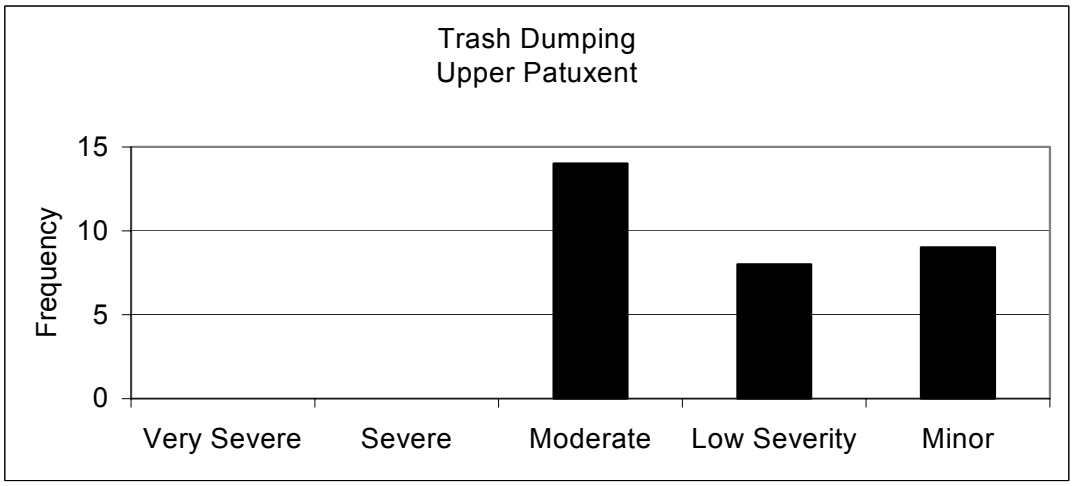

Figure 11b Histograph showing the frequency of severity ratings given to trash dumping sites during Upper Patuxent River SCA survey.

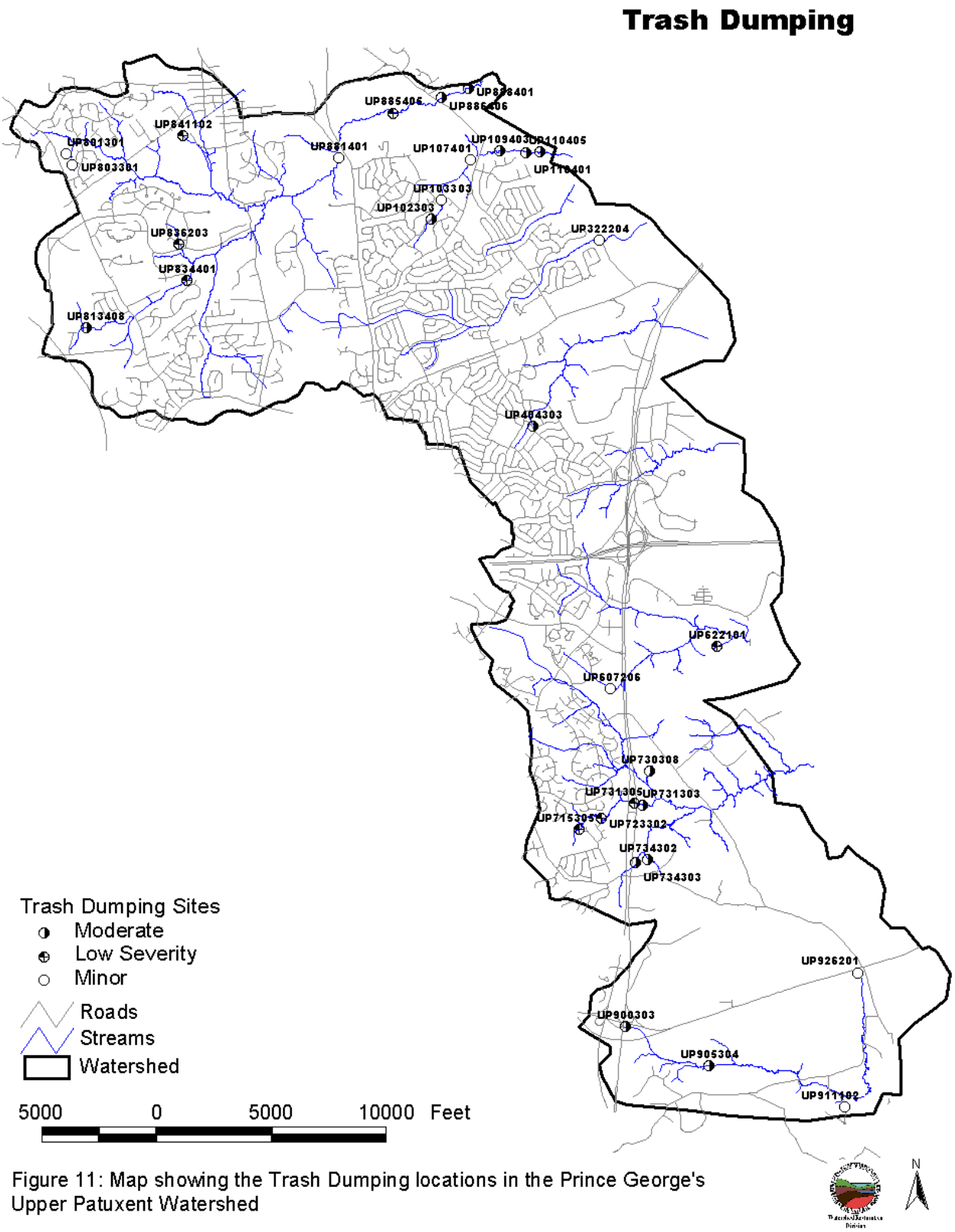

Figure 11: Map showing the Trash Dumping locations in the Prince George's Upper Patuxent Watershed

Exposed Pipes

Exposed pipes are any pipes that are in the stream or along the stream's immediate banks that could be damaged by a high flow event. It does not include pipe outfalls where only the open end of the pipe is exposed. Exposed pipes do include: 1) manhole stacks in or along the edge of the stream channel, 2) pipes that are exposed along the stream banks, 3) pipes that run under the stream's bed and have been exposed by stream down-cutting, and 4) pipes that are built over a stream but are low enough that they could be affected by frequent high storm flows.

In urban areas, it is very common for pipelines and other utilities to be located in the stream corridor. This is especially true for gravity sewage lines that depend on the continuous downward slope of the pipeline to move sewage to a pumping station or treatment plant. Since streams are located at the lowest points of the local landscape, engineers often build sewage lines paralleling streams to collect sewage from adjacent neighborhoods. While the pipelines are stationary, streams can migrate and over time can expose previously buried pipelines. When this occurs, the pipeline becomes vulnerable to being punctured by debris in the stream. Fluids in the pipelines can be discharged into the stream, causing a serious water quality problem.

Exposed pipes were reported at twenty-six sites during the survey. Locations of these sites are shown in Figure 12. Three pipes were reported to be discharging at the time of the survey. The discharge at Site UP814401 was reported to be clear with no odor. At site UP885409 the discharge was reported as clear but with a sewage odor. The third site, UP620407, was reported as having a soapy discharge. Most of the sites received low and minor severity ratings. The exposed pipe photos should be reviewed by public works officials and follow-up visits should be done based on their evaluations.

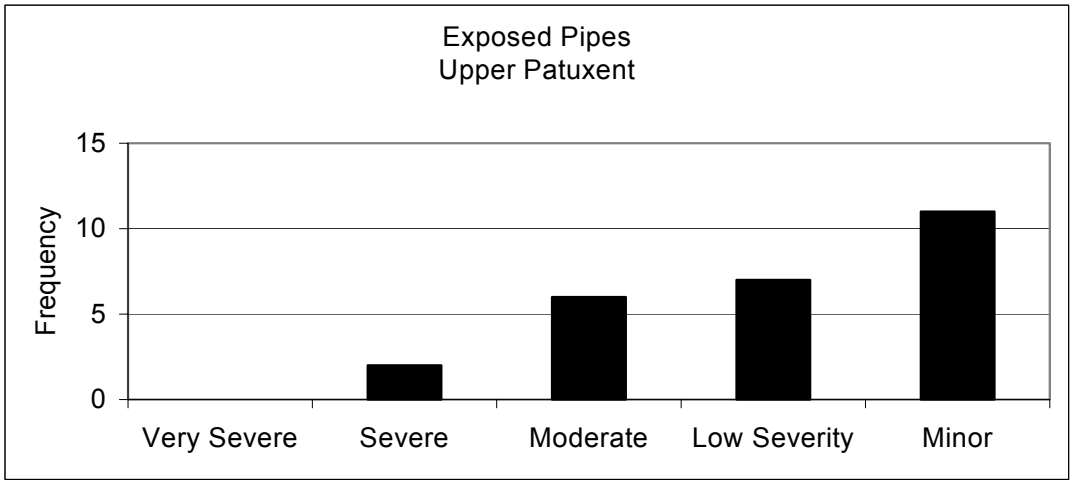

Figure 12b Histograph showing the frequency of severity ratings given to exposed pipes sites during Upper Patuxent River SCA survey.

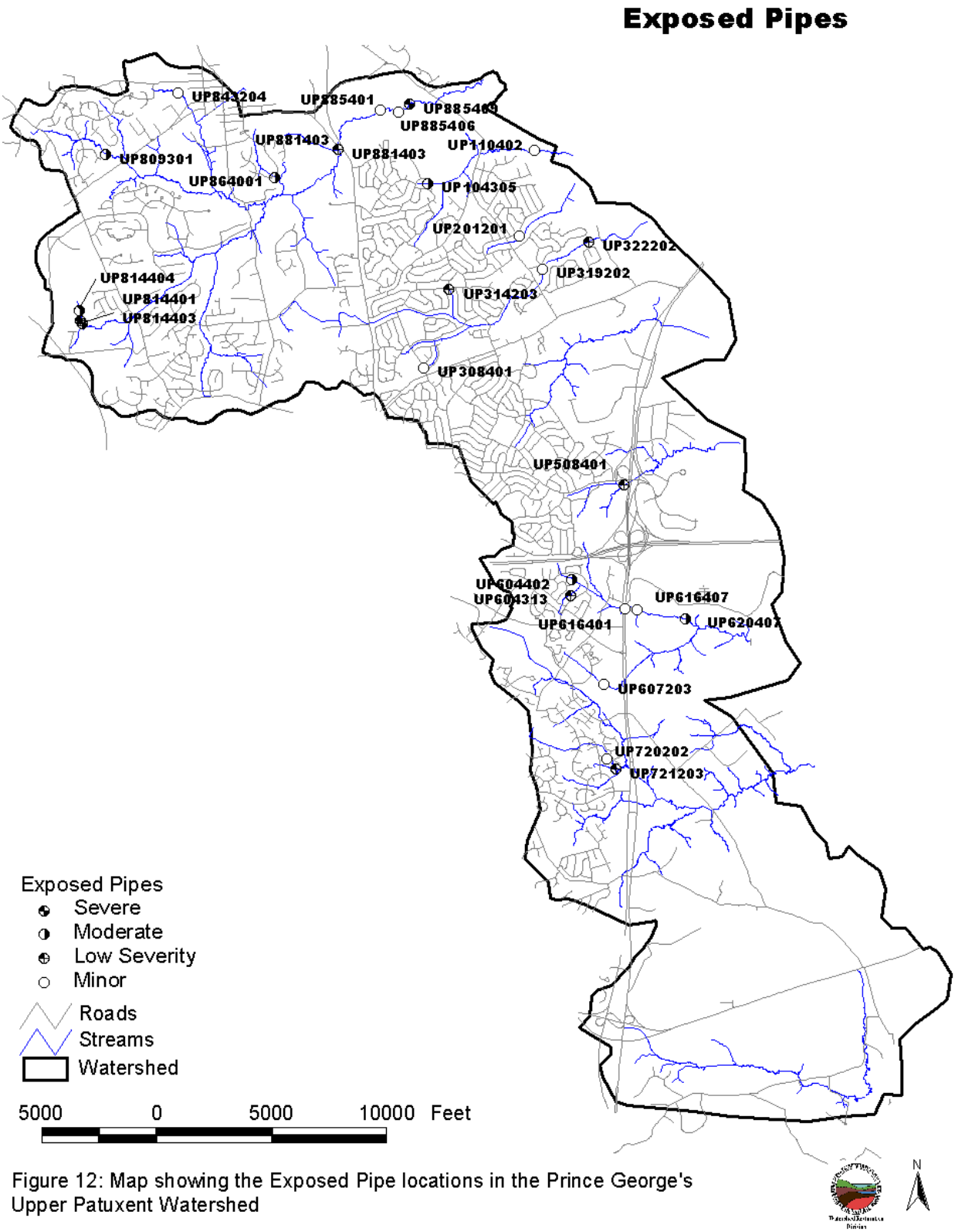

Figure 12: Map showing the Exposed Pipe locations in the Prince George's Upper Patuxent Watershed

In/Near Stream Construction Sites

In or near stream construction data sheets are used to document the locations where major disturbances are occurring inside or near the stream corridor at the time of the survey. Survey teams report evidence of inadequate sediment control measures or if sediment pollution from the site has affected the stream. In or near stream construction was reported at two sites during the survey (Figure 13). Site UP829202 was given a moderate severity ranking. The sediment control was reported as inadequate and there was excessive sediment in the stream. The other site was given a minor rating.

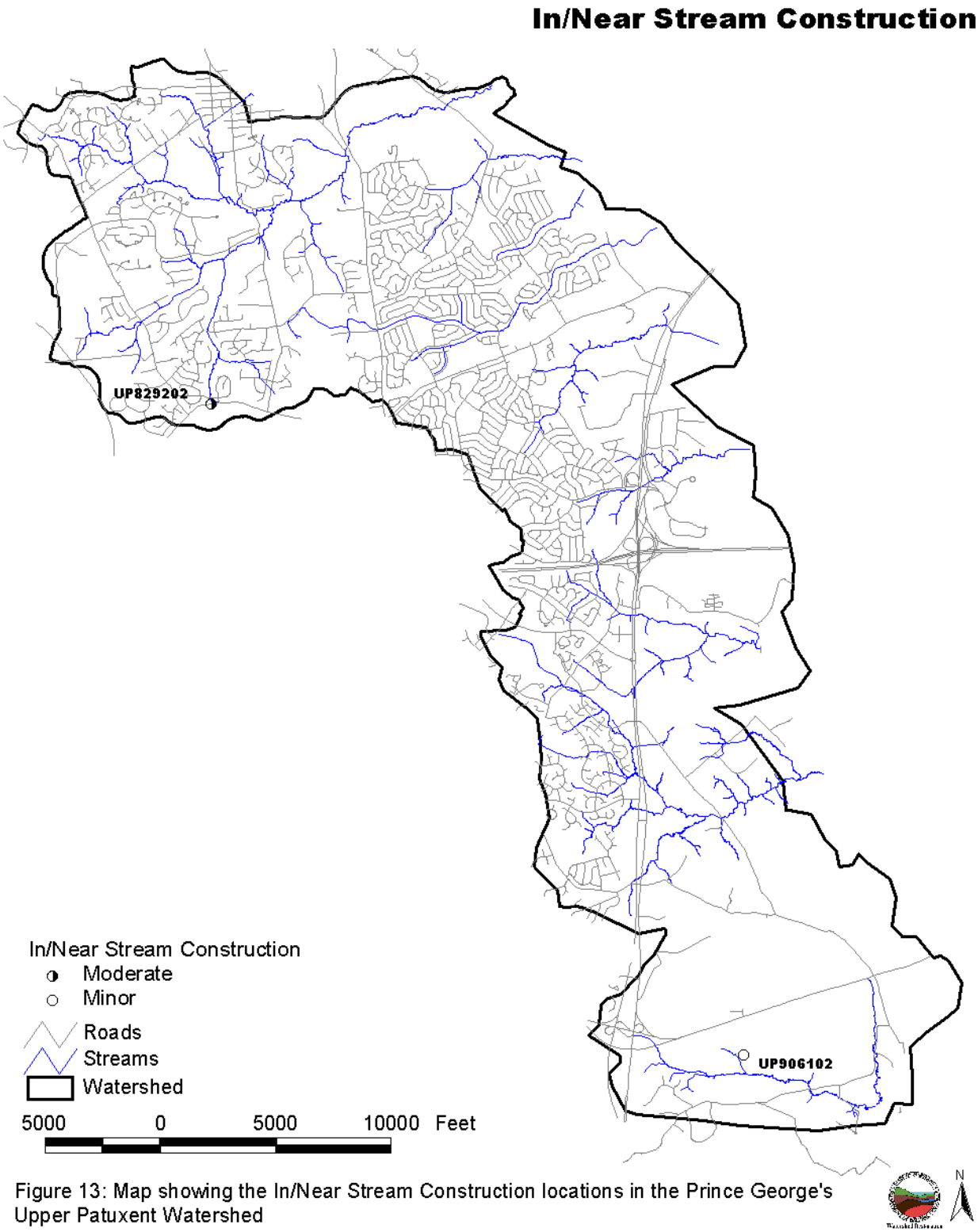

Figure 13: Map showing the In/Near Stream Construction locations in the Prince George's Upper Patuxent Watershed

Representative Sites

Representative sites are used to document the general condition of both in-stream habitat and the adjacent riparian (stream bank) corridor. The representative site evaluations procedures used during the survey are very similar to the habitat evaluations done as part of the Maryland Save-Our-Stream's Heartbeat Program and are based on the habitat assessment procedures outlined in EPA's rapid bioassessment protocols (Plafkin, et. al., 1989). At each representative site, data was collected on 10 separate parameters. Habitat parameters that were evaluated include:

* Attachment Sites for Macroinvertebrates
* Shelter for Fish
* Sediment Deposition
* Channel Flow Status
* Condition of Banks
* Embeddedness
* Channel Alteration
* Stream Velocity and Depth
* Bank Vegetation Protection
* Riparian Vegetative Zone Width

For each of the above habitat parameters, a rating of optimal, sub-optimal, marginal or poor was assigned based on the grading criteria developed for each parameter. In addition to the habitat ratings, data was collected on the stream's wetted width and pool depths at both runs and riffles at each representative site. Depth measurements were taken along the stream thalweg (main flow path). At representative sites, field crews also indicated whether the bottom sediments in the area were primarily silts, sands, gravel, cobble, boulders, or bedrock.

Sixty-eight representative data sheets were filled out during this survey. Locations of representative sites are shown in Figure 14 and the data is presented in Appendix B.

Results indicate that the tributaries to the Upper Patuxent are fairly impacted. Most of the tributaries flow through the city of Bowie, a highly urbanized sections of the watershed. They tended to have higher rating for conditions such as channel alteration and riparian vegetation indicating that the channel had not been altered significantly and most areas did have an adequate riparian buffer. Other parameters, including macroinvertebrate substrate, embeddedness, sediment deposition, and bank condition were mostly given marginal ratings. This indicates that erosion is a problem in the watershed. This is not surprising considering the large amount of impervious surface present in the watershed. Even the tributaries Mount Nebo Branch and Honey Branch, which are south of the city, are somewhat impacted. The tributaries showed similar ratings in riparian vegetation and shelter for fish. They received optimal to suboptimal ratings for most tributaries in riparian vegetation and suboptimal to marginal for shelter for fish.

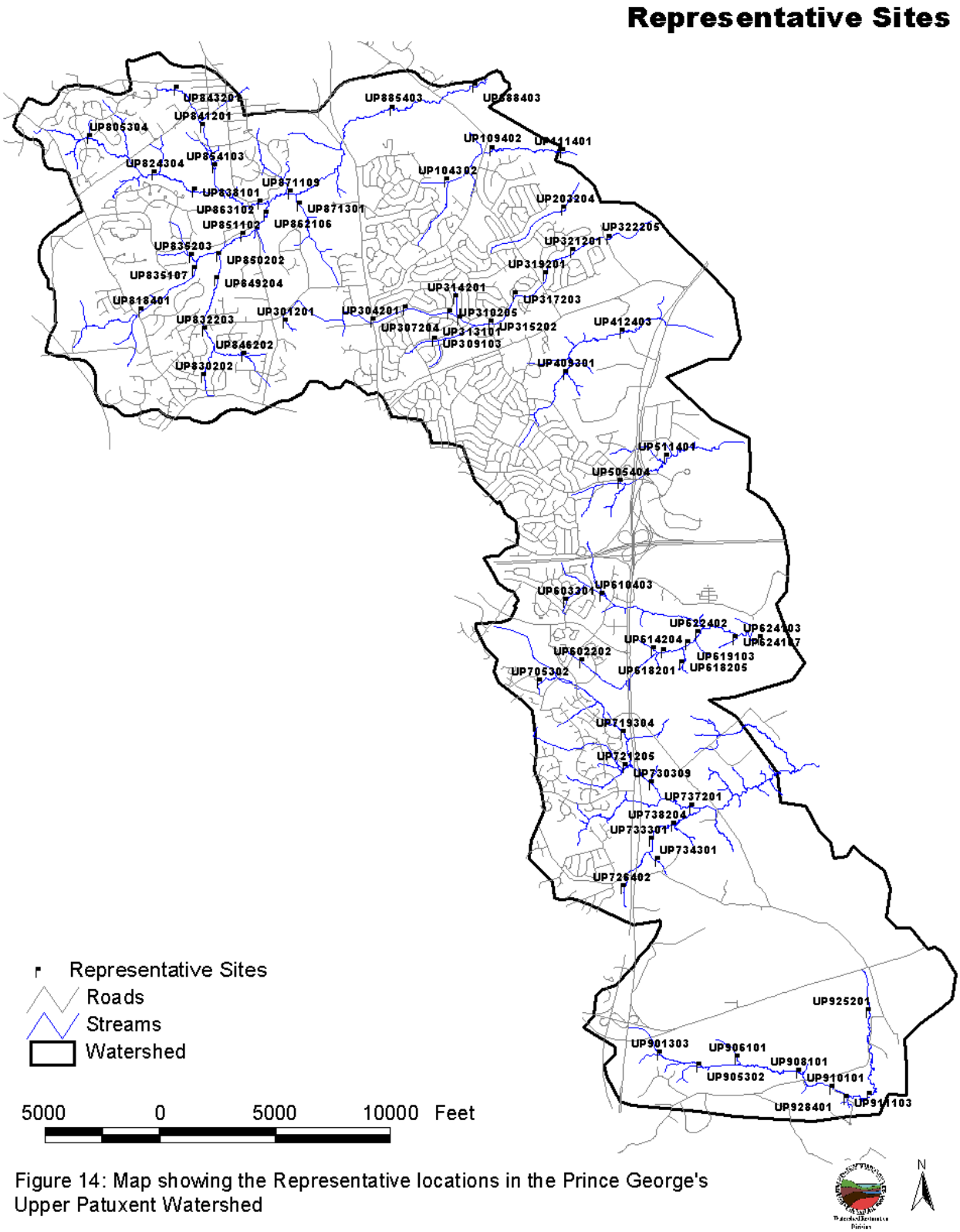

Figure 14: Map showing the Representative locations in the Prince George's Upper Patuxent Watershed

DISCUSSION

One of the main objectives of the Upper Patuxent Stream Corridor Assessment survey was to walk the stream network quickly in order to identify potential environmental problems in or along the edge of the stream. The survey was completed in the winter of 2002 and approximately 60 miles of stream were walked. During the survey, 630 potential environmental problems were identified. The most common environmental concern seen during the SCA survey was pipe outfalls, which was reported at 197 sites. Other potential environmental problems recorded during the survey include: 145 fish migration barriers, 85 erosion sites, 72 sites with inadequately vegetated stream buffers, 41 unusual condition sites, 31 channel alteration sites, 31 trash dumping sites, 26 exposed pipes and 2 in/near stream construction sites.

Results of the Stream Corridor Assessment survey indicate a variety of environmental problems in the Upper Patuxent River Watershed. It is anticipated that results from this survey will be combined with other information about the area, which will help Prince George's County to establish priorities for the types and location of restoration projects that will be pursued in the Upper Patuxent River Watershed in the future.

Results of the Stream Corridor Assessment survey indicate that there are a number of stream segments that could be enhanced by restoration projects. As mentioned earlier, the Maryland Dept. of Natural Resources has formed a partnership with Prince George's County to develop a Watershed Restoration Action Strategy (WRAS) for the Prince George's County portion of the Upper Patuxent River Watershed. Results from this survey will be combined with other information about the area to help establish priorities for the types and location of restoration projects that will be pursued in the Upper Patuxent River Watershed.

The SCA survey has been developed by DNR's Watershed Restoration Division as a watershed management tool to both quickly assess the general condition of a stream corridor and to provide a list of potential environmental problems present within the corridor. One of the main goals of the SCA survey is to provide some basic information about each problem so that future restoration efforts can be better targeted. It is hoped that now that a SCA survey has been completed for the Upper Patuxent watershed, a dialog can continue among resource managers on the goals and targets of future restoration efforts in the watershed. It is important to note that all of the problems identified in this survey can be addressed through existing State and Local Government programs. The value of the survey is that it can help place the problems in a watershed context and can be used by a variety of resource managers to plan future restoration work.

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Appendix A

Listing of sites by site number

Appendix A

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP100301	Pipe Outfall	3	3	1	147037.93610	421681.51551	Tributary 1
UP101301	Pipe Outfall	5	1	2	147114.90790	421722.60572	Tributary 1
UP101302	Pipe Outfall	5	1	2	147127.06135	421734.75917	Tributary 1
UP102301	Inadequate Buffer	4	3	1	147257.27680	421831.40797	Tributary 1
UP102302	Pipe Outfall	5	1	1	147365.50030	421887.54529	Tributary 1
UP102303	Trash Dumping	3	2	3	147403.69684	421931.52918	Tributary 1
UP102304	Pipe Outfall	3	3	2	147441.89337	421970.30445	Tributary 1
UP103301	Unusual Condition	1	4	2	147555.90423	422060.58716	Tributary 1
UP103302	Fish Barrier	5	1	2	147617.25017	422058.27222	Tributary 1
UP103303	Trash Dumping	5	1	2	147660.65532	422058.85095	Tributary 1
UP103304	Inadequate Buffer	4	2	2	147667.02141	422059.42969	Tributary 1
UP103305	Erosion	4	3	2	147673.38750	422059.42969	Tributary 1
UP103306	Fish Barrier	5	2	2	147765.98516	422062.90210	Tributary 1
UP103307	Unusual Condition	3	4	3	147809.96904	422072.74060	Tributary 1
UP104301	Inadequate Buffer	4	2	2	147873.05119	422079.68543	Tributary 1
UP104302	Representative Site				147870.15752	422073.89807	Tributary 1
UP104303	Pipe Outfall	3	3	2	147853.95293	421933.26539	Tributary 1
UP104304	Pipe Outfall	5	1	2	147853.95293	421908.95850	Tributary 1
UP104305	Exposed Pipe	3	4	2	147857.42534	421873.65565	Tributary 1
UP104306	Pipe Outfall	5	1	2	147858.00407	421840.66773	Tributary 1
UP104307	Pipe Outfall	5	1	2	147857.42534	421832.56544	Tributary 1
UP104308	Pipe Outfall	3	3	1	147862.63396	421725.49940	Tributary 1
UP104401	Channel Alteration	5	1	1	147877.68107	422099.36243	Tributary 1
UP104402	Inadequate Buffer	3	1	1	147879.41728	422113.83081	Tributary 1
UP106401	Fish Barrier	5	2	1	147895.04313	422154.34228	Tributary 1
UP106402	Unusual Condition	5	2	1	147927.45231	422241.15258	Tributary 1
UP106403	Fish Barrier	3	3	2	147961.01896	422278.19164	Tributary 1
UP106404	Erosion	3	3	1	148069.24247	422371.36803	Tributary 1
UP107401	Trash Dumping	5	2	2	148188.46195	422441.39501	Tributary 1
UP107402	Pipe Outfall	3	3	1	148266.01248	422530.52025	Tributary 1
UP107403	Fish Barrier	3	3	2	148252.12284	422551.93346	Tributary 1
UP109401	Erosion	1	2	3	148252.12284	422617.33055	Tributary 1
UP109402	Representative Site				148290.31937	422662.47191	Tributary 1
UP109403	Trash Dumping	3	2	2	148309.41763	422819.30918	Tributary 1
UP109404	Fish Barrier	5	2	1	148307.10269	422838.98618	Tributary 1
UP109405	Fish Barrier	3	3	1	148304.20902	422902.64707	Tributary 1
UP109406	Channel Alteration	5	3	2	148303.05155	422910.17063	Tributary 1
UP110401	Trash Dumping	3	2	2	148283.95328	423165.97165	Tributary 1
UP110402	Exposed Pipe	5	3	3	148293.50241	423281.42935	Tributary 1
UP110403	Comment				148293.21305	423286.92733	Tributary 1
UP110404	Erosion	4	2	3	148283.95328	423330.91122	Tributary 1
UP110405	Trash Dumping	3	2	3	148293.79178	423350.58822	Tributary 1
UP110406	Erosion	3	3	2	148279.90213	423446.07955	Tributary 1
UP111401	Representative Site				148255.01651	423594.81453	Tributary 1
UP200201	Pipe Outfall	5	1	2	146932.02754	422645.10985	Tributary 2
UP200202	Pipe Outfall	3	3	2	146935.49995	422644.53111	Tributary 2
UP200203	Inadequate Buffer	4	5	2	146941.86604	422646.84605	Tributary 2
UP200204	Pipe Outfall	5	1	2	146985.27119	422657.84202	Tributary 2
UP200205	Pipe Outfall	5	1	2	146985.84992	422655.52708	Tributary 2
UP200206	Pipe Outfall	5	1	2	147026.94013	422700.66844	Tributary 2

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP200207	Pipe Outfall	5	1	2	147066.29414	422853.45457	Tributary 2
UP200208	Pipe Outfall	5	1	2	147068.03034	422859.82066	Tributary 2
UP200209	Pipe Outfall	5	1	2	147074.39643	422900.33213	Tributary 2
UP200210	Pipe Outfall	5	1	2	147075.55390	422910.74937	Tributary 2
UP200211	Pipe Outfall	5	1	2	147077.29011	422924.06028	Tributary 2
UP200212	Pipe Outfall	5	1	1	147077.86884	422926.95396	Tributary 2
UP200213	Pipe Outfall	5	1	1	147081.34125	422939.68613	Tributary 2
UP201201	Exposed Pipe	5	1	2	147162.36420	423079.74008	Tributary 2
UP201202	Pipe Outfall	5	1	2	147129.95502	423076.26767	Tributary 2
UP202201	Pipe Outfall	5	1	3	147320.93768	423202.43197	Tributary 2
UP202202	Pipe Outfall	5	1	3	147386.91351	423293.29342	Tributary 2
UP202204	Pipe Outfall	5	1	2	147421.63763	423360.42672	Tributary 2
UP203201	Fish Barrier	4	4	3	147482.40484	423564.14156	Tributary 2
UP203202	Pipe Outfall	5	1	3	147484.14105	423600.02315	Tributary 2
UP203203	Unusual Condition	5	3	3	147488.77093	423605.81050	Tributary 2
UP203204	Representative Site				147493.40081	423610.44039	Tributary 2
UP204201	Pipe Outfall	3	3	1	147628.24615	423772.48628	Tributary 2
UP204202	Channel Alteration	4	5	1	147631.71856	423766.12019	Tributary 2
UP205401	unusual condition	3	5	2	147838.90581	423785.21846	Tributary 2
UP300201	Inadequate Buffer	5	1	1	145938.53188	420000.28937	Tributary 3
UP301201	Representative Site				146007.40138	419944.15204	Tributary 3
UP304201	Representative Site				146015.50368	421099.30777	Tributary 3
UP304202	Inadequate Buffer	4	3	2	146018.39736	421116.66983	Tributary 3
UP304203	Pipe Outfall	5	1	2	146024.76344	421156.02383	Tributary 3
UP304204	Pipe Outfall	3	3	2	146025.92092	421159.49624	Tributary 3
UP305401	Pipe Outfall	2	4	2	145692.47368	421661.26356	Tributary 3
UP305402	Pipe Outfall	3	3	1	145640.48318	421594.70521	Tributary 3
UP307201	Pipe Outfall	5	1	2	146100.57777	421309.38869	Tributary 3
UP307202	Pipe Outfall	3	3	2	146133.56569	421386.93923	Tributary 3
UP307203	Fish Barrier	4	3	1	146159.03004	421458.70241	Tributary 3
UP307204	Representative Site				146182.17946	421531.04433	Tributary 3
UP307205	Pipe Outfall	5	1	2	146188.54554	421628.85060	Tributary 3
UP308401	Exposed Pipe	5	1	1	145428.66605	421827.35682	Tributary 3
UP308403	Erosion	2	2	1	145430.40226	421839.51026	Tributary 3
UP308404	Inadequate Buffer	3	3	1	145430.98099	421840.08900	Tributary 3
UP308405	Pipe Outfall	3	3	1	145429.82352	421834.88038	Tributary 3
UP308406	Pipe Outfall	3	3	1	145481.90970	421924.58436	Tributary 3
UP308407	Pipe Outfall	2	4	2	145571.61368	421977.82801	Tributary 3
UP309101	Pipe Outfall	3	3	1	145799.05666	422048.43372	Tributary 3
UP309102	Pipe Outfall	3	3	1	145780.53713	421957.57227	Tributary 3
UP309103	Representative Site				145769.54116	421908.95850	Tributary 3
UP309401	Fish Barrier	4	3	1	145717.45498	421961.62342	Tributary 3
UP309402	Pipe Outfall	2	4	3	145767.22622	421831.40797	Tributary 3
UP309403	Pipe Outfall	5	1	2	145755.07278	421753.27870	Tributary 3
UP310201	Pipe Outfall	3	3	2	146128.93581	421797.84132	Tributary 3
UP310202	Pipe Outfall	5	1	2	146112.15248	421848.19129	Tributary 3
UP310203	Pipe Outfall	3	3	2	146120.25478	421926.32056	Tributary 3
UP310204	Pipe Outfall	5	1	2	146131.82948	421995.76880	Tributary 3
UP310205	Representative Site				146130.67201	422114.40955	Tributary 3
UP312101	Erosion	3	4	2	145991.77553	422602.86217	Tributary 3

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP312102	Pipe Outfall	3	3	1	145992.35427	422599.38976	Tributary 3
UP312103	Pipe Outfall	3	3	1	145991.77553	422591.86620	Tributary 3
UP312104	Inadequate Buffer	2	5	1	145992.35427	422599.38976	Tributary 3
UP312105	Fish Barrier	5	1	1	145992.93300	422594.18114	Tributary 3
UP312106	Erosion	5	1	2	145970.36232	422445.44616	Tributary 3
UP312107	Inadequate Buffer	3	3	2	145970.94106	422444.86742	Tributary 3
UP312108	Pipe Outfall	3	3	1	145998.72035	422351.11230	Tributary 3
UP312109	Fish Barrier	3	5	1	146000.45656	422347.06115	Tributary 3
UP312110	Pipe Outfall	3	3	1	145958.78762	422426.92663	Tributary 3
UP312111	Pipe Outfall	3	3	1	145946.05544	422402.04101	Tributary 3
UP312112	Pipe Outfall	3	3	1	145926.95717	422365.58068	Tributary 3
UP312113	Pipe Outfall	3	3	1	145838.98940	422238.83764	Tributary 3
UP312114	Comment				145860.98135	422244.62500	Tributary 3
UP313101	Representative Site				146053.70021	422246.93994	Tributary 3
UP313201	Pipe Outfall	3	3	2	146113.88869	422158.97217	Tributary 3
UP313202	Inadequate Buffer	2	5	2	146131.25075	422197.74743	Tributary 3
UP313203	Pipe Outfall	3	3	2	146131.25075	422197.74743	Tributary 3
UP313204	Pipe Outfall	3	3	2	146220.37599	422200.06237	Tributary 3
UP314201	Representative Site				146329.17823	422197.16870	Tributary 3
UP314202	Pipe Outfall	3	3	1	146452.44886	422154.92102	Tributary 3
UP314203	Exposed Pipe	4	1	1	146454.18506	422153.18481	Tributary 3
UP315201	Pipe Outfall	2	4	2	145994.09047	422638.74376	Tributary 3
UP315202	Representative Site				145994.66921	422644.53111	Tributary 3
UP315203	Inadequate Buffer	3	5	2	145991.77553	422610.38573	Tributary 3
UP315204	Pipe Outfall	3	3	1	145995.24794	422669.41673	Tributary 3
UP315205	Pipe Outfall	3	3	1	145992.35427	422669.41673	Tributary 3
UP315206	Pipe Outfall	3	3	2	145996.98415	422699.51097	Tributary 3
UP315207	Pipe Outfall	3	3	2	145988.30312	422731.92015	Tributary 3
UP316201	Pipe Outfall	3	3	2	146220.37599	422888.75742	Tributary 3
UP316202	Pipe Outfall	3	3	2	146239.47425	422898.01719	Tributary 3
UP316203	Erosion	3	3	1	146258.57252	422907.85569	Tributary 3
UP317201	Pipe Outfall	5	1	2	146326.28455	422936.21372	Tributary 3
UP317202	Pipe Outfall	5	1	2	146347.11903	422944.31602	Tributary 3
UP317203	Representative Site				146361.58741	422968.04416	Tributary 3
UP317204	Pipe Outfall	3	3	2	146362.16615	423009.71311	Tributary 3
UP318201	Pipe Outfall	3	3	2	146356.95753	423134.14120	Tributary 3
UP318202	Pipe Outfall	5	1	2	146368.53223	423178.70383	Tributary 3
UP318203	Channel Alteration	5	3	1	146483.70057	423283.45492	Tributary 3
UP318204	Pipe Outfall	3	3	2	146508.58618	423309.49801	Tributary 3
UP318205	Pipe Outfall	3	3	2	146510.32239	423308.34054	Tributary 3
UP318206	Fish Barrier	3	5	1	146515.06144	423313.71357	Tributary 3
UP318207	Pipe Outfall	3	3	1	146535.20801	423330.91122	Tributary 3
UP318208	Pipe Outfall	5	1	2	146602.34131	423361.00546	Tributary 3
UP319201	Representative Site				146632.43555	423364.47787	Tributary 3
UP319202	Exposed Pipe	5	1	3	146729.66308	423378.94625	Tributary 3
UP320201	Pipe Outfall	3	3	2	146872.03197	423572.82259	Tributary 3
UP320202	Pipe Outfall	2	4	2	146832.09924	423561.82662	Tributary 3
UP320203	Fish Barrier	3	5	3	146885.34289	423631.27486	Tributary 3
UP320204	Pipe Outfall	5	1	2	146908.49230	423697.82942	Tributary 3
UP321201	Representative Site				146932.79919	423725.02998	Tributary 3

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP321202	Fish Barrier	3	5	2	146987.20031	423793.89949	Tributary 3
UP321203	Pipe Outfall	3	3	2	147081.53417	423960.57526	Tributary 3
UP322201	Fish Barrier	3	5	2	147086.16405	423984.88215	Tributary 3
UP322202	Exposed Pipe	4	4	2	147086.74278	423984.88215	Tributary 3
UP322203	Fish Barrier	5	2	1	147126.09679	424137.08954	Tributary 3
UP322204	Trash Dumping	5	1	1	147126.67552	424134.77460	Tributary 3
UP322205	Representative Site				147119.15196	424209.43146	Tributary 3
UP401301	Pipe Outfall	3	3	2	144441.72939	423054.85446	Marsh Branch
UP401301	Comment				144442.30813	423054.85446	Marsh Branch
UP401302	Pipe Outfall	3	3	2	144415.68630	423031.70505	Marsh Branch
UP401303	Pipe Outfall	3	3	2	144387.90701	423012.02805	Marsh Branch
UP401304	Pipe Outfall	3	3	2	144389.06448	423011.44931	Marsh Branch
UP401305	Inadequate Buffer	4	3	2	144389.64321	423012.02805	Marsh Branch
UP404301	Pipe Outfall	3	3	1	144791.28553	423140.50729	Marsh Branch
UP404301	Comment				144791.28553	423140.50729	Marsh Branch
UP404302	Pipe Outfall	3	3	2	144646.60170	423263.19918	Marsh Branch
UP404303	Trash Dumping	3	2	3	144662.22756	423256.25436	Marsh Branch
UP404304	Fish Barrier	4	3	1	144699.26662	423209.37680	Marsh Branch
UP404305	Fish Barrier	4	3	1	144695.21547	423207.06186	Marsh Branch
UP404305	Comment				144695.21547	423208.21933	Marsh Branch
UP404306	Pipe Outfall	3	3	1	144630.39711	423170.02280	Marsh Branch
UP404307	Pipe Outfall	5	1	2	144550.53164	423130.09006	Marsh Branch
UP404308	Channel Alteration	3	3	2	144692.32179	423205.90439	Marsh Branch
UP405301	Inadequate Buffer	1	4	2	145045.35035	423484.27608	Marsh Branch
UP405302	Fish Barrier	4	3	2	144947.10520	423438.96757	Marsh Branch
UP405303	Fish Barrier	4	3	2	144946.90740	423438.80840	Marsh Branch
UP405303	Comment				144946.89375	423438.88432	Marsh Branch
UP405304	Pipe Outfall	3	3	2	144901.82398	423405.56808	Marsh Branch
UP407301	Pipe Outfall	3	3	1	145463.77599	423307.76181	Marsh Branch
UP407302	Erosion	3	3	1	145465.51220	423311.23422	Marsh Branch
UP407303	Pipe Outfall	3	3	2	145482.87426	423367.37154	Marsh Branch
UP409301	Representative Site				145326.61572	423634.74727	Marsh Branch
UP409302	Erosion	3	3	5	145206.23877	423736.60469	Marsh Branch
UP410301	Fish Barrier	4	3	3	145530.90929	423636.48348	Marsh Branch
UP410302	Channel Alteration	5	3	3	145531.48803	423637.06221	Marsh Branch
UP410303	Erosion	1	5	4	145534.96044	423641.69209	Marsh Branch
UP410304	Erosion	3	3	5	145475.92944	423687.99092	Marsh Branch
UP411401	Erosion	3	2	3	145748.51378	423691.46333	Marsh Branch
UP411402	Fish Barrier	5	2	2	145748.51378	423690.88460	Marsh Branch
UP412401	Fish Barrier	5	2	3	145793.07640	424026.55109	Marsh Branch
UP412402	Erosion	1	5	4	145790.18272	424150.97919	Marsh Branch
UP412403	Representative Site				145876.41429	424376.10723	Marsh Branch
UP413401	Pipe Outfall	5	1	1	145897.15230	424464.07500	Marsh Branch
UP413402	Erosion	3	3	2	145890.88267	424532.94451	Marsh Branch
UP413402	Comment				145891.46141	424534.10198	Marsh Branch
UP413403	Pipe Outfall	5	1	1	145951.55343	424598.92034	Marsh Branch
UP415101	Comment				146463.83065	424870.34721	Marsh Branch
UP502401	Fish Barrier	4	1	1	143702.20209	423957.68159	Tributary 4
UP504401	Channel Alteration	5	1	1	143823.15778	423986.03962	Tributary 4
UP504402	Fish Barrier	4	1	1	143823.15778	423986.03962	Tributary 4

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP504403	Unusual Condition	3	3	1	143819.10663	423985.46088	Tributary 4
UP504404	Inadequate Buffer	4	1	1	143840.51984	423987.77582	Tributary 4
UP504405	Erosion	3	5	1	143848.04340	424010.92524	Tributary 4
UP504406	Channel Alteration	5	3	3	143756.60321	424318.23370	Tributary 4
UP504407	Erosion	3	3	3	143709.14692	424280.61590	Tributary 4
UP504408	Fish Barrier	5	1	4	143756.02448	424303.76532	Tributary 4
UP504409	Fish Barrier	5	3	4	143678.47394	424276.56476	Tributary 4
UP505401	Pipe Outfall	3	3	1	143872.35028	424094.26313	Tributary 4
UP505402	Fish Barrier	4	1	1	143874.08649	424111.04645	Tributary 4
UP505403	Pipe Outfall	3	3	1	143895.49969	424266.72625	Tributary 4
UP505404	Representative Site				143886.23993	424344.85553	Tributary 4
UP505405	Pipe Outfall	2	4	1	143931.38128	424341.38311	Tributary 4
UP505406	Erosion	3	3	1	143884.50372	424355.27276	Tributary 4
UP505407	Fish Barrier	5	1	1	143871.77154	424400.41412	Tributary 4
UP506401	Inadequate Buffer	4	1	1	144328.97246	424428.77215	Tributary 4
UP506402	Fish Barrier	5	1	1	144337.65349	424352.37908	Tributary 4
UP506403	Fish Barrier	5	1	1	144316.24028	424315.91876	Tributary 4
UP506404	Pipe Outfall	5	1	2	144295.98454	424285.82452	Tributary 4
UP508001	Unusual Condition	3	5	2	144035.36073	424714.08867	Tributary 4
UP508401	Exposed Pipe	4	3	2	143880.45257	424452.50030	Tributary 4
UP508402	Channel Alteration	5	2	1	143883.92499	424464.65374	Tributary 4
UP508403	Erosion	1	5	1	144039.02606	424718.13982	Tributary 4
UP508404	Pipe Outfall	3	3	1	144019.34905	424836.20182	Tributary 4
UP508405	Fish Barrier	5	2	3	144109.05303	424883.65812	Tributary 4
UP509401	Fish Barrier	4	1	1	144217.27654	424821.73344	Tributary 4
UP509402	Fish Barrier	5	1	1	144242.74089	424797.42656	Tributary 4
UP509403	Fish Barrier	5	3	3	144366.01152	424678.78581	Tributary 4
UP509404	Fish Barrier	4	1	1	144368.32646	424622.64849	Tributary 4
UP509405	Unusual Condition	4	5	1	144356.75175	424594.86919	Tributary 4
UP509406	Fish Barrier	5	1	2	144304.08684	424469.28362	Tributary 4
UP509407	Erosion	3	3	1	144324.34258	424439.18938	Tributary 4
UP510401	Fish Barrier	5	3	3	144155.35186	424910.27995	Tributary 4
UP511401	Representative Site				144220.74895	424962.94486	Tributary 4
UP511402	Fish Barrier	5	1	2	144345.17705	425221.06082	Tributary 4
UP511403	Fish Barrier	5	1	2	144372.37761	425327.54812	Tributary 4
UP602201	Pipe Outfall	3	3	1	141616.53640	423716.92769	Green Branch
UP602202	Representative Site				141527.98989	423837.88337	Green Branch
UP602203	Pipe Outfall	3	3	1	141453.33304	423928.74482	Green Branch
UP603301	Representative Site				142327.80213	423632.43233	Green Branch
UP604306	Fish Barrier	4	3	2	142554.08764	423870.87129	Green Branch
UP604307	Unusual Condition	3	3	2	142533.83191	423859.87531	Green Branch
UP604308	Fish Barrier	4	3	2	142526.88708	423855.82417	Green Branch
UP604309	Erosion	3	4	2	142551.77270	423870.87129	Green Branch
UP604310	Inadequate Buffer	3	3	2	142544.24914	423866.24140	Green Branch
UP604311	Fish Barrier	5	2	2	142511.26123	423845.40693	Green Branch
UP604312	Fish Barrier	5	2	2	142444.12793	423763.22651	Green Branch
UP604313	Exposed Pipe	4	3	2	142429.65955	423747.60066	Green Branch
UP604314	Fish Barrier	5	3	2	142425.02966	423736.60469	Green Branch
UP604401	Fish Barrier	5	5	1	142636.84680	423761.49031	Green Branch
UP604402	Exposed Pipe	3	4	1	142633.37438	423767.27766	Green Branch

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP604403	Pipe Outfall	3	3	1	142627.58703	423773.06501	Green Branch
UP604404	Fish Barrier	5	4	1	142575.50085	423841.35578	Green Branch
UP604405	Unusual Condition	3	3	1	142568.55603	423850.03681	Green Branch
UP605401	Inadequate Buffer	4	2	2	142676.77953	423617.38521	Green Branch
UP605402	Channel Alteration	4	2	1	142653.63012	423726.76619	Green Branch
UP605403	Fish Barrier	5	5	1	142653.63012	423735.44722	Green Branch
UP607201	Pipe Outfall	5	1	1	141385.04227	424019.60627	Green Branch
UP607202	Pipe Outfall	5	1	1	141273.92508	424149.24298	Green Branch
UP607203	Exposed Pipe	5	1	1	141251.93314	424196.69928	Green Branch
UP607204	Pipe Outfall	3	3	1	141203.89811	424277.72223	Green Branch
UP607205	Pipe Outfall	5	1	1	141202.74064	424362.21759	Green Branch
UP607206	Trash Dumping	5	1	2	141199.26822	424289.87567	Green Branch
UP607207	Inadequate Buffer	4	4	1	141272.76761	424152.13666	Green Branch
UP609001	Fish Barrier	3	5	1	142259.00044	424383.14701	Green Branch
UP610001	Inadequate Buffer	4	2	1	142341.51544	424198.90119	Green Branch
UP610401	Pipe Outfall	4	2	2	142417.89193	424086.73957	Green Branch
UP610402	Fish Barrier	3	4	1	142425.99422	424083.26715	Green Branch
UP610403	Representative Site				142408.63216	424108.15277	Green Branch
UP610404	Pipe Outfall	3	3	1	142359.43966	424174.70734	Green Branch
UP613201	Inadequate Buffer	5	3	1	141309.61376	424454.23650	Green Branch
UP613202	Channel Alteration	5	2	1	141309.03503	424453.65777	Green Branch
UP613203	Pipe Outfall	5	1	1	141332.76317	424473.33477	Green Branch
UP613204	Fish Barrier	3	4	1	141330.44823	424454.81524	Green Branch
UP614201	Unusual Condition	3	4	3	141509.27745	424633.06572	Green Branch
UP614202	Fish Barrier	5	4	2	141566.57225	424699.62029	Green Branch
UP614203	Erosion	1	4	3	141567.15099	424699.62029	Green Branch
UP614204	Representative Site				141696.20897	424785.27311	Green Branch
UP615201	Pipe Outfall	3	3	1	141823.53074	424585.03069	Green Branch
UP615202	Pipe Outfall	3	3	1	141785.33421	424646.37663	Green Branch
UP615203	Unusual Condition	4	4	1	141804.43247	424612.23125	Green Branch
UP615204	Erosion	3	4	2	141776.65318	424663.15996	Green Branch
UP615205	Pipe Outfall	5	1	1	141756.97618	424714.08867	Green Branch
UP616401	Exposed Pipe	5	1	1	142258.16098	424467.54742	Green Branch
UP616402	Erosion	1	5	1	142259.31845	424468.70489	Green Branch
UP616403	Fish Barrier	3	1	1	142258.73971	424471.59856	Green Branch
UP616404	Comment				142277.25924	424547.41289	Green Branch
UP616405	Inadequate Buffer	3	1	1	142267.42074	424560.14507	Green Branch
UP616406	Pipe Outfall	3	3	1	142230.96041	424631.32952	Green Branch
UP616407	Exposed Pipe	5	1	1	142246.58627	424629.01457	Green Branch
UP616408	Pipe Outfall	2	4	1	142214.17709	424641.74675	Green Branch
UP618201	Representative Site				141668.42967	424929.95695	Green Branch
UP618202	Unusual Condition	5	3	5	141708.36241	425167.23844	Green Branch
UP618203	Erosion	4	4	5	141644.12278	425181.12808	Green Branch
UP618204	Fish Barrier	5	1	5	141546.89525	425182.28555	Green Branch
UP618205	Representative Site				141508.69872	425168.39591	Green Branch
UP619101	Inadequate Buffer	4	1	1	141850.73130	425329.86306	Green Branch
UP619102	Pipe Outfall	3	3	1	141787.07041	425268.51712	Green Branch
UP619103	Representative Site				141776.07444	425249.41885	Green Branch
UP619104	Channel Alteration	5	3	1	141734.98423	425168.39591	Green Branch
UP620401	Fish Barrier	5	1	2	142145.88632	424975.67704	Green Branch

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP620402	Channel Alteration	5	1	2	142147.62253	424964.68107	Green Branch
UP620403	Pipe Outfall	3	3	2	142145.88632	425001.72013	Green Branch
UP620404	Inadequate Buffer	4	1	1	142138.36276	425169.55338	Green Branch
UP620405	Pipe Outfall	3	3	1	142119.84323	425236.10794	Green Branch
UP620406	Pipe Outfall	3	3	2	142119.84323	425236.10794	Green Branch
UP620407	Exposed Pipe	3	3	2	142120.42197	425264.46597	Green Branch
UP620408	Pipe Outfall	3	3	2	142053.28867	425336.22915	Green Branch
UP622101	Trash Dumping	4	3	5	141754.66123	425693.88759	Green Branch
UP622401	Fish Barrier	5	1	2	141959.53354	425406.25613	Green Branch
UP622402	Representative Site				141900.50254	425377.31936	Green Branch
UP624101	Fish Barrier	2	5	1	141823.53074	426119.83680	Green Branch
UP624102	Erosion	2	3	4	141825.26694	426127.36036	Green Branch
UP624103	Representative Site				141839.15659	426196.22986	Green Branch
UP624104	Fish Barrier	5	1	3	141839.15659	426185.23389	Green Branch
UP624105	Fish Barrier	5	1	3	141829.89683	426071.80176	Green Branch
UP624106	Erosion	3	5	3	141927.12436	425811.94960	Green Branch
UP624107	Representative Site				141843.78648	425867.50819	Green Branch
UP704301	Pipe Outfall	3	3	2	141641.90430	423179.28256	Mill Branch
UP704301	Unusual Condition	5	3	1	141641.90430	423177.54636	Mill Branch
UP704302	Inadequate Buffer	2	3	1	141641.90430	423178.70383	Mill Branch
UP705301	Channel Alteration	4	3	2	141398.25672	423477.33126	Mill Branch
UP705302	Representative Site				141263.99013	423288.66354	Mill Branch
UP710301	Pipe Outfall	5	1	1	140825.30874	423722.13631	Mill Branch
UP710302	Channel Alteration	4	3	1	140886.65469	423801.42305	Mill Branch
UP710303	Pipe Outfall	5	1	1	140894.17825	423811.26155	Mill Branch
UP711301	Inadequate Buffer	3	4	1	140782.48233	423666.57771	Mill Branch
UP713301	Pipe Outfall	3	3	3	140045.75225	423632.43233	Mill Branch
UP713302	Inadequate Buffer	4	3	3	140042.85857	423634.74727	Mill Branch
UP713303	Inadequate Buffer	2	3	2	139980.35515	423709.40413	Mill Branch
UP713304	Pipe Outfall	5	3	3	139980.93389	423704.77424	Mill Branch
UP713305	Erosion	4	3	3	139980.35515	423704.19551	Mill Branch
UP713306	Pipe Outfall	4	2	1	139920.74541	423950.73676	Mill Branch
UP715301	Fish Barrier	5	2	2	139543.98871	423837.30464	Mill Branch
UP715302	Inadequate Buffer	4	3	2	139514.47321	423868.55634	Mill Branch
UP715303	Erosion	5	1	2	139420.71809	423918.32758	Mill Branch
UP715304	Pipe Outfall	3	3	1	139343.16755	423886.49714	Mill Branch
UP715305	Trash Dumping	4	2	3	139332.17158	423872.02876	Mill Branch
UP715305	Fish Barrier	5	2	1	139332.17158	423872.60749	Mill Branch
UP716301	Fish Barrier	5	1	4	139144.66133	423784.63972	Mill Branch
UP718301	Channel Alteration	5	3	1	140970.57131	423984.30341	Mill Branch
UP718302	Inadequate Buffer	3	3	2	141026.70864	424031.75971	Mill Branch
UP718303	Channel Alteration	4	3	2	141023.81496	424038.70453	Mill Branch
UP718304	Unusual Condition	4	2	2	141019.76381	424043.33442	Mill Branch
UP718305	Fish Barrier	5	3	3	140937.00466	424121.46369	Mill Branch
UP719301	Erosion	2	4	2	140702.03812	424202.48663	Mill Branch
UP719302	Unusual Condition	3	4	2	140707.82547	424252.25787	Mill Branch
UP719303	Erosion	4	3	2	140783.63980	424231.42340	Mill Branch
UP719304	Representative Site				140585.13358	424396.36297	Mill Branch
UP720201	Channel Alteration	5	3	1	140287.08488	424228.52972	Mill Branch
UP720202	Exposed Pipe	5	1	1	140266.25041	424234.89581	Mill Branch

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP720203	Unusual Condition	3	3	2	140352.48197	424222.16363	Mill Branch
UP720401	Erosion	3	3	2	140497.16581	424429.92962	Mill Branch
UP721201	Channel Alteration	4	2	2	140205.48320	424286.40326	Mill Branch
UP721202	Fish Barrier	4	5	1	140158.60564	424330.96588	Mill Branch
UP721203	Exposed Pipe	4	1	1	140133.72002	424352.37908	Mill Branch
UP721204	Unusual Condition	4	4	2	140157.44817	424431.08709	Mill Branch
UP721205	Representative Site				140144.71599	424414.30377	Mill Branch
UP721206	Fish Barrier	5	1	3	140114.04302	424369.74114	Mill Branch
UP721301	Pipe Outfall	5	1	1	139916.45567	423981.31311	Mill Branch
UP721302	Pipe Outfall	5	1	1	139915.53680	423986.03962	Mill Branch
UP721303	Pipe Outfall	3	3	1	139920.16668	424161.39642	Mill Branch
UP721304	Pipe Outfall	5	1	1	140002.92583	424256.30902	Mill Branch
UP722301	Erosion	3	3	2	139898.17474	424057.80280	Mill Branch
UP722302	Pipe Outfall	3	3	1	139890.07244	424095.99933	Mill Branch
UP722303	Fish Barrier	3	5	2	139656.26337	424340.22564	Mill Branch
UP722304	Inadequate Buffer	4	3	2	139625.59039	424318.81244	Mill Branch
UP722305	Pipe Outfall	5	1	1	139603.59845	424282.93084	Mill Branch
UP723301	Fish Barrier	5	1	2	139503.47724	424227.37225	Mill Branch
UP723302	Trash Dumping	4	2	3	139484.37897	424159.08148	Mill Branch
UP723303	Unusual Condition	3	4	2	139493.63874	424104.68036	Mill Branch
UP723304	Pipe Outfall	3	3	1	139537.62262	424076.32233	Mill Branch
UP723305	Pipe Outfall	3	3	2	139515.63068	424034.07465	Mill Branch
UP726401	Inadequate Buffer	3	1	1	138678.77939	424421.82732	Mill Branch
UP726402	Representative Site				138555.50876	424396.94171	Mill Branch
UP728101	Inadequate Buffer	5	5	1	140524.36637	424436.29571	Mill Branch
UP728102	Erosion	3	2	1	140523.78763	424436.29571	Mill Branch
UP728103	Fish Barrier	4	5	1	140567.19278	424778.32829	Mill Branch
UP728104	Fish Barrier	4	5	1	140541.14969	424524.84221	Mill Branch
UP728105	Pipe Outfall	5	1	1	140580.50370	424805.52885	Mill Branch
UP728106	Inadequate Buffer	5	1	1	140568.92899	424780.06450	Mill Branch
UP728107	Channel Alteration	5	1	1	140570.08646	424782.37944	Mill Branch
UP730301	Erosion	4	3	1	140195.06596	424469.28362	Mill Branch
UP730302	Fish Barrier	3	5	1	140103.04704	424574.61345	Mill Branch
UP730303	Unusual Condition	3	3	1	140103.62578	424575.19219	Mill Branch
UP730304	Unusual Condition	3	3	1	140092.05107	424594.29045	Mill Branch
UP730305	Pipe Outfall	5	1	1	140041.12236	424625.54216	Mill Branch
UP730305	Unusual condition	5	3	1	140041.12236	424625.54216	Mill Branch
UP730306	Erosion	2	3	3	140037.64995	424627.85710	Mill Branch
UP730307	Erosion	3	3	3	139957.20574	424756.91508	Mill Branch
UP730308	Trash Dumping	3	3	3	140105.94072	424807.26506	Mill Branch
UP730309	Representative Site				139921.32415	424769.64726	Mill Branch
UP731301	Inadequate Buffer	3	2	2	139808.47076	424845.46159	Mill Branch
UP731302	Erosion	3	3	2	139733.81390	424878.44950	Mill Branch
UP731303	Trash Dumping	3	3	3	139649.31854	424705.40764	Mill Branch
UP731304	Fish Barrier	3	5	1	139684.62140	424613.96746	Mill Branch
UP731305	Trash Dumping	4	3	2	139686.93634	424598.92034	Mill Branch
UP731306	Erosion	3	3	1	139707.19208	424481.43706	Mill Branch
UP732201	Fish Barrier	5	1	2	139352.42732	424817.68229	Mill Branch
UP733301	Representative Site				139181.12166	424762.70244	Mill Branch
UP733302	Erosion	3	3	3	139027.75679	424711.19499	Mill Branch

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP734301	Representative Site				138909.11605	424837.93803	Mill Branch
UP734302	Trash Dumping	3	3	3	138936.31661	424776.59208	Mill Branch
UP734303	Trash Dumping	3	3	2	138894.06893	424620.33354	Mill Branch
UP734304	Fish Barrier	4	5	1	138820.56954	424548.57036	Mill Branch
UP734305	Pipe Outfall	5	1	1	138819.99081	424548.57036	Mill Branch
UP734306	Unusual Condition	3	4	1	138821.14828	424548.57036	Mill Branch
UP737201	Representative Site				139616.90936	425302.08377	Mill Branch
UP737202	Comment				139604.17719	425146.98270	Mill Branch
UP737203	Fish Barrier	5	2	5	139745.38861	424933.42936	Mill Branch
UP737204	Comment				139728.60528	424905.07133	Mill Branch
UP738201	Comment				139537.62262	425259.83609	Mill Branch
UP738202	Fish Barrier	5	1	3	139524.31171	425251.73379	Mill Branch
UP738203	Unusual Condition	5	5	4	139488.43012	425221.06082	Mill Branch
UP738204	Representative Site				139376.15546	425058.43619	Mill Branch
UP738205	Fish Barrier	5	2	4	139382.52155	425061.32987	Mill Branch
UP738206	Fish Barrier	5	1	3	139380.20661	425059.01493	Mill Branch
UP738207	Unusual Condition	3	4	3	139372.68305	425058.43619	Mill Branch
UP738208	Fish Barrier	5	3	1	139302.07734	425146.40396	Mill Branch
UP738208	Unusual Condition	5	5	1	139302.07734	425146.98270	Mill Branch
UP738209	Erosion	1	5	1	139355.89973	425059.59366	Mill Branch
UP740301	Pipe Outfall	3	3	1	138739.54660	424945.00407	Mill Branch
UP740302	Erosion	3	3	1	138740.70407	424944.42533	Mill Branch
UP740303	Inadequate Buffer	4	2	1	138741.86154	424943.84660	Mill Branch
UP740304	Fish Barrier	5	3	1	138772.53451	424929.95695	Mill Branch
UP741202	Erosion	1	5	3	139608.80707	425391.20901	Mill Branch
UP742201	Erosion	1	5	1	139583.34271	425590.29397	Mill Branch
UP801301	Trash Dumping	5	1	3	148266.10894	417100.24661	Horsepen Branch
UP801302	Erosion	4	3	1	148227.91241	417030.21963	Horsepen Branch
UP802301	Pipe Outfall	3	3	1	148582.67717	416725.22611	Horsepen Branch
UP802302	Erosion	2	4	2	148550.26799	416772.10367	Horsepen Branch
UP802303	Fish Barrier	5	1	3	148550.84673	416867.59500	Horsepen Branch
UP802304	Fish Barrier	5	1	3	148536.95708	416917.36624	Horsepen Branch
UP803301	Trash Dumping	5	1	3	148129.69103	417181.21272	Horsepen Branch
UP803302	Fish Barrier	5	1	1	148121.06683	417183.02470	Horsepen Branch
UP804301	Inadequate Buffer	3	3	1	148417.30355	417222.93850	Horsepen Branch
UP804302	Pipe Outfall	5	1	1	148366.95357	417166.22243	Horsepen Branch
UP804303	Erosion	3	3	1	148268.56857	417147.70290	Horsepen Branch
UP804304	Fish Barrier	5	3	1	148221.69100	417151.17532	Horsepen Branch
UP804305	Pipe Outfall	3	3	1	148226.89962	417151.75405	Horsepen Branch
UP804306	Fish Barrier	5	1	1	148176.54965	417162.17129	Horsepen Branch
UP804307	Fish Barrier	5	1	2	148356.53634	417469.47975	Horsepen Branch
UP804308	Unusual Condition	3	4	2	148283.03695	417564.39234	Horsepen Branch
UP805301	Inadequate Buffer	4	2	1	148456.65755	417328.84706	Horsepen Branch
UP805302	Erosion	4	3	1	148461.28743	417330.00453	Horsepen Branch
UP805303	Pipe Outfall	3	3	1	148545.78279	417342.15798	Horsepen Branch
UP805304	Representative Site				148442.18917	417352.57521	Horsepen Branch
UP805305	Fish Barrier	5	1	2	148440.45296	417349.10280	Horsepen Branch
UP805306	Erosion	5	3	2	148441.03170	417345.05165	Horsepen Branch
UP805307	Fish Barrier	5	1	2	148478.07076	417126.28970	Horsepen Branch
UP807301	Pipe Outfall	3	3	2	147819.01419	417991.50626	Horsepen Branch

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP807302	Pipe Outfall	3	3	2	147768.08548	417698.66618	Horsepen Branch
UP807303	Pipe Outfall	3	3	2	147697.47977	417663.94206	Horsepen Branch
UP808301	Fish Barrier	5	1	3	147995.52847	418007.13211	Horsepen Branch
UP808302	Fish Barrier	4	3	2	147914.50552	417985.14017	Horsepen Branch
UP808303	Unusual Condition	4	3	2	147852.00211	417799.94486	Horsepen Branch
UP809301	Exposed Pipe	3	4	2	148240.33352	417614.17082	Horsepen Branch
UP809302	Fish Barrier	5	1	2	148192.87722	417727.60294	Horsepen Branch
UP809303	Erosion	3	3	2	148230.49501	417671.46562	Horsepen Branch
UP810301	Fish Barrier	5	2	2	148446.36329	417826.56668	Horsepen Branch
UP810302	Erosion	4	4	2	148524.49256	417803.41727	Horsepen Branch
UP810303	Fish Barrier	4	3	1	148612.77141	417764.05603	Horsepen Branch
UP810303	Comment				148613.03907	417764.06327	Horsepen Branch
UP810304	Channel Alteration	2	4	1	148654.70802	417773.90177	Horsepen Branch
UP810305	Pipe Outfall	5	1	1	148678.43616	417769.85062	Horsepen Branch
UP811301	Inadequate Buffer	2	3	1	148769.45639	417670.32564	Horsepen Branch
UP811302	Fish Barrier	5	1	2	148813.14570	417635.93398	Horsepen Branch
UP813401	Pipe Outfall	3	3	1	145887.05985	417237.18533	Horsepen Branch
UP813402	Inadequate Buffer	3	3	1	145878.95756	417235.44913	Horsepen Branch
UP813403	Pipe Outfall	5	1	2	145700.70707	417149.79630	Horsepen Branch
UP813404	Pipe Outfall	4	2	1	145732.53752	417177.57559	Horsepen Branch
UP813405	Pipe Outfall	4	2	1	145923.52018	417252.81119	Horsepen Branch
UP813406	Pipe Outfall	3	3	2	145948.98453	417281.16922	Horsepen Branch
UP813407	Inadequate Buffer	1	2	3	145973.29142	417310.68472	Horsepen Branch
UP813408	Trash Dumping	3	2	3	145969.24027	417359.87722	Horsepen Branch
UP813409	Fish Barrier	5	2	3	145969.81901	417377.81802	Horsepen Branch
UP814401	Exposed Pipe	2	3	1	146012.64542	417300.84622	Horsepen Branch
UP814402	Pipe Outfall	4	2	1	146024.22013	417293.90140	Horsepen Branch
UP814403	Exposed Pipe	4	1	1	146053.15689	417282.32669	Horsepen Branch
UP814404	Exposed Pipe	3	1	1	146181.05740	417270.17325	Horsepen Branch
UP814405	Pipe Outfall	3	3	1	146195.52579	417270.17325	Horsepen Branch
UP817401	Pipe Outfall	2	4	1	146115.08157	417984.91139	Horsepen Branch
UP817402	Inadequate Buffer	3	2	2	146117.97525	417990.69874	Horsepen Branch
UP817403	Channel Alteration	5	2	1	146122.60513	417995.90736	Horsepen Branch
UP817404	Erosion	4	3	1	146116.81778	417988.38380	Horsepen Branch
UP818401	Representative Site				146153.85684	418036.99757	Horsepen Branch
UP819401	Unusual Condition	3	3	2	146462.32278	418421.85656	Horsepen Branch
UP820201	Fish Barrier	5	2	1	146904.47657	418287.58997	Horsepen Branch
UP820202	Pipe Outfall	3	3	1	146909.68519	418236.08252	Horsepen Branch
UP821201	Pipe Outfall	5	1	1	146932.25587	418322.89282	Horsepen Branch
UP824301	Unusual Condition	3	5	3	148127.34433	418299.16467	Horsepen Branch
UP824302	Erosion	1	3	4	148120.97824	418296.84973	Horsepen Branch
UP824303	Fish Barrier	5	1	4	148035.32542	418278.90894	Horsepen Branch
UP824304	Representative Site				147967.03465	418212.93311	Horsepen Branch
UP824305	Inadequate Buffer	5	3	3	147936.36167	418105.86707	Horsepen Branch
UP825301	Fish Barrier	5	1	2	148214.15463	418319.42041	Horsepen Branch
UP825302	Erosion	4	3	3	148191.00522	418314.21179	Horsepen Branch
UP826301	Channel Alteration	5	3	1	148471.11312	418293.95605	Horsepen Branch
UP828201	Unusual Condition	5	3	3	149095.56855	418237.81873	Horsepen Branch
UP828202	Erosion	3	4	2	149086.88752	418281.22388	Horsepen Branch
UP828203	Inadequate Buffer	5	2	1	149086.30878	418284.11755	Horsepen Branch

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP828204	Fish Barrier	5	3	1	149094.98981	418336.20373	Horsepen Branch
UP829201	Pipe Outfall	3	3	1	145045.57868	418901.62816	Horsepen Branch
UP829202	Construction	3			145031.68903	418901.62816	Horsepen Branch
UP830201	Erosion	4	3	2	145157.27460	418883.68736	Horsepen Branch
UP830202	Representative Site				145286.33258	418866.90404	Horsepen Branch
UP831201	Fish Barrier	5	1	3	145410.18194	418882.52989	Horsepen Branch
UP831202	Fish Barrier	4	3	2	145474.42156	418907.41551	Horsepen Branch
UP831203	Erosion	3	2	2	145482.52385	418910.30919	Horsepen Branch
UP832201	Pipe Outfall	5	1	2	145771.89152	418939.24595	Horsepen Branch
UP832202	Inadequate Buffer	3	4	1	145785.78117	418946.19078	Horsepen Branch
UP832203	Representative Site				145901.52824	418876.16380	Horsepen Branch
UP832204	Pipe Outfall	5	1	1	145983.12992	418928.82872	Horsepen Branch
UP833201	Pipe Outfall	5	1	1	146001.64945	418844.91209	Horsepen Branch
UP833202	Pipe Outfall	3	4	2	146013.80289	418829.86497	Horsepen Branch
UP833203	Unusual Condition	4	3	3	146023.64139	418844.91209	Horsepen Branch
UP833204	Pipe Outfall	5	1	1	146128.39249	418793.98338	Horsepen Branch
UP833205	Pipe Outfall	5	1	1	146108.71549	418927.67125	Horsepen Branch
UP833206	Pipe Outfall	5	1	2	146238.35220	418946.19078	Horsepen Branch
UP834401	Trash Dumping	4	1	3	146597.16811	418689.23229	Horsepen Branch
UP835104	Erosion	3	5	3	146611.63649	418706.01561	Horsepen Branch
UP835105	Fish Barrier	5	2	3	146641.15199	418725.69261	Horsepen Branch
UP835106	Pipe Outfall	4	1	2	146674.71864	418714.11791	Horsepen Branch
UP835107	Representative Site				146702.49794	418741.89720	Horsepen Branch
UP835201	Erosion	3	2	3	146819.98121	418743.63341	Horsepen Branch
UP835202	Fish Barrier	5	2	2	146895.21681	418659.71679	Horsepen Branch
UP835203	Representative Site				146867.43751	418704.27941	Horsepen Branch
UP836201	Fish Barrier	5	2	1	146927.68702	418545.34874	Horsepen Branch
UP836202	Unusual Condition	4	2	1	147030.12318	418607.27342	Horsepen Branch
UP836203	Trash Dumping	4	1	3	147066.00477	418588.75389	Horsepen Branch
UP836204	Pipe Outfall	3	3	2	147068.89844	418585.28147	Horsepen Branch
UP836205	Inadequate Buffer	5	1	1	147127.92945	418556.34471	Horsepen Branch
UP836206	Channel Alteration	4	1	1	147141.81910	418554.60850	Horsepen Branch
UP838101	Representative Site				147737.33776	418750.22104	Horsepen Branch
UP840101	Inadequate Buffer	3	5	1	148354.26962	418854.97214	Horsepen Branch
UP840102	Fish Barrier	5	1	1	148369.89548	418837.61008	Horsepen Branch
UP841101	Unusual Condition	3	5	1	148518.05172	418853.23593	Horsepen Branch
UP841102	Trash Dumping	4	3	2	148514.57931	418630.42283	Horsepen Branch
UP841201	Representative Site				148585.95667	418855.55088	Horsepen Branch
UP842201	Fish Barrier	5	3	3	148966.57161	418650.09983	Horsepen Branch
UP842202	Inadequate Buffer	4	3	1	148883.23372	418684.82395	Horsepen Branch
UP842202	Fish Barrier	5	1	2	148865.87166	418688.29636	Horsepen Branch
UP842203	Pipe Outfall	5	1	1	148803.36824	418752.53599	Horsepen Branch
UP842204	Pipe Outfall	3	3	1	148802.21077	418750.22104	Horsepen Branch
UP842205	Pipe Outfall	5	1	1	148800.47457	418753.11472	Horsepen Branch
UP843201	Representative Site				149087.52729	418498.47117	Horsepen Branch
UP843202	Fish Barrier	5	2	2	149074.21638	418543.61253	Horsepen Branch
UP843203	Fish Barrier	5	1	2	149060.32673	418574.86424	Horsepen Branch
UP843204	Exposed Pipe	5	3	2	149056.85432	418575.44297	Horsepen Branch
UP843205	Fish Barrier	5	3	2	149049.90950	418570.81309	Horsepen Branch
UP846201	Fish Barrier	5	1	2	145661.60702	418982.29391	Horsepen Branch

Appendix A

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP846202	Representative Site				145570.39202	419392.83777	Horsepen Branch
UP846203	Pipe Outfall	4	1	1	145610.09958	419402.45577	Horsepen Branch
UP846204	Erosion	3	3	3	145582.32028	419279.76388	Horsepen Branch
UP846205	Fish Barrier	5	2	2	145618.78061	419021.64792	Horsepen Branch
UP847201	Pipe Outfall	5	1	3	145744.36618	418988.66000	Horsepen Branch
UP847202	Fish Barrier	5	4	1	145771.56674	418955.67209	Horsepen Branch
UP849201	Pipe Outfall	3	3	2	146361.87678	418977.08530	Horsepen Branch
UP849202	Unusual Condition	4	3	1	146422.64399	418998.49850	Horsepen Branch
UP849203	Fish Barrier	5	2	1	146455.05317	418996.76230	Horsepen Branch
UP849204	Representative Site				146569.06403	419043.06112	Horsepen Branch
UP850201	Fish Barrier	5	2	3	146886.78973	419057.52951	Horsepen Branch
UP850202	Representative Site				146882.73858	419058.68698	Horsepen Branch
UP851101	Inadequate Buffer	5	1	1	146924.98626	418950.46347	Horsepen Branch
UP851102	Representative Site				147147.79936	419389.14485	Horsepen Branch
UP853101	Inadequate Buffer	4	5	1	147631.62210	419276.87020	Horsepen Branch
UP853102	Fish Barrier	5	2	1	147661.71634	419240.98861	Horsepen Branch
UP853103	Erosion	3	3	4	147756.62893	419063.31686	Horsepen Branch
UP853104	Pipe Outfall	5	2	1	147665.18875	419223.62655	Horsepen Branch
UP854103	Representative Site				148059.88625	419004.28586	Horsepen Branch
UP854104	Fish Barrier	5	1	4	148007.22133	418997.34103	Horsepen Branch
UP854105	Comment				148042.52419	418993.86862	Horsepen Branch
UP857201	Inadequate Buffer	4	3	1	148775.20312	418956.82956	Horsepen Branch
UP859201	Pipe Outfall	3	3	1	145378.99127	419528.62007	Horsepen Branch
UP860201	Unusual Condition	4	3	2	145399.82574	419526.88386	Horsepen Branch
UP860202	Pipe Outfall	3	3	2	145446.70330	419536.14363	Horsepen Branch
UP860203	Fish Barrier	5	2	2	145578.07622	419503.73445	Horsepen Branch
UP860204	Pipe Outfall	5	1	1	145604.69805	419624.69014	Horsepen Branch
UP860205	Pipe Outfall	3	3	1	145587.33599	419669.83149	Horsepen Branch
UP860206	Pipe Outfall	3	3	1	145572.28887	419426.76265	Horsepen Branch
UP862101	Pipe Outfall	3	3	1	147242.33971	419556.68122	Horsepen Branch
UP862104	Pipe Outfall	5	1	1	147239.37633	419545.42039	Horsepen Branch
UP862105	Erosion	1	5	3	147315.83145	419583.94429	Horsepen Branch
UP862106	Representative Site				147437.32990	419694.18190	Horsepen Branch
UP862107	Inadequate Buffer	5	5	1	147512.00700	419465.40921	Horsepen Branch
UP863101	Erosion	1	5	4	147593.79620	419713.14751	Horsepen Branch
UP863102	Representative Site				147581.35001	419614.17073	Horsepen Branch
UP864001	Exposed Pipe	3	3	1	147940.47386	419855.60553	Horsepen Branch
UP864401	Fish Barrier	5	2	1	148128.98205	419613.57805	Horsepen Branch
UP864402	Inadequate Buffer	3	2	1	148109.42376	419622.46818	Horsepen Branch
UP864403	Pipe Outfall	3	3	1	147989.11066	419629.58029	Horsepen Branch
UP864404	Fish Barrier	4	3	1	147962.44027	419812.71698	Horsepen Branch
UP864405	Pipe Outfall	3	3	1	147962.44027	419812.71698	Horsepen Branch
UP865401	Pipe Outfall	3	3	1	148430.06114	419557.27389	Horsepen Branch
UP865402	Pipe Outfall	3	3	1	148430.06114	419559.05192	Horsepen Branch
UP865403	Fish Barrier	5	2	1	148435.98789	419559.05192	Horsepen Branch
UP865404	Inadequate Buffer	4	2	1	148431.83916	419559.05192	Horsepen Branch
UP865405	Channel Alteration	5	2	1	148431.24649	419557.86657	Horsepen Branch
UP865406	Fish Barrier	5	3	1	148354.19869	419578.01753	Horsepen Branch
UP865407	Fish Barrier	5	3	2	148345.90123	419578.01753	Horsepen Branch
UP866401	Erosion	3	3	2	148577.34842	419581.21203	Horsepen Branch

Appendix A

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP866402	Fish Barrier	5	3	1	148556.41844	419581.21203	Horsepen Branch
UP866403	Unusual Condition	3	1	1	148468.17312	419554.62530	Horsepen Branch
UP869301	Inadequate Buffer	1	1	3	147153.54415	420246.44596	Horsepen Branch
UP869302	Comment				147164.85765	420244.74894	Horsepen Branch
UP871107	Pipe Outfall	5	1	2	147694.44276	419905.60157	Horsepen Branch
UP871108	Inadequate Buffer	5	1	2	147707.60953	419895.42725	Horsepen Branch
UP871109	Representative Site				147711.79895	420003.15532	Horsepen Branch
UP871110	Fish Barrier	5	1	2	147697.43521	420071.38309	Horsepen Branch
UP871111	Inadequate Buffer	3	1	1	147713.59442	420101.30755	Horsepen Branch
UP871301	Representative Site				147556.79024	420126.44410	Horsepen Branch
UP871302	Erosion	3	3	3	147579.53283	420100.11057	Horsepen Branch
UP871303	Pipe Outfall	3	3	3	147723.76874	419938.51848	Horsepen Branch
UP871304	Comment				147727.95816	419939.11697	Horsepen Branch
UP871305	Pipe Outfall	5	1	3	147815.33759	419957.67013	Horsepen Branch
UP871306	Fish Barrier	5	1	1	147824.31493	419957.07164	Horsepen Branch
UP872301	Erosion	4	3	3	147860.22428	419931.93510	Horsepen Branch
UP872401	Pipe Outfall	1	4	2	147964.36141	419928.34416	Horsepen Branch
UP875301	Pipe Outfall	5	1	1	146516.01744	420636.95543	Horsepen Branch
UP875302	Channel Alteration	5	2	1	146519.00989	420636.95543	Horsepen Branch
UP875303	Inadequate Buffer	5	2	2	146518.41140	420636.35694	Horsepen Branch
UP876301	Channel Alteration	5	2	2	146732.67055	420544.18959	Horsepen Branch
UP876302	Channel Alteration	5	3	4	146742.24637	420532.81830	Horsepen Branch
UP876303	Pipe Outfall	3	3	2	146782.94364	420483.14369	Horsepen Branch
UP876304	Fish Barrier	5	3	2	146882.89135	420411.32498	Horsepen Branch
UP876305	Channel Alteration	5	1	2	146888.87624	420410.72649	Horsepen Branch
UP880104	Fish Barrier	5	1	2	147967.95235	420518.45456	Horsepen Branch
UP880401	Pipe Outfall	3	3	1	147944.01278	420621.39471	Horsepen Branch
UP880402	Erosion	4	2	1	147951.79314	420625.58413	Horsepen Branch
UP881401	Trash Dumping	5	1	3	148216.32539	420702.78924	Horsepen Branch
UP881402	Channel Alteration	5	3	3	148237.87100	420714.75903	Horsepen Branch
UP881403	Exposed Pipe	4	1	2	148305.50028	420685.43306	Horsepen Branch
UP881404	Inadequate Buffer	4	1	1	148304.90179	420678.25119	Horsepen Branch
UP882401	Erosion	2	3	2	148467.69087	420705.78169	Horsepen Branch
UP883401	Fish Barrier	5	3	2	148709.48052	420961.93509	Horsepen Branch
UP883402	Fish Barrier	5	2	3	148726.83671	421019.98854	Horsepen Branch
UP885401	Exposed Pipe	5	2	4	148830.37535	421256.39180	Horsepen Branch
UP885402	Fish Barrier	5	2	4	148848.92852	421350.35461	Horsepen Branch
UP885403	Representative Site				148821.39801	421360.52893	Horsepen Branch
UP885404	Erosion	1	5	2	148837.51363	421353.37258	Horsepen Branch
UP885405	Trash Dumping	4	2	4	148808.23125	421420.37785	Horsepen Branch
UP885406	Exposed Pipe	5	1	1	148804.64031	421486.81016	Horsepen Branch
UP885407	Fish Barrier	5	2	1	148816.61010	421492.79505	Horsepen Branch
UP885408	Unusual Condition	3	2	1	148816.61010	421495.18901	Horsepen Branch
UP885409	Exposed Pipe	2	1	1	148904.58802	421634.63700	Horsepen Branch
UP885410	Fish Barrier	5	2	1	148931.52003	421649.59923	Horsepen Branch
UP886401	Fish Barrier	5	2	3	148946.48227	421705.85722	Horsepen Branch
UP886402	Channel Alteration	5	3	2	148926.13363	421807.00190	Horsepen Branch
UP886403	Inadequate Buffer	3	3	1	148936.90644	421812.38831	Horsepen Branch
UP886404	Pipe Outfall	5	1	2	148915.95931	421899.16925	Horsepen Branch
UP886405	Pipe Outfall	5	3	1	148949.47471	421988.34414	Horsepen Branch

Appendix A

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP886406	Trash Dumping	3	2	2	149011.11910	422059.56436	Horsepen Branch
UP886407	Pipe Outfall	5	1	1	148989.57349	422018.26861	Horsepen Branch
UP888401	Trash Dumping	3	2	1	149134.44529	422401.11470	Horsepen Branch
UP888402	Unusual Condition	3	2	1	149139.83170	422390.94038	Horsepen Branch
UP888403	Representative Site				149121.27853	422438.81952	Horsepen Branch
UP888404	Comment				149190.70328	422572.28262	Horsepen Branch
UP888405	Pipe Outfall	3	3	2	149229.00660	422602.80557	Horsepen Branch
UP900301	Pipe Outfall	5	1	1	136737.28663	424451.96287	Mount Nebo Branch
UP900302	Inadequate Buffer	4	3	2	136736.65672	424455.11241	Mount Nebo Branch
UP900303	Trash Dumping	3	3	2	136730.35764	424485.34802	Mount Nebo Branch
UP900304	Pipe Outfall	3	3	2	136586.73850	424731.01234	Mount Nebo Branch
UP900305	Fish Barrier	4	4	2	136584.21887	424734.16188	Mount Nebo Branch
UP900306	Pipe Outfall	4	2	2	136579.80951	424737.31142	Mount Nebo Branch
UP901301	Erosion	2	4	4	136543.90472	424764.39749	Mount Nebo Branch
UP901302	Inadequate Buffer	4	2	4	136453.82780	424792.11346	Mount Nebo Branch
UP901303	Representative Site				136355.29460	424868.21062	Mount Nebo Branch
UP901304	Erosion	3	3	4	136348.65773	424867.10447	Mount Nebo Branch
UP902301	Fish Barrier	5	1	4	136312.70800	424916.32794	Mount Nebo Branch
UP903301	Inadequate Buffer	3	3	2	136152.31691	425195.62966	Mount Nebo Branch
UP903302	Inadequate Buffer	5	2	2	136119.68562	424916.88102	Mount Nebo Branch
UP903303	Erosion	3	3	3	136120.23870	424917.43409	Mount Nebo Branch
UP903304	Fish Barrier	5	2	2	136146.78619	424934.02627	Mount Nebo Branch
UP904101	Inadequate Buffer	4	1	2	136447.10467	425762.52920	Mount Nebo Branch
UP905301	Erosion	4	3	3	136194.35044	425403.58501	Mount Nebo Branch
UP905302	Representative Site				136195.45659	425393.07662	Mount Nebo Branch
UP905303	Erosion	5	3	5	136163.37837	425502.58502	Mount Nebo Branch
UP905304	Trash Dumping	3	2	2	136207.62419	425582.78057	Mount Nebo Branch
UP905305	Inadequate Buffer	4	2	2	136219.79179	425705.56271	Mount Nebo Branch
UP906101	Representative Site				136301.09348	425895.26665	Mount Nebo Branch
UP906102	Construction	5			136480.28904	425907.98732	Mount Nebo Branch
UP906103	Unusual Condition	4	1	2	136415.02645	425870.93145	Mount Nebo Branch
UP907101	Inadequate Buffer	5	1	1	136214.26106	426089.39518	Mount Nebo Branch
UP907102	Fish Barrier	3	5	1	136205.41190	425954.44543	Mount Nebo Branch
UP907102	Unusual Condition	2	5	2	136205.41190	425956.65772	Mount Nebo Branch
UP907103	Pipe Outfall	2	4	1	136199.32810	425957.21080	Mount Nebo Branch
UP907104	Erosion	2	4	2	136211.49570	425946.14934	Mount Nebo Branch
UP908101	Representative Site				136113.60182	426710.49584	Mount Nebo Branch
UP908102	Inadequate Buffer	5	1	1	136181.07670	426288.50135	Mount Nebo Branch
UP909101	Fish Barrier	5	1	1	136016.26103	426775.75842	Mount Nebo Branch
UP909102	Inadequate Buffer	5	1	2	136087.05433	426743.12713	Mount Nebo Branch
UP909103	Erosion	3	4	4	136093.13813	426743.68020	Mount Nebo Branch
UP909104	Fish Barrier	5	5	5	136101.98730	426730.40645	Mount Nebo Branch
UP910101	Representative Site				135899.56268	427146.31714	Mount Nebo Branch
UP910102	Inadequate Buffer	5	3	1	135937.72470	426825.53496	Mount Nebo Branch
UP911101	Erosion	5	1	4	135712.62410	427250.84788	Mount Nebo Branch
UP911102	Trash Dumping	5	1	1	135662.84756	427394.64679	Mount Nebo Branch
UP911103	Representative Site				135760.74143	427336.57415	Mount Nebo Branch
UP911104	Fish Barrier	5	5	1	135769.03752	427340.44566	Mount Nebo Branch
UP911105	Erosion	5	5	1	135770.14367	427342.65795	Mount Nebo Branch
UP911106	Erosion	2	5	4	135814.38948	427360.90935	Mount Nebo Branch

Appendix A

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
UP911107	Inadequate Buffer	4	3	1	135821.02636	427321.64119	Mount Nebo Branch
UP911108	Pipe Outfall	3	1	1	135860.29452	427230.38419	Mount Nebo Branch
UP921401	Erosion	4	2	3	135778.43976	427502.49597	Mount Nebo Branch
UP921401	Fish Barrier	5	4	1	135804.98725	427377.50153	Mount Nebo Branch
UP924201	Erosion	3	4	1	136813.90123	427615.86764	Honey Branch
UP925201	Representative Site				136909.39256	427629.75728	Honey Branch
UP926201	Trash Dumping	5	1	2	137439.51412	427568.41134	Honey Branch
UP926202	Erosion	4	4	2	137335.34176	427603.71419	Honey Branch
UP926203	Inadequate Buffer	3	2	2	137463.82101	427545.26193	Honey Branch
UP926204	Fish Barrier	5	1	1	137177.34702	427600.82052	Honey Branch
UP928401	Representative Site				135799.95692	427641.91073	Honey Branch
UP928402	Erosion	3	3	3	135864.19654	427703.25667	Honey Branch
UP929403	Erosion	3	3	2	136213.75268	427649.43429	Honey Branch
UP929405	Fish Barrier	5	2	4	135970.10511	427677.79232	Honey Branch
UP930404	Fish Barrier	5	1	1	136473.02611	427655.80037	Honey Branch

Appendix B

Listing of sites by problem category

Pipe Outfall- Upper Patuxent Watershed in Prince George's County

Problem	Site	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	UP872401	Stormwater	Concrete Pipe	Head of stream	24		Yes	medium brown	Sewage	1	4	2
Pipe Outfall	UP305401	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	sewage	2	4	2
Pipe Outfall	UP308407	Stormwater	Concrete Pipe	Right Bank	12		Yes	medium brown	rotten egg	2	4	2
Pipe Outfall	UP309402	Stormwater	Concrete Pipe	Right Bank	24		Yes	green	fishy	2	4	3
Pipe Outfall	UP315201	Stormwater	Concrete Pipe	Right Bank	24		Yes	dark brown	rotten egg	2	4	2
Pipe Outfall	UP320202	Stormwater	Concrete Pipe	head of trib	24		Yes	dark brown	sewage	2	4	2
Pipe Outfall	UP505405	Stormwater	Concrete Pipe	Left Bank	12		Yes	brown	oily	2	4	1
Pipe Outfall	UP616408	Stormwater	Concrete Pipe	Right Bank	36		Yes	medium brown	oily	2	4	1
Pipe Outfall	UP817401	Stormwater	Corrugated Metal	Left Bank	24		Yes	dark brown	musky	2	4	1
Pipe Outfall	UP907103	Stormwater	Concrete Pipe	Right Bank	36	4	Yes	medium brown	none	2	4	1
Pipe Outfall	UP100301	Stormwater	Concrete Pipe	Head of Stream	48		Yes	clear	none	3	3	1
Pipe Outfall	UP102304	Stormwater	Concrete Pipe		36		Yes	clear	none	3	3	2
Pipe Outfall	UP104303	Stormwater	Concrete Pipe		24		Yes	clear	none	3	3	2
Pipe Outfall	UP104308	Stormwater	Concrete Pipe	Head of Stream	48		Yes	clear	none	3	3	1
Pipe Outfall	UP107402	Stormwater	Corrugated Metal	Left Bank	24		Yes	clear	none	3	3	1
Pipe Outfall	UP200202	Stormwater	concrete pipe	head of stream	36		Yes	clear	musty	3	3	2
Pipe Outfall	UP204201	Stormwater	Concrete Pipe	Right Bank	36		Yes	clear	none	3	3	1
Pipe Outfall	UP304204	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	2
Pipe Outfall	UP305402	Stormwater	Concrete Pipe	Right Bank	12		Yes	clear	none	3	3	1
Pipe Outfall	UP307202	Stormwater	Concrete Pipe	Right Bank	12		Yes	clear	none	3	3	2
Pipe Outfall	UP308405	Stormwater	Concrete Pipe	Right Bank	24		Yes	dark brown	none	3	3	1
Pipe Outfall	UP308406	Stormwater	Concrete Pipe	Right Bank	30		Yes	dark brown	none	3	3	1
Pipe Outfall	UP309101	Stormwater	Concrete Pipe	Right Bank	18		Yes	clear	none	3	3	1
Pipe Outfall	UP309102	Stormwater	Concrete Pipe	Left Bank	12		Yes	clear	none	3	3	1
Pipe Outfall	UP310201	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	2
Pipe Outfall	UP310203	Stormwater	Concrete Pipe	Left Bank	18		Yes	clear	none	3	3	2
Pipe Outfall	UP312102	Unknown	Plastic	Left Bank	8		Yes	clear	none	3	3	1
Pipe Outfall	UP312103	Stormwater	Concrete Pipe	Right Bank	36		Yes	green-blue	none	3	3	1
Pipe Outfall	UP312108	Stormwater	Concrete Pipe	Left Bank	18		Yes	clear	none	3	3	1
Pipe Outfall	UP312110	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	1
Pipe Outfall	UP312111	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	1
Pipe Outfall	UP312112	Stormwater	Corrugated Metal	Right Bank	18		Yes	clear	none	3	3	1
Pipe Outfall	UP312113	Unknown	Concrete Pipe	Right Bank	24		Yes	orange	none	3	3	1
Pipe Outfall	UP313201	Stormwater	Concrete Pipe	Right Bank	36		Yes	clear	none	3	3	2
Pipe Outfall	UP313203	Stormwater	Concrete Pipe	Left Bank	36		Yes	clear	none	3	3	2
Pipe Outfall	UP313204	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	2

Pipe Outfall- Upper Patuxent Watershed in Prince George's County

Problem	Site	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	UP314202	Stormwater	Concrete Pipe	Head of Stream	36		Yes	clear	none	3	3	1
Pipe Outfall	UP315204	Stormwater	Concrete Pipe	Left Bank	18		Yes	clear	none	3	3	1
Pipe Outfall	UP315205	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	1
Pipe Outfall	UP315206	Stormwater	Concrete Pipe	Right Bank	12		Yes	clear	none	3	3	2
Pipe Outfall	UP315207	Stormwater	Concrete Pipe	Right Bank	36		Yes	clear	none	3	3	2
Pipe Outfall	UP316201	Stormwater	Concrete Pipe	Right Bank	36		Yes	soapy bubbles	none	3	3	2
Pipe Outfall	UP316202	Stormwater	Concrete Pipe	Left Bank	24		Yes	clear	none	3	3	2
Pipe Outfall	UP317204	Stormwater	Corrugated Metal		12		Yes	clear	none	3	3	2
Pipe Outfall	UP318201	Stormwater	Corrugated Metal	Right Bank	18		Yes	clear	none	3	3	2
Pipe Outfall	UP318204	Stormwater	Concrete Pipe	Right Bank	36		Yes	clear	none	3	3	2
Pipe Outfall	UP318205	Stormwater	Concrete Pipe	Left Bank	24		Yes	clear	none	3	3	2
Pipe Outfall	UP318207	Stormwater	Concrete Pipe	Right Bank	36		Yes	clear	none	3	3	1
Pipe Outfall	UP320201	Stormwater	Concrete Pipe	Left Bank	24		Yes	clear	none	3	3	2
Pipe Outfall	UP321203	Stormwater	Corrugated Metal	Right Bank	36		Yes	clear	none	3	3	2
Pipe Outfall	UP401301	Stormwater	Concrete Pipe	Right Bank	18		Yes	clear	none	3	3	2
Pipe Outfall	UP401302	Stormwater	Concrete Pipe	Right Bank	18		Yes	clear	none	3	3	2
Pipe Outfall	UP401303	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	sewage	3	3	2
Pipe Outfall	UP401304	Stormwater	Concrete Pipe	Head of Stream	48		Yes	clear	none	3	3	2
Pipe Outfall	UP404301	Stormwater	Corrugated Metal	Head of Stream	36		Yes	clear	none	3	3	1
Pipe Outfall	UP404302	Stormwater	Concrete Pipe	Head of Stream	48		Yes	light brown	none	3	3	2
Pipe Outfall	UP404306	Stormwater	Concrete Pipe	Left Bank	18		Yes	clear	none	3	3	1
Pipe Outfall	UP405304	Sewage Treatment	Earth Channel	Right Bank		4	Yes	clear	sewage	3	3	2
Pipe Outfall	UP407301	Stormwater	Concrete Pipe	Head of Stream	24		Yes	clear	none	3	3	1
Pipe Outfall	UP407303	Stormwater	Concrete Pipe	Left Bank	24		Yes	clear	none	3	3	2
Pipe Outfall	UP505401	Stormwater	Concrete Pipe	Left Bank	36		Yes	clear	rotten egg	3	3	1
Pipe Outfall	UP505403	Stormwater	Concrete Pipe	Left Bank	36		Yes	clear	none	3	3	1
Pipe Outfall	UP508404	Stormwater	Concrete Pipe	Right Bank	12		Yes	clear	none	3	3	1
Pipe Outfall	UP602201	Stormwater	Concrete Pipe	Head of Stream	36		Yes	Clear	none	3	3	1
Pipe Outfall	UP602203	Stormwater	Concrete Pipe	Head of Stream	24		Yes	Clear	none	3	3	1
Pipe Outfall	UP604403	Stormwater	Concrete Pipe	Left Bank	24		Yes	clear	none	3	3	1
Pipe Outfall	UP607204	Stormwater	Concrete Pipe		18		Yes	Clear	none	3	3	1
Pipe Outfall	UP610404	Stormwater	Concrete Pipe	Right Bank	12		Yes	clear	rotten egg	3	3	1
Pipe Outfall	UP615201	Stormwater	Concrete Pipe	Head of Stream	36		Yes	clear	none	3	3	1
Pipe Outfall	UP615202	Stormwater	Concrete Pipe	Right Bank	36		Yes	orange/brown	none	3	3	1
Pipe Outfall	UP616406	Stormwater	Concrete Pipe	Left Bank	36		Yes	clear	none	3	3	1
Pipe Outfall	UP619102	Unknown	Concrete Pipe	Left Bank	18		Yes	rust orange	none	3	3	1

Pipe Outfall- Upper Patuxent Watershed in Prince George's County

Problem	Site	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	UP620403	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	2
Pipe Outfall	UP620405	Stormwater	Concrete Pipe	Right Bank	18		Yes	medium brown	none	3	3	1
Pipe Outfall	UP620406	Stormwater	Concrete Pipe	Left Bank	24		Yes	clear	none	3	3	2
Pipe Outfall	UP620408	Stormwater	Concrete Pipe	Right Bank	18		Yes	medium brown	none	3	3	2
Pipe Outfall	UP704301	Stormwater	Concrete	Head of Stream	30		Yes	clear	none	3	3	2
Pipe Outfall	UP713301	Stormwater	Concrete Pipe	Head of Stream	48		Yes	clear	none	3	3	3
Pipe Outfall	UP715304	Stormwater	Corrugated Metal	Right Bank	60		Yes	clear	none	3	3	1
Pipe Outfall	UP721303	Stormwater	Concrete Pipe	Left Bank	18		Yes	clear	none	3	3	1
Pipe Outfall	UP722302	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	1
Pipe Outfall	UP723304	Stormwater	Concrete Pipe	Left Bank	24		Yes	clear	none	3	3	1
Pipe Outfall	UP723305	Stormwater	Concrete Pipe	Left Bank	12		Yes	clear	none	3	3	2
Pipe Outfall	UP740301	Stormwater	Concrete Pipe	Head of Stream	36		Yes	clear	none	3	3	1
Pipe Outfall	UP802301	Stormwater	congrated metal	head of stream	24	3	Yes	clear	none	3	3	1
Pipe Outfall	UP804305	Stormwater	concrete pipe	right bank	18	3	Yes	clear	none	3	3	1
Pipe Outfall	UP805303	Stormwater	concrete pipe	head of stream	36	4	Yes	clear	none	3	3	1
Pipe Outfall	UP807301	Stormwater	Concrete Pipe	Head of Stream	36		Yes	clear	none	3	3	2
Pipe Outfall	UP807302	Stormwater	Plastic	Left Bank	12		Yes	clear	none	3	3	2
Pipe Outfall	UP807303	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	2
Pipe Outfall	UP813401	Stormwater	Concrete Pipe		24		Yes	clear	none	3	3	1
Pipe Outfall	UP813406	Stormwater	Concrete Pipe	Right Bank	36		Yes	clear	none	3	3	2
Pipe Outfall	UP814405	Stormwater	Plastic	Right Bank	12		Yes	clear	none	3	3	1
Pipe Outfall	UP820202	Stormwater	Concrete Pipe	Head of Stream	72		Yes	clear	none	3	3	1
Pipe Outfall	UP829201	Stormwater	Corrugated Metal	Head of Stream	24		Yes	yellow brown	none	3	3	1
Pipe Outfall	UP833202	Stormwater	Concrete Pipe	Left Bank	36		Yes	red	gasoline	3	4	2
Pipe Outfall	UP836204	Unknown	plastic	right bank	4		Yes	clear	none	3	3	2
Pipe Outfall	UP842204	Stormwater	concrete pipe	right bank	36		Yes	CLEAR	none	3	3	1
Pipe Outfall	UP849201	Stormwater	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	2
Pipe Outfall	UP859201	Stormwater	Concrete Pipe	Head of Stream	48		Yes	dark brown	none	3	3	1
Pipe Outfall	UP860202	Stormwater	Concrete Pipe	Head of Stream	36		Yes	clear	none	3	3	2
Pipe Outfall	UP860205	Stormwater	Concrete Pipe	Head of Stream	36		Yes	clear	none	3	3	1
Pipe Outfall	UP860206	Stormwater	Concrete Pipe	Right Bank	12		Yes	clear	none	3	3	1
Pipe Outfall	UP862101	Stormwater	Concrete Pipe	right bank	6		Yes	clear	none	3	3	1
Pipe Outfall	UP864403	Stormwater	Concrete Pipe		12		Yes	clear	none	3	3	1
Pipe Outfall	UP864405	Stormwater	Concrete Pipe	cand	24		Yes	Clear	none	3	3	1
Pipe Outfall	UP865401	cand Outlet	Concrete Pipe	Right Bank	24		Yes	clear	none	3	3	1
Pipe Outfall	UP865402	Stormwater	Concrete Pipe	Left Bank	24		Yes	clear	none	3	3	1

Pipe Outfall- Upper Patuxent Watershed in Prince George's County

Problem	Site	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	UP871303	Stormwater	Smooth Metal	Left Bank	6		Yes	clear	none	3	3	3
Pipe Outfall	UP876303	Stormwater	Concrete Pipe	Right Bank	18		Yes	clear	none	3	3	2
Pipe Outfall	UP880401	Stormwater	Corrugated Metal	Head of Stream	12	2	Yes	Clear	none	3	3	1
Pipe Outfall	UP888405	Stormwater	Smooth Metal	Right Bank	12	4	Yes	clear	none	3	3	2
Pipe Outfall	UP900304	Stormwater	Earth Channel	Left Bank		2	Yes	clear		3	3	2
Pipe Outfall	UP911108	Stormwater	Plastic	Right Bank	18	2	Yes	clear	none	3	1	1
Pipe Outfall	UP610401	Stormwater	Corrugated Metal	Right Bank	24		No			4	2	2
Pipe Outfall	UP713306	Stormwater	Concrete Pipe	Left Bank	12		No			4	2	1
Pipe Outfall	UP813404	Unknown	Plastic	Left Bank	6		No			4	2	1
Pipe Outfall	UP813405	Unknown	Plastic	Left Bank	2		No			4	2	1
Pipe Outfall	UP814402	Unknown	Plastic	Left Bank	6		No			4	2	1
Pipe Outfall	UP835106	Stormwater	concrete pipe	left bank	24		No			4	1	2
Pipe Outfall	UP846203	Stormwater	Concrete Pipe	Right Bank	36		No			4	1	1
Pipe Outfall	UP900306	Stormwater	Concrete Channel	Right Bank		3	No			4	2	2
Pipe Outfall	UP101301	Stormwater	Corrugated Metal		12		No			5	1	2
Pipe Outfall	UP101302	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	2
Pipe Outfall	UP102302	Stormwater	Concrete Pipe		18		No			5	1	1
Pipe Outfall	UP104304	Stormwater	Corrugated Metal		12		No			5	1	2
Pipe Outfall	UP104306	Stormwater	Concrete Pipe	Right Bank	12		No			5	1	2
Pipe Outfall	UP104307	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	2
Pipe Outfall	UP200201	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	2
Pipe Outfall	UP200204	Stormwater	Corrugated Metal	Right Bank	12		No			5	1	2
Pipe Outfall	UP200205	Stormwater	Concrete Pipe	Left Bank	12		No			5	1	2
Pipe Outfall	UP200206	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	2
Pipe Outfall	UP200207	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	2
Pipe Outfall	UP200208	Stormwater	Corrugated Metal	Left Bank	12		No			5	1	2
Pipe Outfall	UP200209	Stormwater	Corrugated Metal	Right Bank	8		No			5	1	2
Pipe Outfall	UP200210	Stormwater	Concrete Pipe	Left Bank	12		No			5	1	2
Pipe Outfall	UP200211	Stormwater	Plastic	Left Bank	24		No			5	1	2
Pipe Outfall	UP200212	Stormwater	Corrugated Metal	Right Bank	24		No			5	1	1
Pipe Outfall	UP200213	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	1
Pipe Outfall	UP201202	Stormwater	Concrete Pipe	Right Bank	24		No			5	1	2
Pipe Outfall	UP202201	Stormwater	Corrugated Metal	Left Bank	18		No			5	1	3
Pipe Outfall	UP202202	Stormwater	Concrete Pipe	Left Bank	12		No			5	1	3
Pipe Outfall	UP202204	Stormwater	Concrete Pipe	Right Bank	12		No			5	1	2
Pipe Outfall	UP203202	Stormwater	Corrugated Metal	Right Bank	24		No			5	1	3

Pipe Outfall- Upper Patuxent Watershed in Prince George's County

Problem	Site	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	UP304203	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	2
Pipe Outfall	UP307201	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	2
Pipe Outfall	UP307205	Stormwater	Concrete Pipe	Left Bank	18		No			5	1	2
Pipe Outfall	UP309403	Stormwater	Concrete Pipe	Left Bank	12		No			5	1	2
Pipe Outfall	UP310202	Stormwater	Concrete Pipe	Right Bank	18		No			5	1	2
Pipe Outfall	UP310204	Unknown	Plastic	Left Bank	4		No			5	1	2
Pipe Outfall	UP317201	Stormwater	Concrete Pipe	Left Bank	12		No			5	1	2
Pipe Outfall	UP317202	Stormwater	Corrugated Metal	Right Bank	18		No			5	1	2
Pipe Outfall	UP318202	Stormwater	Corrugated Metal	Right Bank	24		No			5	1	2
Pipe Outfall	UP318208	Stormwater	Corrugated Metal	Left Bank	12		No			5	1	2
Pipe Outfall	UP320204	Stormwater	Corrugated Metal	Right Bank	18		No			5	1	2
Pipe Outfall	UP404307	Unknown	Smooth Metal	Right Bank	12		No			5	1	2
Pipe Outfall	UP413401	Stormwater	corrugated plastic	Right Bank	3		No			5	1	1
Pipe Outfall	UP413403	Stormwater	Plastic		3		No			5	1	1
Pipe Outfall	UP506404	Stormwater	Concrete Pipe	Head of stream	24		No			5	1	2
Pipe Outfall	UP607201	Stormwater	Concrete Pipe	Right Bank	18		No			5	1	1
Pipe Outfall	UP607202	Stormwater	Concrete Pipe	Right Bank	18		No			5	1	1
Pipe Outfall	UP607205	Stormwater	Concrete Pipe	Right Bank	8		No			5	1	1
Pipe Outfall	UP613203	Stormwater	Rip-rap	Right Bank		3	No			5	1	1
Pipe Outfall	UP615205	Stormwater	Concrete Pipe	Left Bank	48		No			5	1	1
Pipe Outfall	UP710301	Stormwater	Concrete Pipe	Right Bank	18		No			5	1	1
Pipe Outfall	UP710303	Stormwater	Concrete Pipe	Left Bank	18		No			5	1	1
Pipe Outfall	UP713304	Stormwater	Concrete Pipe	Right Bank	48		No			5	3	3
Pipe Outfall	UP721301	Stormwater	Concrete Pipe	Right Bank	24		No			5	1	1
Pipe Outfall	UP721302	Stormwater	Concrete Pipe	Left Bank	12		No			5	1	1
Pipe Outfall	UP721304	Stormwater	Concrete Pipe	Left Bank	18		No			5	1	1
Pipe Outfall	UP722305	Stormwater	Concrete Pipe	Left Bank	18		No			5	1	1
Pipe Outfall	UP728105	cand Outlet	Plastic	Left Bank	4		No			5	1	1
Pipe Outfall	UP730305	Stormwater	Concrete Channel	Right Bank		24	No			5	1	1
Pipe Outfall	UP734305	Stormwater	Corrugated Metal		18		No			5	1	1
Pipe Outfall	UP804302	Stormwater	concrete pipe	rightbank	12		No			5	1	1
Pipe Outfall	UP810305	Stormwater	concrete pipe		12		No			5	1	1
Pipe Outfall	UP813403	Stormwater	Concrete Pipe	Head of Stream	24		No			5	1	2
Pipe Outfall	UP821201	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	1
Pipe Outfall	UP832201	Stormwater	Concrete Pipe	Left Bank	12		No			5	1	2
Pipe Outfall	UP832204	Stormwater	Concrete Channel	Right Bank		3	No			5	1	1

Pipe Outfall- Upper Patuxent Watershed in Prince George's County

Problem	Site	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	UP833201	Stormwater	Concrete Channel	Right Bank		2	No			5	1	1
Pipe Outfall	UP833204	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	1
Pipe Outfall	UP833205	Stormwater	Concrete Pipe	Right Bank	24		No			5	1	1
Pipe Outfall	UP833206	Stormwater	Concrete Pipe	Right Bank	12		No			5	1	2
Pipe Outfall	UP842203	Stormwater	concrete channel	left bank		3	No			5	1	1
Pipe Outfall	UP842205	Stormwater	concrete channel	left bank		3	No			5	1	1
Pipe Outfall	UP847201	Stormwater	Concrete Pipe	Left Bank	36		No			5	1	3
Pipe Outfall	UP853104	Stormwater	plastic	left bank	6		No			5	2	1
Pipe Outfall	UP860204	Stormwater	Concrete Pipe	Right Bank	18		No			5	1	1
Pipe Outfall	UP862104	Stormwater	concrete channel	Right Bank		2	No			5	1	1
Pipe Outfall	UP871107	Unknown	concrete pipe	right bank	8		No			5	1	2
Pipe Outfall	UP871305	Unknown	Terra cotta	Left Bank	12		No			5	1	3
Pipe Outfall	UP875301	Stormwater	Concrete Pipe	Right Bank	18		No			5	1	1
Pipe Outfall	UP886404	Stormwater	Plastic	Right Bank	24	12	No			5	1	2
Pipe Outfall	UP886405	Stormwater	Concrete Pipe	Right Bank	24	8	No			5	3	1
Pipe Outfall	UP886407	Stormwater	Concrete Pipe	Right Bank	12	2	No			5	1	1
Pipe Outfall	UP900301	Stormwater	Concrete Pipe	Head of Stream	36		No			5	1	1

Fish Barriers- Upper Patuxent Watershed in Prince George's County

Problem	Site	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access
Fish Barrier	UP624101	Total	Road Crossing	Too High/Too Shallow	10	1	2	5	1
Fish Barrier	UP106403	Total	Crossing	Too High	8		3	3	2
Fish Barrier	UP107403	Total	Channel Alteration	Too High	24		3	3	2
Fish Barrier	UP109405	Total	Crossing	Too High	48		3	3	1
Fish Barrier	UP312109	Total	Road Crossing	Too Shallow		0.5	3	5	1
Fish Barrier	UP318206	Total	Road Crossing	Too Shallow		0.25	3	5	1
Fish Barrier	UP320203	Total	Dam	Too High	36		3	5	3
Fish Barrier	UP321202	Total	Dam	Too High	60		3	5	2
Fish Barrier	UP322201	Total	Dam	Too High	60		3	5	2
Fish Barrier	UP609001	Total	Instream pond	Too high	36		3	5	1
Fish Barrier	UP610402	Total	Dam	Too High	24		3	4	1
Fish Barrier	UP613204	Total	Road Crossing	Too High	40		3	4	1
Fish Barrier	UP616403	Total	Channel Alteration	Too Shallow		0.25	3	1	1
Fish Barrier	UP722303	Total	Trail bridge crossing	Too High	24		3	5	2
Fish Barrier	UP730302	Total	Road Crossing	Too High	12		3	5	1
Fish Barrier	UP731304	Total	Road Crossing	Too High	24		3	5	1
Fish Barrier	UP907102	Total	Road Crossing	Too Shallow		0.5	3	5	1
Fish Barrier	UP203201	Total	Dam	Too High	10	0	4	4	3
Fish Barrier	UP307203	Partial	Road Crossing	Too Shallow		0.25	4	3	1
Fish Barrier	UP309401	Total	Road Crossing	Too High	48		4	3	1
Fish Barrier	UP404304	Total	Road Crossing	Too High	12		4	3	1
Fish Barrier	UP404305	Total	Dam	Too High	48		4	3	1
Fish Barrier	UP405302	Total	Road Crossing	Too High/Too Shallow	12	2	4	3	2
Fish Barrier	UP405303	Total	Dam	Too High	36		4	3	2
Fish Barrier	UP410301	Total	Channel Alteration	Too High	36		4	3	3
Fish Barrier	UP502401	Total	Road Crossing	Too High	24		4	1	1
Fish Barrier	UP504402	Total	Channel Alteration	Too High	24		4	1	1
Fish Barrier	UP505402	Total	Road Crossing	Too High	52		4	1	1
Fish Barrier	UP509401	Total	Channel Alteration	Too High	12		4	1	1
Fish Barrier	UP509404	Total	Road Crossing	Too High	36		4	1	1
Fish Barrier	UP604306	Total	Underground stream	Too High	24		4	3	2
Fish Barrier	UP604308	Total	Dam	Too High	24		4	3	2
Fish Barrier	UP721202	Total	Road Crossing	Too High	180		4	5	1
Fish Barrier	UP728103	Total	Road Crossing	Too High	50		4	5	1

Fish Barriers- Upper Patuxent Watershed in Prince George's County

Problem	Site	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access
Fish Barrier	UP728104	Total	Road Crossing	Too Shallow		0.25	4	5	1
Fish Barrier	UP734304	Total	Road Crossing	Too Shallow		1	4	5	1
Fish Barrier	UP808302	Partial	Road Crossing	Too High/Too Shallow	6	1	4	3	2
Fish Barrier	UP810303	Total	Instream pond	Too high	50		4	3	1
Fish Barrier	UP831202	Total	Dam	Too High	72		4	3	2
Fish Barrier	UP864404	Total	Instream pond	Too High	52		4	3	1
Fish Barrier	UP900305	Total	Road Crossing	Too High	12		4	4	2
Fish Barrier	UP103302	Temporary	Debris Dam	Too High	36		5	1	2
Fish Barrier	UP103306	Temporary	Debris Dam	Too High	36		5	2	2
Fish Barrier	UP106401	Temporary	Debris Dam	Too Shallow		0.25	5	2	1
Fish Barrier	UP109404	Temporary	Debris Dam	Too High	12		5	2	1
Fish Barrier	UP312105	Temporary	Debris Dam	Too High			5	1	1
Fish Barrier	UP322203	Temporary	Debris Dam	Too High	36		5	2	1
Fish Barrier	UP411402	Total	Natural Falls	Too High	48		5	2	2
Fish Barrier	UP412401	Total	Natural Falls	Too Shallow		1	5	2	3
Fish Barrier	UP504408	Total	Natural Falls	Too High	24		5	1	4
Fish Barrier	UP504409	Total	Natural Falls	Too Shallow		1	5	3	4
Fish Barrier	UP505407	Temporary	Debris Dam	Too Shallow	0.25		5	1	1
Fish Barrier	UP506402	Total	Channel Alteration	Too High	12		5	1	1
Fish Barrier	UP506403	Temporary	Debris Dam	Too High	10		5	1	1
Fish Barrier	UP508405	Temporary	Debris Dam	Too High	10		5	2	3
Fish Barrier	UP509402	Temporary	Debris Dam	Too High	36		5	1	1
Fish Barrier	UP509403	Partial	Natural Falls	Too High	36		5	3	3
Fish Barrier	UP509406	Temporary	Debris Dam	Too Shallow		0.25	5	1	2
Fish Barrier	UP510401	Total	Natural Falls	Too Fast	20		5	3	3
Fish Barrier	UP511402	Temporary	Beaver dam	Too Shallow		1	5	1	2
Fish Barrier	UP511403	Temporary	Debris Dam	Too High	8		5	1	2
Fish Barrier	UP604311	Temporary	Debris Dam	Too High	12		5	2	2
Fish Barrier	UP604312	Temporary	Debris Dam	Too High	24		5	2	2
Fish Barrier	UP604314	Temporary	Debris Dam	Too High	36		5	3	2
Fish Barrier	UP604401	Total	Dam	Too High	36		5	5	1
Fish Barrier	UP604404	Total	Dam	Too High	10		5	4	1
Fish Barrier	UP605403	Total	Dam	Too High	8		5	5	1
Fish Barrier	UP614202	Total	Natural Falls	Too High	72		5	4	2

Fish Barriers- Upper Patuxent Watershed in Prince George's County

Problem	Site	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access
Fish Barrier	UP618204	Temporary	Debris Dam	Too High	12		5	1	5
Fish Barrier	UP620401	Temporary	Debris Dam	Too High	4		5	1	2
Fish Barrier	UP622401	Temporary	Debris Dam	Too Shallow		1	5	1	2
Fish Barrier	UP624104	Temporary	Debris Dam	Too High			5	1	3
Fish Barrier	UP624105	Temporary	Debris Dam	Too High			5	1	3
Fish Barrier	UP715301	Temporary	Debris Dam	Too High	24		5	2	2
Fish Barrier	UP715305	Temporary	Beaver dam	Too high	24		5	2	1
Fish Barrier	UP716301	Temporary	Beaver dam	Too High	36		5	1	4
Fish Barrier	UP718305	Temporary	Debris Dam	Too High	50		5	3	3
Fish Barrier	UP721206	Temporary	Debris Dam	Too High	36		5	1	3
Fish Barrier	UP723301	Total	Natural Falls	Too High	12		5	1	2
Fish Barrier	UP732201	Temporary	Debris Dam	Too High	18		5	1	2
Fish Barrier	UP737203	Temporary	Debris Dam	Too High	12		5	2	5
Fish Barrier	UP738202	Temporary	Debris Dam	Too High	6		5	1	3
Fish Barrier	UP738205	Temporary	Debris Dam	Too High	18		5	2	4
Fish Barrier	UP738206	Temporary	Debris Dam	Too High			5	1	3
Fish Barrier	UP738208	Total	Road Crossing	Too High			5	3	1
Fish Barrier	UP740304	Total	Dam	Too High	36		5	3	1
Fish Barrier	UP802303	Temporary	Debris Dam	Too High	24		5	1	3
Fish Barrier	UP802304	Temporary	Debris Dam	Too High	24		5	1	3
Fish Barrier	UP803302	Temporary	Debris Dam	Too High	24		5	1	1
Fish Barrier	UP804304	Partial	Channel Alteration	Too High	24		5	3	1
Fish Barrier	UP804306	Temporary	Debris Dam	Too High	36		5	1	1
Fish Barrier	UP804307	Temporary	Debris Dam	Too High	12		5	1	2
Fish Barrier	UP805305	Temporary	Debris Dam	Too High	24		5	1	2
Fish Barrier	UP805307	Temporary	Debris Dam	Too High	18		5	1	2
Fish Barrier	UP808301	Total	Natural Falls	Too High	24		5	1	3
Fish Barrier	UP809302	Temporary	Debris Dam	Too High	24		5	1	2
Fish Barrier	UP810301	Temporary	Debris Dam	Too High	36		5	2	2
Fish Barrier	UP811302	Temporary	Debris Dam	Too High	12		5	1	2
Fish Barrier	UP813409	Temporary	Debris Dam	Too Shallow		0.25	5	2	3
Fish Barrier	UP820201	Temporary	Beaver dam	Too High	36		5	2	1
Fish Barrier	UP824303	Temporary	Debris Dam	Too High	24		5	1	4
Fish Barrier	UP825301	Temporary	Debris Dam	Too High	18		5	1	2

Fish Barriers- Upper Patuxent Watershed in Prince George's County

Problem	Site	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access
Fish Barrier	UP828204	Temporary	Debris Dam	Too High	36		5	3	1
Fish Barrier	UP831201	Temporary	Debris Dam	Too High	13		5	1	3
Fish Barrier	UP835105	Temporary	Debris Dam	Too High	18		5	2	3
Fish Barrier	UP835202	Temporary	Beaver dam	Too High	6		5	2	2
Fish Barrier	UP836201	Temporary	Beaver dam	Too High	36		5	2	1
Fish Barrier	UP840102	Total	Trash	Too High	30		5	1	1
Fish Barrier	UP842201	Temporary	Debris Dam	Too High	36		5	3	3
Fish Barrier	UP842202	Temporary	Debris Dam	Too High	6		5	1	2
Fish Barrier	UP843202	Temporary	Debris Dam	Too High	36		5	2	2
Fish Barrier	UP843203	Temporary	Debris Dam	Too High	24		5	1	2
Fish Barrier	UP843205	Temporary	Debris Dam	Too High	18		5	3	2
Fish Barrier	UP846201	Temporary	Debris Dam	Too High	12		5	1	2
Fish Barrier	UP846205	Temporary	Debris Dam	Too High	36		5	2	2
Fish Barrier	UP847202	Temporary	Debris Dam	Too high	12		5	4	1
Fish Barrier	UP849203	Temporary	Debris Dam	Too High	12		5	2	1
Fish Barrier	UP850201	Temporary	Debris Dam	Too High	18		5	2	3
Fish Barrier	UP853102	Temporary	Debris Dam	Too High	18		5	2	1
Fish Barrier	UP854104	Temporary	Debris Dam	Too High	12		5	1	4
Fish Barrier	UP860203	Temporary	Debris Dam	Too High	24		5	2	2
Fish Barrier	UP864401	Temporary	Beaver dam	Too High	52		5	2	1
Fish Barrier	UP865403	Partial	Channel Alteration	Too Shallow		0.25	5	2	1
Fish Barrier	UP865406	Temporary	Debris Dam	Too Shallow		0.5	5	3	1
Fish Barrier	UP865407	Total	Channel Alteration	Too High	36		5	3	2
Fish Barrier	UP866402	Temporary	Debris Dam	Too Shallow		0.25	5	3	1
Fish Barrier	UP871110	Temporary	Debris Dam	Too High	8		5	1	2
Fish Barrier	UP871306	Temporary	Debris Dam	Too High	6		5	1	1
Fish Barrier	UP876304	Total	Dam	Too High	12		5	3	2
Fish Barrier	UP880104	Temporary	Debris Dam	Too High	6		5	1	2
Fish Barrier	UP883401	Temporary	Debris Dam	Too High	10		5	3	2
Fish Barrier	UP883402	Temporary	Beaver dam	Too Shallow		0.25	5	2	3
Fish Barrier	UP885402	Temporary	Beaver dam	Too Shallow		0.25	5	2	4
Fish Barrier	UP885407	Temporary	Beaver dam	Too Shallow		0.25	5	2	1
Fish Barrier	UP885410	Temporary	Beaver dam	Too High	52		5	2	1
Fish Barrier	UP886401	Temporary	Debris Dam	Too High	8		5	2	3

Fish Barriers- Upper Patuxent Watershed in Prince George's County

Problem	Site	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access
Fish Barrier	UP902301	Total	Natural Falls	Too High	18		5	1	4
Fish Barrier	UP903304	Total	Trail	Too High	6		5	2	2
Fish Barrier	UP909101	Temporary	Debris Dam	Too High	18		5	1	1
Fish Barrier	UP909104	Total	Natural Falls	Too High	12	0	5	5	5
Fish Barrier	UP911104	Total	Road Crossing	Too High	2		5	5	1
Fish Barrier	UP921401	Total	Natural Falls	Too High	48		5	4	1
Fish Barrier	UP926204	Temporary	Debris Dam	Too High	3		5	1	1
Fish Barrier	UP929405	Partial	Natural Falls	Too High	6		5	2	4
Fish Barrier	UP930404	Temporary	Debris Dam	Too Shallow		1	5	1	1

Erosion- Upper Patuxent Watershed in Prince George's County

Problem	Site	Type	Possible Cause	Length(ft)	Height(ft)	Land use right	Land use left	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion	UP109401	Downcutting	Below Road Crossing	3600	6	Shrubs/Small Trees	Lawn			1	2	3
Erosion	UP410303	Downcutting	Unknown	2700	10	Forest	Forest			1	5	4
Erosion	UP412402	Headcutting	Bend at Slope	2400	20	Shrubs/Small Trees	Shrubs/Small Trees			1	5	4
Erosion	UP508403	Headcutting	Below Road Crossing	3500	6	Shrubs/Small Trees	Shrubs/Small Trees			1	5	1
Erosion	UP614203	Headcutting	Unknown	700	12	Forest	Forest			1	4	3
Erosion	UP616402	Widening	Below Road Crossing	3800	20	Lawn	Lawn	Yes		1	5	1
Erosion	UP738209	Widening	Unknown	1500	12	Forest	Shrubs/Small Trees			1	5	1
Erosion	UP741202	Widening	Unknown	1200	6	Forest	Forest			1	5	3
Erosion	UP742201	Widening	Unknown	2500	8	Forest	Forest			1	5	1
Erosion	UP824302	Downcutting	Unknown	2000	6	Forest	Forest			1	3	4
Erosion	UP862105	Widening	unknown	6200	6	Forest	Forest			1	5	3
Erosion	UP863101	Widening	unknown	4000	6	Forest	Forest			1	5	4
Erosion	UP885404	Unknown	Below Road Crossing	4500	6	Shrubs/Small Trees	Shrubs/Small Trees			1	5	2
Erosion	UP308403	Downcutting	Channel Alteration	2000	10	Lawn	Paved			2	2	1
Erosion	UP624102	Widening	Below Road Crossing	400	15	Forest	Forest			2	3	4
Erosion	UP719301	Downcutting	Bend at Slope	900	9	Shrubs/Small Trees	Shrubs/Small Trees			2	4	2
Erosion	UP730306	Widening	Below Road Crossing	1300	5	Forest	Forest			2	3	3
Erosion	UP802302	Downcutting	unknown	1800	6	Forest	Forest			2	4	2
Erosion	UP882401	Unknown	Below Road Crossing	2300	10	Shrubs/Small Trees	Shrubs/Small Trees			2	3	2
Erosion	UP901301	Widening	Bend at Slope	3500	4	Forest	Forest			2	4	4
Erosion	UP907104	Downcutting	Unknown	1300	4	Forest	Shrubs/Small Trees			2	4	2
Erosion	UP911106	Widening	Unknown	4000	5	Paved	Forest	Yes		2	5	4
Erosion	UP106404	Widening	Below Road Crossing	200	8	Lawn	Shrubs/Small Trees			3	3	1
Erosion	UP110406	Widening	Unknown	100	8	Shrubs/Small Trees	Shrubs/Small Trees			3	3	2
Erosion	UP312101	Widening	Unknown	2200	3	Shrubs/Small Trees	Shrubs/Small Trees			3	4	2
Erosion	UP316203	Widening	Land Use Change	1600	4	Shrubs/Small Trees	Shrubs/Small Trees	Yes	paved lots, houses	3	3	1
Erosion	UP407302	Downcutting	Land Use Change	500	5	Forest	Forest			3	3	1
Erosion	UP409302	Downcutting	Unknown	500	5	Forest	Forest			3	3	5
Erosion	UP410304	Downcutting	Unknown	200	6	Forest	Forest			3	3	5
Erosion	UP411401	Downcutting	Land Use Change	600	8	Shrubs/Small Trees	Shrubs/Small Trees			3	2	3
Erosion	UP413402	Headcutting	Bend at Slope	150	6	Lawn	Shrubs/Small Trees			3	3	2
Erosion	UP504405	Widening	Channel Alteration	1500	4	Shrubs/Small Trees	Paved			3	5	1
Erosion	UP504407	Downcutting	Land Use Change	600	6	Shrubs/Small Trees	Shrubs/Small Trees			3	3	3

Erosion- Upper Patuxent Watershed in Prince George's County

Problem	Site	Type	Possible Cause	Length(ft)	Height(ft)	Land use right	Land use left	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion	UP505406	Widening	Land Use Change	600	8	Shrubs/Small Trees	Paved			3	3	1
Erosion	UP509407	Downcutting	Channel Alteration	800	6	Paved	Shrubs/Small Trees			3	3	1
Erosion	UP604309	Widening	Unknown	1000	6	Lawn	Lawn			3	4	2
Erosion	UP615204	Widening	Pipe Outfall	550	15	Shrubs/Small Trees	Shrubs/Small Trees			3	4	2
Erosion	UP624106	Widening	Unknown	4200	5	Forest	Forest			3	5	3
Erosion	UP720401	Widening	Below Road Crossing	400	5	Shrubs/Small Trees	Shrubs/Small Trees			3	3	2
Erosion	UP722301	Downcutting	Bend at Slope	550	6	Lawn	Lawn			3	3	2
Erosion	UP728102	Downcutting	Unknown	1200	3	Paved	Paved			3	2	1
Erosion	UP730307	Downcutting	Bend at Slope	400	6	Forest	Forest			3	3	3
Erosion	UP731302	Downcutting	Unknown	800	5	Forest	Lawn			3	3	2
Erosion	UP731306	Widening	Land Use Change	1750	5	Forest	Forest			3	3	1
Erosion	UP733302	Widening	Bend at Slope	800	4	Forest	Forest			3	3	3
Erosion	UP740302	Widening	Unknown	1000	3	Lawn	Lawn			3	3	1
Erosion	UP804303	Downcutting	unknown	600	5	Forest	Lawn			3	3	1
Erosion	UP809303	Downcutting	unknown	1000	5	Forest	Forest			3	3	2
Erosion	UP828202	Widening	Land Use Change	2300	3	Shrubs/Small Trees	Shrubs/Small Trees			3	4	2
Erosion	UP831203	Widening	below dam	2200	5	Shrubs/Small Trees	Shrubs/Small Trees			3	2	2
Erosion	UP835104	Widening	Bend at Slope	2500	4	Forest	Forest			3	5	3
Erosion	UP835201	Widening	unknown	800	5	Forest	Forest			3	2	3
Erosion	UP846204	Widening	Bend at Slope	1400	5	Forest	Forest			3	3	3
Erosion	UP853103	Widening	unknown	1800	4	Forest	Forest			3	3	4
Erosion	UP866401	Unknown	Land Use Change	1000	5	Shrubs/Small Trees	Shrubs/Small Trees			3	3	2
Erosion	UP871302	Widening	Unknown	400	4	Forest	Forest			3	3	3
Erosion	UP901304	Downcutting	Unknown	900	5	Forest	Forest			3	3	4
Erosion	UP903303	Downcutting	Land Use Change	1000	4	Lawn	Forest			3	3	3
Erosion	UP909103	Widening	Unknown	600	6	Crop Field	Forest			3	4	4
Erosion	UP924201	Widening	Bend at Slope	800	6	Lawn	Paved	Yes		3	4	1
Erosion	UP928402	Headcutting	Bend at Slope	600	30	Shrubs/Small Trees	Shrubs/Small Trees			3	3	3
Erosion	UP929403	Headcutting	Bend at Slope	400	6	Shrubs/Small Trees	Shrubs/Small Trees			3	3	2
Erosion	UP103305	Widening	Unknown	300	3.5	Lawn	Forest			4	3	2
Erosion	UP110404	Widening	Land Use Change	30	10	Shrubs/Small Trees	Shrubs/Small Trees	Yes		4	2	3
Erosion	UP618203	Headcutting	Unknown	80	18	Forest	Forest			4	4	5
Erosion	UP713305	Downcutting	Pipe Outfall	75	6	Lawn	Lawn			4	3	3

Erosion- Upper Patuxent Watershed in Prince George's County

Problem	Site	Type	Possible Cause	Length(ft)	Height(ft)	Land use right	Land use left	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion	UP719303	Downcutting	Unknown	300	4	Shrubs/Small Trees	Shrubs/Small Trees			4	3	2
Erosion	UP730301	Widening	Bend at Slope	100	10	Shrubs/Small Trees	Shrubs/Small Trees			4	3	1
Erosion	UP801302	Downcutting	unknown	400	5	Forest	Forest			4	3	1
Erosion	UP805302	Widening	Bend at Slope	300	4	Lawn	Lawn			4	3	1
Erosion	UP810302	Downcutting	Bend at Slope	100	6	Forest	Shrubs/Small Trees			4	4	2
Erosion	UP817404	Widening	Below Road Crossing	300	4	Lawn	Shrubs/Small Trees			4	3	1
Erosion	UP825302	Headcutting	Unknown	200	4	Forest	Forest			4	3	3
Erosion	UP830201	Widening	Land Use Change	450	4	Shrubs/Small Trees	Shrubs/Small Trees			4	3	2
Erosion	UP872301	Widening	Unknown	350	4	Forest	Forest			4	3	3
Erosion	UP880402	Headcutting	Pipe Outfall	100	8	Shrubs/Small Trees	Shrubs/Small Trees			4	2	1
Erosion	UP905301	Downcutting	Unknown	400	5	Forest	Forest			4	3	3
Erosion	UP921401	Widening	Bend at Slope	400	30	Shrubs/Small Trees	Shrubs/Small Trees			4	2	3
Erosion	UP926202	Widening	Bend at Slope	500	4	Paved	Crop Field			4	4	2
Erosion	UP312106	Downcutting	Unknown	700	2.5	Forest	Paved			5	1	2
Erosion	UP715303	Headcutting	Unknown	10	3	Forest	Forest			5	1	2
Erosion	UP805306	Downcutting	Bend at Slope	50	5	Shrubs/Small Trees	Forest			5	3	2
Erosion	UP905303	Headcutting	Unknown	150	4	Forest	Forest			5	3	5
Erosion	UP911101	Downcutting	Bend at Slope	40	4	Forest	Forest			5	1	4
Erosion	UP911105	Downcutting	Below Road Crossing	50	4	Forest	Forest			5	5	1

Inadequate Buffer- Upper Patuxent Watershed in Prince George's County

Problem	Site	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	Land Use Left	Land Use Right	Recently Established Buffer	Livestock	Severity	Correctability	Access
Inadequate Buffer	UP405301	Both	Both	0	0	400	1700	Lawn	Lawn	No	No	1	4	2
Inadequate Buffer	UP813407	Both	Both	0	0	1200	1200	Lawn	Lawn	No	No	1	2	3
Inadequate Buffer	UP869301	Both	Neither	0	0	1500	1500	Shrubs/Small Trees	Lawn	No	No	1	1	3
Inadequate Buffer	UP312104	Both	Neither	7	10	400	2200	Paved	Paved	No	No	2	5	1
Inadequate Buffer	UP313202	Both	Both	20	20	400	800	Shrubs/Small Trees	Shrubs/Small Trees	No	No	2	5	2
Inadequate Buffer	UP704302	Both	Both	0	0	2400	2400	Lawn	Lawn	No	No	2	3	1
Inadequate Buffer	UP713303	Both	Both	0	0	1300	1300	Lawn	Lawn	Yes	No	2	3	2
Inadequate Buffer	UP811301	Both	Both	0	0	700	700	Lawn	Lawn	No	No	2	3	1
Inadequate Buffer	UP104402	Left	Left	0		400		wetland	Shrubs/Small Trees	No	No	3	1	1
Inadequate Buffer	UP308404	Both	Both	0	0	400	2000	Multiflora rose	Paved	No	No	3	3	1
Inadequate Buffer	UP312107	Both	Both	15	7	400	700	Lawn	Forest	No	No	3	3	2
Inadequate Buffer	UP315203	Both	Neither	20	20	400	3300	Shrubs/Small Trees	Shrubs/Small Trees	No	No	3	5	2
Inadequate Buffer	UP604310	Both	Neither	0	0	1100	1100	Lawn	Lawn	No	No	3	3	2
Inadequate Buffer	UP616405	Left	Left	0		700		Lawn	Shrubs/Small trees	No	No	3	1	1
Inadequate Buffer	UP711301	Both	Neither	10	20	2500	2500	Shrubs/Small Trees	Shrubs/Small trees	No	No	3	4	1
Inadequate Buffer	UP718302	Both	Neither	20	20	1700	1700	Shrubs/Small Trees	Shrubs/Small trees	No	No	3	3	2
Inadequate Buffer	UP726401	Both	Both	0	0	200	1200	Lawn	Lawn	No	No	3	1	1
Inadequate Buffer	UP731301	Right	Neither		0		500	Forest	Lawn	No	No	3	2	2
Inadequate Buffer	UP804301	Left	Left	0		2100		Lawn	Forest	No	No	3	3	1
Inadequate Buffer	UP813402	Left	Left	0		1200		Paved	Shrubs/Small Trees	No	No	3	3	1
Inadequate Buffer	UP817402	Left	Left	0		1200		Lawn	Shrubs/Small Trees	No	No	3	2	2
Inadequate Buffer	UP832202	Left		0		650		Lawn	Shrubs/Small trees	No	No	3	4	1
Inadequate Buffer	UP840101	Both	Left	5		400		Paved	Multiflora rose	No	No	3	5	1
Inadequate Buffer	UP864402	Both	Both	0	0	400	400	Lawn	Lawn	No	No	3	2	1
Inadequate Buffer	UP871111	Both	Both	0	0	400	400	Lawn	Lawn	No	No	3	1	1
Inadequate Buffer	UP886403	Left		0		700		Pasture	Shrubs/Small trees	No	Horses	3	3	1
Inadequate Buffer	UP903301	Both	Both	0	0	700	700	Pasture	Pasture	No	Yes	3	3	2
Inadequate Buffer	UP926203	Both	Both	20	0	3000	3000	Shrubs/Small Trees	Lawn	No	No	3	2	2
Inadequate Buffer	UP102301	Left	Neither	5		800		Lawn	Forest	No	No	4	3	1
Inadequate Buffer	UP103304	Right	Neither		0		300	Forest	Forest	No	No	4	2	2
Inadequate Buffer	UP104301	Left	Neither	15	15	1200	1200	Lawn	Forest	No	No	4	2	2

Inadequate Buffer- Upper Patuxent Watershed in Prince George's County

Problem	Site	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	Land Use Left	Land Use Right	Recently Established Buffer	Livestock	Severity	Correctability	Access
Inadequate Buffer	UP200203	Both	Neither	25	25	400	1700	Shrubs/Small Trees	Shrubs/Small Trees	No	No	4	5	2
Inadequate Buffer	UP304202	Both	Neither	20	20	400	3400	Shrubs/Small Trees	Shrubs/Small Trees	No	No	4	3	2
Inadequate Buffer	UP401305	Both	Both	10	10	400	1100	Shrubs/Small Trees	Shrubs/Small Trees	No	No	4	3	2
Inadequate Buffer	UP504404	Left	Neither	0		400		Paved	Shrubs/Small trees	No	No	4	1	1
Inadequate Buffer	UP506401	Right	Neither		0		300	Shrubs/Small Trees	Paved	No	No	4	1	1
Inadequate Buffer	UP605401	Both	Both	0	0	1000	1000	Lawn	Lawn	No	No	4	2	2
Inadequate Buffer	UP607207	Both	Neither	0	0	20	400	Paved	Lawn	No	No	4	4	1
Inadequate Buffer	UP610001	Both	Both	0	0	400	400	Paved	Paved	No	No	4	2	1
Inadequate Buffer	UP619101	Left	Neither	10		600		Openfield;parking lot	Forest	No	No	4	1	1
Inadequate Buffer	UP620404	Right	Right		0		700	Forest	Stadium	No	No	4	1	1
Inadequate Buffer	UP713302	Right	Neither		0		300	Forest	Lawn	No	No	4	3	3
Inadequate Buffer	UP715302	Left	Neither	10		500		Shrubs/Small Trees	Forest	No	No	4	3	2
Inadequate Buffer	UP722304	Both	Neither	0	0	1100	1100	Lawn	shrubs & small trees	No	No	4	3	2
Inadequate Buffer	UP740303	Both	Neither	0	0	300	300	Lawn	Lawn	No	No	4	2	1
Inadequate Buffer	UP805301	Both	Neither	10	15	300	300	Lawn	Lawn	No	No	4	2	1
Inadequate Buffer	UP842202	Both	Both	5	20	400	400	Lawn	Lawn	No	No	4	3	1
Inadequate Buffer	UP853101	Left	Neither	0		800		Paved	Forest	No	Horses	4	5	1
Inadequate Buffer	UP857201	Both	Both	0	0	700	250	Rail road	Lawn	No	No	4	3	1
Inadequate Buffer	UP865404	Right	Right		0		400	Multiflora rose	Lawn	No	No	4	2	1
Inadequate Buffer	UP881404	Left	Left	0		300		Paved	Shrubs/Small Trees	No	Yes	4	1	1
Inadequate Buffer	UP900302	Both	Neither	30	0	600	800	Shrubs/Small Trees	Lumber yard	No	No	4	3	2
Inadequate Buffer	UP901302	Right	Neither		0		400	Forest	Shrubs/Small trees	No	No	4	2	4
Inadequate Buffer	UP904101	Right	Both		5		300	Forest	Pasture	No	No	4	1	2
Inadequate Buffer	UP905305	Left	Neither	10		300		Shooting range	Forest	No	No	4	2	2
Inadequate Buffer	UP911107	Right	Neither	10	7	300	500	Pasture	Paved	No	No	4	3	1
Inadequate Buffer	UP300201	Both	Both	0	0	400	500	Lawn	Lawn	No	No	5	1	1
Inadequate Buffer	UP613201	Both	Both	10	10	200	200	Paved	Paved	No	No	5	3	1
Inadequate Buffer	UP728101	Both	Both	20	30	200	200	Paved	Paved	No	No	5	5	1
Inadequate Buffer	UP728106	Both	Neither	10	20	400	300	Pond	crop field	No	No	5	1	1
Inadequate Buffer	UP824305	Right	Neither		30		100	Forest	Shrubs/Small trees	No	No	5	3	3
Inadequate Buffer	UP828203	Left	Left	10		400		baseball field	Forest	No	No	5	2	1

Inadequate Buffer- Upper Patuxent Watershed in Prince George's County

Problem	Site	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	Land Use Left	Land Use Right	Recently Established Buffer	Livestock	Severity	Correctability	Access
Inadequate Buffer	UP836205	Both	Both	0	0	250	250	Lawn	Lawn	No	No	5	1	1
Inadequate Buffer	UP851101	Right	Neither		0		200	Forest	Paved	No	No	5	1	1
Inadequate Buffer	UP862107	Left	Neither	0		150		Paved	Forest	No	No	5	5	1
Inadequate Buffer	UP871108	Left	Neither	20		150		Lawn	Forest	No	No	5	1	2
Inadequate Buffer	UP875303	Both	Both	0	0	1500	1500	Lawn	Lawn	No	No	5	2	2
Inadequate Buffer	UP903302	Right	Neither		0		150	Forest	Lawn	No	No	5	2	2
Inadequate Buffer	UP907101	Left	Both	20		1300		Lawn	Forest	No	No	5	1	1
Inadequate Buffer	UP908102	Left	Both	30		200		Crop field	Forest	No	No	5	1	1
Inadequate Buffer	UP909102	Left	Both	25		200		Crop field	Forest	No	No	5	1	2
Inadequate Buffer	UP910102	Both	Both	25	5	250	250	Paved	Lawn	No	No	5	3	1

Unusual Condition- Upper Patuxent Watershed in Prince George's County

Problem	Site	Describe	Description	Potential Cause	Severity	Correctability	Access
Unusual Condition	UP103301	Odor/Water Clarity/Sewage Discharge	Sewage leaking from top of manhole into water which is murky, gray, and has strong odor	sewage	1	4	2
Unusual Condition	UP907102	Sewage Discharge	stream blue-gray for a few hundred ft before reaching pipe outfall	sewage	2	5	2
Unusual Condition	UP103307		Stream stops due to debris in front of random culvert, water possibly running underneath all the debris?		3	4	3
unusual condition	UP205401	Sewage Discharge	Sewage smell, major erosion	Chanelized	3	5	2
Unusual Condition	UP504403	Piped Steam	Stream piped for 600ft. Has perennial flow.		3	3	1
Unusual Condition	UP508001	Piped stream	Stream piped for 800 ft.		3	5	2
Unusual Condition	UP604307	odor, scum, water color, red flock	Waxy film on top, red flock, smells like sewage, runs entire length of stream		3	3	2
Unusual Condition	UP604405	Piped Steam	Stream piped for 700ft. Has perennial flow.		3	3	1
Unusual Condition	UP614201	red flock, oil	Heavy gasoline smell, red flock	gas station	3	4	3
Unusual Condition	UP719302	scum, water color, red flock	Murky brown water, full of red flock, scum coating top		3	4	2
Unusual Condition	UP720203	Piped stream	Stream Piped for 1700 ft		3	3	2
Unusual Condition	UP723303	Water Clarity/Color	water murky/cloudy, foam on top. Landowner complains of change in color		3	4	2
Unusual Condition	UP730303		road wing wall cracked, collapsing into stream		3	3	1

Unusual Condition- Upper Patuxent Watershed in Prince George's County

Problem	Site	Describe	Description	Potential Cause	Severity	Correctability	Access
Unusual Condition	UP730304		pipe outfall exposed, rusting, coming apart		3	3	1
Unusual Condition	UP734306		concrete around culvert falling, collapsing into stream		3	4	1
Unusual Condition	UP738207	Sewage discharge	redish brown particle discharge, septic smell, not red flock		3	4	3
Unusual Condition	UP804308	Beaver Dam	Gigantic beaver dam has blocked stream totally and has created small lake wetland on other side	beavers	3	4	2
Unusual Condition	UP819401	Discharge	red oily discharge from man hole	man hole	3	3	2
Unusual Condition	UP824301		stream runs underground, lots of silt on top of stream, appears dry, could be fish barrier		3	5	3
Unusual Condition	UP841101		pond in front of industrial site. Holds run-off above stream. There is a land slide from industrial site-R&S construction company	industrial work site R&S Construction Co. Inc. Concrete Work (301)805-4922 (a neighbor of the site)	3	5	1
Unusual Condition	UP866403	excessive erosion	excessive erosion below manhole	man hole	3	1	1
Unusual Condition	UP885408		beaver flooding out more than 2000 ft	beaver near race track road	3	2	1
Unusual Condition	UP888402	Red Flock	Red Flock below remains of pipe	run-off, Bowie Race track storm water	3	2	1
Unusual Condition	UP509405	Piped Steam	Stream piped for 600ft.		4	5	1
Unusual Condition	UP615203	Red Flock	Red flock for 800ft	business and hwy upstream	4	4	1
Unusual Condition	UP718304	scum, water color, red flock	Murky, red flock, waxy scum on top	run-off?	4	2	2

Unusual Condition- Upper Patuxent Watershed in Prince George's County

Problem	Site	Describe	Description	Potential Cause	Severity	Correctability	Access
Unusual Condition	UP721204	red flock	red flock for 820ft		4	4	2
Unusual Condition	UP808303		erosion control is failing, black cloth and rip rap		4	3	2
Unusual Condition	UP833203	red flock	400ft	stormwater draining	4	3	3
Unusual Condition	UP836202	red flock	200ft	unknown	4	2	1
Unusual Condition	UP849202	red flock	2050ft	unknown	4	3	1
Unusual Condition	UP860201	red flock	2000ft	Below underground, part the stream, maybe road & house runoff	4	3	2
Unusual Condition	UP906103	odor, water color	water brown, slight odor, scum	development, construction	4	1	2
Unusual Condition	UP106402	oil		runoff development	5	2	1
Unusual Condition	UP203203	red flock	200 ft of red flock		5	3	3
Unusual Condition	UP618202	red flock	Red flock goes for 250 ft		5	3	5
Unusual Condition	UP704301	Piped Steam	Stream piped for 2400ft.		5	3	1
Unusual condition	UP730305		pipe outfall collapsed		5	3	1
Unusual Condition	UP738203	Odor	strong bengay scent covering several hundred ft, no apparent source		5	5	4
Unusual Condition	UP738208		piped stream for 100 ft		5	5	1

Unusual Condition- Upper Patuxent Watershed in Prince George's County

Problem	Site	Describe	Description	Potential Cause	Severity	Correctability	Access
Unusual Condition	UP828201	Red flock	Red Flock		5	3	3
Comment	UP110403		Massive erosion of right bank of stream				
Comment	UP312114		Pipe outfall 20 ft from right bank has steady water flow for 50 ft until reaching stream, possible red flock				
Comment	UP401301		Water running over thick orange film that covers a pipe				
Comment	UP404305		Culvert for road crossing with a dam behind it is backing up water				
Comment	UP405303		Culvert for road crossing with dam behind is backing up water				
Comment	UP413402		Tree Blockage	flooding			
Comment	UP415101		Stream not shown on field map but is in the stream layer sent from the county				
Comment	UP616404		SHA markers for wetland- trib not shown on maps				
Comment	UP737202		erosion connected to site 742201ES, ht 25ft				
Comment	UP737204		erosion connected to site 742201ES, ht 25 ft				
Comment	UP738201		erosion connected to site 741202ES, ht of 90ft				
Comment	UP810303	Fish Barrier	Pond causing fish barrier	unknown			
Comment	UP854105		stream in a different position than shown on map				

Unusual Condition- Upper Patuxent Watershed in Prince George's County

Problem	Site	Describe	Description	Potential Cause	Severity	Correctability	Access
Comment	UP869302		around stream all cleared due to power lines except for about 20 ft of multiflora rose, tagged as "wetlands"				
Comment	UP871304		collapsed remains of bridge near where stream channeled into pipe				
Comment	UP888404	Erosion	Erosion	Erosion, tree uprooted in stream			
Comment	UP404301		Pipe outfall placed on wrong map; should be located on map 405				

Channel Alteration- Upper Patuxent Watershed in Prince George's County

Problem	Site	Type	BottomWidth(in)	Length(ft)	Perennial Flow	Sedimentation	Veg in Channel	Road Crossing	LengthAbove(ft)	LengthBelow(ft)	Severity	Correctability	Access
Channel Alteration	UP810304	Concrete	60	450	Yes	No	No	No			2	4	1
Channel Alteration	UP404308	Earth channel	120	1100	Yes	Yes	No	No			3	3	2
Channel Alteration	UP204202	Concrete	24	250	Yes	No	No	No			4	5	1
Channel Alteration	UP605402	Earth channel	52	400	No	Yes	Yes	Below	200	200	4	2	1
Channel Alteration	UP705301	Rip-rap	84	110	Yes	No	Yes	Below		110	4	3	2
Channel Alteration	UP710302	Rip-rap	48	50	Yes	No	No	Both	25	25	4	3	1
Channel Alteration	UP718303	Rip-rap	5	50	Yes	No	Yes	No			4	3	2
Channel Alteration	UP721201	Rip-rap	24	400	No	No	Yes	No			4	2	2
Channel Alteration	UP836206	Rip-rap	36	200	No	No	Yes	Above	200		4	1	1
Channel Alteration	UP104401	Concrete blocks	52	200	Yes	No	Yes	No			5	1	1
Channel Alteration	UP109406	Concrete blocks	24	150	Yes	Yes	Yes	Below		150	5	3	2
Channel Alteration	UP318203	Rip-rap	96	200	Yes	No	No	Both	100	100	5	3	1
Channel Alteration	UP410302	Rip-rap	36	60	Yes	Yes	No	No			5	3	3
Channel Alteration	UP504401	Concrete	12	100	Yes	No	Yes	No			5	1	1
Channel Alteration	UP504406	Concrete	8	20	No	Yes	No	No			5	3	3
Channel Alteration	UP508402	Rip-rap	16	600	Yes	Yes	Yes	above	300	300	5	2	1
Channel Alteration	UP613202	Earth channel	80	500	No	Yes	Yes	No			5	2	1
Channel Alteration	UP619104	Metal pipe	36	60	Yes	Yes	No	No			5	3	1
Channel Alteration	UP620402	Rip-rap	12	30	Yes	Yes	No	No			5	1	2
Channel Alteration	UP718301	Rip-rap	24	100	Yes	No	No	Below		100	5	3	1
Channel Alteration	UP720201	Rip-rap	48	20	No	No	Yes	No			5	3	1
Channel Alteration	UP728107	Earth channel	18	200	Yes	Yes	No	No			5	1	1
Channel Alteration	UP817403	Gabion	24	300	Yes	Yes	No	Below		300	5	2	1
Channel Alteration	UP826301	Rip-rap	72	100	No	No	No	Below		100	5	3	1
Channel Alteration	UP865405	Rip-rap	8	100	Yes	Yes	No	Below		100	5	2	1
Channel Alteration	UP875302	Earth channel	24	700	No	No	Yes	Below		700	5	2	1
Channel Alteration	UP876301	Rip-rap	48	50	No	No	No	No			5	2	2
Channel Alteration	UP876302	Concrete	12	600	No	No	No	No			5	3	4
Channel Alteration	UP876305	Rip-rap	120	50	No	Yes	No	No			5	1	2
Channel Alteration	UP881402	Stone Blocks	82	200	Yes	Yes	Yes	No			5	3	3
Channel Alteration	UP886402	Rip-rap	52	500	Yes	Yes	No	No			5	3	2

Trash Dumping- Upper Patuxent Watershed in Prince George's County

Problem	Site	Type	Truckloads	Other measure	Extent	Volunteer Project?	Owner Type	Owner Name	Severity	Correctability	Access
Trash Dumping	UP102303	Yard Waste	7		Single Site	Yes	Public		3	2	3
Trash Dumping	UP109403	Tires	3		Single Site	Yes	Unknown		3	2	2
Trash Dumping	UP110401	Residential	3		Large Area	Yes	Unknown		3	2	2
Trash Dumping	UP110405	Residential/Yard Waste	4	100 ft	Large Area	Yes	Unknown		3	2	3
Trash Dumping	UP404303	Yard Waste	10		Single Site	Yes	Unknown		3	2	3
Trash Dumping	UP730308	Residential	4		Large Area	No	Private		3	3	3
Trash Dumping	UP731303	Tires/Appliances	5		Single Site	No	Unknown		3	3	3
Trash Dumping	UP734302	Old farm machines	5		Large Area	No	Private		3	3	3
Trash Dumping	UP734303	Yard Waste		5 dumptrucks	Single Site	No	Private		3	3	2
Trash Dumping	UP813408	Construction	3		Large Area	Yes	Unknown		3	2	3
Trash Dumping	UP886406	Residential/Yard Waste	8		Large Area	Yes	Unknown		3	2	2
Trash Dumping	UP888401	Yard Waste/Tires	15		Large Area	Yes	Unknown		3	2	1
Trash Dumping	UP900303	Lumber		7 dumptrucks	Large Area	No	Private		3	3	2
Trash Dumping	UP905304	Residential	4		Large Area	Yes	Private		3	2	2
Trash Dumping	UP622101	Residential	1		Single Site	No	Public		4	3	5
Trash Dumping	UP715305	Yard Waste	3		Single Site	Yes	Private		4	2	3
Trash Dumping	UP723302	Yard Waste	3		Single Site	Yes	Private		4	2	3
Trash Dumping	UP731305	Tires/Appliances		3 dumptrucks	Single Site	No	Private		4	3	2
Trash Dumping	UP834401	Floatables	3		Large Area	Yes	Unknown		4	1	3
Trash Dumping	UP836203	Residential	2		Single Site	Yes	Public		4	1	3
Trash Dumping	UP841102	Industrial	1		Large Area	Yes	Private	Porto Construction/other sites	4	3	2
Trash Dumping	UP885405	Mixed	2		Large Area	Yes	Unknown		4	2	4
Trash Dumping	UP103303	Yard Waste	3		Single Site	Yes	Unknown		5	1	2
Trash Dumping	UP107401	Floatables	1		Single Site	Yes	Private		5	2	2
Trash Dumping	UP322204	Floatables	1		Single Site	Yes	Public		5	1	1
Trash Dumping	UP607206	Residential	1		Large Area	Yes	Unknown		5	1	2
Trash Dumping	UP801301	Residential	2		Single Site	Yes	Private		5	1	3
Trash Dumping	UP803301	Residential	2		Single Site	Yes	Private		5	1	3
Trash Dumping	UP881401	Residential	2		Single Site	Yes	Private		5	1	3
Trash Dumping	UP911102	Residential/Tires	1		Single Site	Yes	Private		5	1	1
Trash Dumping	UP926201	Residential/Yard Waste	1		Single Site	Yes	Private		5	1	2

Exposed Pipes- Upper Patuxent Watershed in Prince George's County

Problem	Site	Location of Pipe	Type	Diameter(in)	Length(ft)	Purpose	Discharge	Color	Odor	Severity	Correctability	Access
Exposed Pipe	UP814401	Above stream	Smooth metal	2	10	Water supply	Yes	clear	none	2	3	1
Exposed Pipe	UP885409	Exposed manhole	Smooth metal	24	3	Sewage	Yes	clear	Sewage	2	1	1
Exposed Pipe	UP104305	Bottom of stream	Smooth metal	12	5	Unknown	No			3	4	2
Exposed Pipe	UP604402	Above stream	Smooth metal	12	25	Sewage	No		fishy	3	4	1
Exposed Pipe	UP620407	Along stream bank	Concrete	48	6	Unknown	Yes	soapy		3	3	2
Exposed Pipe	UP809301	Bottom of stream	Smooth metal	12	2	Sewage	No		none	3	4	2
Exposed Pipe	UP814404	Bottom of stream	Plastic	2	15	Unknown	No			3	1	1
Exposed Pipe	UP864001	Exposed manhole	Metal manhole	36	3	Sewage	No			3	3	1
Exposed Pipe	UP314203	Exposed manhole	Metal manhole	36	3	Sewage	No			4	1	1
Exposed Pipe	UP322202	Above stream	Smooth metal	6	25	Unknown	No			4	4	2
Exposed Pipe	UP508401	Along stream bank	Smooth metal	12	2	Unknown	No		Sewage	4	3	2
Exposed Pipe	UP604313	Bottom of stream	Smooth metal	2	3	Unknown	No			4	3	2
Exposed Pipe	UP721203	Exposed manhole	Metal manhole	36	2	Sewage	No			4	1	1
Exposed Pipe	UP814403	Bottom of stream	Plastic	6	4	Unknown	No		none	4	1	1
Exposed Pipe	UP881403	Exposed manhole	Metal manhole	24	2	Sewage	No			4	1	2
Exposed Pipe	UP110402	Along stream bank	Smooth metal	6	8	Unknown	No			5	3	3
Exposed Pipe	UP201201	Exposed manhole	Metal manhole	32	1	Sewage	No			5	1	2
Exposed Pipe	UP308401	Exposed manhole	Smooth metal	24	1	Stormwater	No			5	1	1
Exposed Pipe	UP319202	Exposed manhole	Metal manhole	36	1	Sewage	No			5	1	3
Exposed Pipe	UP607203	Exposed manhole	Metal manhole	24	2.5	Sewage	No			5	1	1
Exposed Pipe	UP616401	Exposed manhole	Corrugated metal	24	2	Sewage	No			5	1	1
Exposed Pipe	UP616407	Exposed manhole	Smooth metal	24	4	Stormwater	No			5	1	1
Exposed Pipe	UP720202	Exposed manhole	Metal manhole	36	2	Sewage	No			5	1	1
Exposed Pipe	UP843204	Bottom of stream	Smooth metal	24	2	Sewage	No			5	3	2
Exposed Pipe	UP885401	Exposed manholes	Metal manhole	24	1	Sewage	No		Sewage	5	2	4
Exposed Pipe	UP885406	Exposed manhole	Metal manhole	24	3	Sewage	No		Sewage	5	1	1

In/Near Stream Construction- Upper Patuxent Watershed in Prince George's County

Problem	Site	Type of Activity	Sediment Control	Why, if inadequate	Excess Sediment?	Length	Company	Location	Severity
Construction	UP829202	Residential	Inadequate	Depositing in stream, silt fense not sufficient	Yes	1500		450 and Martha's Choice Rd	3
Construction	UP906102	Residential	Adequate		No			Stan fey rd	5

Representative Sites A

Problem	Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation
Green Branch											
Representative Site	UP602202	Marginal	Poor	Poor	Optimal	Suboptimal	Poor	Suboptimal	Optimal	Optimal	Optimal
Representative Site	UP603301	Poor	Poor	Marginal	Optimal	Suboptimal	Poor	Suboptimal	Suboptimal	Marginal	Marginal
Representative Site	UP610403	Marginal	Poor	Poor	Marginal	Marginal	Marginal	Optimal	Marginal	Suboptimal	Marginal
Representative Site	UP614204	Suboptimal	Marginal	Marginal	Optimal	Suboptimal	Suboptimal	Marginal	Poor	Poor	Optimal
Representative Site	UP618201	Marginal	Poor	Marginal	Optimal	Suboptimal	Marginal	Suboptimal	Poor	Marginal	Optimal
Representative Site	UP618205	Marginal	Poor	Marginal	Optimal	Suboptimal	Poor	Suboptimal	Optimal	Marginal	Optimal
Representative Site	UP619103	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Poor	Optimal
Representative Site	UP622402	Marginal	Poor	Poor	Optimal	Marginal	Marginal	Suboptimal	Poor	Poor	Suboptimal
Representative Site	UP624103	Suboptimal	Marginal	Suboptimal	Optimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Marginal	Optimal
Representative Site	UP624107	Poor	Poor	Marginal	Optimal	Optimal	Marginal	Optimal	Suboptimal	Suboptimal	Optimal
Average		**Marginal**	**Poor**	**Marginal**	**Optimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Marginal**	**Suboptimal**
Honey Branch											
Representative Site	UP925201	Suboptimal	Suboptimal	Marginal	Optimal	Optimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Poor
Representative Site	UP928401	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal
Average		**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Optimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Suboptimal**	**Suboptimal**
Horsepen Branch											
Representative Site	UP805304	Marginal	Poor	Marginal	Optimal	Marginal	Marginal	Suboptimal	Marginal	Suboptimal	Suboptimal
Representative Site	UP818401	Marginal	Marginal	Poor	Suboptimal	Marginal	Marginal	Optimal	Suboptimal	Optimal	Suboptimal
Representative Site	UP824304	Suboptimal	Marginal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Marginal	Suboptimal
Representative Site	UP830202	Marginal	Poor	Marginal	Optimal	Marginal	Marginal	Suboptimal	Suboptimal	Suboptimal	Optimal
Representative Site	UP832203	Suboptimal	Poor	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Marginal	Suboptimal	Poor
Representative Site	UP835107	Poor	Poor	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal	Marginal	Suboptimal	Optimal
Representative Site	UP835203	Marginal	Marginal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Marginal	Optimal
Representative Site	UP838101	Suboptimal	Poor	Optimal	Optimal	Marginal	Suboptimal	Suboptimal	Marginal	Marginal	Optimal
Representative Site	UP841201	Poor	Poor	Marginal	Optimal	Optimal	Marginal	Suboptimal	Optimal	Optimal	Optimal
Representative Site	UP843201	Poor	Poor	Poor	Optimal	Marginal	Marginal	Marginal	Marginal	Marginal	Suboptimal
Representative Site	UP846202	Marginal	Poor	Marginal	Optimal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal
Representative Site	UP849204	Poor	Poor	Suboptimal	Optimal	Marginal	Suboptimal	Suboptimal	Marginal	Marginal	Optimal
Representative Site	UP850202	Marginal	Marginal	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal	Marginal	Poor	Optimal
Representative Site	UP851102	Marginal	Marginal	Marginal	Suboptimal	Suboptimal	Marginal	Optimal	Suboptimal	Suboptimal	Optimal
Representative Site	UP854103	Marginal	Suboptimal	Marginal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Poor	Optimal
Representative Site	UP862106	Suboptimal	Marginal	Suboptimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Poor	Optimal
Representative Site	UP863102	Suboptimal	Marginal	Suboptimal	Optimal	Poor	Suboptimal	Suboptimal	Marginal	Poor	Optimal
Representative Site	UP871109	Suboptimal	Suboptimal	Suboptimal	Optimal	Marginal	Optimal	Suboptimal	Suboptimal	Marginal	Optimal
Representative Site	UP871301	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Optimal	Optimal	Suboptimal	Suboptimal
Representative Site	UP885403	Marginal	Poor	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Optimal
Representative Site	UP888403	Suboptimal	Marginal	Suboptimal	Suboptimal	Poor	Suboptimal	Suboptimal	Marginal	Suboptimal	Marginal
Average		**Marginal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Marginal**	**Marginal**	**Suboptimal**

Representative Sites A

Problem	Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation
Marsh Branch											
Representative Site	UP409301	Marginal	Marginal	Marginal	Optimal	Marginal	Optimal	Suboptimal	Marginal	Poor	Suboptimal
Representative Site	UP412403	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Marginal	Marginal	Marginal
Average		**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Marginal**	**Optimal**	**Suboptimal**	**Marginal**	**Marginal**	**Suboptimal**
Mill Branch											
Representative Site	UP705302	Marginal	Marginal	Suboptimal	Optimal	Optimal	Marginal	Suboptimal	Optimal	Optimal	Optimal
Representative Site	UP719304	Marginal	Poor	Marginal	Optimal	Suboptimal	Marginal	Suboptimal	Marginal	Marginal	Suboptimal
Representative Site	UP721205	Suboptimal	Suboptimal	Marginal	Optimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Marginal	Optimal
Representative Site	UP726402	Poor	Poor	Marginal	Optimal	Optimal	Poor	Optimal	Suboptimal	Optimal	Suboptimal
Representative Site	UP730309	Marginal	Poor	Suboptimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Marginal	Optimal
Representative Site	UP733301	Suboptimal	Marginal	Marginal	Optimal	Suboptimal	Marginal	Optimal	Optimal	Suboptimal	Optimal
Representative Site	UP734301	Poor	Poor	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Marginal	Poor	Optimal
Representative Site	UP737201	Marginal	Marginal	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal	Marginal	Marginal	Optimal
Representative Site	UP738204	Suboptimal	Marginal	Suboptimal	Optimal	Marginal	Suboptimal	Optimal	Poor	Poor	Optimal
Average		**Marginal**	**Marginal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Marginal**	**Optimal**
Mount Nebo Branch											
Representative Site	UP901303	Poor	Poor	Suboptimal	Optimal	Optimal	Poor	Optimal	Marginal	Poor	Suboptimal
Representative Site	UP905302	Poor	Poor	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Marginal	Optimal
Representative Site	UP906101	Marginal	Poor	Marginal	Optimal	Optimal	Poor	Optimal	Optimal	Poor	Suboptimal
Representative Site	UP908101	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Optimal	Suboptimal	Marginal	Optimal
Representative Site	UP910101	Marginal	Marginal	Marginal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Optimal
Representative Site	UP911103	Poor	Poor	Poor	Optimal	Optimal	Dry	Dry	Optimal	Optimal	Optimal
Average		**Marginal**	**Marginal**	**Marginal**	**Optimal**	**Optimal**	**Marginal**	**Optimal**	**Suboptimal**	**Marginal**	**Optimal**
Tributary 1											
Representative Site	UP104302	Marginal	Poor	Marginal	Optimal	Marginal	Marginal	Suboptimal	Suboptimal	Suboptimal	Marginal
Representative Site	UP109402	Suboptimal	Suboptimal	Suboptimal	Optimal	Marginal	Suboptimal	Marginal	Marginal	Poor	Marginal
Representative Site	UP111401	Poor	Poor	Marginal	Suboptimal	Poor	Suboptimal	Suboptimal	Suboptimal	Marginal	Suboptimal
Average		**Marginal**	**Marginal**	**Marginal**	**Optimal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Marginal**	**Marginal**
Tributary 2											
Representative Site	UP203204	Optimal	Marginal	Marginal	Optimal	Suboptimal	Poor	Suboptimal	Optimal	Optimal	Optimal
Tributary 3											
Representative Site	UP301201	Poor	Poor	Poor	Suboptimal	Marginal	Poor	Optimal	Optimal	Optimal	Poor
Representative Site	UP304201	Marginal	Marginal	Marginal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Marginal
Representative Site	UP307204	Poor	Poor	Suboptimal	Suboptimal	Marginal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative Site	UP309103	Suboptimal	Marginal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal
Representative Site	UP310205	Marginal	Marginal	Marginal	Suboptimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Marginal
Representative Site	UP313101	Marginal	Marginal	Marginal	Suboptimal	Marginal	Marginal	Suboptimal	Optimal	Suboptimal	Marginal
Representative Site	UP314201	Marginal	Marginal	Marginal	Suboptimal	Suboptimal	Marginal	Suboptimal	Poor	Suboptimal	Suboptimal
Representative Site	UP315202	Marginal	Poor	Poor	Suboptimal	Marginal	Marginal	Optimal	Suboptimal	Suboptimal	Marginal
Representative Site	UP317203	Suboptimal	Marginal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Poor	Suboptimal
Representative Site	UP319201	Suboptimal	Poor	Marginal	Suboptimal	Marginal	Marginal	Suboptimal	Suboptimal	Suboptimal	Optimal
Representative Site	UP321201	Poor	Poor	Suboptimal	Optimal	Poor	Optimal	Suboptimal	Optimal	Suboptimal	Optimal
Representative Site	UP322205	Marginal	Poor	Marginal	Optimal	Poor	Suboptimal	Suboptimal	Optimal	Optimal	Optimal
Average		**Marginal**	**Poor**	**Marginal**	**Suboptimal**	**Marginal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Suboptimal**

Representative Sites A

Problem	Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation
Tributary 4											
Representative Site	UP505404	Marginal	Suboptimal	Marginal	Marginal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative Site	UP511401	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Suboptimal	Marginal	Optimal
		Suboptimal	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Suboptimal**	**Optimal**

Representative Sites B

Problem	Site	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type
Green Branch								
Representative Site	UP602202		36			3		Silt
Representative Site	UP603301							Sand
Representative Site	UP610403	6	36	4	2	10	4	cobble
Representative Site	UP614204	4	36	48	1	8	48	Gravel
Representative Site	UP618201	36	52	36	3	2	8	Sand
Representative Site	UP618205		54			1		Silt
Representative Site	UP619103	24	30	60	1	6	24	cobble
Representative Site	UP622402	12	24	6	8	48	4	Sand
Representative Site	UP624103	12	60	70	3	6	12	Sand
Representative Site	UP624107							Sand
Honey Branch								
Representative Site	UP925201	36	48	96	8	4	40	Sand
Representative Site	UP928401	4	6	48	8	12	12	Gravel
Horsepen Branch								
Representative Site	UP805304	36	36	72	2	4	12	Silt
Representative Site	UP818401	4	10	6	1	24	4	Silt
Representative Site	UP824304	60	48	60	2	3	12	Silt
Representative Site	UP830202	18	18	18	12	8	12	Silt
Representative Site	UP832203	36	42	42	12	8	14	Silt
Representative Site	UP835107	12	108	108	4	10	18	Silt
Representative Site	UP835203	24	48	48	1	4	12	Gravel
Representative Site	UP838101	36	96	96	6	4	24	Sand
Representative Site	UP841201	14	24		1	2	3	Silt
Representative Site	UP843201	12	18	36	1	2	4	Sand
Representative Site	UP846202	12	36	60	1	2	12	Silt
Representative Site	UP849204	12	48	72	4	4	12	Silt
Representative Site	UP850202	20	72	144	3	7	36	Silt
Representative Site	UP851102	36	84		4	6	8	Silt
Representative Site	UP854103	30	36	48	1	4	12	Gravel
Representative Site	UP862106	24	84	84	6	8	18	Silt
Representative Site	UP863102	24	144	144	4	4	12	Gravel
Representative Site	UP871109	60	84	180	3	3	36	Gravel
Representative Site	UP871301	6	36	48	1.5	2	6	Gravel
Representative Site	UP885403	6	24	48	24	15	52	sand
Representative Site	UP888403	6	15	12	48	6	52	Sand

Representative Sites B

Problem	Site	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type
Marsh Branch								
Representative Site	UP409301	48	96	24	1	6	18	bedrock
Representative Site	UP412403	24	12	6	4	10	8	Sand
Mill Branch								
Representative Site	UP705302		30			2		Silt
Representative Site	UP719304	24	40	36	3	12	12	Silt
Representative Site	UP721205	36	48	196	1	2	18	Sand
Representative Site	UP726402	4	6	2	8	7	2	Silt
Representative Site	UP730309	120	120	48	2	12	24	Sand
Representative Site	UP733301	24	36	48	2	6	12	Gravel
Representative Site	UP734301			60			6	Silt
Representative Site	UP737201		96	96		7	26	Silt
Representative Site	UP738204	24	60	72	3	7	12	Gravel
Mount Nebo Branch								
Representative Site	UP901303		72			10		Silt
Representative Site	UP905302	24	36		1	2		Silt
Representative Site	UP906101		4					Sand
Representative Site	UP908101	84	120		1.5	27		bedrock
Representative Site	UP910101	56	60	60	2	4	18	Sand
Representative Site	UP911103							Sand
Tributary 1								
Representative Site	UP104302		36	48		2	30	Sand
Representative Site	UP109402	18	12	4	10	12	8	Gravel
Representative Site	UP111401	10	8	4	16	10	8	Sand
Tributary 2								
Representative Site	UP203204	6	72		2	1		cobble
Tributary 3								
Representative Site	UP301201	3	24		1	1		Silt
Representative Site	UP304201	12	36	48	1	2	4	Gravel
Representative Site	UP307204		48	36		4	8	Silt
Representative Site	UP309103	12	56	30	3	6	18	Sand
Representative Site	UP310205	12	84	36	1	4	8	Gravel
Representative Site	UP313101	24	36		1	3		Sand
Representative Site	UP314201	12	24	48	1	2	12	Gravel
Representative Site	UP315202	48	96	48	2	4	12	Silt
Representative Site	UP317203	36	96	108	4	4	36	Gravel
Representative Site	UP319201	48	48	36	2	2	8	Silt
Representative Site	UP321201	30	120	84	4	8	24	Silt
Representative Site	UP322205	12	108	36	3	7	36	sand

Representative Sites B

Problem	Site	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type
Tributary 4								
Representative Site	UP505404	12	48	6	6	4	10	Silt
Representative Site	UP511401	52	24	8	6	8	4	bedrock

Stream Segment	Channel Alteration	Construction	Erosion	Exposed Pipes	Fish Barrier	Inadequate Buffer	Pipe Outfall	Representative Sites	Trash Dumping	Unusual Conditio	Total
Green Branch	4		7	6	19	8	20	10	2	5	81
Honey Branch			4		3	1		2	1		11
Horsepen Branch	11	1	25	10	54	24	57	21	10	13	226
Marsh Branch	2		7		7	2	13	2	1		34
Mill Branch	7		17	2	20	12	19	9	7	13	106
Mount Nebo Branch		1	11		8	11	5	6	3	2	47
Tributary 1	2		5	2	7	4	11	3	6	3	43
Tributary 2	1			1	1	1	18	1		2	25
Tributary 3	1		4	4	9	7	49	12	1		87
Tributary 4	3		5	1	17	2	5	2		3	38