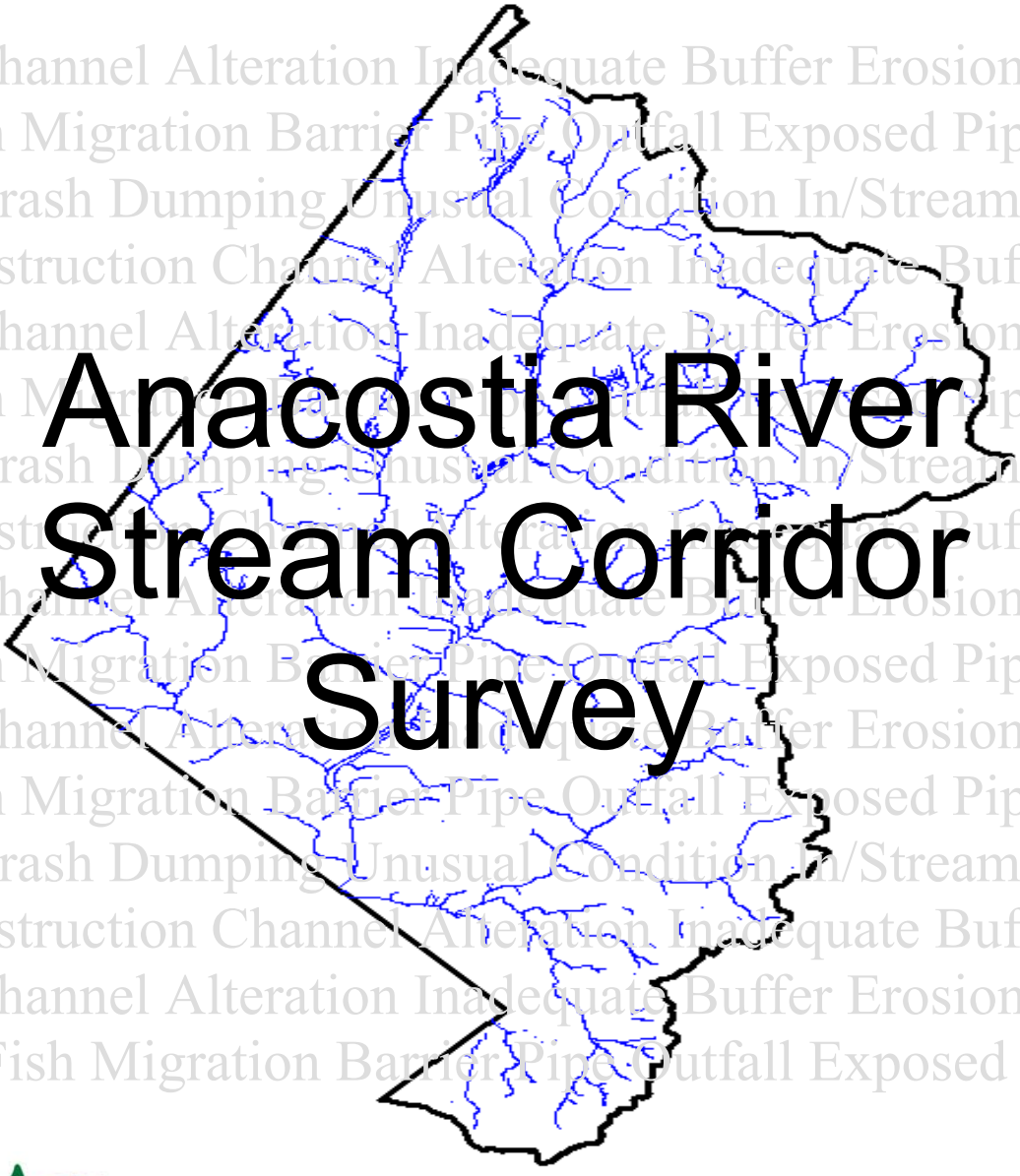

Anacostia River Stream Corridor Survey

Maryland Department of Natural Resources
Watershed Services
June 2005

Robert L. Ehrlich, Jr.
Governor

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A Message To Maryland Citizens

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ANACOSTIA RIVER STREAM CORRIDOR ASSESSMENT

BY

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Watershed Assessment and Targeting Division
Watershed Services Unit
Maryland Department of Natural Resources

2005

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SUMMARY

In 1998, the Maryland Clean Water Action Plan identified the Anacostia River watershed as one of the State's water bodies that did not meet water quality requirements. In response to this finding, the Maryland Department of Natural Resources (DNR) and Prince George's County formed a partnership to develop a Watershed Restoration Action Strategy (WRAS) for the Anacostia River. The following Stream Corridor Assessment (SCA) survey is part of the WRAS development process.

The SCA survey provides descriptive and positional data for potential environmental problems along a watershed's non-tidal stream network. Developed by DNR's Watershed Services Unit, the survey is a watershed management tool to identify environmental problems and help prioritize restoration opportunities on a watershed basis. As part of the survey, specially trained personnel walk a watershed's streams and record data and the location for several environmental problems that can be easily observed within the stream corridor. Each potential problem site is ranked on a scale of one to five for its severity, correctability, and access for restoration work.

SCA survey fieldwork for the Anacostia River began in November 2003 and was completed by May 2004. To complete the survey, field crews walked approximately 76 miles of streams in the 197 miles of the Anacostia River. Over the streams assessed, survey teams identified 756 potential environmental problem sites. At the time of the survey, the most frequently observed potential problem site was pipe outfalls reported at 378 sites. Other potential environmental problems recorded during the survey included: 85 inadequately forested stream buffers, 69 erosion sites, 68 fish barriers, 62channel alterations, 58 exposed pipes, 18 trash dumping sites, 15 unusual conditions, and 3 in- or near-stream construction sites (Table 1). Opportunities exist to restore potential problem sites in all categories to increase fish and wildlife habitat, other natural resources, and resource services. Additionally, crews recorded descriptive habitat condition data at 46 representative sites.

The Stream Corridor Assessment Survey is a rapid overview of the entire stream network in order to determine the location of potential environmental problems and to collect some basic habitat information about its streams. The value of the present survey is its help in placing individual stream problems into their watershed context and its potential common use among resource managers and land-use planners to cooperatively and consistently prioritize future restoration work. Results of the present survey will be given to the Anacostia River Watershed WRAS committee, which is developing a Watershed Restoration Action Strategy for the Anacostia River. Information on the Anacostia River Watershed Action Strategy can be found on the Department of Natural Resources' website (www.dnr.maryland.gov/watershed/wras).

ACKNOWLEDGEMENTS

Without the hard work and dedication of the Chesapeake Bay Restoration Crew of the Maryland Conservation Corps, this survey would not have been possible. The crew chief during the survey was Tina Stevens. The crewmembers were Dorothy Vauls, Jim Quinn, Marcel Demers, Veronica Valeriano, and Michelle Hyun.

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INTRODUCTION

In 1998, Maryland's Clean Water Action Plan identified bodies of water that failed to meet water quality requirements or other natural resource goals. One of the areas identified in the report was the Anacostia River watershed. This watershed encompasses approximately 55,123 acres of land the Coastal Plain of Maryland (Figure 1). In response to the findings of the Maryland Clean Water Action Plan, the Maryland Department of Natural Resources formed a partnership with Prince George's County to assess and improve environmental conditions in the Anacostia River. The main goal of this partnership is to develop and implement a Watershed Restoration Action Strategy (WRAS) for the Anacostia River.

Located in western Prince George's County, the watershed covers approximately 55,000 acres of land (86 square miles). Figure 2 shows a digital orthophoto map of the watershed. Figure 3 shows the same watershed boundary superimposed on a 7.5 minute USGS topographic quadrangle maps. Figure 4 shows the boundaries of the sub-watersheds surveyed.

The first step in developing a Restoration Action Strategy for this watershed is to complete an overall assessment of the condition of the watershed and the streams it contains. This initial step was accomplished using three approaches. First, a watershed characterization was completed that compiles and analyzes existing water quality, land use, and living resource data about the watershed (Shanks, 2005). Secondly, a synoptic water quality survey, as well as surveys of the fish and macroinvertebrate communities, was conducted at selected stations throughout the watershed to provide information on the present condition of aquatic resources (Primrose, 2005). Lastly, a Stream Corridor Assessment (SCA) survey was completed for the stream network to provide specific information on the present location of potential environmental problems and restoration opportunities. This report details the results of the Anacostia Stream Corridor Assessment Survey and highlights potential restoration opportunities within the watershed based on the survey.

Survey teams walked over 76 miles of the 197 miles of the Anacostia River from November 2003 to May 2004**.** At each site during the survey, field crews collected descriptive data, recorded the location on field maps, and took a photograph to document each potential environmental problem observed. As an aid to prioritizing future restoration work, crews rated all problem sites on a scale of one to five in three categories: 1) how *severe* the problem is compared to others in its category; 2) how *correctable* the specific problem is using current restoration techniques; and 3) how *accessible* the site is for work crews and any machinery necessary to complete restoration work. In addition, field teams collect descriptive data for both in- and near-stream habitat conditions at representative sites spaced at approximately ½ to 1-mile intervals along the stream.

One of the main goals of the Anacostia River SCA survey is to compile a list of observable environmental problems in this watershed in order to most successfully target future restoration efforts. Once this list is compiled and distributed, county planners, resource managers, and others can initiate a dialog to cooperatively set the direction and goals for the watershed' management and plan future restoration work at specific problem sites. All of the problems identified as part of the Anacostia River Stream Corridor Assessment survey can be addressed through existing State or Local government programs.

To this end, the Maryland Department of Natural Resources is working with Prince George's County to develop a Watershed Restoration Action Strategy (WRAS) of the Anacostia Watershed. As part of this process, data collected during the SCA survey will be used to help define present environmental conditions and possible restoration opportunities in the watershed. This information, combined with the watershed characterization, synoptic water quality surveys, recent biological surveys, and local knowledge of the watershed will be used to develop a Watershed Restoration Action Strategy for the Anacostia River. The Watershed Restoration Action Strategy, in turn, will help guide future restoration efforts with the ultimate goals of restoring the area's natural resources and meeting State water quality standards.

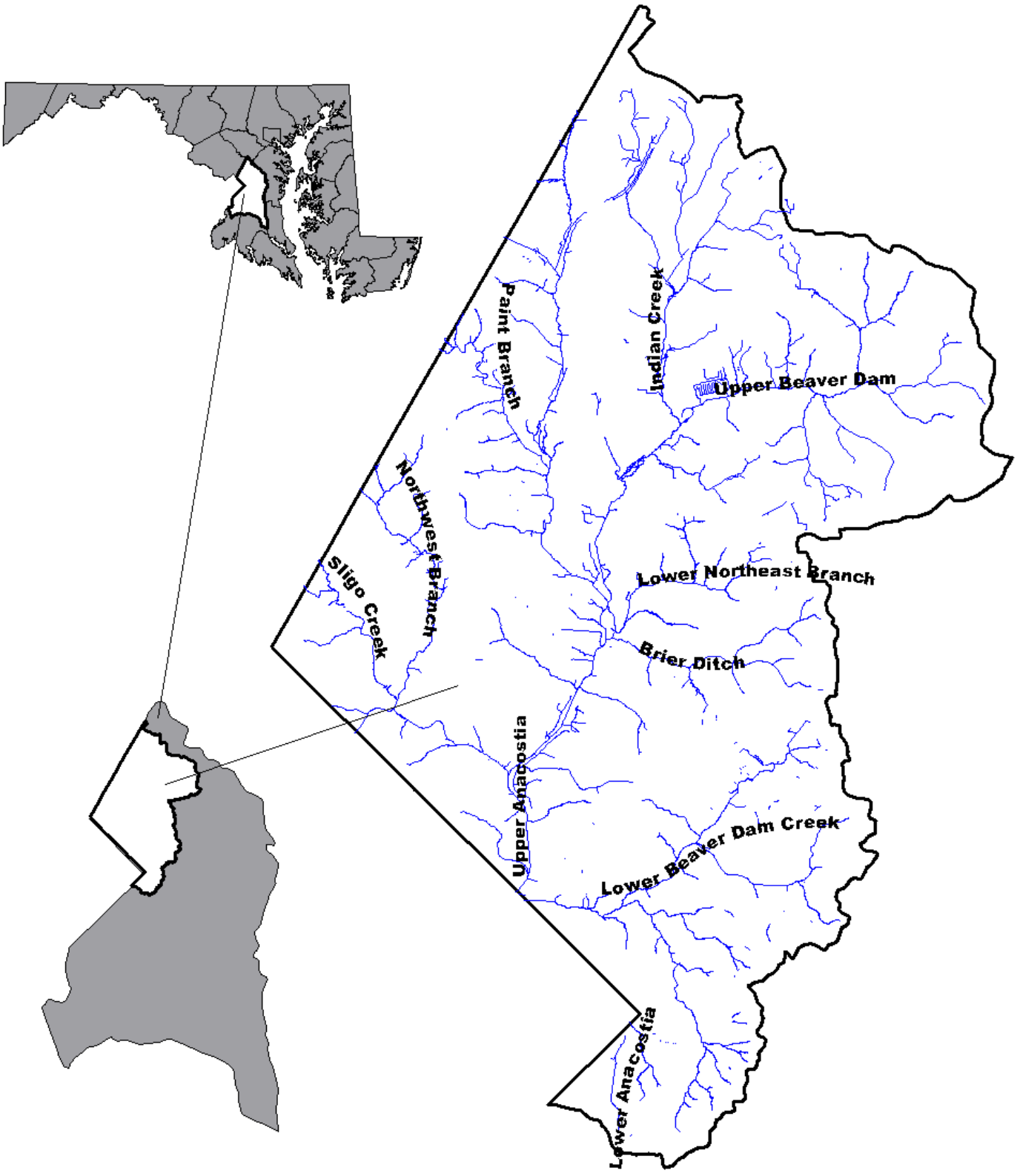

Figure 1: Map showing the location of the Anacostia River Watershed in Maryland

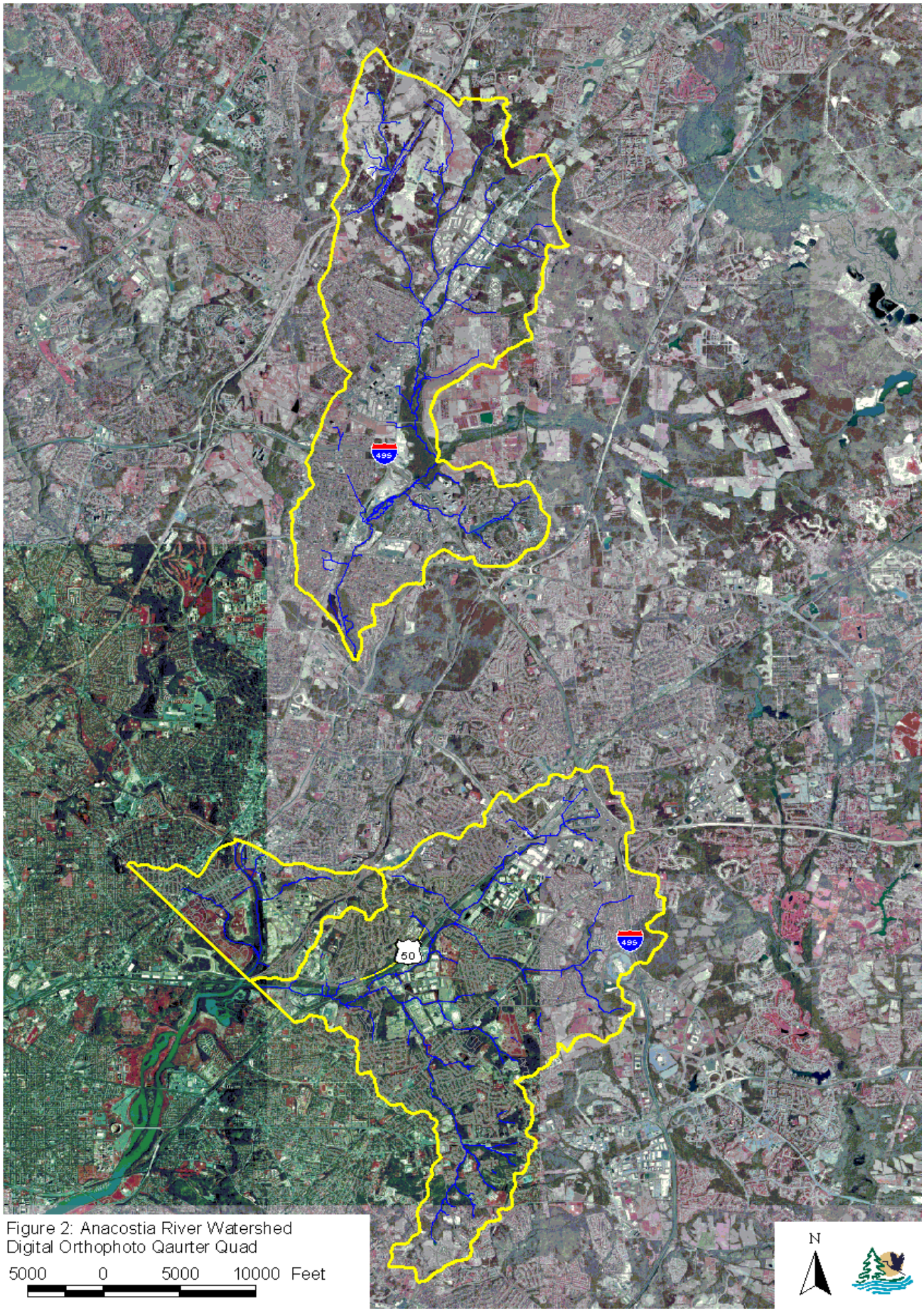

Figure 2: Anacostia River Watershed
Digital Orthophoto Qaurter Quad

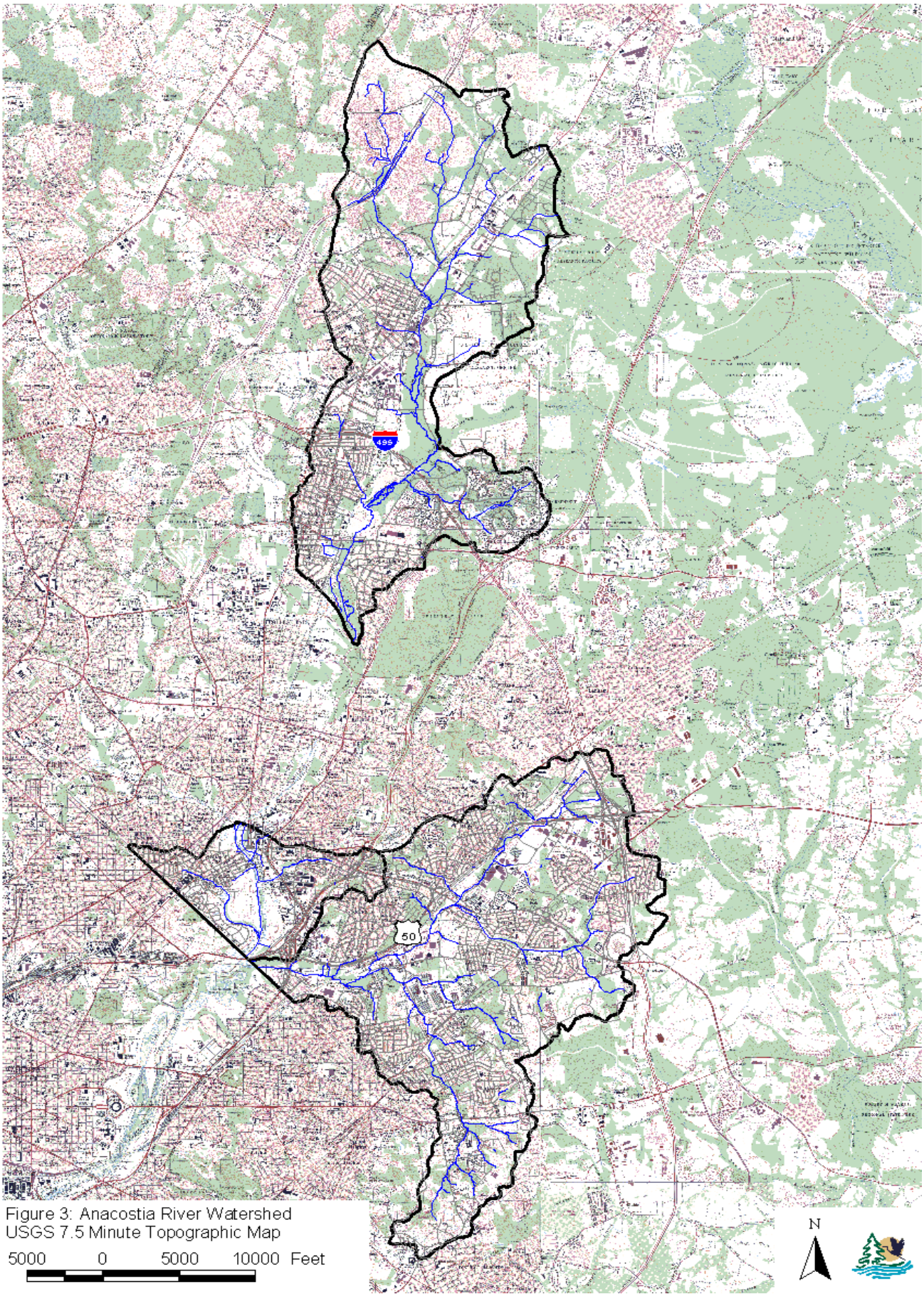

Figure 3: Anacostia River Watershed
USGS 7.5 Minute Topographic Map

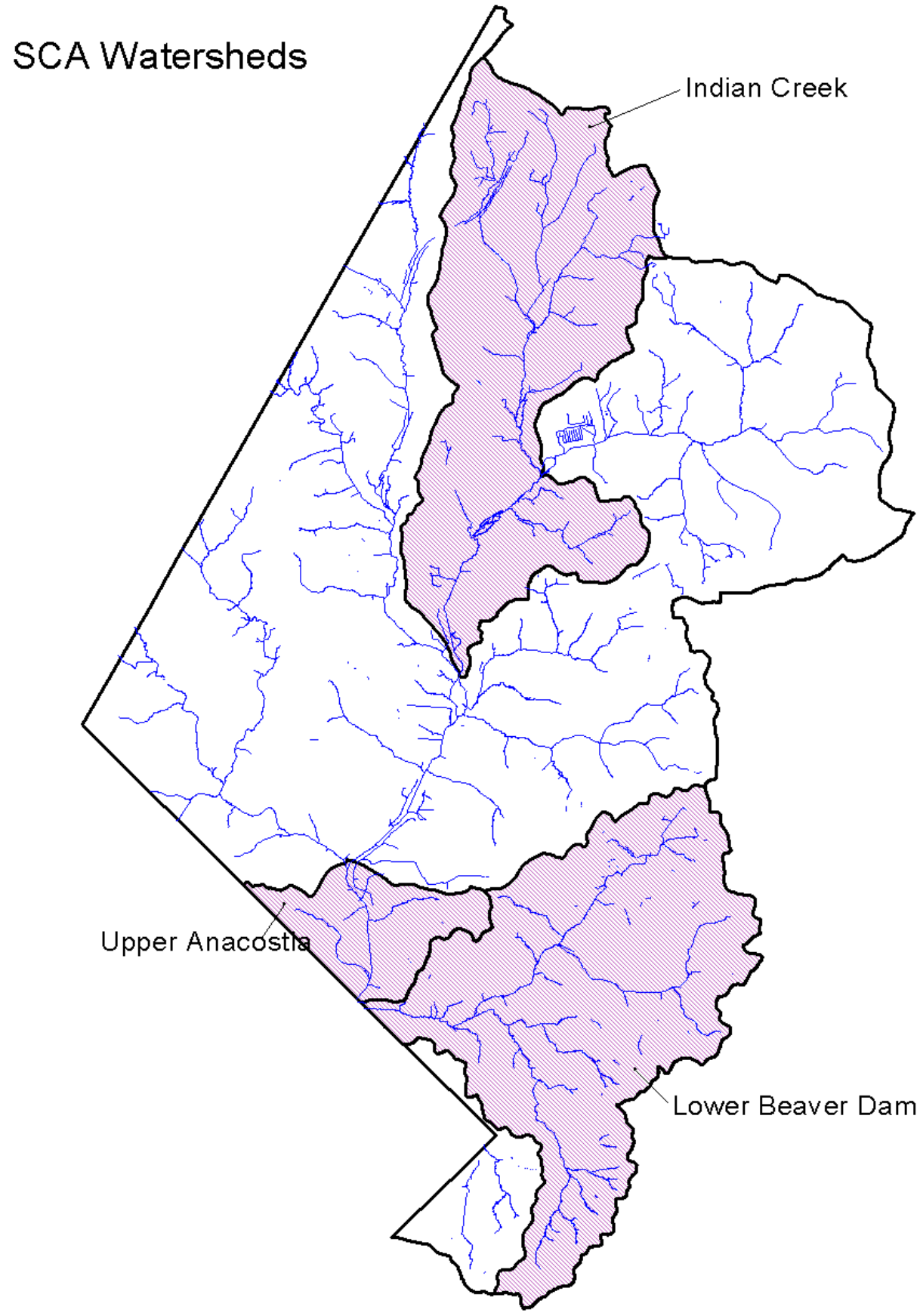

Figure 4: Map showing the location of the Stream Corridor Assessment Watersheds

METHODS

Goals of the SCA Survey

To help identify some of the common problems that affect streams in a rapid and cost effective manner, the Watershed Services Unit of the Maryland Department of Natural Resources developed the Stream Corridor Assessment (SCA) survey. The four main objectives of the survey are to provide:

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

2. Sufficient data on each problem in order to make a preliminary determination of both the severity and correctability of each problem.

3. Sufficient data to prioritize restoration efforts.

4. A quick assessment of both in- and near-stream habitat conditions to make comparisons among the conditions of different stream segments.

The SCA survey provides a rapid method of examining and cataloguing the observable environmental problems within an entire drainage network to better target future monitoring, management and/or conservation efforts. This survey is not a detailed scientific survey, nor will it replace chemical and biological surveys in determining overall stream conditions and health. 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 both a refinement and systematization of an old approach – the stream walk survey. Many of the common environmental problems affecting streams can be straightforward to identify by an individual walking along a stream. These include: excessive stream bank erosion, blockages to fish migration, stream segments without trees along their banks, or a sewage pipeline exposed by stream bank erosion leaking sewage into the stream. With a limited amount of training, most people can correctly identify these common environmental problems.

Over the years, many groups standardized a stream walk survey approach for their particular purpose or interest. 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), focused on utilizing citizen volunteers with little or no training. While these surveys can be a good guide for citizens interested in seeing their community's 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, training for citizen groups includes giving guidance on how to organize a survey and a slide show explaining how to complete the field work. After approximately one hour of training, citizen volunteers are sent out in groups to walk designated stream segments. During the survey, volunteers usually walk their assigned stream segment in under a few hours and return their data sheets to the survey organizers for analysis. 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 collected information. In addition, the data collected from these surveys often only indicates that a potential environmental problem exists at a specific location, but it does not provide sufficient information to judge the severity of the problem.

Other visual stream surveys, such as the Natural Resources Conservation Service's "Stream Visual Assessment Protocols" (NRCS, 1998), are designed for use by trained professionals analyzing a very specific stream reach type, such as 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 carried out on a watershed basis.

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

Field Training and Procedure

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, initiated to promote greater involvement of young volunteers in their communities and the environment. DNR's Forest and Park Service manage the MCC program. 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, MCC 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.maryland.gov/mcc.

Prior to the start of Anacostia River SCA Survey, the members of the MCC's Chesapeake Bay Crew received training in assessing both environmental problem sites and habitat conditions in and along Maryland streams. For problem sites, crewmembers learned how to identify common problems observable within the stream corridor, record problem locations on survey maps, and accurately complete data sheets for each specific problem type. For habitat conditions, the crew learned and practiced assessing stream health based on established criteria indicating both favorable conditions for macroinvertebrates and fish and healthy riparian habitat. These reference sites for habitat condition are located at approximately 1/2- to 1-mile intervals along the stream. In addition, the field crew reviewed a standard procedure for assigning site numbers based on the 3-digit map number, 1-digit team number, and 2-digit problem number for each problem and reference site during the survey. Lastly, in order to have a visual record of existing conditions at the time of the SCA survey, the MCC's Chesapeake Bay Crew received guidelines for taking photographs at all problem and reference sites.

Several weeks prior to the beginning of the survey, property owners along the stream reach received letters informing them of what the survey is and when it was to be completed. This letter also provided a phone number to call if individuals did not want MCC crews

surveying the stream on their property. In addition, survey crews were not to cross fence lines or enter any areas that are marked "No Trespassing" unless they had specific permission from the property owner.

The MCC crew conducted field surveys of the Anacostia Watershed from November 2003 to May 2004. The survey teams walked most of the drainage network, collecting information on potential environmental problems. Those commonly identified during the SCA Survey include: inadequate stream buffers, excessive bank erosion, channelized stream sections, fish migration blockages, in or near stream construction, trash dumping sites, unusual conditions, and pipe outfalls. In addition, the survey recorded information on the general condition of in-stream and riparian habitats and the location of potential wetland creation sites.

More detailed 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.maryland.gov/streams/pubs/other.html. Hard copies of the protocols also can be obtained by contacting the Watershed Services Unit of the Maryland Department of Natural Resources, Annapolis, MD.

Overall Ranking System

The SCA survey 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 crew's training on survey methods is devoted to properly rating the different problems identified during the survey. This ranking system developed from an earlier survey that found 453 potential environmental problems along 96 miles of stream of the Swan Creek Watershed in Harford County. The most frequently reported problem during the survey was stream bank erosion, 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 minor in severity. Based on this experience and its goal of helping to prioritize restoration work, the SCA survey rates the severity, correctibility, and access of each problem site.

While the ratings are subjective, they have proven to be very valuable in providing a starting point for more detailed follow-up evaluations. Once the SCA survey is completed, the collected data can 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 plan future riparian buffer plantings, while the local fishery biologist can use the data on fish blockages to help target future fish passage projects. 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 Protocol*s (Yetman, 2000). It is important to note that the rating system is designed to contrast problems within a specific problem category and is not intended to be applied across categories. 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. 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 **severity** rating indicates how bad a specific problem is relative to others in the same problem category. It is often the most useful rating because it answers 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, based on the established criteria for each problem category (Yetman, 2000).

* 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 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 are unstable and eroding at a rapid rate.

* A moderate severity rating of 3 identifies problems that have some adverse environmental impacts but the severity and/or length of affected stream 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 worse problems in the specific problem category. Examples include: a small fish blockage that is 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 has an inadequate forest buffer.

* A minor severity rating of 5 identifies problems that do not have a significant impact on stream and aquatic resources. A minor rating indicates that a problem is present, but compared to other problems in the same category it is considered minor. One example of a site with a minor rating is an outfall pipe from a storm water management structure that is not discharging during dry weather and does not have an erosion problem at the outfall or immediately downstream. Another example is a section of stream with stable banks that has a partial forest buffer less than 50 feet wide along both banks.

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

* A minor correctability rating of 1 indicates problems that can be corrected quickly and easily using hand labor, with a minimal 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 include 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 indicates 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 alone, 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 indicates 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 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 provides 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 a survey 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 indicates sites that are readily accessible both by car and on foot. Examples 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 indicates sites that are easily accessible by foot but not easily accessible by a vehicle. Examples would include a stream section that can be reached by crossing a large field or a site that is 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. To reach the site it would be necessary to hike at least a mile, and if equipment were needed to do the restoration work, an access road would need to be built through rough terrain. Examples include a site where there are no roads or trails nearby.

Data Analysis and Presentation

Following the completion of the survey, crews entered and information from the field data sheets into a Microsoft Access database and verified the accuracy of the data. Field crews labeled and organized the 824 photographs taken during the survey by site number and placed them in binders in both print and digital form. Members of the Department of Natural Resources' Watershed Services Unit incorporated the map location, recorded data, and digitized

photographs into the ArcGIS computer software. The GIS project is an electronic geodatabase that integrates all the collected problem locations and descriptive data by site number, links photographs to each potential problem site, and produces the maps presented in this report. This data can then be used alongside of other digital geographic datasets available for features within the watershed. A final copy of the ArcView files was given to the Prince George's County Planning Department for their use in developing a Watershed Action Strategy for the Anacostia Watershed.

RESULTS

The Stream Corridor Assessment Survey identified 756 potential environmental problems within the stream corridor (Table 1). At the time of the survey, the most frequently observed potential problem site was pipe outfalls reported at 378 sites. Other potential environmental problems recorded during the survey included: 85 inadequately forested stream buffers, 69 erosion sites, 68 fish barriers, 62channel alterations, 58 exposed pipes, 18 trash dumping sites, 15 unusual conditions, and 3 in- or near-stream construction sites (Table 1).

Table 1 presents a summary of survey results, Table 2 is a summary by stream reach, and Table 3 lists potential problem sites in separate categories occurring together at the same site. Appendices A and B list the data collected during the survey. Appendix A provides a listing of information by site number and location, referenced by both tributary name and the X, Y coordinates using Maryland State Plane 83 meters. Information in this format is useful to determine what problems are present along a specific stream reach. In Appendix B, the data is presented by problem type and lists the collected descriptive data. Presenting the data by problem type allows the reader to see which problems are rated as most severe or easiest to correct within each category. Result categories are discussed further in order of those with the greatest number of sites to those with the least.

Table 1. Summary of results from the Anacostia River SCA Survey.

Potential Problems Identified	Number	Estimated Length	Very Severe	Severe	Moderate	Low Severity	Minor
Pipe Outfall	378		0	1	279	29	69
Inadequate Buffer	85	112,100 feet (21.23 miles)	20	14	22	19	10
Erosion	69	61,525 feet (11.65 miles)	3	8	44	9	5
Fish Barrier	68		0	0	18	14	36
Channel Alteration	62	50,258 feet (9.51 miles)	13	7	16	12	14
Exposed Pipe	58	840 feet (0.16 miles)	0	7	35	9	7
Trash Dumping	18		0	0	7	3	8
Unusual Condition	15		0	1	5	7	2
Construction	3		1	0	1	0	1
Total	**756**		**37**	**38**	**426**	**103**	**152**
Comments	**7**						
Representative Sites	**46**						

Table 2. Summary of results by major stream reach.

Stream Segment	Channel Alteration	Exposed Pipes	Erosion	Fish Barriers	Inadequate Buffers	In/ Near Stream Construction	Pipe Outfalls	Representative Sites	Trash Dumping	Unusual Conditions	Comments	Total
Indian Creek	25	11	10	13	29	1	129	16	2	7		243
Lower Beaver Dam	31	38	54	51	51	1	219	25	14	6	7	497
Upper Anacostia	6	9	5	4	5	1	30	5	2	2		69

Pipe Outfalls

Pipe outfalls include any pipes or small, constructed 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. The survey crew identified a total of 378 pipe outfalls. The severity and location of pipe outfall sites is shown in Figure 5b, 5c and the distribution of severity ratings in Figure 5a.

Only one pipe outfall was rated as severe. At site 345402, the pipe was discharging a clear fluid that smelled of sewage. Most of the outfalls carried stormwater, or discharged from a small pond or reservoir. Of the outfalls observed, 98 were dry when surveyed and 293 had a clear discharge with no associated odor

No immediate follow up actions were taken as part of this study to determine the source of the color coming from the pipe. In some cases, coloration from a storm drainpipe may be a sporadic occurrence. In addition, we made no estimate of the amount of fluid released from the pipes.

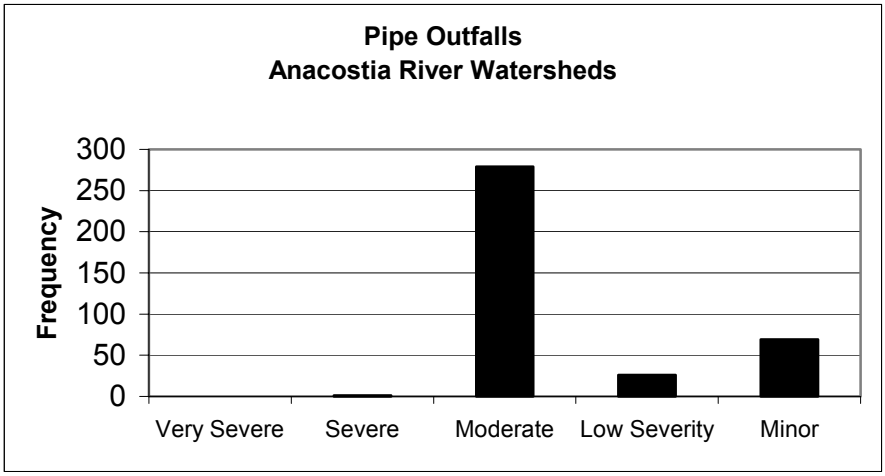

Figure 5a. Histograph showing the frequency of severity ratings given to pipe outfall sites during the Anacostia River SCA survey.

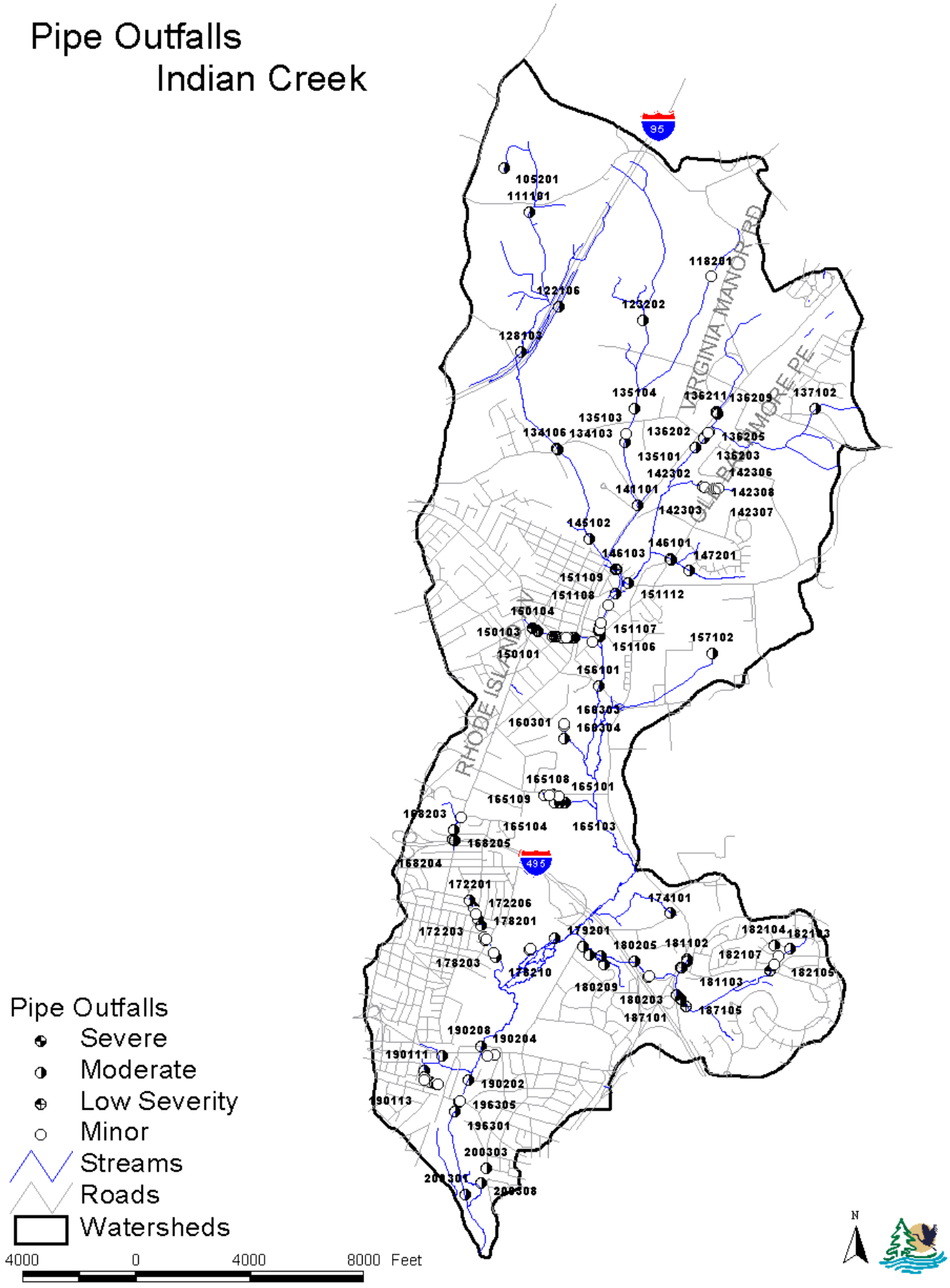

Figure 5b: Map showing the pipe outfalls in Indian Creek sub-watershed of the Anacostia River

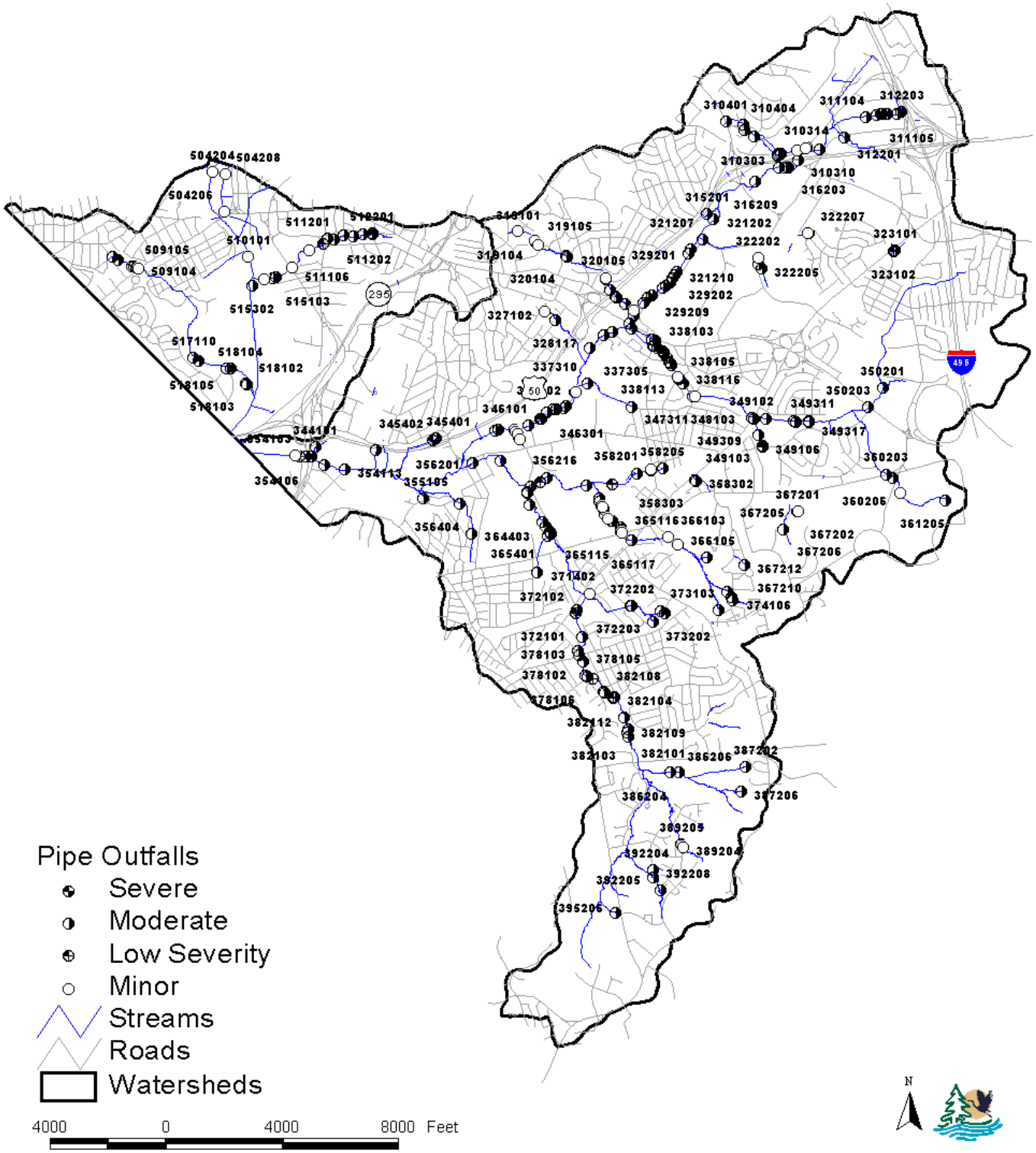

Figure 5c: Map showing the channel alterations in Upper Anacostia and Lower Beaver Dam sub-watersheds of the Anacostia River

Inadequate Buffers

Forests are the historically occurring ecosystem around Maryland streams and are very important for maintaining stream health in Maryland. Forested buffer areas along streams play a crucial role in increasing water quality, stabilizing stream banks, trapping sediment, mitigating floods, and providing the required habitat for all types of stream life, including fish. Tree roots capture and remove pollutants and excess nutrients from shallow flowing water, and their structure helps prevent erosion and slow down water flow, reducing sediment load and the risk of flooding. Shading from the tree canopy provides the cooler water temperatures necessary for most stream life, especially cold-water species like trout. In smaller streams such as those surveyed, terrestrial plant material falling into the stream is the primary source of plant food for stream life. Tree leaves provide seasonal, instant food for stream life, while fallen tree branches and trunks provide a more consistent, slow-release food source throughout the year. Tree roots and snags also provide necessary fish habitat. Maintaining healthy streams and forest buffers are important to reducing the nutrient and sediment loadings to the Chesapeake Bay.

While there is no single minimum standard for how wide a stream buffer should be in Maryland, for the purposes of this study a forest buffer is considered inadequate if it is less than 50 feet wide, measured from the edge of the stream. The severity of inadequate forest buffers is based on both the length and width of the site. Those sites over 1,000 feet long with no forest on either side of the stream rank as the most severe.

Survey crews identified 85 inadequate buffer sites with a total length of 112,100 feet (21.2 miles), or approximately 28 percent of streams surveyed. The severity and location of inadequate buffer sites is shown in Figure 6b, and 6c. Thirty-four of these sites are ranked as very severe or severe, while the other sites are moderate, of low severity, or minor (Figure 6a). Crews reported that livestock were present at one site, 157101.

Almost any inadequate buffer site would benefit from the restoration of trees and shrubs along both stream banks. Unfortunately many of the sites in the Anacostia River are along paved areas, sometimes on both sides. This would prevent any tree planting. Some sites are located in the gaps of green infrastructure. Green infrastructure are areas were there are natural lands. There are hubs, which is an area of unfragmented natural landscape. Corridors are areas that allow movement from one hub to another. Sites 129201, 174102, 174103, 190201, 510202 are located in those gaps. Planting these areas could help provide better movement between hub areas.

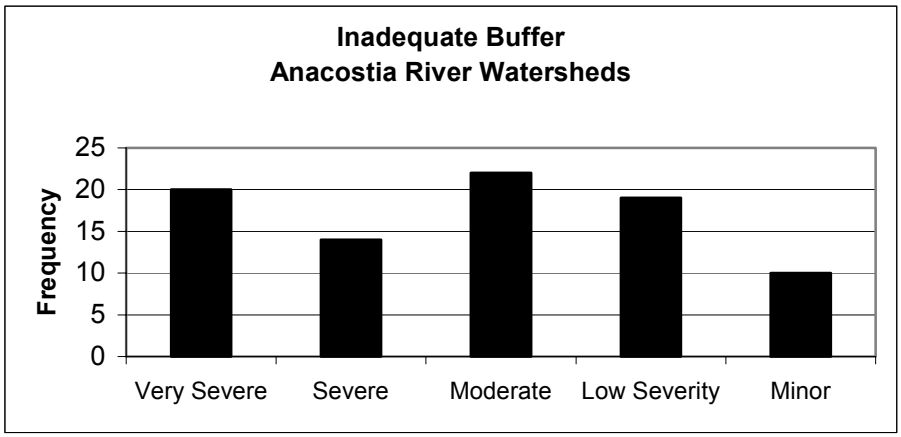

Figure 6a. Histograph showing the frequency of severity ratings given to inadequate buffer sites during the Anacostia River SCA survey.

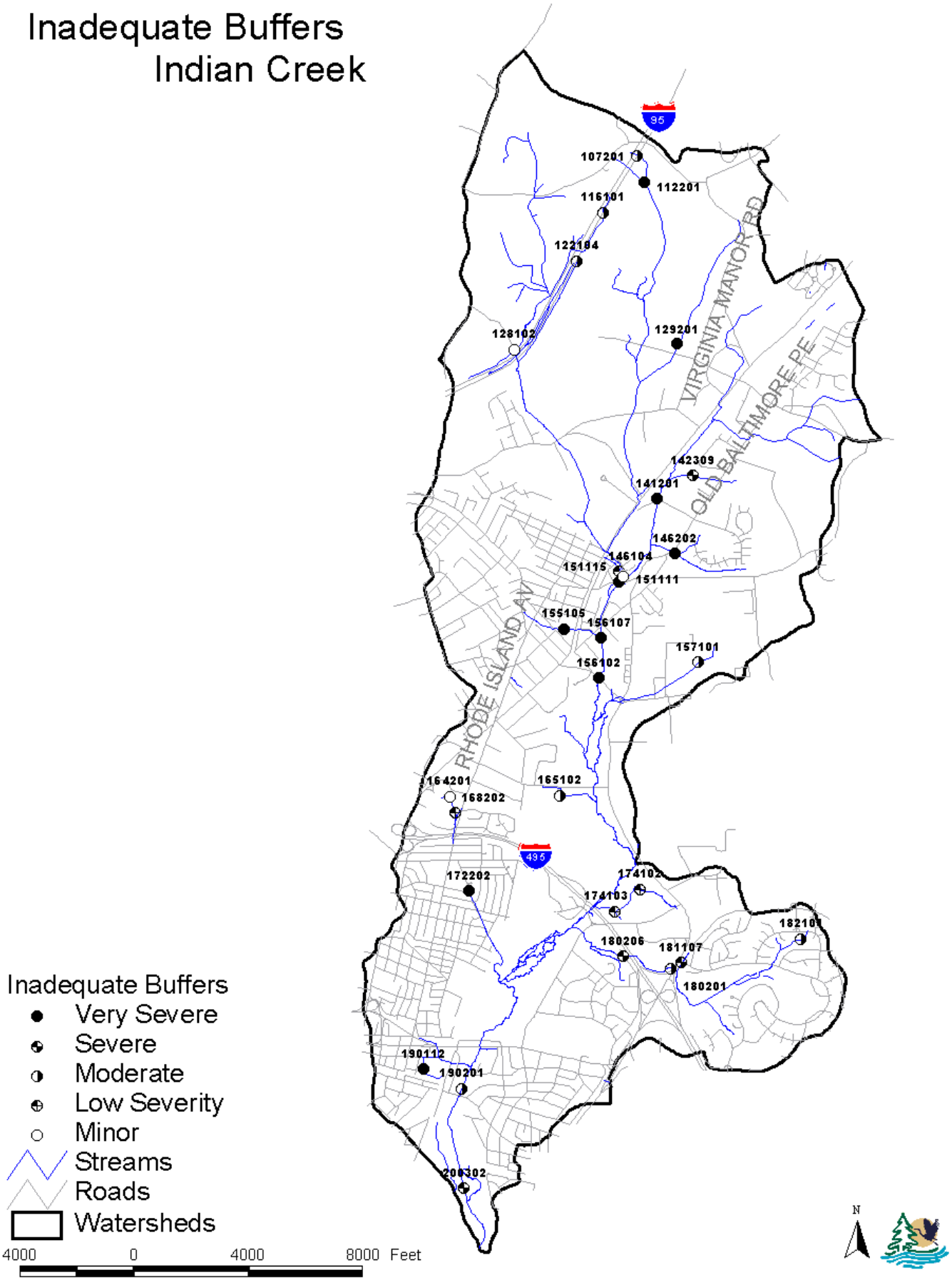

Figure 6b: Map showing the inadequate buffers in Indian Creek sub-watershed of the Anacostia River

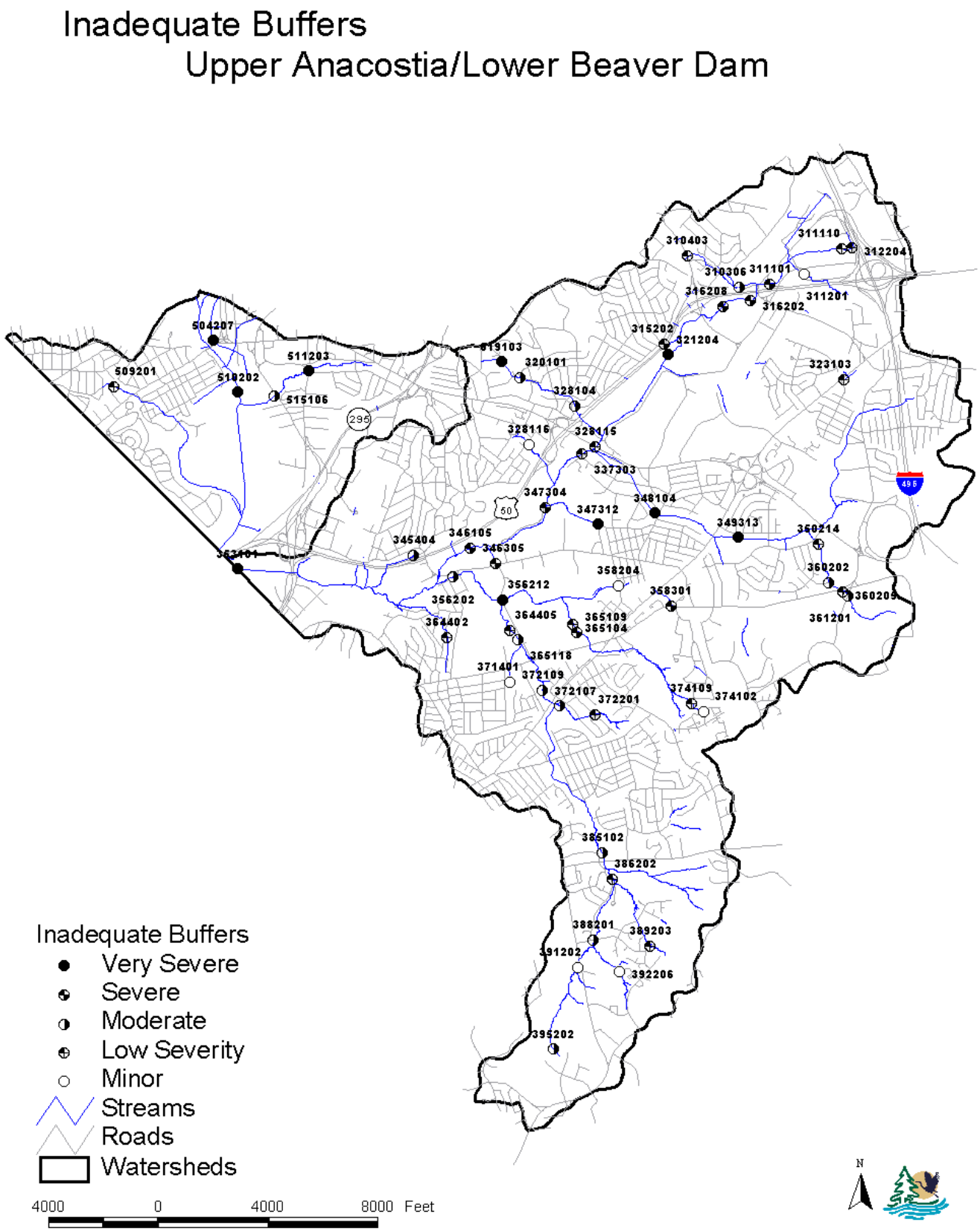

Figure 6c: Map showing the channel alterations in Upper Anacostia and Lower Beaver Dam sub-watersheds of the Anacostia River

Erosion Sites

Erosion is a natural process necessary to maintain good aquatic habitat. Too much erosion, however, can have the opposite effect on the stream by destabilizing stream banks, destroying in-stream habitat, and causing significant sediment pollution problems downstream. Erosion problems occur when either a stream's hydrology and/or sediment supply are significantly altered. This often occurs below a specific alteration, such as a pipe outfall or road crossing, or when land use in a watershed changes. For example, 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 surface, or land area where rainwater cannot seep into the groundwater directly, increases in a drainage basin. This causes the amount of runoff entering a stream to increase. Over time, a stream channel will adjust to the greater rain-induced flows by eroding the streambed and banks to raise water-carrying capacity. 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 a stream's aquatic resources.

In this survey, unstable eroding streams are defined as areas where the stream banks are almost vertical, and the vegetative roots along the stream are unable to hold the soil onto the banks. While survey teams are asked to visually assess whether the stream was down cutting, widening, or headcutting at a specific site, the only way to evaluate the full significance of the erosion processes at a specific site is to do more detailed monitoring over time.

The SCA survey found 69 eroding stream banks over the length of 61,525 feet (11.65 miles) of stream, or about 15 percent of streams surveyed. The severity and location of erosion sites is shown in Figure 7b, and 7c. Three sites are ranked as very severe, 349312, 354110, and 373104.

Eight erosion sites are threats to infrastructure. The first, 160306 is right near a parking lot, and sites 316201.321203 are also near a parking lot. Sites 347310 and 364411 are near roads.

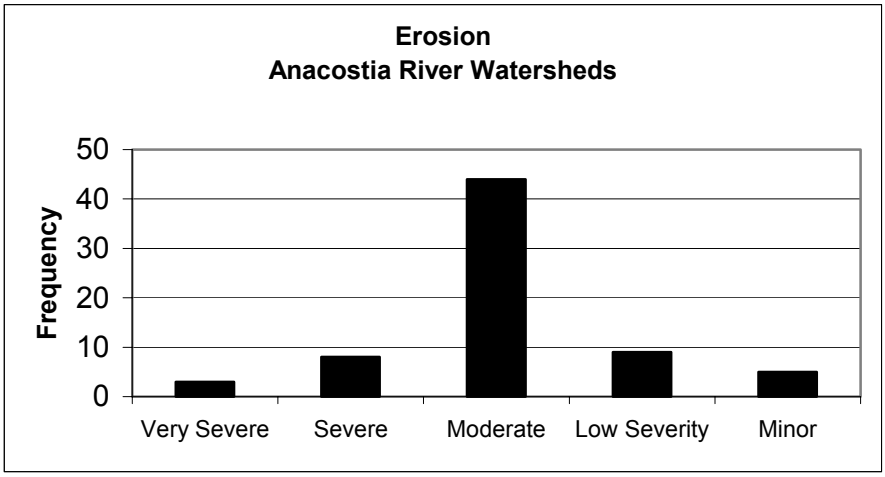

Figure 7a. Histograph showing the frequency of severity ratings given to erosion sites during the Anacostia River' SCA survey.

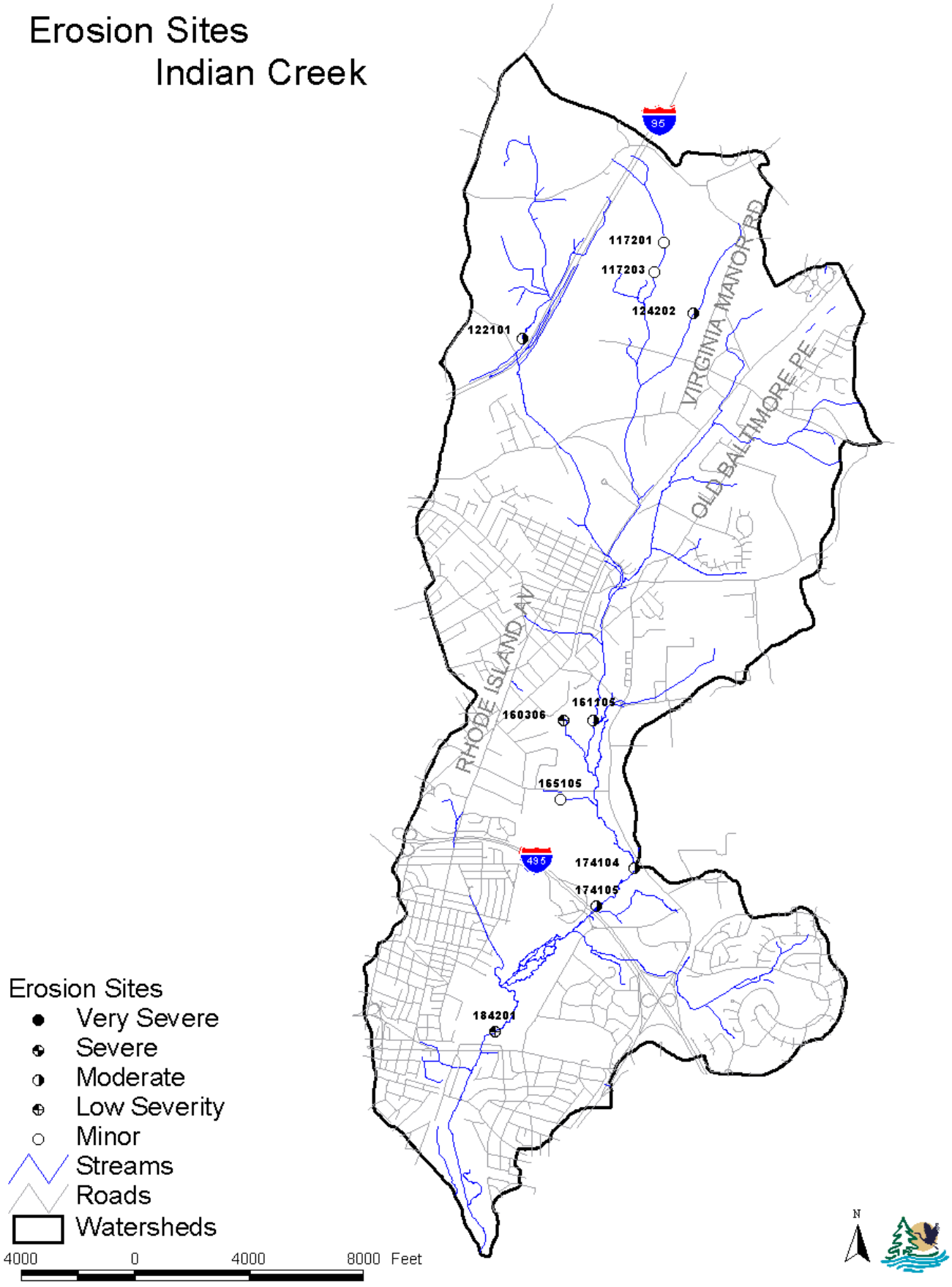

Figure 7b: Map showing the erosion sites in Indian Creek sub-watershed of the Anacostia River

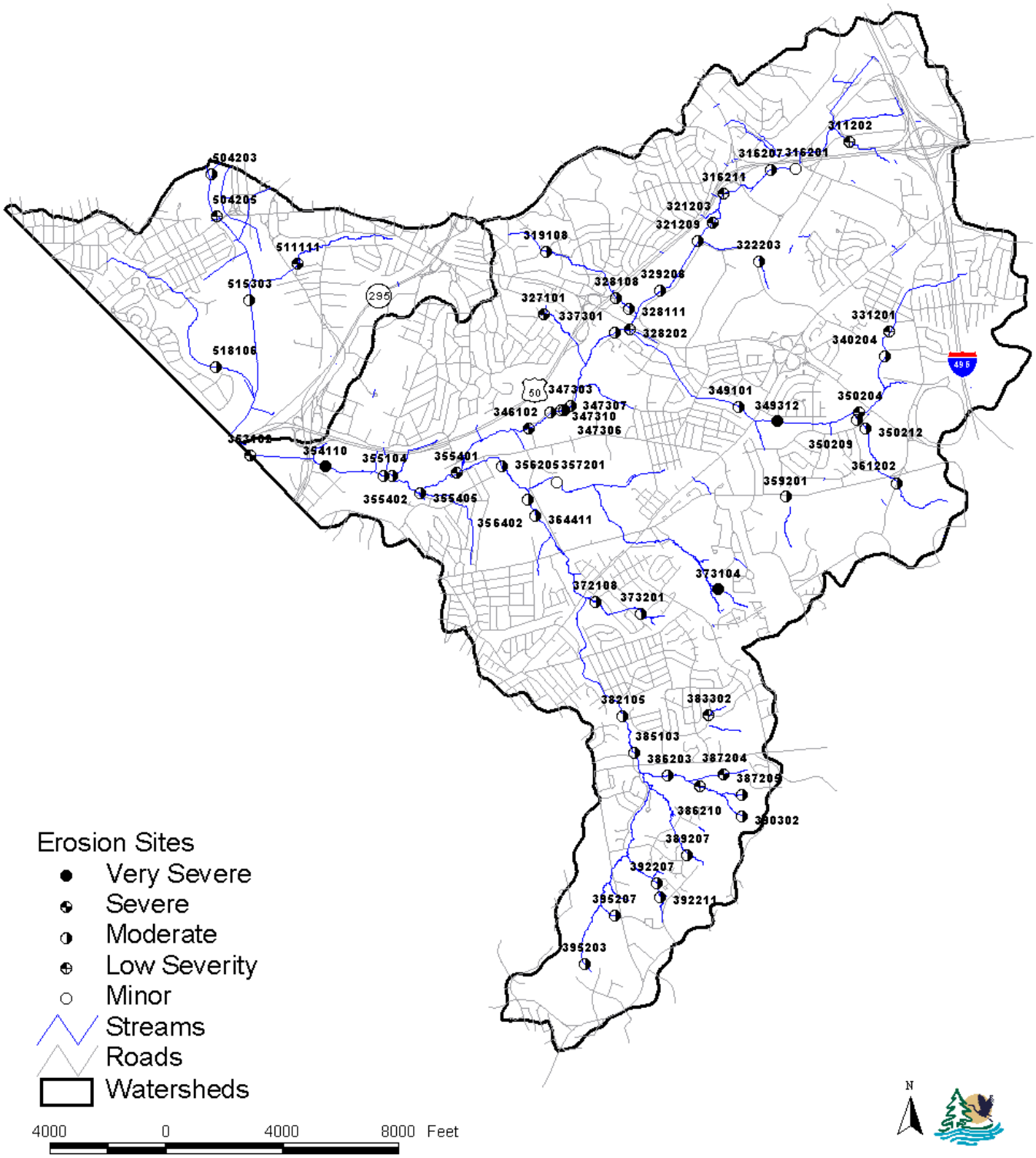

Figure 7c: Map showing the erosion sites in Upper Anacostia and Lower Beaver Dam sub-watersheds of the Anacostia River

Fish Migration Barriers

Fish migration barriers include anything in the stream that significantly interferes with the free, upstream movement of fish. Unimpeded fish passage is especially important for anadromous fish that live most of their lives in tidal waters but must migrate into non-tidal rivers and streams to spawn. Unobstructed upstream movement is also important for resident fish species, many of which also travel both up and down stream during different parts of their life cycle. In addition, without free fish passage, certain sections in a stream network become isolated from others. This becomes detrimental to species survival when a disturbance occurs in an isolated stretch of stream. A sediment discharge from a construction project, for example, or a sewage line break discharging into a small tributary can eliminate some or all of the fish species in an isolated stream stretch. With a fish blockage present, there is no avenue for fish to repopulate the inaccessible section. As a result, the disturbance will reduce diversity of the fish community in the area, and the remaining biological community may deviate from its natural balance and composition.

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. A structure becomes a blockage for fish if the stream water over or under it is too high, shallow, or fast. First, a vertical water drop such as a dam can be too high for fish to migrate 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 one foot, providing there is sufficient water flow and depth. Second, water too shallow for fish passage can occur in channelized stream sections or at road crossings, where the entire stream volume is spread over a large, flat area. 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 is placed at a steep angle, and the water moving through the pipe has a velocity higher than a fish's swimming ability.

In restoration work, priority is given to removing fish barriers that will yield access to the greatest quality and quantity of upstream habitat per dollar spent. The mainstem is ideally kept as barrier-free as possible, allowing anadromous fish to migrate to spawn and a source of fish species for tributaries in the event of a disturbance. Restoration planning includes targeting barriers for removal that isolate entire tributaries, those that isolate significant portions of the upper tributary, and those that isolate quality fish habitat. The best restoration sites also are far from other existing fish barriers.

The Anacostia River SCA survey found 68 fish migration barriers. The locations of fish blockages are shown in Figure 8b and 8c. Fish barriers in these watershed are due to road crossings (18), natural falls (14), debris (9), a pipe crossing (7), beaver dam (3), railroad crossing (2), instream pond (1) and where the stream goes underground (1). The majority of fish migration barriers (50 out of 68) are low to minor in severity (Figure 8a). Eighteen barriers received moderate severity rankings because they isolate a significant length of the tributary upstream from the barrier. Five fish barrier sites in the watershed, which have a moderate rating, are in channelized areas.

In all cases, areas should be assessed for viable fish habitat before restoration work begins, giving preference to sites with the most potential habitat area created.

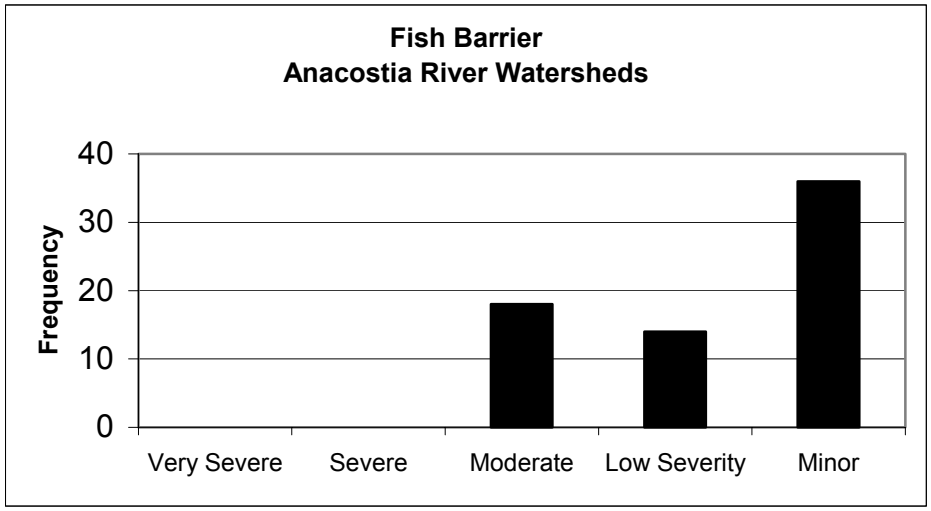

Figure 8a. Histograph showing the frequency of severity ratings given to fish barrier sites during the Anacostia River SCA survey.

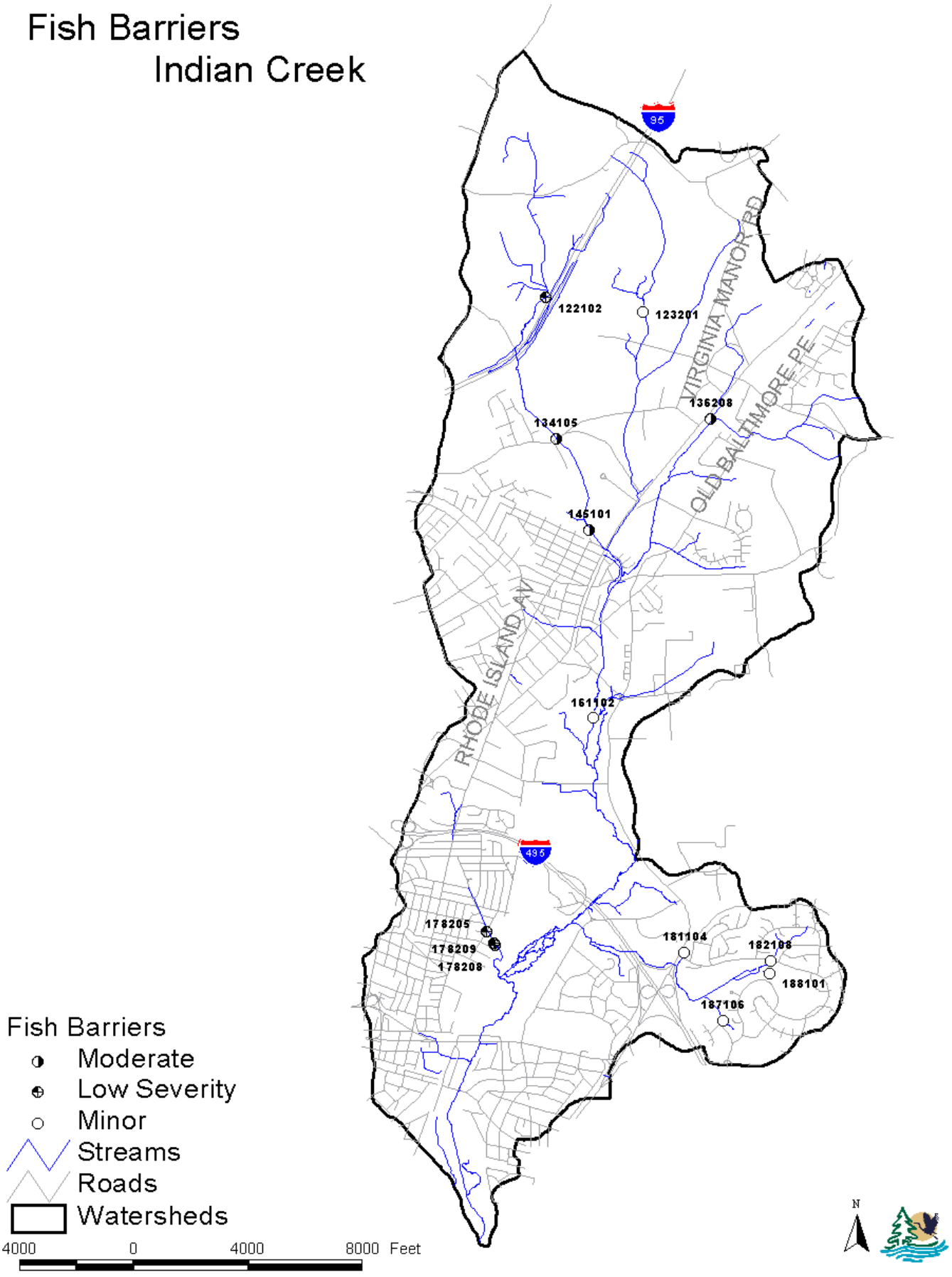

Figure 8b: Map showing the fish barriers in Indian Creek sub-watershed of the Anacostia River

Fish Barriers
Upper Anacostia/Lower Beaver Dam

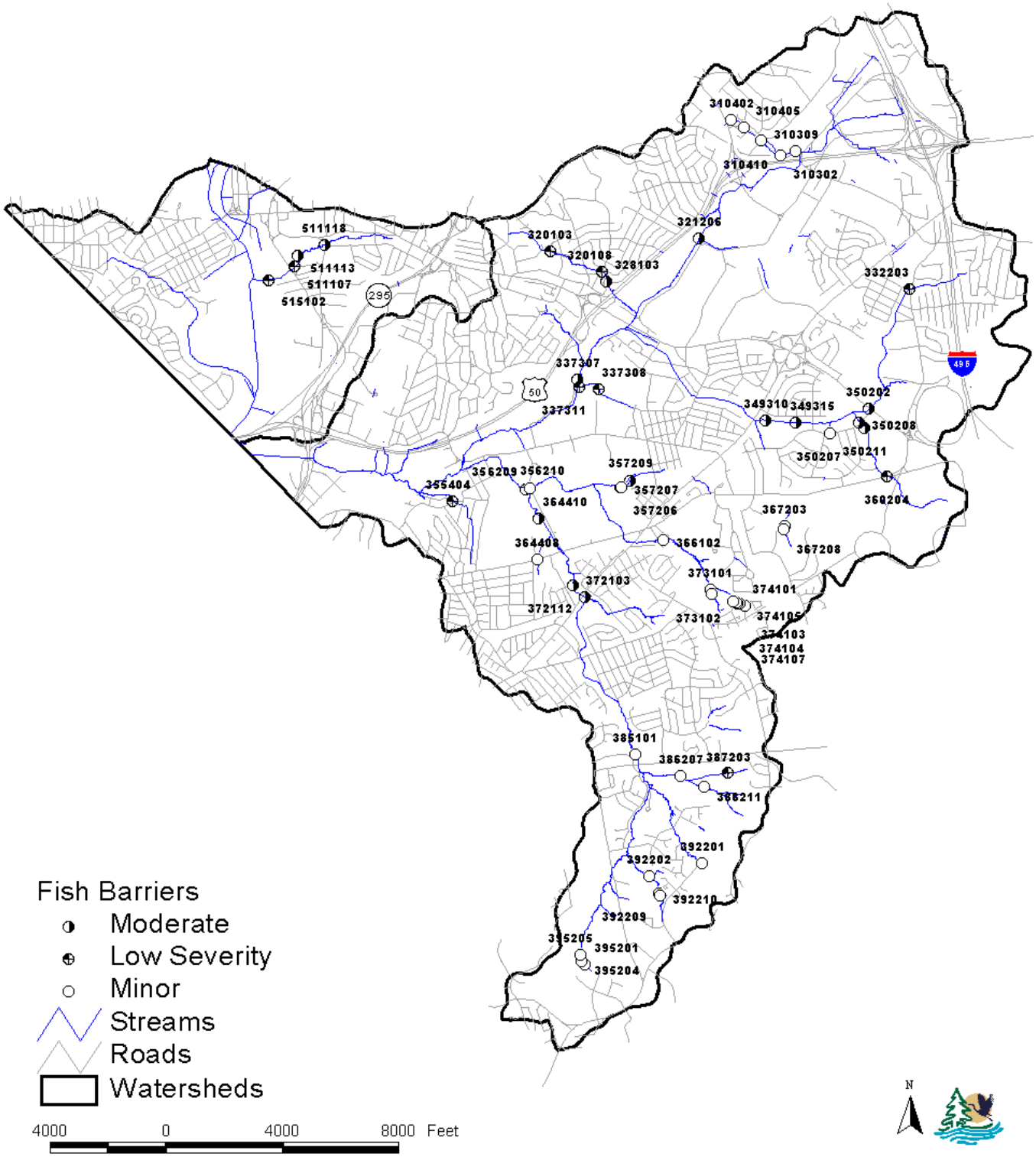

Figure 8c: Map showing the fish barriers in Upper Anacostia and Lower Beaver Dam sub-watersheds of the Anacostia River

Channel Alterations

Channel alterations are sections where the stream's banks or channel are significantly altered from their naturally occurring structure or condition. These channelized streams are straightened, deepened, and/or the banks hardened using rock, gabion baskets or concrete over a significant length of stream (usually 100 feet or more). Most frequently, channels are altered to decrease the likelihood of flooding by increasing the stream velocity through an area, making stream channelization more common near development or roadways. On Maryland's Eastern Shore, earth channels also are created for drainage purposes.

For the purposes of this survey, there are three types of channel alternations *not* recorded. The first are tributaries where the entire stream branch is piped underground and storm drains replace the stream channel. While these stream sections are significantly altered, it is not possible to know precisely where this was done by walking the stream corridor. Secondly, crews do not specifically record road crossings unless a significant portion of the stream above or below the road is channelized. Lastly, the survey does not report places where a small section of only one side of the stream bank is stabilized to reduce erosion.

Results of this survey show recognizably altered stream channels at 62 sites. The severity and location of channel alteration sites is shown in Figure 9b and 9c. The total length of stream affected by channelization is estimated to be 50,258 feet (9.5 miles), or 13 percent of streams surveyed. Channel alteration sites occur with inadequate forest buffer sites at 36 sites, or for 58 percent of the channelized stream length. The majority of sites, 42 out of 62, are concrete channels, areas where the stream is straightened and/or placed in trapezoidal channels to increase water passage.

Severity rankings for the sites range from minor to very severe and are fairly evenly distributed over these four rankings (Figure 9a). The severity of channel alterations is based on both the channel type and the length of the site. The presence of hardened stream banks using concrete or rock for a total length of over a thousand feet increases the severity of a site. Thirteen sites received a very severe rating. All of these sites were concrete channels, which total 24,650 feet, nearly half of the total channel alteration length. Seven sites are ranked as severe. All of these sites are also concrete. Table 3 presents a summary of the lengths of channel alteration sites according to alteration type.

Restoring channel alteration sites can increase fish and wildlife habitat and may allow for more time for nutrient uptake in the waterway. In its simplest form, restoration for earth channels would include allowing vegetation and/or tree roots to stabilize the sediment along the channel, causing sinuosity to re-form naturally. However for those channels which have been altered using concrete, it will be difficult and expensive to restore some of the longer lengths of stream.

Table 3. Summary of channel alteration site lengths according to type of alteration.

Type of Alteration	Length (ft)
Concrete	37,800
Earth channel	7,250
Gabion	4,200
Rip-rap	1,008

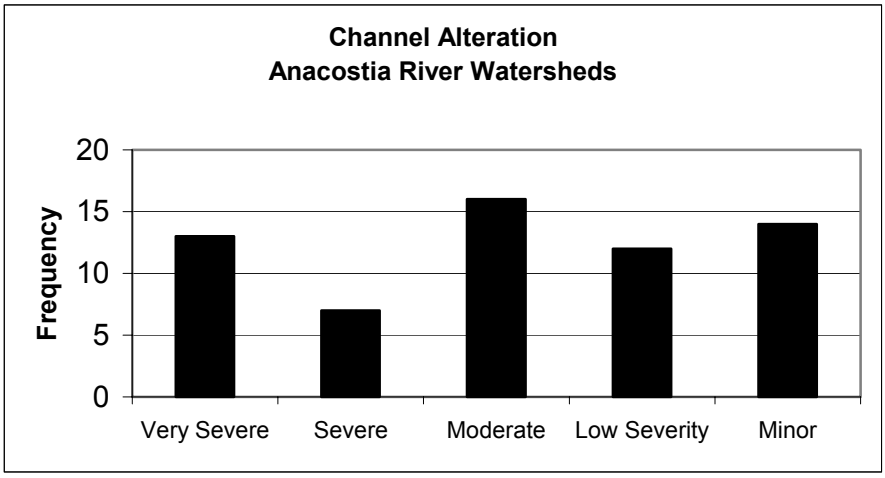

Figure 9a. Histograph showing the frequency of severity ratings given to channel alteration sites during the Anacostia River SCA survey.

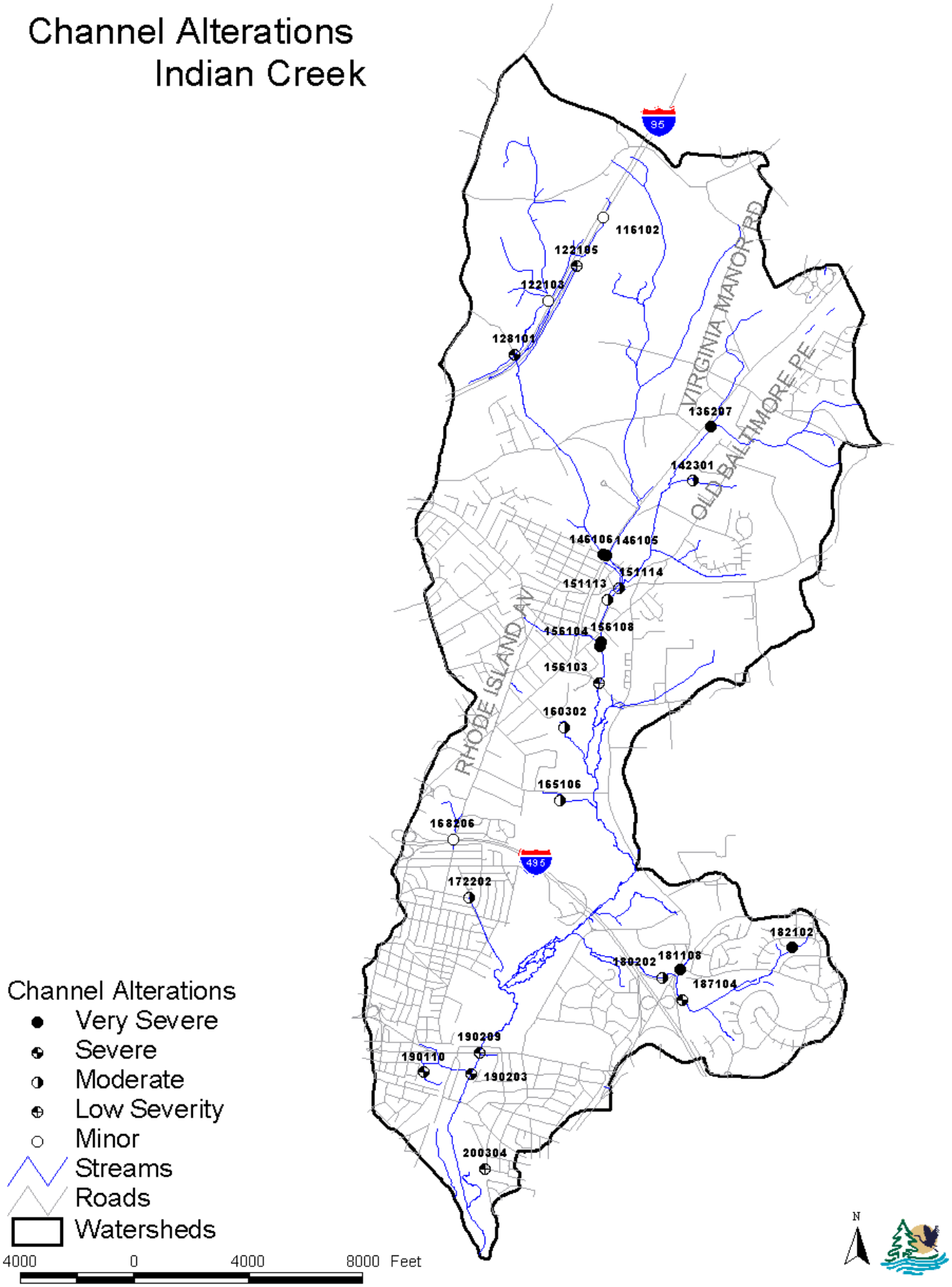

Figure 9b: Map showing the channel alterations in Indian Creek sub-watershed of the Anacostia River

Channel Alterations
Upper Anacostia/Lower Beaver Dam

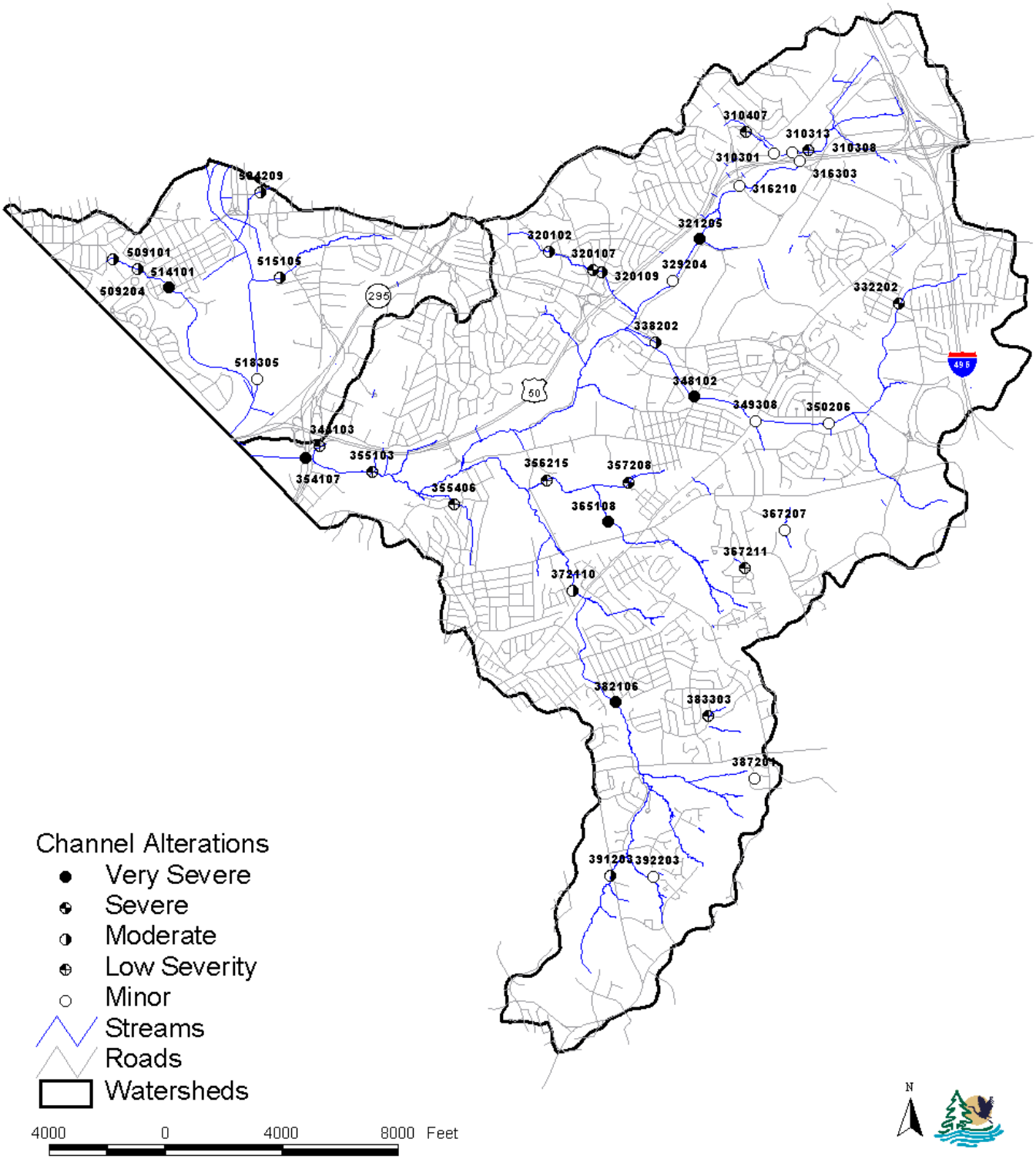

Figure 9c: Map showing the channel alterations in Upper Anacostia and Lower Beaver Dam sub-watersheds of the Anacostia River

Exposed Pipes

Any pipes that are in the stream or along the stream's immediate banks that could be damaged by a high flow event are recorded as exposed pipes in the SCA survey. Exposed pipes 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 bed and were exposed by stream down-cutting, and 4) pipes built over a stream that are low enough to be affected by frequent high storm flows. Exposed pipes do not include pipe outfalls, where only the open end of the pipe is exposed to the stream bed.

In urban areas, it is very common for pipelines and other utilities to be placed in the stream corridor. This is especially true for gravity sewage lines, which depend on the continuous downward slope of the pipeline to move sewage to a pumping station or treatment plant. Since streams flow through 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 migrate to different areas within the floodplain. Over time, this variance in stream location can expose previously buried pipelines, making them vulnerable to puncture by debris in the stream. Fluids in the pipelines can be discharged into the stream, causing a serious water quality problem.

Field crews observed 58 exposed pipes during the survey. Seven were rated as severe, the rest were rated moderate to minor in severity (Figure 10a). The pipes were rated as severe because most of the pipes are being undermined by erosion and may collapse. One of the severe sites, 346304, is a manhole stack that is damaged and open to the elements. Locations of these sites are shown in Figures 10b and 10 c. The lengths observed ranged from half a foot to 250 feet. The majority (34) of the 58 exposed pipes are manhole stacks located in or along the stream channel. Follow-up visits should be made to evaluate its severity and a means for repairing or replacing the pipes.

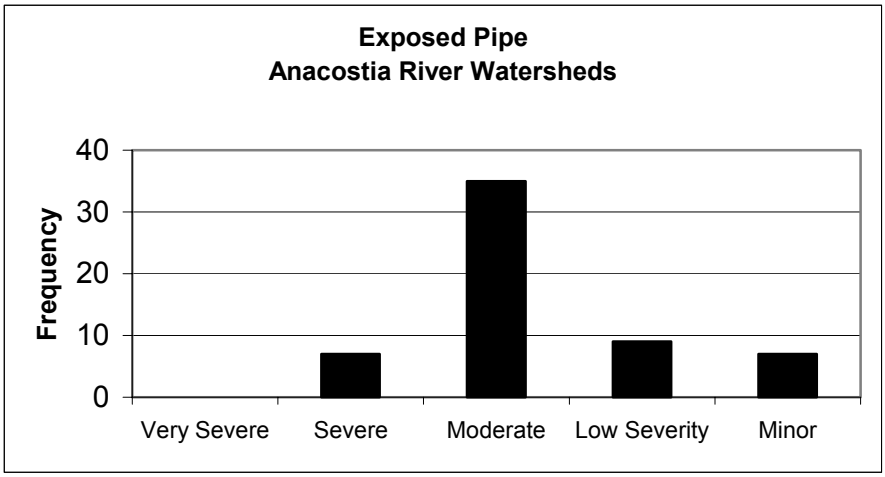

Figure 10a. Histograph showing the severity rating given to exposed pipe site during the Anacostia River SCA survey.

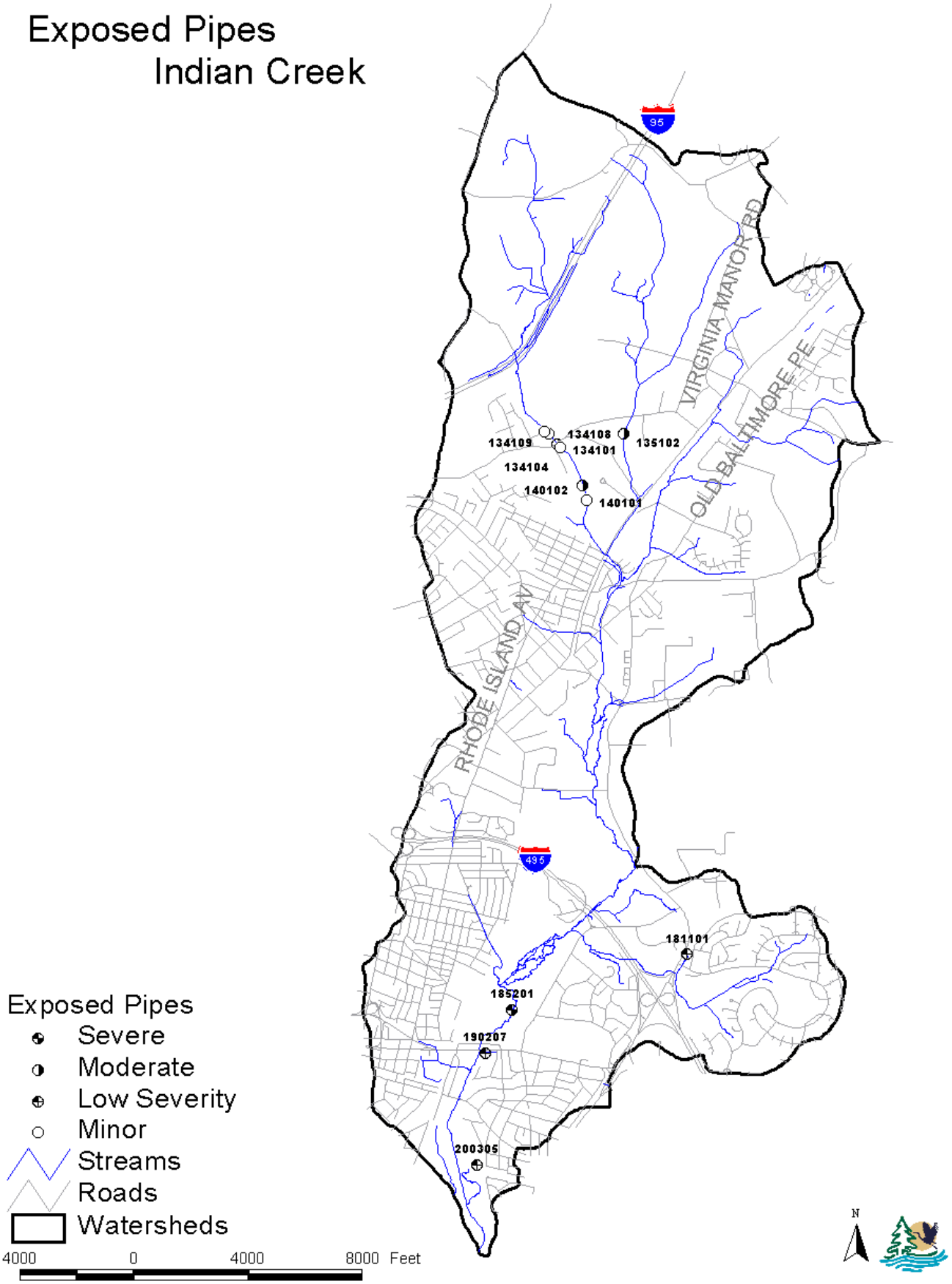

Figure 10b: Map showing the exposed pipes in Indian Creek sub-watershed of the Anacostia River

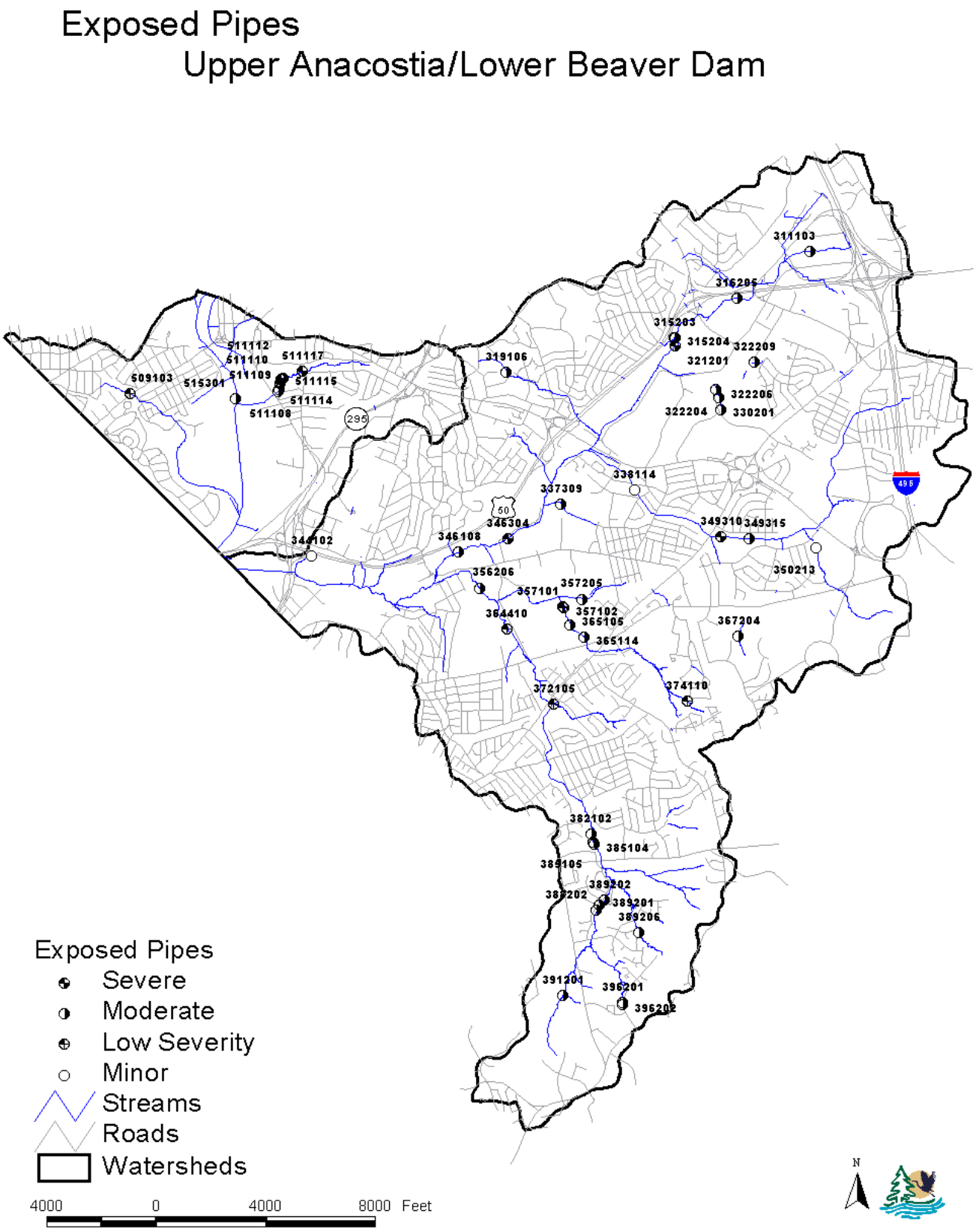

Figure 10c: Map showing the exposed pipes in Upper Anacostia and Lower Beaver Dam sub-watersheds of the Anacostia River

Trash Dumping

Trash dumping sites are places where large amounts of trash are inside the stream corridor, either as a site of deliberate dumping or as a place where trash tends to accumulate (often a result of storm drainage). Site severity rankings are based on size, contents of trash, and potential impact on the stream.

Survey crews found eighteen trash dumping sites (Figure 11b and 11c). In terms of severity, the eighteen sites are ranked as moderate (7), low severity (3), and minor (8), as shown in Figure 11a. The sites contained residential waste (5), mixed types (4), yard waste (1), construction (1), floatables (2), industrial (2), tires with floatables (1), cars (1) and casket liners (1).

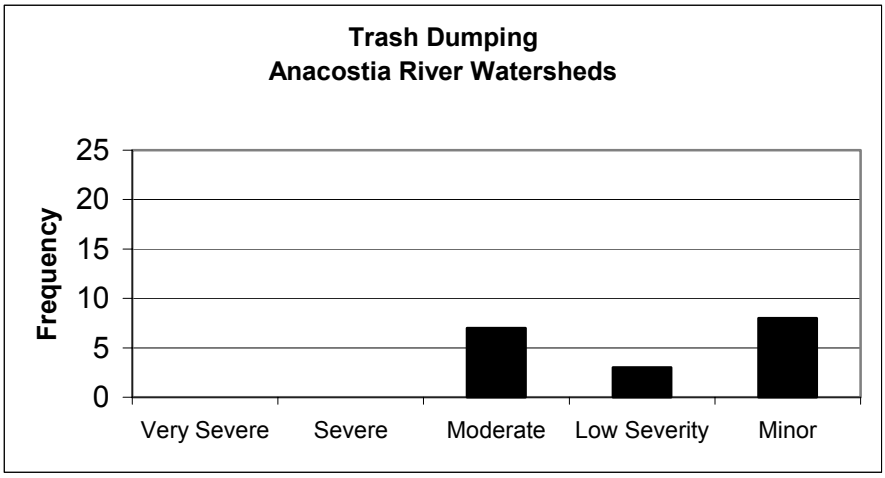

Figure 11a. Histograph showing the frequency of severity ratings given to trash dumping sites during the Anacostia River SCA survey.

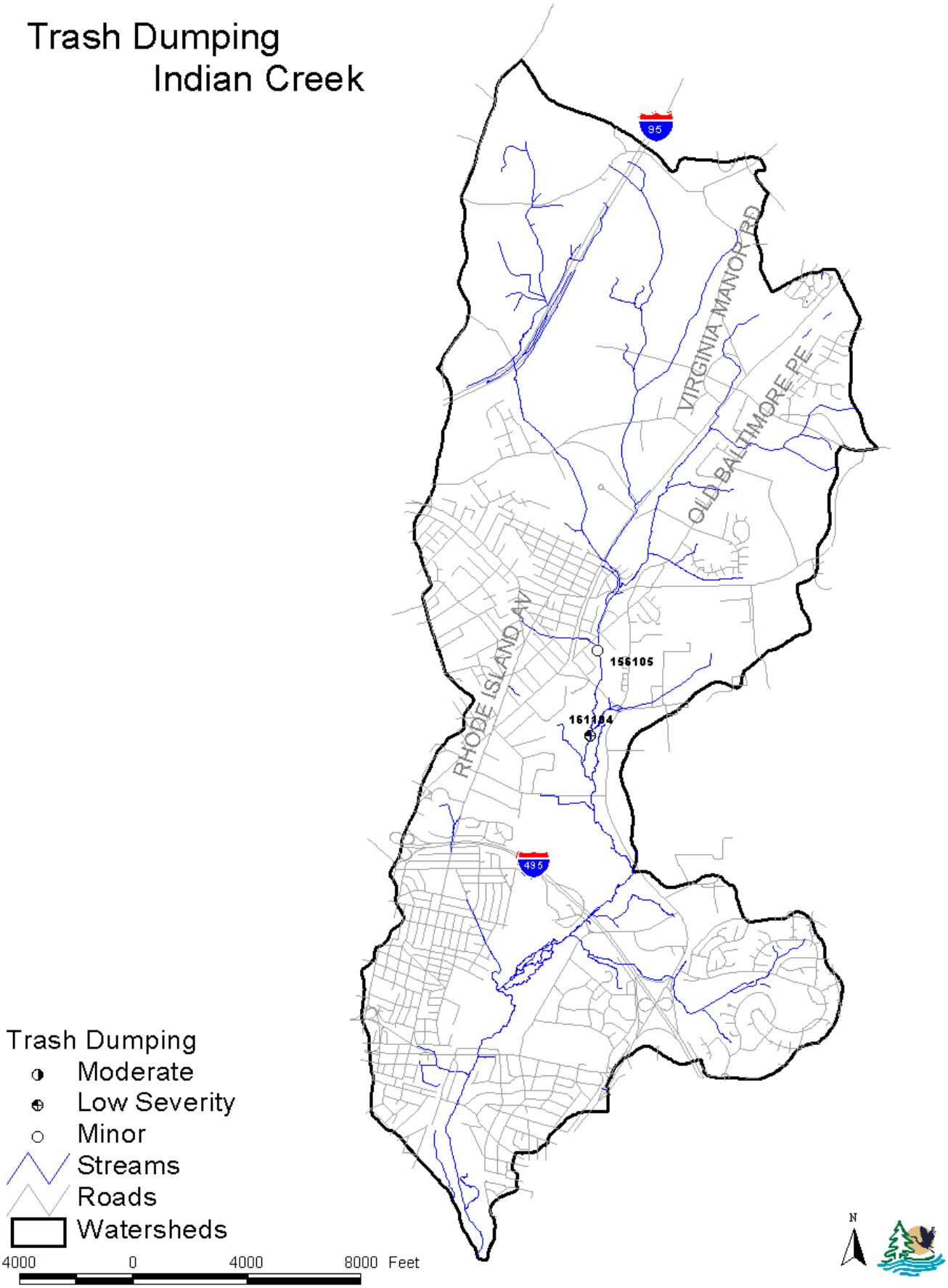

Figure 11b: Map showing the trash dumping sites in Indian Creek sub-watershed of the Anacostia River

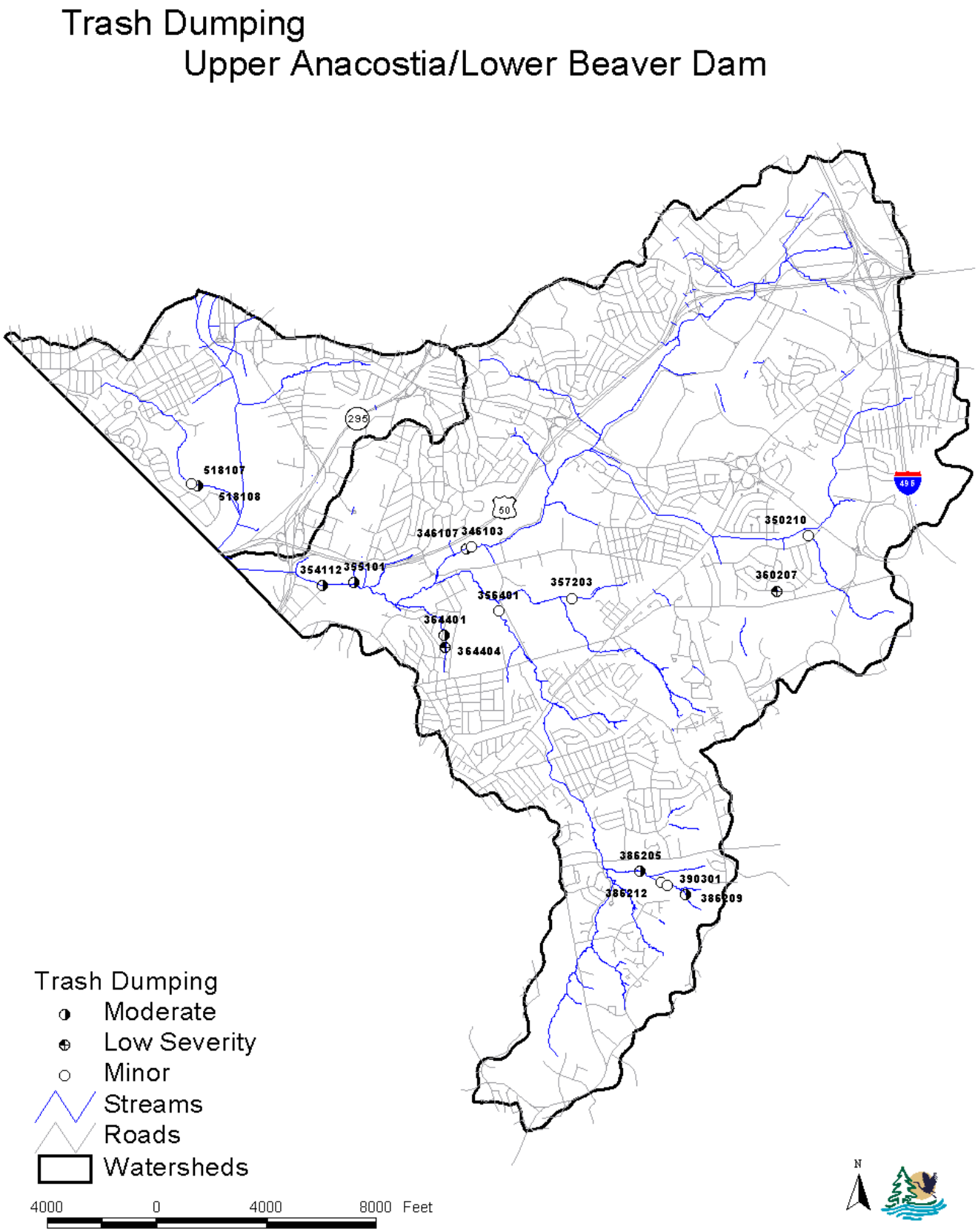

Figure 11c: Map showing the trash dumping in Upper Anacostia and Lower Beaver Dam sub-watersheds of the Anacostia River

Unusual Conditions or Comments

Survey teams record unusual conditions or comments to note the location of anything out of the ordinary observed during the survey or to provide additional written comments on a specific problem site. The survey crew identified 15 unusual conditions and 7 comments throughout the Anacostia Watershed. The severity and location of unusual condition sites is shown in Figure 12b and 12c.

The fifteen unusual conditions included sites with red flock (2), sediment accumulation (1), excessive algae (3), a culvert with debris (1), possible sewage discharge (1), piped streams (5), and a damaged manhole. Site 345403 is a possible sewage discharge. This site was given a severe rating.

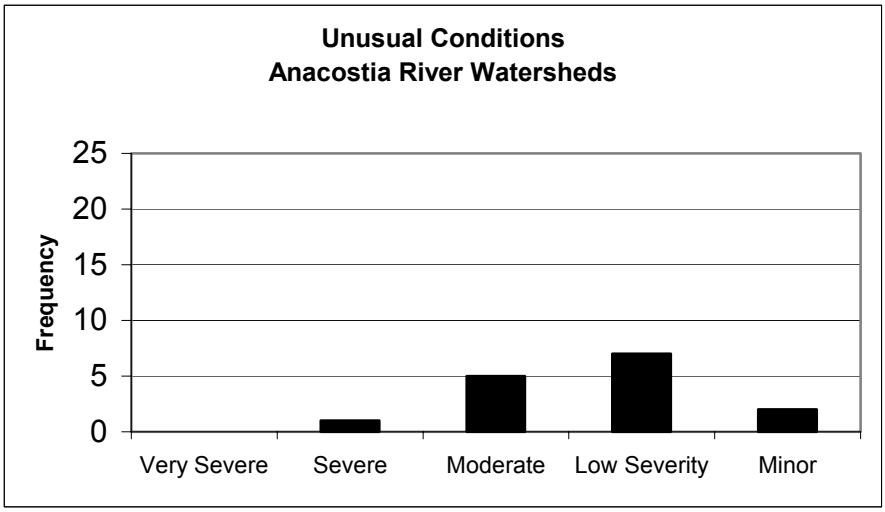

Figure 12a. Histograph showing the frequency of severity ratings given to unusual condition sites during the Anacostia River SCA survey.

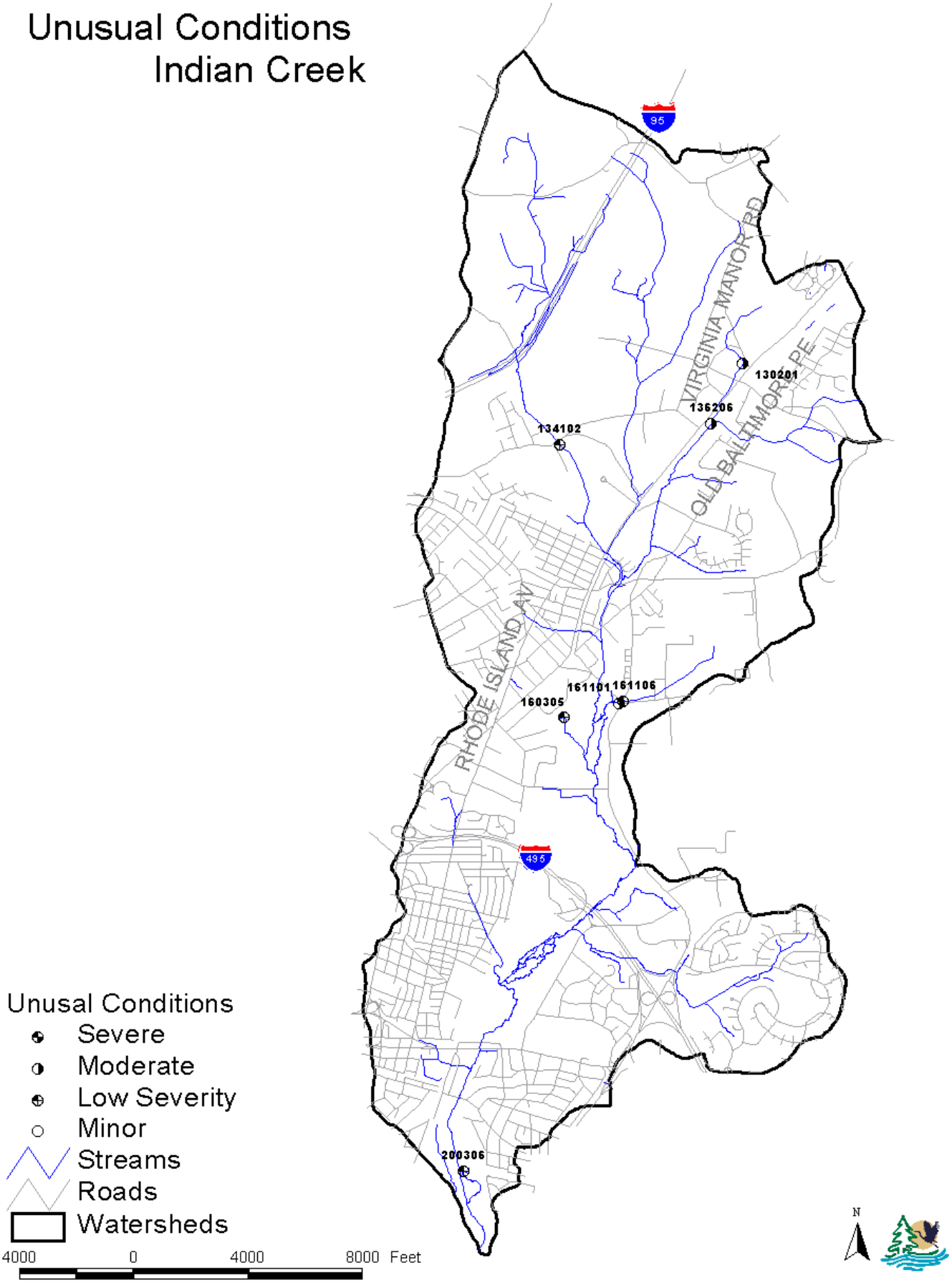

Figure 12b: Map showing the unusual condition sites in Indian Creek sub-watershed of the Anacostia River

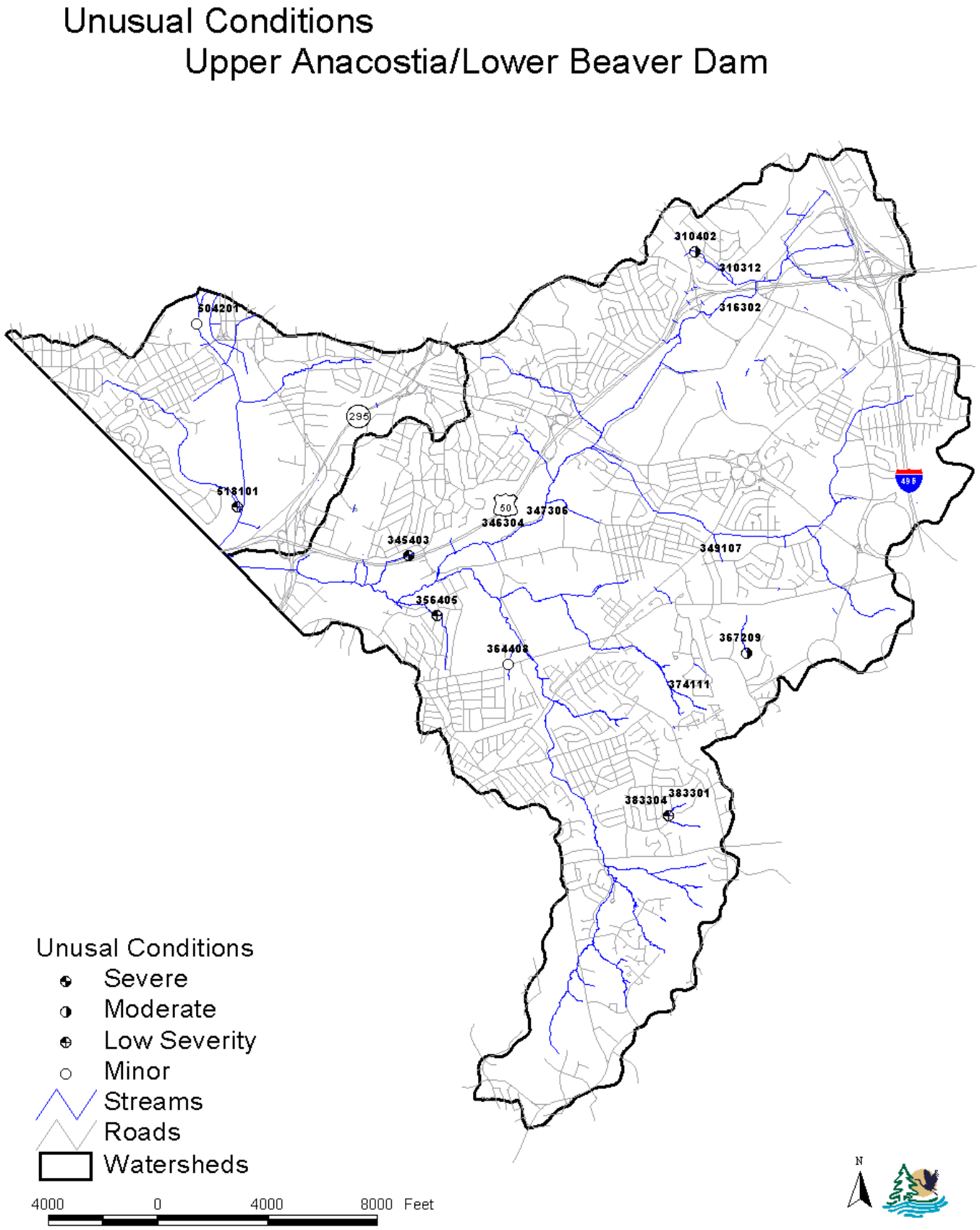

Figure 12c: Map showing the unusual conditions in Upper Anacostia and Lower Beaver Dam sub-watersheds of the Anacostia River

In/Near Stream Construction

In or near stream construction data sheets are used to document any construction disturbances seen by the survey teams inside or near the stream corridor. Survey team members are not trained sediment inspectors, but as part of their training they do receive a quick review of the different type of sediment control measures they may see while doing a SCA 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 3 sites during the survey. The locations of in/near stream construction sites are shown in Figure 13b and 13c. Site 319102 was given a very severe rating. It had inadequate sediment control and sediment was entering the stream. The other sites were 151116, which received a moderate rating and site 510201, which received a minor rating.

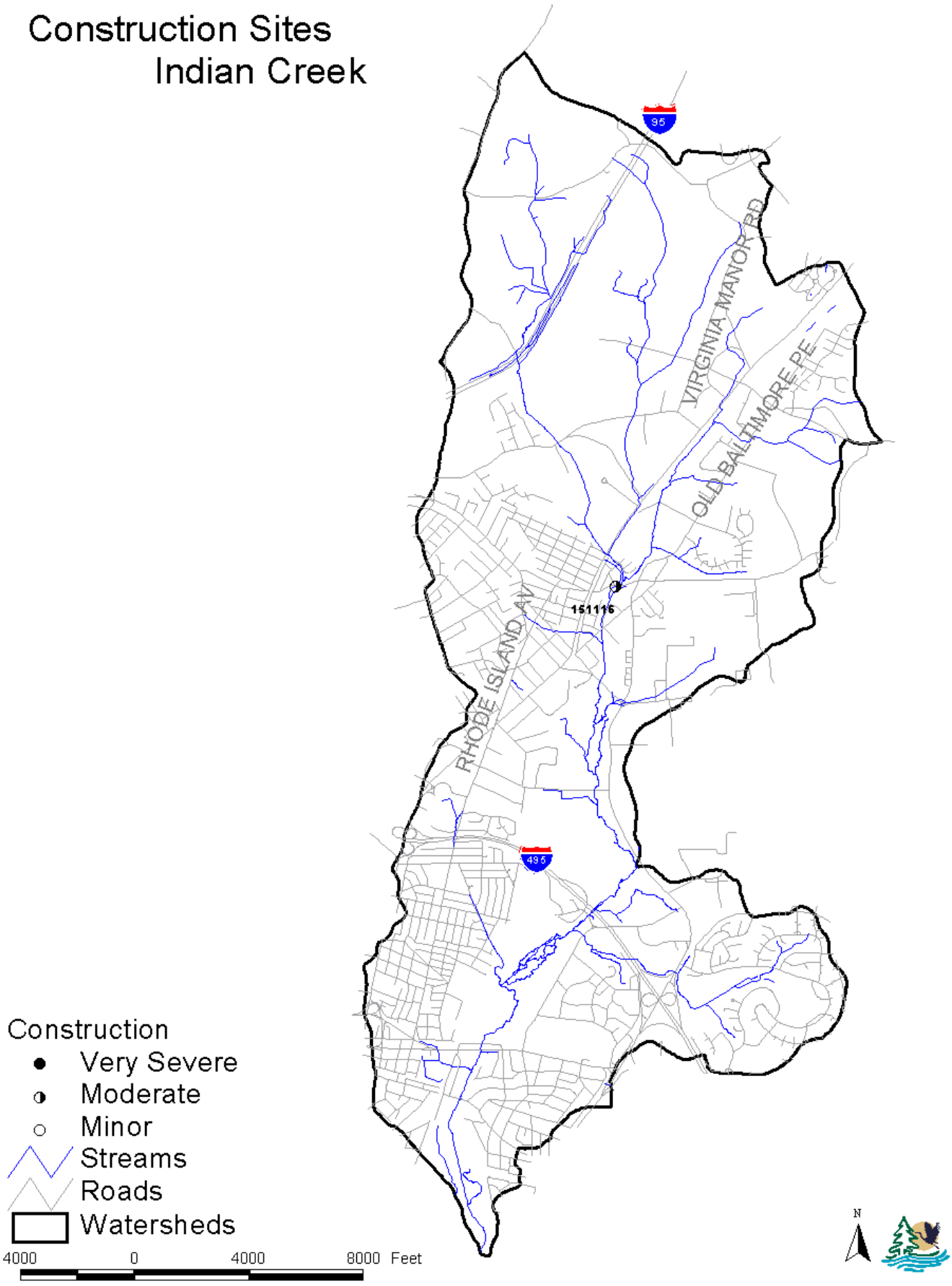

Figure 13b: Map showing the construction sites in Indian Creek sub-watershed of the Anacostia River

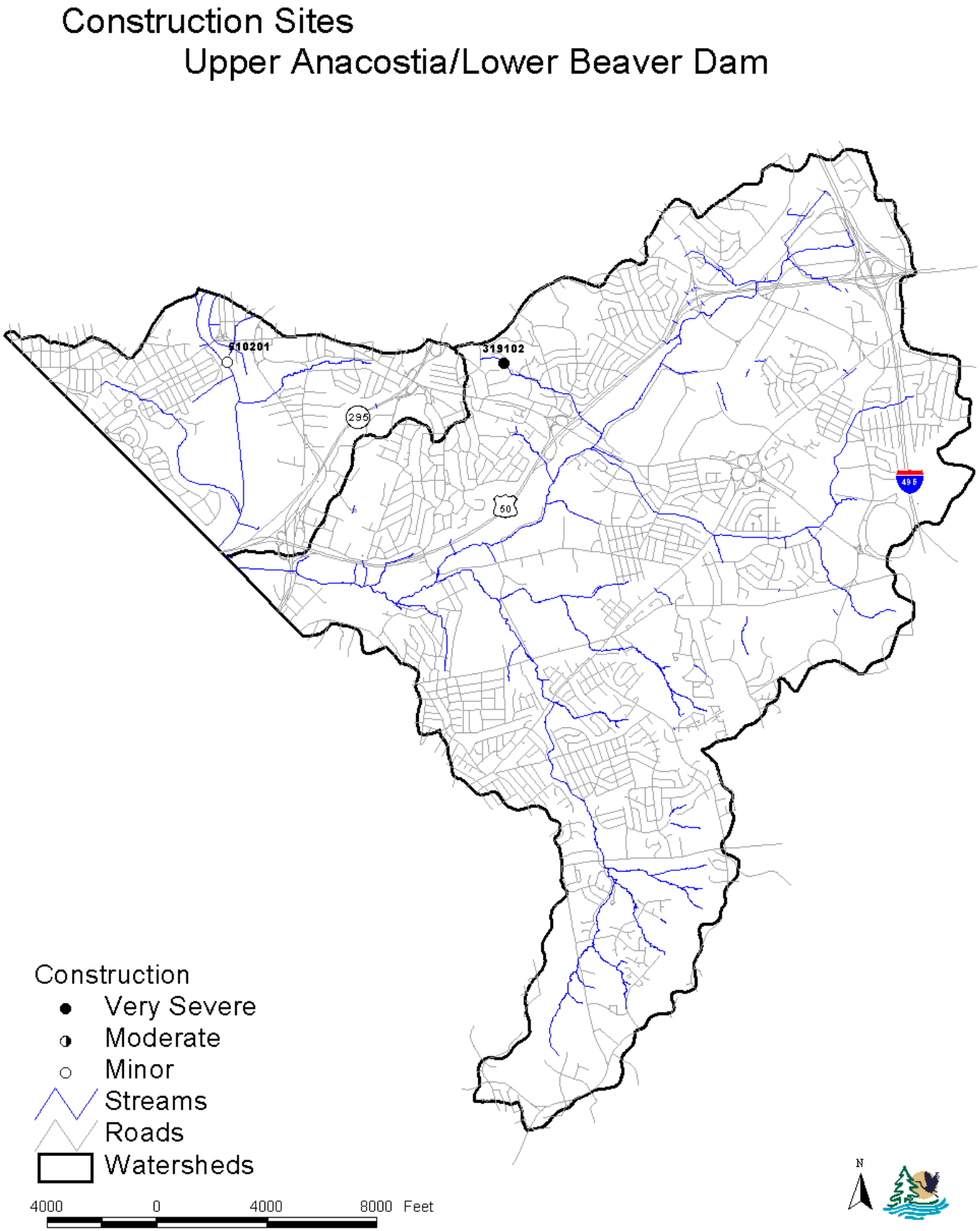

Figure 13c: Map showing the construction sites in Upper Anacostia and Lower Beaver Dam sub-watersheds of the Anacostia River

Representative Sites

Representative sites are used to document the general condition of both in-stream habitat and the adjacent riparian corridor (including and up to 50 feet beyond the stream bank). The SCA survey's representative site evaluations are based on the habitat assessment procedures outlined in EPA's rapid bioassessment protocols (Plafkin, et. al., 1989), and they are very similar to the habitat evaluations of Maryland Save-Our-Stream's Heartbeat Program. At each representative site, the following 10 separate categories related to stream habitat health are evaluated:

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

Under each category, field crews base a rating of optimal, suboptimal, marginal or poor on established grading criteria developed to reflect ideal wildlife habitat for rocky bottom streams. In addition to the habitat ratings, teams collect data on the stream's wetted width and pool depths at both runs and riffles at each representative site. Depth measurements are taken along the stream thalweg (main flow channel). At representative sites, field crews also indicate whether the bottom sediments are primarily silt, sand, gravel, cobble, boulder, or bedrock. Representative sites are located at approximately ½- to one-mile intervals along the stream. Survey crews evaluated 46 representative sites in the Anacostia Watershed.

The streams in this watershed show typical characteristics for coastal plain streams in Maryland. Sand and silt were the two most common bottom types recorded. Also some of the channels had been placed in concrete and that was listed as well. As a result, the substrate was poor to marginal for attachment sites for macroinvertebrates and poor to marginal for embeddedness. The sediment deposition was marginal and the channel flow suboptimal, indicating that most streams filled their channel from bank to bank with few sediment bars forming. The bank condition and the bank vegetation were suboptimal, but shelter for fish spanned the entire range of ratings, from optimal to poor. In areas with little channel alteration, this characteristic ranked as mostly suboptimal. Similarly, in areas with few inadequate buffer sites, riparian vegetation ranked as optimal. Locations of representative sites are shown in Figure 14a, 14b and data collected for all categories are listed in Appendix B.

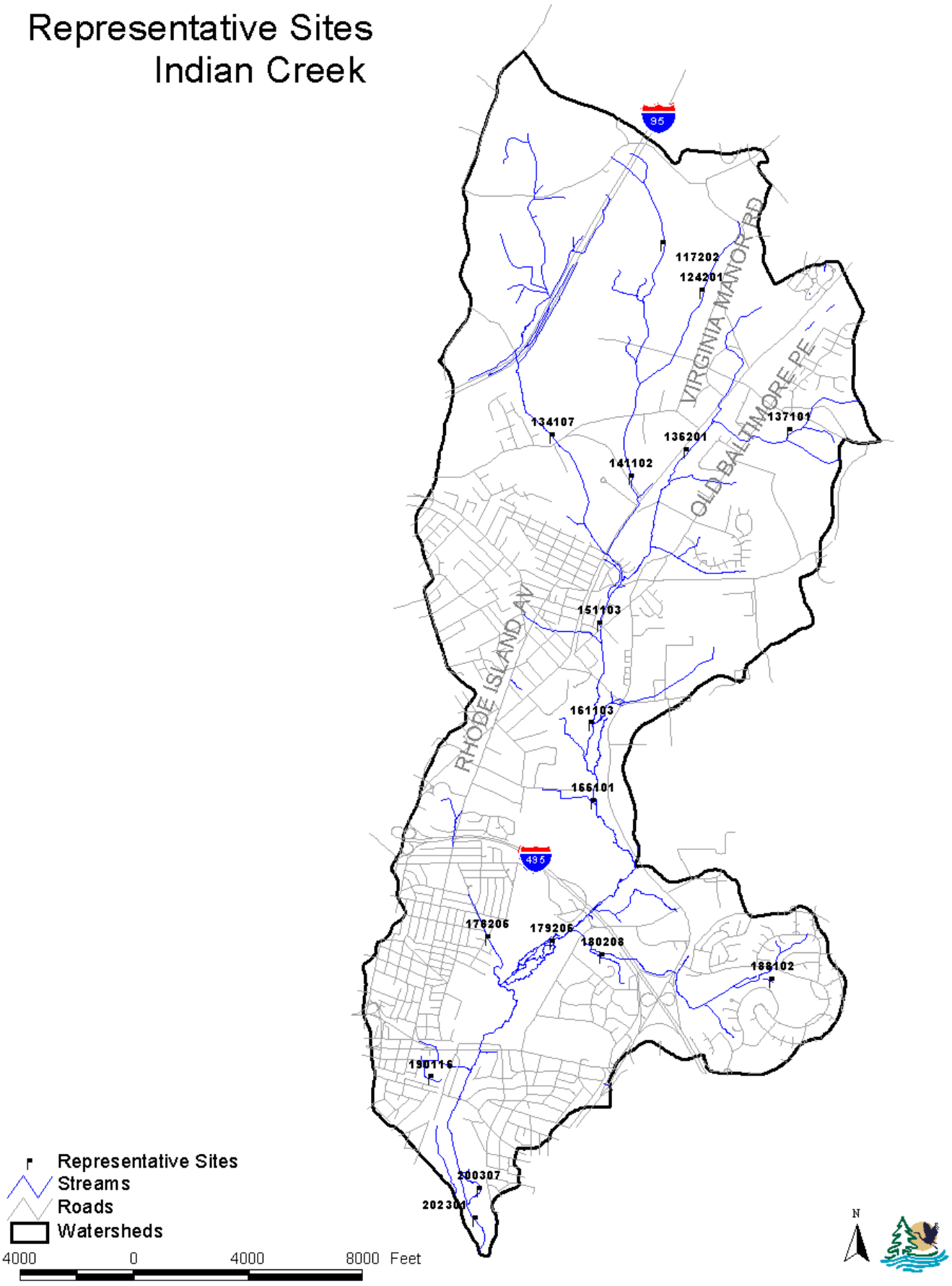

Figure 14a: Map showing the representative sites in Indian Creek sub-watershed of the Anacostia River

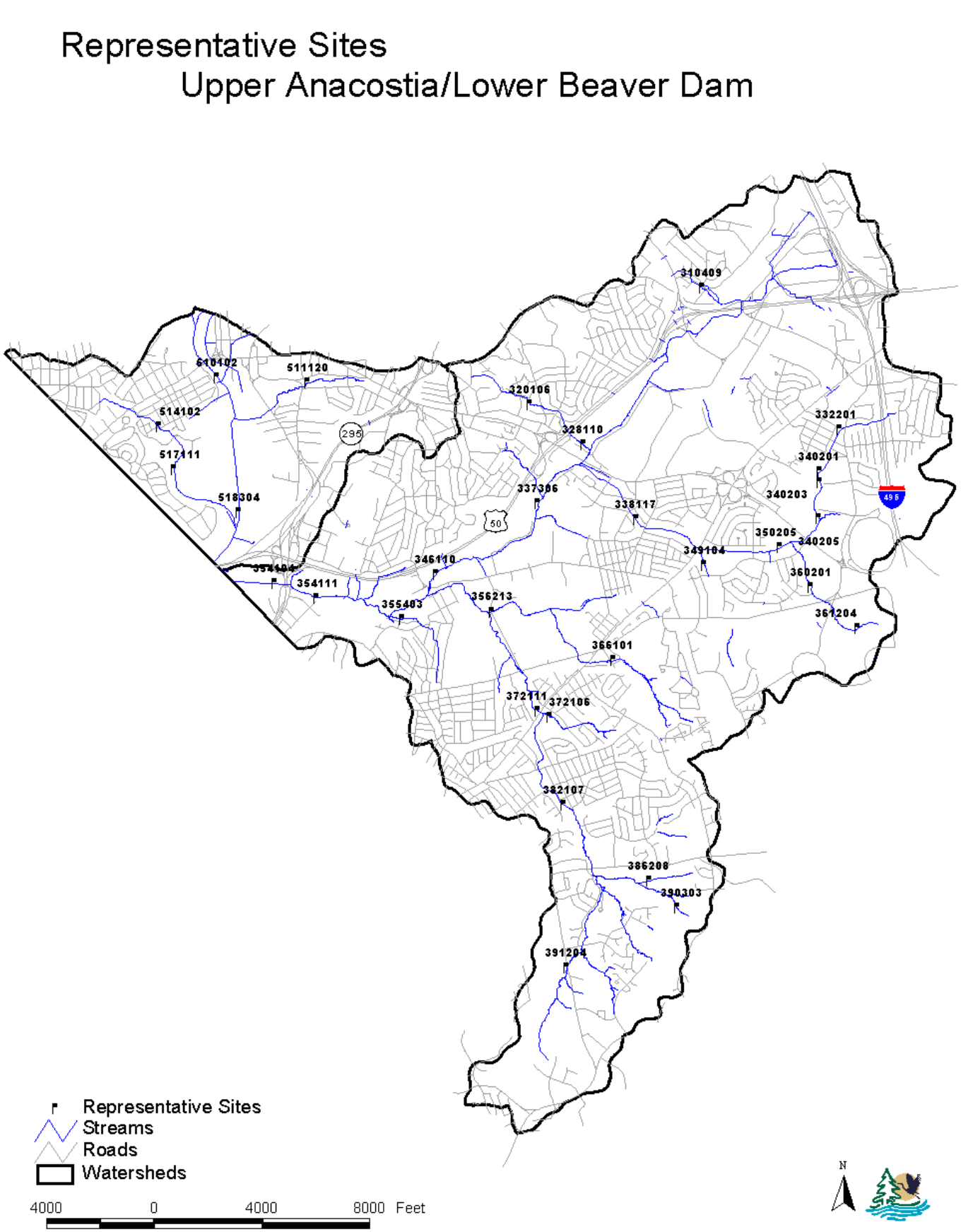

Figure 14b: Map showing the representative sites in Upper Anacostia and Lower Beaver Dam sub-watersheds of the Anacostia River

DISCUSSION

The results of the Anacostia River SCA survey list, summarize, and show the location of the observable environmental problems along the stream corridor network in this watershed. Each potential problem site has a corresponding ranking for severity, correctibility, and access and a photograph of the site. The data from this effort can be used to target future restoration efforts. After this list of potential problem sites is compiled and distributed, county planners, resource managers, and others can initiate a dialog to cooperatively set the direction and goals for the watershed' management and plan future restoration work at specific problem sites. In addition, this data can be combined with other GIS data and local information to prioritize areas for restoration.

During the SCA survey, the most frequently observed potential problem site was pipe outfalls reported at 378 sites. Other potential environmental problems recorded during the survey included: 85 inadequately forested stream buffers, 69 erosion sites, 68 fish barriers, 62channel alterations, 58 exposed pipes, 18 trash dumping sites, 15 unusual conditions, and 3 in- or near-stream construction sites. Additionally, crews recorded descriptive habitat condition data at 46 representative sites.

The GIS and attribute data for the sites described in the SCA survey can be combined with other existing GIS datasets to even further prioritize areas for restoration. Projects can be further targeted to restoring areas where rare or threatened species, gaps in continuous forest or the state's Green Infrastructure, or quality fish and wildlife habitat are found. In addition, sites can be prioritized for restoration based on their location in headwater areas, streams that deposit directly into the Chesapeake Bay, areas of specific local interest, or sites where the surrounding land use is particularly suited to restoration projects.

As mentioned earlier, the Maryland Department of Natural Resources has formed a partnership with Prince George's County to develop a Watershed Restoration Action Strategy (WRAS) for the Anacostia Watershed. Results from this survey will be combined with other GIS data and local information about the area to help establish priorities for the types and location of restoration projects that will be pursued in the watershed in the future. The value of the present survey is its help in placing individual stream problems into their watershed context and its potential common use among resource managers and land-use planners to cooperatively and consistently prioritize future restoration work. Results of the present survey will be given to the Anacostia Watershed WRAS committee, which is developing a Watershed Restoration Action Strategy for the Anacostia River. Information on the Anacostia River Watershed Action Strategy can be found on the Department of Natural Resources' website (www.dnr.maryland.gov/wras).

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Appendix A

Listing of sites by site number

Appendix A- Anacostia River

Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
105201	Pipe Outfall	3	3	2	407429.97324	157273.27077	Indian Creek
107201	Inadequate Buffer	3	3	1	408855.59134	157302.43364	Indian Creek
111101	Pipe Outfall	3	3	1	407699.70771	156802.63298	Indian Creek
112201	Inadequate Buffer	1	3	2	408935.37407	157013.06662	Indian Creek
116101	Inadequate Buffer	3	5	1	408494.30515	156696.57442	Indian Creek
116102	Channel Alteration	5	1	1	408494.30515	156694.89095	Indian Creek
117201	Erosion site	5	2	2	409140.75730	156415.43507	Indian Creek
117202	Representative site				409140.75730	156363.24753	Indian Creek
117203	Erosion site	5	1	2	409037.30649	156102.24869	Indian Creek
118201	Pipe Outfall	5	3	3	409655.21743	156107.02143	Indian Creek
122101	Erosion site	3	3	2	407620.67747	155385.35485	Indian Creek
122102	Fish Barrier	4	3	2	407883.20433	155786.15922	Indian Creek
122103	Channel Alteration	5	3	1	407911.26063	155804.19542	Indian Creek
122104	Inadequate Buffer	3	5	1	408211.48233	156176.38245	Indian Creek
122105	Channel Alteration	4	5	1	408211.48233	156176.38245	Indian Creek
122106	Pipe Outfall	3	3	1	408015.97950	155788.16167	Indian Creek
123201	Fish Barrier	5	1	5	408925.29569	155631.84954	Indian Creek
123202	Pipe Outfall	3	3	5	408925.29569	155641.86965	Indian Creek
124201	Representative site				409552.55453	155848.28390	Indian Creek
124202	Erosion site	3	3	5	409454.35746	155663.91389	Indian Creek
128101	Channel Alteration	2	4	1	407546.00471	155237.89515	Indian Creek
128102	Inadequate Buffer	5	4	1	407546.00471	155238.82386	Indian Creek
128103	Pipe Outfall	3	3	1	407611.01481	155304.76267	Indian Creek
129201	Inadequate Buffer	1	1	3	409284.31650	155284.73610	Indian Creek
130201	Unusual Condition	3	4	1	409981.44167	155102.61358	Indian Creek
134101	Exposed Pipe	5	3	2	408047.96530	154225.49535	Indian Creek
134102	Unusual Condition	4	4	2	408028.99620	154234.12010	Indian Creek
134103	Pipe Outfall	3	2	1	408013.18248	154252.03073	Indian Creek
134104	Exposed Pipe	3	3	1	408008.76159	154257.28304	Indian Creek
134105	Fish Barrier	3	4	1	407999.24865	154264.19820	Indian Creek
134106	Pipe Outfall	3	4	1	407994.44043	154263.14974	Indian Creek
134107	Representative site				407955.85110	154310.09002	Indian Creek
134108	Exposed Pipe	5	3	2	407914.49370	154362.72671	Indian Creek
134109	Exposed Pipe	5	3	2	407878.77595	154392.80482	Indian Creek
135101	Pipe Outfall	3	3	1	408734.12214	154327.00896	Indian Creek
135102	Exposed Pipe	3	3	1	408720.96297	154362.72671	Indian Creek
135103	Pipe Outfall	5	1	1	408743.52155	154428.52257	Indian Creek
135104	Pipe Outfall	3	3	1	408829.99611	154691.70602	Indian Creek
136201	Representative site				409384.56123	154150.30008	Indian Creek
136202	Pipe Outfall	3	3	1	409489.83460	154272.49239	Indian Creek
136203	Pipe Outfall	3	3	1	409572.54940	154374.00600	Indian Creek
136204	Pipe Outfall	5	2	1	409619.54644	154432.28234	Indian Creek
136205	Pipe Outfall	3	3	1	409628.94585	154441.68175	Indian Creek
136206	Unusual Condition	3	5	3	409647.77904	154456.21489	Indian Creek
136207	Channel Alteration	1	4	2	409637.32870	154455.94305	Indian Creek
136208	Fish Barrier	3	3	2	409647.63484	154474.49411	Indian Creek
136209	Pipe Outfall	3	3	3	409723.21324	154636.64413	Indian Creek
136210	Pipe Outfall	3	3	1	409710.84586	154650.38566	Indian Creek
136211	Pipe Outfall	3	3	1	409708.78464	154657.25642	Indian Creek
137101	Representative site				410485.70109	154363.11816	Indian Creek
137102	Pipe Outfall	3	3	1	410765.18676	154693.57919	Indian Creek
140101	Exposed Pipe	5	3	2	408323.97742	153660.39463	Indian Creek
140102	Exposed Pipe	3	3	2	408282.42751	153812.74431	Indian Creek
141101	Pipe Outfall	3	2	1	408866.05740	153652.11417	Indian Creek
141102	Representative site				408793.42254	153875.11592	Indian Creek
141201	Inadequate Buffer	1	4	2	409072.49330	153634.27403	Indian Creek
142301	Channel Alteration	3	4	1	409445.86194	153887.85887	Indian Creek
142302	Pipe Outfall	3	2	1	409561.82285	153857.27578	Indian Creek

Appendix A- Anacostia River

Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
142303	Pipe Outfall	5	1	1	409582.21158	153853.45289	Indian Creek
142304	Pipe Outfall	5	1	1	409693.07531	153839.43564	Indian Creek
142305	Pipe Outfall	5	1	1	409713.46404	153838.16134	Indian Creek
142306	Pipe Outfall	3	1	1	409723.65840	153835.61275	Indian Creek
142307	Pipe Outfall	4	1	2	409727.48129	153833.06416	Indian Creek
142308	Pipe Outfall	5	1	1	409735.12707	153833.06416	Indian Creek
142309	Inadequate Buffer	2	3	2	409445.86194	153887.85887	Indian Creek
145101	Fish Barrier	3	3	2	408352.48671	153288.48883	Indian Creek
145102	Pipe Outfall	3	2	2	408346.68126	153300.09974	Indian Creek
146101	Pipe Outfall	3	2	3	409210.22128	153079.05934	Indian Creek
146102	Pipe Outfall	4	2	1	408640.70919	152965.15692	Indian Creek
146103	Pipe Outfall	4	4	1	408631.66931	152970.58085	Indian Creek
146104	Inadequate Buffer	2	4	2	408667.82881	152862.10235	Indian Creek
146105	Channel Alteration	1	5	2	408524.99879	153080.86731	Indian Creek
146106	Channel Alteration	1	4	2	408488.83930	153091.71516	Indian Creek
146201	Pipe Outfall	3	3	2	409222.87710	153071.82744	Indian Creek
146202	Inadequate Buffer	1	2	1	409257.22862	153046.51579	Indian Creek
147201	Pipe Outfall	3	3	1	409412.71446	152952.50110	Indian Creek
150101	Pipe Outfall	3	2	3	407794.70222	152315.76999	Indian Creek
150102	Pipe Outfall	4	2	3	407786.76469	152320.53250	Indian Creek
150103	Pipe Outfall	4	2	3	407740.72705	152345.93258	Indian Creek
150104	Pipe Outfall	3	2	2	407740.33124	152346.72420	Indian Creek
151101	Pipe Outfall	4	3	2	408458.27936	152268.14483	Indian Creek
151102	Pipe Outfall	4	3	2	408456.69186	152276.08236	Indian Creek
151103	Representative site				408454.90251	152309.82366	Indian Creek
151104	Pipe Outfall	4	3	2	408453.51685	152330.05753	Indian Creek
151105	Pipe Outfall	5	1	2	408455.10435	152344.34508	Indian Creek
151106	Pipe Outfall	3	2	2	408461.45437	152374.50768	Indian Creek
151107	Pipe Outfall	5	2	2	408472.56691	152403.08277	Indian Creek
151108	Pipe Outfall	5	1	2	408545.59214	152591.99588	Indian Creek
151109	Pipe Outfall	3	2	2	408631.31742	152706.29625	Indian Creek
151111	Inadequate Buffer	5	3	2	408707.51767	152817.42161	Indian Creek
151112	Pipe Outfall	3	2	4	408761.49284	152817.42161	Indian Creek
151113	Channel Alteration	3	4	1	408540.82963	152622.15848	Indian Creek
151114	Channel Alteration	3	4	3	408661.10902	152745.19228	Indian Creek
151115	Inadequate Buffer	1	3	2	408659.89251	152747.57138	Indian Creek
151116	Construction	3			408616.15321	152736.09899	Indian Creek
155101	Pipe Outfall	3	4	2	408194.75351	152249.09477	Indian Creek
155102	Pipe Outfall	3	3	2	408172.52844	152250.68228	Indian Creek
155103	Pipe Outfall	3	3	2	408128.07830	152250.68228	Indian Creek
155104	Pipe Outfall	5	2	2	408099.50320	152249.09477	Indian Creek
155105	Inadequate Buffer	1	4	2	408075.69063	152245.91976	Indian Creek
155106	Pipe Outfall	3	3	2	408053.46556	152249.09477	Indian Creek
155107	Pipe Outfall	4	3	2	407996.31537	152253.85729	Indian Creek
155108	Pipe Outfall	4	2	2	407972.50279	152255.44479	Indian Creek
155109	Pipe Outfall	3	3	2	407956.62774	152258.61980	Indian Creek
156101	Pipe Outfall	3	4	1	408445.57932	151729.98060	Indian Creek
156102	Inadequate Buffer	1	3	1	408446.49386	151733.24620	Indian Creek
156103	Channel Alteration	4	3	1	408449.89319	151738.75933	Indian Creek
156104	Channel Alteration	1	4	2	408464.70313	152121.28795	Indian Creek
156105	Trash Dumping	5	2	1	408455.70369	152130.28739	Indian Creek
156106	Pipe Outfall	5	1	1	408381.45831	152200.03304	Indian Creek
156107	Inadequate Buffer	1	4	2	408468.07792	152157.28570	Indian Creek
156108	Channel Alteration	1	4	2	408468.07792	152170.78486	Indian Creek
156109	Pipe Outfall	3	2	1	408460.20341	152256.27954	Indian Creek
156110	Pipe Outfall	3	3	2	408460.20341	152260.77926	Indian Creek
157101	Inadequate Buffer	3	3	1	409507.23196	151903.78977	Indian Creek
157102	Pipe Outfall	3	2	1	409661.90983	152083.07548	Indian Creek

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Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
160301	Pipe Outfall	3	3	3	408076.46168	151170.82760	Indian Creek
160302	Channel Alteration	3	2	2	408081.73479	151271.01668	Indian Creek
160303	Pipe Outfall	5	1	1	408081.73479	151302.65533	Indian Creek
160304	Pipe Outfall	5	1	3	408081.73479	151323.74777	Indian Creek
160305	Unusual Condition	4	3	1	408078.21939	151330.77858	Indian Creek
160306	Erosion site	4	2	1	408060.64235	151329.02088	Indian Creek
161101	Unusual Condition	3	2	1	408657.15151	151481.28854	Indian Creek
161102	Fish Barrier	5	3	3	408390.39900	151275.05971	Indian Creek
161103	Representative site				408372.46606	151250.40191	Indian Creek
161104	Trash Dumping	4	2	2	408385.91576	151212.29441	Indian Creek
161105	Erosion site	3	3	3	408385.91576	151327.73772	Indian Creek
161106	Unusual Condition	4	5	1	408707.58791	151501.46310	Indian Creek
164201	Inadequate Buffer	5	1	1	406856.01166	150471.43975	Indian Creek
165101	Pipe Outfall	3	2	2	408086.65979	150477.04379	Indian Creek
165102	Inadequate Buffer	3	3	1	408028.37773	150479.28541	Indian Creek
165103	Pipe Outfall	3	3	1	408029.49854	150475.92298	Indian Creek
165104	Pipe Outfall	3	2	1	407974.57891	150477.04379	Indian Creek
165105	Erosion site	5	1	1	408027.25692	150475.92298	Indian Creek
165106	Channel Alteration	3	4	1	408028.37773	150488.25188	Indian Creek
165107	Pipe Outfall	5	1	1	408023.89450	150547.65475	Indian Creek
165108	Pipe Outfall	3	2	1	407952.16273	150563.34607	Indian Creek
165109	Pipe Outfall	3	2	1	407859.13559	150552.13799	Indian Creek
165110	Pipe Outfall	5	1	1	407925.26332	150563.34607	Indian Creek
166101	Representative site				408393.76142	150422.12416	Indian Creek
168201	Pipe Outfall	5	1	1	406970.33416	150326.85540	Indian Creek
168202	Inadequate Buffer	4	1	1	406919.89776	150293.23114	Indian Creek
168203	Pipe Outfall	3	1	1	406894.11916	150184.51268	Indian Creek
168204	Pipe Outfall	3	3	1	406879.54864	150081.39826	Indian Creek
168205	Pipe Outfall	3	3	1	406904.20644	150078.03584	Indian Creek
168206	Channel Alteration	5	3	1	406892.99835	150074.67341	Indian Creek
172201	Pipe Outfall	3	3	1	407066.72372	149433.57074	Indian Creek
172202	Channel Alteration	3	3	1	407065.71058	149453.08629	Indian Creek
172202	Inadequate Buffer	1	3	1	407064.48211	149451.50368	Indian Creek
172203	Pipe Outfall	3	3	1	407110.43527	149348.38926	Indian Creek
172204	Pipe Outfall	5	3	1	407129.48902	149302.43610	Indian Creek
172205	Pipe Outfall	5	3	1	407129.48902	149283.38235	Indian Creek
172206	Pipe Outfall	3	3		407153.02601	149229.58352	Indian Creek
174101	Pipe Outfall	3	3	1	409216.43513	149292.34882	Indian Creek
174102	Inadequate Buffer	4	2	1	408888.03813	149479.52390	Indian Creek
174103	Inadequate Buffer	4	4	2	408616.80239	149241.91242	Indian Creek
174104	Erosion site	3	1	1	408825.27284	149742.91398	Indian Creek
174105	Erosion site	3	2	1	408417.29841	149342.78522	Indian Creek
178201	Pipe Outfall	3	3	1	407185.30933	149160.06642	Indian Creek
178202	Pipe Outfall	5	4	1	407218.76725	149041.44287	Indian Creek
178203	Pipe Outfall	3	3	1	407237.01703	149007.98495	Indian Creek
178204	Pipe Outfall	5	4	1	407246.14192	149014.06821	Indian Creek
178205	Fish Barrier	4	3	1	407258.30844	148983.65191	Indian Creek
178206	Representative site				407267.43333	148968.44376	Indian Creek
178207	Pipe Outfall	5	1	1	407319.14103	148874.15325	Indian Creek
178208	Fish Barrier	4	2	1	407328.26591	148855.90348	Indian Creek
178209	Fish Barrier	4	4	1	407346.51569	148831.57044	Indian Creek
178210	Pipe Outfall	3	3	1	407346.51569	148825.48718	Indian Creek
179201	Pipe Outfall	3	2	1	408279.89093	148933.48569	Indian Creek
179202	Pipe Outfall	3	2	1	408345.71576	148846.71660	Indian Creek
179203	Pipe Outfall	3	2	1	407976.19911	149030.72691	Indian Creek
179204	Pipe Outfall	5	2	2	407702.42766	148908.05337	Indian Creek
179205	Pipe Outfall	5	3	3	407714.39581	148914.03744	Indian Creek
179206	Representative site				407949.27077	148923.01356	Indian Creek

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Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
180201	Inadequate Buffer	3	4	1	409217.89473	148632.78591	Indian Creek
180202	Channel Alteration	3	4	1	409119.15749	148596.88145	Indian Creek
180203	Pipe Outfall	3	2	1	408975.53968	148611.84164	Indian Creek
180204	Pipe Outfall	5	1	1	408993.49191	148625.30581	Indian Creek
180205	Pipe Outfall	3	2	1	408833.41789	148776.40371	Indian Creek
180206	Inadequate Buffer	2	3	1	408707.75231	148761.44352	Indian Creek
180207	Pipe Outfall	3	2	1	408469.88532	148836.24447	Indian Creek
180208	Representative site				408484.84551	148774.90769	Indian Creek
180209	Pipe Outfall	3	2	1	408507.28579	148747.97936	Indian Creek
181101	Exposed Pipe	4	3	1	409398.71788	148817.68652	Indian Creek
181102	Pipe Outfall	3	3	1	409395.76649	148801.94580	Indian Creek
181103	Pipe Outfall	3	2	1	409390.84752	148780.30231	Indian Creek
181104	Fish Barrier	5	3	1	409366.47575	148752.78425	Indian Creek
181105	Pipe Outfall	3	2	1	409338.70638	148708.48527	Indian Creek
181106	Pipe Outfall	3	3	1	409329.85223	148706.51768	Indian Creek
181107	Inadequate Buffer	2	2	1	409325.91705	148694.71214	Indian Creek
181108	Channel Alteration	1	3	1	409312.14392	148673.06865	Indian Creek
182101	Inadequate Buffer	3	2	1	410603.86674	148947.54745	Indian Creek
182102	Channel Alteration	1	4	1	410508.43862	148915.08222	Indian Creek
182103	Pipe Outfall	3	3	1	410499.58447	148908.19565	Indian Creek
182104	Pipe Outfall	3	3	2	410328.40414	148949.51504	Indian Creek
182105	Pipe Outfall	5	3	1	410377.59389	148831.45964	Indian Creek
182106	Pipe Outfall	5	3	1	410331.35552	148745.86948	Indian Creek
182107	Pipe Outfall	4	2	1	410285.11716	148676.02004	Indian Creek
182108	Fish Barrier	5	3	1	410283.14957	148668.14968	Indian Creek
184201	Erosion site	4	2	3	407328.44430	147998.15455	Indian Creek
185201	Exposed Pipe	2	3	4	407528.27765	148228.73150	Indian Creek
187101	Pipe Outfall	3	3	1	409278.50708	148417.94662	Indian Creek
187102	Pipe Outfall	3	3	2	409322.28408	148371.97830	Indian Creek
187103	Pipe Outfall	4	3	2	409327.23751	148368.26323	Indian Creek
187104	Channel Alteration	2	4	1	409338.38272	148362.07145	Indian Creek
187105	Pipe Outfall	4	2	1	409387.91699	148293.96182	Indian Creek
187106	Fish Barrier	5	1	1	409775.52266	148021.52333	Indian Creek
188101	Fish Barrier	5	3	2	410273.34208	148535.44140	Indian Creek
188102	Representative site				410299.34758	148520.58111	Indian Creek
190110	Channel Alteration	2	4	1	406585.51561	147589.33682	Indian Creek
190111	Pipe Outfall	3	3	1	406584.27726	147606.67382	Indian Creek
190112	Inadequate Buffer	1	2	1	406587.99233	147548.47105	Indian Creek
190113	Pipe Outfall	3	3	1	406589.23069	147533.61077	Indian Creek
190114	Pipe Outfall	5	3	1	406592.94576	147512.55870	Indian Creek
190115	Pipe Outfall	3	3	1	406657.34031	147481.59978	Indian Creek
190116	Representative site				406669.72388	147476.64635	Indian Creek
190117	Pipe Outfall	3	3	1	406700.68279	147465.50114	Indian Creek
190118	Pipe Outfall	5	3	1	406725.44993	147456.83265	Indian Creek
190119	Pipe Outfall	5	3	1	406742.78693	147461.78607	Indian Creek
190120	Pipe Outfall	3	3	1	406776.22256	147766.42184	Indian Creek
190201	Inadequate Buffer	3	3	1	406989.21992	147350.33396	Indian Creek
190202	Pipe Outfall	3	3	1	407049.89940	147500.17513	Indian Creek
190203	Channel Alteration	2	4	3	407083.33504	147576.95325	Indian Creek
190204	Pipe Outfall	3	5	1	407335.95982	147775.09034	Indian Creek
190205	Pipe Outfall	5	1	1	407332.24475	147773.85198	Indian Creek
190206	Pipe Outfall	5	3	2	407251.75156	147771.37527	Indian Creek
190207	Exposed Pipe	4	3	2	407239.36799	147768.89855	Indian Creek
190208	Pipe Outfall	3	3	3	407182.40358	147863.01367	Indian Creek
190209	Channel Alteration	4	5	3	407170.02001	147799.85747	Indian Creek
196301	Pipe Outfall	3	2	2	406902.04154	147164.84408	Indian Creek
196302	Pipe Outfall	3	2	2	406955.50028	147271.17622	Indian Creek
196303	Pipe Outfall	3	2	2	406954.09333	147262.31566	Indian Creek

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Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
196304	Pipe Outfall	3	2	1	406954.46923	147279.14536	Indian Creek
196305	Pipe Outfall	5	1	1	406960.89180	147277.59879	Indian Creek
200301	Pipe Outfall	3	2	1	407012.00567	146278.78946	Indian Creek
200302	Inadequate Buffer	2	1	1	407010.89948	146284.32043	Indian Creek
200303	Pipe Outfall	3	3	1	407239.88162	146560.86892	Indian Creek
200304	Channel Alteration	4	3	2	407232.13827	146561.97511	Indian Creek
200305	Exposed Pipe	4	4	2	407150.27991	146570.82466	Indian Creek
200306	Unusual Condition	4	3	2	407007.58089	146491.17870	Indian Creek
200307	Representative site				407174.61618	146292.06379	Indian Creek
200308	Pipe Outfall	3	3	3	407191.56341	146397.15221	Indian Creek
202301	Representative site				407129.26223	145973.47993	Indian Creek
310301	Channel Alteration	5	3	2	410727.82560	141889.33950	Lower Beaver Dam
310302	Fish Barrier	5	1	2	410802.75091	141876.19471	Lower Beaver Dam
310303	Pipe Outfall	3	4	2	410773.83237	141870.93679	Lower Beaver Dam
310304	Pipe Outfall	3	3	2	410781.71925	141857.79200	Lower Beaver Dam
310305	Pipe Outfall	3	2	2	410790.92060	141877.50919	Lower Beaver Dam
310306	Inadequate Buffer	3	3	2	410817.21018	141870.93679	Lower Beaver Dam
310307	Pipe Outfall	3	2	2	410811.95227	141882.76711	Lower Beaver Dam
310308	Channel Alteration	5	5	2	410922.36852	141903.79877	Lower Beaver Dam
310309	Fish Barrier	5	5	2	410953.91602	141915.62909	Lower Beaver Dam
310310	Pipe Outfall	3	3	2	410994.66488	141913.00013	Lower Beaver Dam
310311	Pipe Outfall	5	5	2	410976.26217	141916.94357	Lower Beaver Dam
310312	Comment			2	411069.59020	141905.11325	Lower Beaver Dam
310313	Channel Alteration	4	2	2	411089.30739	141928.77388	Lower Beaver Dam
310314	Pipe Outfall	3	2	2	411080.10603	141949.80555	Lower Beaver Dam
310315	Pipe Outfall	5	1	2	411073.53363	141935.34628	Lower Beaver Dam
310401	Pipe Outfall	3	3	1	410235.23921	142216.27461	Lower Beaver Dam
310402	Fish Barrier	5	4	1	410285.49944	142245.63348	Lower Beaver Dam
310402	Unusual Condition	3	4	1	410330.64742	142234.34648	Lower Beaver Dam
310403	Inadequate Buffer	4	5	1	410235.33502	142216.78894	Lower Beaver Dam
310404	Pipe Outfall	3	2	1	410417.18105	142189.19850	Lower Beaver Dam
310405	Fish Barrier	5	4	1	410419.68927	142167.87862	Lower Beaver Dam
310406	Pipe Outfall	3	1	1	410424.70571	142131.50942	Lower Beaver Dam
310407	Channel Alteration	4	3	2	410438.50093	142118.96831	Lower Beaver Dam
310408	Pipe Outfall	3	1	2	410534.59715	142058.90732	Lower Beaver Dam
310409	Representative site				410551.68538	142047.07701	Lower Beaver Dam
310410	Fish Barrier	5	4	1	410600.32111	142024.73086	Lower Beaver Dam
311101	Inadequate Buffer	2	3	1	411152.40239	141909.05669	Lower Beaver Dam
311102	Pipe Outfall	3	1	1	411216.81187	141927.45940	Lower Beaver Dam
311103	Exposed Pipe	3	3	2	411640.07418	142269.22400	Lower Beaver Dam
311104	Pipe Outfall	3	3	1	411697.91127	142270.53848	Lower Beaver Dam
311105	Pipe Outfall	3	1	1	411816.21440	142288.94119	Lower Beaver Dam
311106	Pipe Outfall	3	2	1	411855.64878	142300.77150	Lower Beaver Dam
311107	Pipe Outfall	3	3	1	411874.05149	142300.77150	Lower Beaver Dam
311108	Pipe Outfall	4	2	1	411912.17139	142303.40046	Lower Beaver Dam
311109	Pipe Outfall	3	3	1	411930.57409	142302.08598	Lower Beaver Dam
311110	Inadequate Buffer	4	3	1	411952.92024	142296.82806	Lower Beaver Dam
311201	Inadequate Buffer	5	4	3	411529.65793	142015.52951	Lower Beaver Dam
311202	Erosion site	4	3	2	411527.02897	142018.15847	Lower Beaver Dam
312201	Pipe Outfall	3	3	1	411471.82084	142056.27836	Lower Beaver Dam
312202	Pipe Outfall	3	3	2	412030.47452	142295.51358	Lower Beaver Dam
312203	Pipe Outfall	3	3	2	412073.85233	142317.85973	Lower Beaver Dam
312204	Inadequate Buffer	4	5	1	412065.96546	142311.28734	Lower Beaver Dam
315201	Pipe Outfall	3	2	2	410037.66254	141253.65324	Lower Beaver Dam
315202	Inadequate Buffer	2	4	1	409973.52633	141237.16107	Lower Beaver Dam
315203	Exposed Pipe	3	4	4	410129.16895	141307.40056	Lower Beaver Dam
315204	Exposed Pipe	3	3	3	410133.86685	141303.12974	Lower Beaver Dam
316201	Erosion site	5	4	2	410959.87735	141739.02138	Lower Beaver Dam

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Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
316202	Inadequate Buffer	2	4	3	410933.71596	141728.00606	Lower Beaver Dam
316203	Pipe Outfall	3	3	3	410892.03713	141737.42831	Lower Beaver Dam
316204	Pipe Outfall	3	3	2	410857.17813	141740.10977	Lower Beaver Dam
316205	Exposed Pipe	3	3	2	410818.29694	141744.13196	Lower Beaver Dam
316206	Pipe Outfall	3	2	2	410792.82306	141741.45050	Lower Beaver Dam
316207	Erosion site	3	3	2	410698.97190	141729.38393	Lower Beaver Dam
316208	Inadequate Buffer	2	3	2	410627.91317	141662.34739	Lower Beaver Dam
316209	Pipe Outfall	3	4	2	410542.10640	141589.94793	Lower Beaver Dam
316210	Channel Alteration	5	5	2	410373.00329	141558.75835	Lower Beaver Dam
316211	Erosion site	4	4	2	410208.08161	141479.04620	Lower Beaver Dam
316301	Pipe Outfall	3	2	1	410990.16949	141809.24406	Lower Beaver Dam
316302	Comment			2	410997.05406	141835.40545	Lower Beaver Dam
316303	Channel Alteration	5	5	1	410998.43098	141814.75172	Lower Beaver Dam
319101	Pipe Outfall	5	1	1	408055.96304	141065.70981	Lower Beaver Dam
319102	Construction	1			408208.80063	140996.86405	Lower Beaver Dam
319103	Inadequate Buffer	1	1	1	408174.37775	141034.04076	Lower Beaver Dam
319104	Pipe Outfall	5	1	1	408229.45436	140969.32574	Lower Beaver Dam
319105	Pipe Outfall	3	3	2	408245.97734	140948.67201	Lower Beaver Dam
319106	Exposed Pipe	3	3	2	408259.74650	140928.01828	Lower Beaver Dam
319107	Pipe Outfall	5	4	3	408262.50033	140922.51062	Lower Beaver Dam
319108	Erosion site	3	2	3	408343.79226	140870.60609	Lower Beaver Dam
320101	Inadequate Buffer	3	1	1	408376.17108	140871.92921	Lower Beaver Dam
320102	Channel Alteration	3	3	1	408380.19389	140870.92351	Lower Beaver Dam
320103	Fish Barrier	4	5	1	408385.51956	140871.76547	Lower Beaver Dam
320104	Pipe Outfall	3	3	1	408556.49497	140813.50312	Lower Beaver Dam
320105	Pipe Outfall	3	2	1	408576.39715	140796.91797	Lower Beaver Dam
320106	Representative site				408607.90894	140732.23588	Lower Beaver Dam
320107	Channel Alteration	2	5	2	408845.07661	140672.52933	Lower Beaver Dam
320108	Fish Barrier	4	5	1	408926.34386	140657.60270	Lower Beaver Dam
320109	Channel Alteration	3	3	2	408932.97792	140652.62715	Lower Beaver Dam
321201	Exposed Pipe	2	4	2	410132.08441	141213.20529	Lower Beaver Dam
321202	Pipe Outfall	3	3	1	410107.20668	141194.96162	Lower Beaver Dam
321203	Erosion site	2	3	1	410087.30450	141176.71795	Lower Beaver Dam
321204	Inadequate Buffer	1	3	3	410027.59795	141120.32844	Lower Beaver Dam
321205	Channel Alteration	1	5	2	409959.59883	140995.93980	Lower Beaver Dam
321206	Fish Barrier	3	2	2	409944.67219	141004.23237	Lower Beaver Dam
321207	Pipe Outfall	3	4	1	409986.13507	140979.35464	Lower Beaver Dam
321208	Pipe Outfall	3	3	2	409866.72198	140874.86819	Lower Beaver Dam
321209	Erosion site	3	4	2	409929.74556	140979.35464	Lower Beaver Dam
321210	Pipe Outfall	3	3	2	409840.18573	140831.74679	Lower Beaver Dam
322201	Pipe Outfall	3	3	1	410573.24946	140717.30924	Lower Beaver Dam
322202	Pipe Outfall	5	2	1	410568.27391	140791.94243	Lower Beaver Dam
322203	Erosion site	3	2	2	410571.59094	140770.38173	Lower Beaver Dam
322204	Exposed Pipe	3	3	2	410586.51758	140735.55291	Lower Beaver Dam
322205	Pipe Outfall	3	2	2	410611.39530	140674.18785	Lower Beaver Dam
322206	Exposed Pipe	3	3	2	410619.68788	140642.67606	Lower Beaver Dam
322207	Pipe Outfall	3	4	1	411100.65729	141045.69525	Lower Beaver Dam
322208	Pipe Outfall	5	1	1	411090.70620	141050.67080	Lower Beaver Dam
322209	Exposed Pipe	3	3	2	411017.73153	141035.74416	Lower Beaver Dam
323101	Pipe Outfall	3	3	1	412006.20659	140871.55116	Lower Beaver Dam
323102	Pipe Outfall	4	3	1	411992.93847	140861.60007	Lower Beaver Dam
323103	Inadequate Buffer	4	2	1	411974.69480	140846.67343	Lower Beaver Dam
327101	Erosion site	2	1	2	408320.98581	140219.75468	Lower Beaver Dam
327102	Pipe Outfall	5	1	2	408332.59541	140223.07171	Lower Beaver Dam
328101	Pipe Outfall	5	1	2	408972.78228	140574.67693	Lower Beaver Dam
328102	Pipe Outfall	3	2	2	408977.75783	140564.72584	Lower Beaver Dam
328103	Fish Barrier	3	5	2	408981.07486	140553.11624	Lower Beaver Dam
328104	Inadequate Buffer	3	4	2	408982.73337	140548.14069	Lower Beaver Dam

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Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
328105	Pipe Outfall	3	2	2	409025.85477	140456.92236	Lower Beaver Dam
328106	Pipe Outfall	3	2	3	409073.95171	140383.94769	Lower Beaver Dam
328107	Pipe Outfall	3	3	2	409085.56132	140373.99660	Lower Beaver Dam
328108	Erosion site	3	2	3	409078.92726	140378.97214	Lower Beaver Dam
328109	Pipe Outfall	3	2	4	409184.24297	140299.93353	Lower Beaver Dam
328110	Representative site				409210.15727	140281.79352	Lower Beaver Dam
328111	Erosion site	3	3	3	409215.34013	140276.61066	Lower Beaver Dam
328112	Pipe Outfall	5	1	3	409267.16873	140235.14778	Lower Beaver Dam
328113	Pipe Outfall	3	2	1	409272.35159	140185.91061	Lower Beaver Dam
328114	Pipe Outfall	3	1	1	409223.11442	140108.16770	Lower Beaver Dam
328115	Inadequate Buffer	4	2	2	409215.34013	140100.39341	Lower Beaver Dam
328116	Inadequate Buffer	5	1	2	408475.22772	140123.56080	Lower Beaver Dam
328117	Pipe Outfall	3	2	2	408450.34999	140140.14595	Lower Beaver Dam
328201	Pipe Outfall	3	2	2	409243.84586	140043.38195	Lower Beaver Dam
328202	Erosion site	4	3	2	409223.11442	140053.74767	Lower Beaver Dam
329201	Pipe Outfall	3	4	1	409723.26041	140644.59372	Lower Beaver Dam
329202	Pipe Outfall	3	2	1	409702.52897	140610.90513	Lower Beaver Dam
329203	Pipe Outfall	3	3	1	409676.61467	140572.03368	Lower Beaver Dam
329204	Channel Alteration	5	4	1	409668.84038	140566.85082	Lower Beaver Dam
329205	Pipe Outfall	3	4	1	409648.10894	140527.97937	Lower Beaver Dam
329206	Pipe Outfall	3	3	1	409609.23749	140494.29078	Lower Beaver Dam
329207	Pipe Outfall	3	3	1	409570.36604	140478.74220	Lower Beaver Dam
329208	Erosion site	3	3	1	409536.67745	140460.60219	Lower Beaver Dam
329209	Pipe Outfall	3	3	1	409458.93455	140400.99930	Lower Beaver Dam
329210	Pipe Outfall	3	4	1	409414.88024	140377.67643	Lower Beaver Dam
329211	Pipe Outfall	3	3	2	409373.41736	140312.89068	Lower Beaver Dam
330201	Exposed Pipe	3	3	1	410640.62664	140512.43079	Lower Beaver Dam
331201	Erosion site	4	2	2	411938.93307	140035.60766	Lower Beaver Dam
332201	Representative site				412112.55888	140447.64504	Lower Beaver Dam
332202	Channel Alteration	2	5	1	412045.18170	140325.84783	Lower Beaver Dam
332203	Fish Barrier	4	4	1	412156.61319	140470.96791	Lower Beaver Dam
337301	Erosion site	3	3	1	409061.16196	140026.30646	Lower Beaver Dam
337302	Pipe Outfall	3	3	1	409048.76921	140017.01191	Lower Beaver Dam
337303	Inadequate Buffer	4	4	1	409061.16196	140027.85556	Lower Beaver Dam
337304	Pipe Outfall	3	3	1	408955.82364	139979.83368	Lower Beaver Dam
337305	Pipe Outfall	3	3	3	408811.75801	139840.41532	Lower Beaver Dam
337306	Representative site				408700.22333	139623.54233	Lower Beaver Dam
337307	Fish Barrier	3	3	2	408675.43784	139525.94948	Lower Beaver Dam
337308	Fish Barrier	4	3	1	408893.85993	139431.45482	Lower Beaver Dam
337309	Exposed Pipe	3	3	1	408864.42717	139462.43667	Lower Beaver Dam
337310	Pipe Outfall	3	3	3	408786.97253	139473.28032	Lower Beaver Dam
337311	Fish Barrier	4	4	3	408695.57605	139450.04393	Lower Beaver Dam
338101	Pipe Outfall	3	3	2	409471.67156	139866.74990	Lower Beaver Dam
338102	Pipe Outfall	3	3	2	409480.96612	139862.10262	Lower Beaver Dam
338103	Pipe Outfall	3	3	2	409511.94797	139845.06260	Lower Beaver Dam
338104	Pipe Outfall	5	1	2	409731.91915	139539.89131	Lower Beaver Dam
338105	Pipe Outfall	3	2	2	409738.11553	139530.59676	Lower Beaver Dam
338106	Pipe Outfall	3	3	2	409567.71531	139807.88438	Lower Beaver Dam
338107	Pipe Outfall	4	3	2	409587.85352	139790.84435	Lower Beaver Dam
338108	Pipe Outfall	4	3	2	409580.10806	139797.04073	Lower Beaver Dam
338109	Pipe Outfall	4	3	2	409621.93356	139736.62610	Lower Beaver Dam
338110	Pipe Outfall	3	3	2	409643.62086	139693.25151	Lower Beaver Dam
338111	Pipe Outfall	3	3	2	409638.97358	139693.25151	Lower Beaver Dam
338112	Pipe Outfall	3	3	2	409649.81723	139680.85876	Lower Beaver Dam
338113	Pipe Outfall	3	3	2	409659.11179	139659.17146	Lower Beaver Dam
338114	Exposed Pipe	5	2	2	409679.25000	139618.89505	Lower Beaver Dam
338115	Pipe Outfall	3	3	2	409744.31190	139521.30220	Lower Beaver Dam
338116	Pipe Outfall	3	3	2	409783.03922	139467.08395	Lower Beaver Dam

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Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
338117	Representative site				409804.72652	139437.65119	Lower Beaver Dam
338201	Pipe Outfall	3	2	1	409499.55523	139917.86997	Lower Beaver Dam
338202	Channel Alteration	3	3	1	409498.00614	139919.41906	Lower Beaver Dam
338203	Pipe Outfall	3	3	1	409463.92609	139936.45908	Lower Beaver Dam
340201	Representative site				411877.41273	139975.18640	Lower Beaver Dam
340203	Representative site				411886.70729	139849.70988	Lower Beaver Dam
340204	Erosion site	3	3	3	411889.80547	139772.25524	Lower Beaver Dam
340205	Representative site				411875.86364	139445.39665	Lower Beaver Dam
344101	Pipe Outfall	3	3	2	405942.83808	138808.71950	Lower Beaver Dam
344102	Exposed Pipe	5	1	3	406103.94374	138881.52686	Lower Beaver Dam
344103	Channel Alteration	4	3	2	405995.50724	138836.60317	Lower Beaver Dam
345401	Pipe Outfall	3	5	1	407211.54511	138897.01779	Lower Beaver Dam
345402	Pipe Outfall	2	4	2	407172.81779	138875.33049	Lower Beaver Dam
345403	Unusual Condition	2	3	2	407160.42505	138867.58503	Lower Beaver Dam
345404	Inadequate Buffer	3	5	4	407211.54511	138898.56688	Lower Beaver Dam
346101	Pipe Outfall	3	3	1	408165.78630	139030.23977	Lower Beaver Dam
346102	Erosion site	2	3	1	408161.13902	139025.59249	Lower Beaver Dam
346103	Trash Dumping	5	2	2	407860.61501	138993.06154	Lower Beaver Dam
346104	Pipe Outfall	3	3	3	407845.12408	138988.41427	Lower Beaver Dam
346105	Inadequate Buffer	2	4	2	407829.63315	138980.66880	Lower Beaver Dam
346106	Pipe Outfall	3	3	3	407814.14223	138971.37424	Lower Beaver Dam
346107	Trash Dumping	3	3	2	407803.29858	138966.72697	Lower Beaver Dam
346108	Exposed Pipe	3	3	1	407742.88396	138935.74511	Lower Beaver Dam
346110	Representative site				407555.44372	138821.11224	Lower Beaver Dam
346301	Pipe Outfall	3	3	1	408351.67744	139172.75631	Lower Beaver Dam
346302	Pipe Outfall	4	3	2	408295.91010	139096.85076	Lower Beaver Dam
346303	Pipe Outfall	3	3	1	408288.16463	139103.04714	Lower Beaver Dam
346304	Comment				408273.65645	139078.78356	Lower Beaver Dam
346304	Exposed Pipe	2	3	1	408273.65684	139078.77548	Lower Beaver Dam
346305	Inadequate Buffer	2	2	1	408111.56805	138804.07222	Lower Beaver Dam
346306	Pipe Outfall	5	1	1	408015.52429	138991.51245	Lower Beaver Dam
346307	Pipe Outfall	5	1	1	408032.56432	138969.82515	Lower Beaver Dam
346308	Pipe Outfall	5	1	1	408049.60434	138940.39239	Lower Beaver Dam
346309	Pipe Outfall	3	4	3	408061.99708	138910.95962	Lower Beaver Dam
346310	Pipe Outfall	5	1	1	408074.38982	138886.17414	Lower Beaver Dam
347301	Pipe Outfall	5	1	2	408659.94691	139383.43294	Lower Beaver Dam
347302	Pipe Outfall	3	3	1	408644.45598	139384.98203	Lower Beaver Dam
347303	Erosion site	3	3	1	408602.63048	139254.85823	Lower Beaver Dam
347304	Inadequate Buffer	2	4	1	408659.94691	139429.90572	Lower Beaver Dam
347305	Pipe Outfall	3	3	1	408556.15769	139230.07275	Lower Beaver Dam
347306	Comment			2	408539.11590	139217.68166	Lower Beaver Dam
347306	Erosion site	3	3	1	408539.11767	139217.68001	Lower Beaver Dam
347306	Pipe Outfall	3	4	2	408539.11767	139217.68001	Lower Beaver Dam
347307	Erosion site	3	3	1	408503.48854	139211.48363	Lower Beaver Dam
347308	Pipe Outfall	3	3	1	408457.01575	139200.63998	Lower Beaver Dam
347309	Pipe Outfall	3	3	1	408422.93571	139197.54180	Lower Beaver Dam
347310	Erosion site	3	3	1	408390.40476	139185.14906	Lower Beaver Dam
347311	Pipe Outfall	3	3	1	409245.50400	139228.52366	Lower Beaver Dam
347312	Inadequate Buffer	1	3	1	409243.95491	139236.26912	Lower Beaver Dam
348101	Pipe Outfall	3	3	2	409886.82844	139341.60743	Lower Beaver Dam
348102	Channel Alteration	1	5	2	409900.77027	139343.15653	Lower Beaver Dam
348103	Pipe Outfall	5	1	1	409908.51574	139340.05834	Lower Beaver Dam
348104	Inadequate Buffer	1	2	4	409874.43569	139354.00017	Lower Beaver Dam
349101	Erosion site	3	3	2	410356.20357	139250.21096	Lower Beaver Dam
349102	Pipe Outfall	3	3	1	410504.91648	139110.79260	Lower Beaver Dam
349103	Pipe Outfall	3	3	2	410579.27293	138935.74511	Lower Beaver Dam
349104	Representative site				410579.27293	138924.90146	Lower Beaver Dam
349105	Pipe Outfall	3	3	2	410616.45116	138818.01405	Lower Beaver Dam

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Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
349106	Pipe Outfall	4	3	2	410618.00025	138810.26859	Lower Beaver Dam
349107	Comment			1	410619.54935	138804.07222	Lower Beaver Dam
349308	Channel Alteration	5	3	1	410535.89833	139103.04714	Lower Beaver Dam
349309	Pipe Outfall	3	2	1	410532.80015	139099.94895	Lower Beaver Dam
349310	Exposed Pipe	2	3	1	410647.43302	139104.59623	Lower Beaver Dam
349310	Fish Barrier	3	4	3	410647.49105	139104.57871	Lower Beaver Dam
349311	Pipe Outfall	3	2	1	410653.62939	139104.59623	Lower Beaver Dam
349312	Erosion site	1	3	1	410765.16407	139089.10530	Lower Beaver Dam
349313	Inadequate Buffer	1	3	1	410797.69502	139086.00711	Lower Beaver Dam
349314	Pipe Outfall	3	2	1	410952.60431	139082.90893	Lower Beaver Dam
349315	Exposed Pipe	3	3	1	410957.34411	139077.52275	Lower Beaver Dam
349315	Fish Barrier	3	4	3	410957.37003	139077.63793	Lower Beaver Dam
349316	Pipe Outfall	3	2	1	410974.29161	139068.96709	Lower Beaver Dam
349317	Pipe Outfall	3	2	1	411101.31722	139076.71256	Lower Beaver Dam
349318	Pipe Outfall	3	2	1	411101.31722	139067.41800	Lower Beaver Dam
350201	Pipe Outfall	3	2	4	411877.41273	139425.25845	Lower Beaver Dam
350202	Fish Barrier	3	4	1	411722.50345	139223.87638	Lower Beaver Dam
350203	Pipe Outfall	3	4	3	411724.05254	139219.22910	Lower Beaver Dam
350204	Erosion site	2	3	3	411626.45969	139191.34543	Lower Beaver Dam
350205	Representative site				411431.27399	139118.53806	Lower Beaver Dam
350206	Channel Alteration	5	1	3	411304.24838	139075.16346	Lower Beaver Dam
350207	Fish Barrier	5	4	1	411315.09203	138968.27606	Lower Beaver Dam
350208	Fish Barrier	3	5	1	411626.45969	139079.81074	Lower Beaver Dam
350209	Erosion site	3	4	1	411597.02693	139107.69441	Lower Beaver Dam
350210	Trash Dumping	5	1	1	411595.47783	139107.69441	Lower Beaver Dam
350211	Fish Barrier	3	3	1	411682.22703	139024.04340	Lower Beaver Dam
350212	Erosion site	3	1	1	411688.42340	139016.29794	Lower Beaver Dam
350213	Exposed Pipe	5	1	1	411703.91433	138976.02152	Lower Beaver Dam
350214	Inadequate Buffer	4	2	1	411686.87431	139019.39612	Lower Beaver Dam
353101	Inadequate Buffer	1	3	4	405256.58996	138739.01032	Lower Beaver Dam
353102	Erosion site	2	3	4	405256.58996	138739.01032	Lower Beaver Dam
354103	Pipe Outfall	5	1	4	405729.06327	138714.22483	Lower Beaver Dam
354104	Representative site				405730.61236	138714.22483	Lower Beaver Dam
354105	Pipe Outfall	4	3	4	405778.63424	138711.12665	Lower Beaver Dam
354106	Pipe Outfall	3	4	2	405842.14705	138706.47937	Lower Beaver Dam
354107	Channel Alteration	1	5	1	405843.69614	138708.02846	Lower Beaver Dam
354108	Pipe Outfall	3	4	3	405902.56167	138703.38118	Lower Beaver Dam
354109	Pipe Outfall	3	4	2	406036.22121	138618.70495	Lower Beaver Dam
354110	Erosion site	1	4	2	406043.52912	138618.18108	Lower Beaver Dam
354111	Representative site				406204.63477	138553.11918	Lower Beaver Dam
354112	Trash Dumping	3	5	3	406213.92933	138554.66827	Lower Beaver Dam
354113	Pipe Outfall	3	2	3	406248.00937	138565.51192	Lower Beaver Dam
355101	Trash Dumping	3	4	2	406562.47522	138593.39559	Lower Beaver Dam
355102	Pipe Outfall	3	1	1	406577.96614	138777.73764	Lower Beaver Dam
355103	Channel Alteration	4	5	2	406540.78792	138567.06102	Lower Beaver Dam
355104	Erosion site	3	2	2	406660.06806	138542.27553	Lower Beaver Dam
355105	Pipe Outfall	3	1	1	407076.77404	138275.83156	Lower Beaver Dam
355401	Erosion site	2		2	407420.67265	138554.66827	Lower Beaver Dam
355402	Erosion site	3	2	4	406745.26817	138540.72644	Lower Beaver Dam
355403	Representative site				407177.46507	138319.20616	Lower Beaver Dam
355404	Fish Barrier	4	1	1	407375.74895	138261.88973	Lower Beaver Dam
355405	Erosion site	3	3	1	407036.49762	138354.83530	Lower Beaver Dam
355406	Channel Alteration	4	1	1	407397.43625	138240.20243	Lower Beaver Dam
356201	Pipe Outfall	3	3	2	407589.52377	138638.31929	Lower Beaver Dam
356202	Inadequate Buffer	3	5	1	407645.29111	138661.55568	Lower Beaver Dam
356203	Pipe Outfall	3	3	1	407868.36048	138666.20296	Lower Beaver Dam
356205	Erosion site	3	3	1	407882.30231	138622.82836	Lower Beaver Dam
356206	Exposed Pipe	3	4	3	407959.75695	138540.72644	Lower Beaver Dam

Appendix A- Anacostia River

Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
356207	Pipe Outfall	3	3	2	408154.94265	138350.18802	Lower Beaver Dam
356208	Pipe Outfall	3	3	3	408159.58993	138334.69709	Lower Beaver Dam
356209	Fish Barrier	3	4	1	408127.05898	138393.56262	Lower Beaver Dam
356210	Fish Barrier	5	3	1	408179.72813	138398.20990	Lower Beaver Dam
356211	Pipe Outfall	3	3	1	408182.82632	138399.75899	Lower Beaver Dam
356212	Inadequate Buffer	1	4	1	408182.82632	138401.30808	Lower Beaver Dam
356213	Representative site				408176.56912	138398.07856	Lower Beaver Dam
356214	Pipe Outfall	4	3	3	408285.06645	138449.32996	Lower Beaver Dam
356215	Channel Alteration	4	3	1	408353.22653	138491.15547	Lower Beaver Dam
356216	Pipe Outfall	3	3	2	408353.22653	138492.70456	Lower Beaver Dam
356401	Trash Dumping	5	3	2	408161.13902	138288.22431	Lower Beaver Dam
356402	Erosion site	3	4	2	408159.58993	138289.77340	Lower Beaver Dam
356403	Pipe Outfall	3	3	2	408176.62995	138210.76966	Lower Beaver Dam
356404	Pipe Outfall	3	4	1	407452.55493	138222.33603	Lower Beaver Dam
356405	Unusual Condition	4	1	1	407473.34180	138215.41694	Lower Beaver Dam
357101	Exposed Pipe	4	3	1	408889.21265	138336.24618	Lower Beaver Dam
357102	Exposed Pipe	4	3	1	408898.50721	138320.75525	Lower Beaver Dam
357103	Pipe Outfall	3	2	2	408904.70358	138274.28247	Lower Beaver Dam
357104	Pipe Outfall	3	2	2	408906.25267	138240.20243	Lower Beaver Dam
357201	Erosion site	5	3	2	408458.56484	138474.11545	Lower Beaver Dam
357202	Pipe Outfall	3	3	2	408777.67797	138415.24992	Lower Beaver Dam
357203	Trash Dumping	5	2	2	408971.31457	138421.44629	Lower Beaver Dam
357204	Pipe Outfall	4	2	2	409047.22012	138419.89720	Lower Beaver Dam
357205	Exposed Pipe	3	3	3	409096.79109	138418.34810	Lower Beaver Dam
357206	Fish Barrier	5	1	4	409123.12567	138416.79901	Lower Beaver Dam
357207	Fish Barrier	5	2	4	409135.51841	138416.79901	Lower Beaver Dam
357208	Channel Alteration	2	2	1	409217.62033	138467.91907	Lower Beaver Dam
357209	Fish Barrier	3	2	2	409228.46398	138481.86091	Lower Beaver Dam
358201	Pipe Outfall	3	2	2	409304.36953	138536.07916	Lower Beaver Dam
358202	Pipe Outfall	5	1	2	409451.53335	138565.51192	Lower Beaver Dam
358203	Pipe Outfall	3	3	2	409454.63154	138554.66827	Lower Beaver Dam
358204	Inadequate Buffer	5	3	1	409467.02428	138559.31555	Lower Beaver Dam
358205	Pipe Outfall	3	4	2	409570.81350	138585.65013	Lower Beaver Dam
358301	Inadequate Buffer	2	4	1	410055.67956	138340.89346	Lower Beaver Dam
358302	Pipe Outfall	3	2	1	409919.35939	138461.72270	Lower Beaver Dam
358303	Pipe Outfall	3	3	1	409911.61392	138467.91907	Lower Beaver Dam
359201	Erosion site	3	3	1	410851.91327	138317.65707	Lower Beaver Dam
360201	Representative site				411786.01625	138667.75205	Lower Beaver Dam
360202	Inadequate Buffer	3	3	1	411801.50718	138598.04287	Lower Beaver Dam
360203	Pipe Outfall	3	3	1	411911.49277	138525.23551	Lower Beaver Dam
360204	Fish Barrier	4	1	1	411919.23824	138523.68642	Lower Beaver Dam
360205	Inadequate Buffer	4	4	1	411962.61283	138498.90093	Lower Beaver Dam
360206	Pipe Outfall	3	3	1	411982.75104	138494.25365	Lower Beaver Dam
360207	Trash Dumping	4	1	1	411250.03013	138498.90093	Lower Beaver Dam
361201	Inadequate Buffer	3	1	1	412015.28199	138457.07542	Lower Beaver Dam
361202	Erosion site	3	2	1	412013.73290	138460.17361	Lower Beaver Dam
361203	Pipe Outfall	5	1	3	412057.10750	138330.04981	Lower Beaver Dam
361204	Representative site				412311.15872	138220.06422	Lower Beaver Dam
361205	Pipe Outfall	3	1	1	412540.42446	138258.79154	Lower Beaver Dam
364401	Trash Dumping	3	1	2	407570.93465	138015.58397	Lower Beaver Dam
364402	Inadequate Buffer	4	5	2	407574.03284	138000.09304	Lower Beaver Dam
364403	Pipe Outfall	3	4	2	407578.68012	137910.24565	Lower Beaver Dam
364404	Trash Dumping	4	1	1	407580.22921	137885.46017	Lower Beaver Dam
364405	Inadequate Buffer	4	5	2	408261.83005	138074.44949	Lower Beaver Dam
364406	Pipe Outfall	3	3	2	408312.95012	138032.62399	Lower Beaver Dam
364407	Pipe Outfall	3	3	2	408350.12835	137984.60211	Lower Beaver Dam
364408	Fish Barrier	5	5	1	408252.53550	137663.93989	Lower Beaver Dam
364408	Unusual Condition	5	5	1	408253.89287	137668.59024	Lower Beaver Dam

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Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
364410	Exposed Pipe	4	4		408262.38016	138088.42559	Lower Beaver Dam
364410	Fish Barrier	3	2	2	408262.37756	138088.42819	Lower Beaver Dam
364411	Erosion site	3	2	2	408232.39729	138117.82409	Lower Beaver Dam
365101	Pipe Outfall	3	3	2	408926.86178	138201.55080	Lower Beaver Dam
365102	Pipe Outfall	5	1	1	408935.70608	138182.59874	Lower Beaver Dam
365103	Pipe Outfall	3	3	2	408949.60425	138161.11975	Lower Beaver Dam
365104	Inadequate Buffer	4	2	1	408959.71201	138142.16770	Lower Beaver Dam
365105	Exposed Pipe	3	3	2	408967.29283	138130.79647	Lower Beaver Dam
365106	Pipe Outfall	3	3	1	408969.81977	138114.37135	Lower Beaver Dam
365107	Pipe Outfall	5	2	1	408993.82570	138065.09602	Lower Beaver Dam
365108	Channel Alteration	1	4	2	408999.57863	138056.25173	Lower Beaver Dam
365109	Inadequate Buffer	2	4	1	409014.04123	138048.67090	Lower Beaver Dam
365110	Pipe Outfall	3	3	2	409029.20287	138042.35355	Lower Beaver Dam
365111	Pipe Outfall	3	2	2	409049.41839	138036.03620	Lower Beaver Dam
365112	Pipe Outfall	3	2	2	409134.07090	137956.43758	Lower Beaver Dam
365113	Pipe Outfall	3	3	2	409130.28048	137974.12616	Lower Beaver Dam
365114	Exposed Pipe	3	3	2	409119.78648	137995.12609	Lower Beaver Dam
365115	Pipe Outfall	3	3	2	409139.12478	137931.16818	Lower Beaver Dam
365116	Pipe Outfall	5	1	2	409142.91519	137918.53348	Lower Beaver Dam
365117	Pipe Outfall	3	3		409246.51974	137836.40791	Lower Beaver Dam
365118	Inadequate Buffer	3	2	2	408359.42290	137969.11118	Lower Beaver Dam
365401	Pipe Outfall	3	5	2	408370.26655	137887.00926	Lower Beaver Dam
365402	Pipe Outfall	3	3	2	408393.50295	137928.83477	Lower Beaver Dam
365403	Pipe Outfall	3	4	2	408407.44478	137904.04928	Lower Beaver Dam
366101	Representative site				409547.43237	137858.06066	Lower Beaver Dam
366102	Fish Barrier	5	2	3	409573.77795	137863.28226	Lower Beaver Dam
366103	Pipe Outfall	5	1	2	409630.94402	137873.22419	Lower Beaver Dam
366104	Pipe Outfall	5	1	2	409732.84876	137797.41700	Lower Beaver Dam
366105	Pipe Outfall	3	3	3	410032.34927	137654.50182	Lower Beaver Dam
367201	Pipe Outfall	5	3	1	410987.42424	138143.40296	Lower Beaver Dam
367202	Pipe Outfall	3	2	1	410979.52167	138142.08586	Lower Beaver Dam
367203	Fish Barrier	5	3	2	410838.59252	138013.01057	Lower Beaver Dam
367204	Exposed Pipe	3	3	2	410839.90962	138003.79090	Lower Beaver Dam
367205	Pipe Outfall	3	4	2	410837.24099	137955.19182	Lower Beaver Dam
367206	Pipe Outfall	3	5	2	410839.62554	137946.62210	Lower Beaver Dam
367207	Channel Alteration	5	3	2	410838.59252	137976.13191	Lower Beaver Dam
367208	Fish Barrier	5	4	2	410837.27543	137968.22934	Lower Beaver Dam
367209	Unusual Condition	3	1	1	410904.63717	137796.79953	Lower Beaver Dam
367210	Pipe Outfall	3	3	1	410430.29312	137577.05217	Lower Beaver Dam
367211	Channel Alteration	4	4	1	410430.29312	137578.36927	Lower Beaver Dam
367212	Pipe Outfall	3	1	1	410433.09048	137577.76215	Lower Beaver Dam
371401	Inadequate Buffer	5	3	1	408261.32401	137499.51882	Lower Beaver Dam
371402	Pipe Outfall	3	4	1	408260.03384	137499.51882	Lower Beaver Dam
372101	Pipe Outfall	4	2	1	408660.96846	137070.96140	Lower Beaver Dam
372102	Pipe Outfall	3	3	2	408671.31441	137108.46545	Lower Beaver Dam
372103	Fish Barrier	3	3	1	408751.49548	137262.36137	Lower Beaver Dam
372104	Pipe Outfall	5	1	2	408801.93196	137270.12083	Lower Beaver Dam
372105	Exposed Pipe	4	3	2	408790.29277	137252.01543	Lower Beaver Dam
372106	Representative site				408830.38330	137223.56408	Lower Beaver Dam
372107	Inadequate Buffer	3	2	3	408816.15763	137236.49651	Lower Beaver Dam
372108	Erosion site	3	3	2	408861.42114	137217.09786	Lower Beaver Dam
372109	Inadequate Buffer	3	3	2	408622.17117	137412.37757	Lower Beaver Dam
372110	Channel Alteration	3	4	1	408628.63739	137339.95595	Lower Beaver Dam
372111	Representative site				408697.17927	137290.81272	Lower Beaver Dam
372112	Fish Barrier	3	3	2	408624.75766	137391.68568	Lower Beaver Dam
372201	Inadequate Buffer	4	4	2	409209.30352	137145.96950	Lower Beaver Dam
372202	Pipe Outfall	3	3	1	409249.39405	137152.43571	Lower Beaver Dam
372203	Pipe Outfall	3	3	3	409229.99541	137152.43571	Lower Beaver Dam

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Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
373101	Fish Barrier	5	1	4	410066.72366	137347.71541	Lower Beaver Dam
373102	Fish Barrier	5	1	4	410073.18988	137293.39920	Lower Beaver Dam
373103	Pipe Outfall	3	4	2	410154.66419	137107.17220	Lower Beaver Dam
373104	Erosion site	1	5	3	410143.02500	137345.12893	Lower Beaver Dam
373201	Erosion site	3	3	2	409341.21431	137100.70599	Lower Beaver Dam
373202	Pipe Outfall	3	3	3	409467.95213	136988.19384	Lower Beaver Dam
373203	Pipe Outfall	3	3	1	409546.83996	137091.65329	Lower Beaver Dam
373204	Pipe Outfall	3	4	3	409592.10346	137070.96140	Lower Beaver Dam
374101	Fish Barrier	5	2	3	410430.39154	137172.96654	Lower Beaver Dam
374102	Inadequate Buffer	5	1	2	410418.56670	137172.96654	Lower Beaver Dam
374103	Fish Barrier	5	2	3	410373.23814	137191.68921	Lower Beaver Dam
374104	Fish Barrier	5	2	3	410351.55926	137193.66002	Lower Beaver Dam
374105	Fish Barrier	5	2	3	410335.79280	137202.52865	Lower Beaver Dam
374106	Pipe Outfall	3	4	3	410310.17231	137210.41188	Lower Beaver Dam
374107	Fish Barrier	5	1	3	410302.28908	137214.35349	Lower Beaver Dam
374108	Pipe Outfall	3	3	3	410295.39125	137238.98858	Lower Beaver Dam
374109	Inadequate Buffer	4	1	3	410279.62479	137261.65286	Lower Beaver Dam
374110	Exposed Pipe	4	3	3	410270.75616	137284.31715	Lower Beaver Dam
374111	Comment				410259.91672	137298.11280	Lower Beaver Dam
374112	Pipe Outfall	3	4	2	410246.12107	137302.05441	Lower Beaver Dam
378101	Pipe Outfall	3	3	2	408730.33658	136830.18059	Lower Beaver Dam
378102	Pipe Outfall	3	3	2	408688.65253	136673.06382	Lower Beaver Dam
378103	Pipe Outfall	3	3	2	408688.65253	136673.06382	Lower Beaver Dam
378104	Pipe Outfall	3	3	2	408698.27193	136637.79270	Lower Beaver Dam
378105	Pipe Outfall	3	3	2	408736.70104	136566.71345	Lower Beaver Dam
378106	Pipe Outfall	3	2	2	408762.40122	136414.94340	Lower Beaver Dam
378107	Pipe Outfall	3	3	2	408784.84648	136405.32400	Lower Beaver Dam
378108	Pipe Outfall	4	2	2	408837.75315	136390.89491	Lower Beaver Dam
382101	Pipe Outfall	3	2	3	409209.21605	135777.93378	Lower Beaver Dam
382102	Exposed Pipe	3	3	2	409198.74288	135807.86318	Lower Beaver Dam
382103	Pipe Outfall	3	3	2	409203.00423	135827.74949	Lower Beaver Dam
382104	Pipe Outfall	3	2	2	409167.49298	135982.57856	Lower Beaver Dam
382105	Erosion site	3	3	3	409146.18622	136026.61251	Lower Beaver Dam
382106	Channel Alteration	1	3	2	409079.42506	136175.75978	Lower Beaver Dam
382107	Representative site				408988.51625	136225.47554	Lower Beaver Dam
382108	Pipe Outfall	3	2	3	408968.62995	136239.68004	Lower Beaver Dam
382109	Pipe Outfall	3	3	2	409215.78828	135853.31759	Lower Beaver Dam
382110	Pipe Outfall	3	3	3	409060.95921	136191.38473	Lower Beaver Dam
382111	Pipe Outfall	3	3	2	408957.26635	136249.62319	Lower Beaver Dam
382112	Pipe Outfall	4	2	3	409059.53876	136180.02113	Lower Beaver Dam
383301	Comment			3	410122.03550	136096.21457	Lower Beaver Dam
383302	Erosion site	4	2	1	410051.01299	136037.97611	Lower Beaver Dam
383303	Channel Alteration	4	2	1	410049.59254	136036.55566	Lower Beaver Dam
383304	Unusual Condition	4	5	2	410038.22894	135988.26036	Lower Beaver Dam
385101	Fish Barrier	5	2	1	409276.86764	135624.62511	Lower Beaver Dam
385102	Inadequate Buffer	3	2	1	409291.07214	135607.57971	Lower Beaver Dam
385103	Erosion site	3	3	2	409264.08359	135643.09096	Lower Beaver Dam
385104	Exposed Pipe	3	4	2	409232.83368	135698.48852	Lower Beaver Dam
385105	Exposed Pipe	3	3	2	409224.31098	135719.79527	Lower Beaver Dam
386202	Inadequate Buffer	4	2	3	409403.28771	135313.54652	Lower Beaver Dam
386203	Erosion site	3	1	2	409616.35524	135401.61443	Lower Beaver Dam
386204	Pipe Outfall	3	3	3	409654.70739	135401.61443	Lower Beaver Dam
386205	Trash Dumping	3	4	4	409732.83215	135404.45533	Lower Beaver Dam
386206	Pipe Outfall	3	3	3	409744.19575	135400.19398	Lower Beaver Dam
386207	Fish Barrier	5	1	4	409754.13890	135397.35308	Lower Beaver Dam
386208	Representative site				409954.42238	135374.62587	Lower Beaver Dam
386209	Trash Dumping	5	1	1	409964.36553	135285.13751	Lower Beaver Dam
386210	Erosion site	4	3	2	409953.00193	135287.97841	Lower Beaver Dam

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Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
386211	Fish Barrier	5	3	2	410001.29724	135276.61481	Lower Beaver Dam
386212	Trash Dumping	5	1	3	410038.22894	135248.20581	Lower Beaver Dam
387201	Channel Alteration	5	3	1	410524.02291	135383.14858	Lower Beaver Dam
387202	Pipe Outfall	3	4	2	410440.21635	135465.53469	Lower Beaver Dam
387203	Fish Barrier	4	4	3	410248.45557	135422.92118	Lower Beaver Dam
387204	Erosion site	2	3	4	410204.42161	135420.08028	Lower Beaver Dam
387205	Erosion site	3	3	3	410394.76194	135198.49005	Lower Beaver Dam
387206	Pipe Outfall	3	3	1	410396.18239	135198.49005	Lower Beaver Dam
388201	Inadequate Buffer	3	3	2	409193.96953	134642.61697	Lower Beaver Dam
388202	Exposed Pipe	3	4	2	409262.54967	134962.65761	Lower Beaver Dam
389201	Exposed Pipe	3	3	3	409288.26722	135018.37897	Lower Beaver Dam
389202	Exposed Pipe	3	3	3	409342.55983	135074.10033	Lower Beaver Dam
389203	Inadequate Buffer	4	3	3	409824.04954	134568.32182	Lower Beaver Dam
389204	Pipe Outfall	5	1	3	409784.04446	134618.32817	Lower Beaver Dam
389205	Pipe Outfall	3	2	3	409765.47068	134646.90323	Lower Beaver Dam
389206	Exposed Pipe	3	3	3	409735.46687	134716.91212	Lower Beaver Dam
389207	Erosion site	3	4	3	409822.62079	134576.89434	Lower Beaver Dam
390301	Trash Dumping	3	3	3	410233.68278	135143.43275	Lower Beaver Dam
390302	Erosion site	3	3	2	410391.41539	134977.25017	Lower Beaver Dam
390303	Representative site				410266.07430	135068.79142	Lower Beaver Dam
391201	Exposed Pipe	3	3	3	408888.73053	134022.40450	Lower Beaver Dam
391202	Inadequate Buffer	5	4	3	409022.52159	134336.46141	Lower Beaver Dam
391203	Channel Alteration	3	2	2	409022.52159	134370.26125	Lower Beaver Dam
391204	Representative site				409019.70494	134394.20281	Lower Beaver Dam
392201	Fish Barrier	5	3	3	409980.18392	134482.92741	Lower Beaver Dam
392202	Fish Barrier	5	3	2	409421.07812	134349.13635	Lower Beaver Dam
392203	Channel Alteration	5	2	3	409473.18622	134361.81129	Lower Beaver Dam
392204	Pipe Outfall	3	3	3	409474.59455	134377.30289	Lower Beaver Dam
392205	Pipe Outfall	3	3	3	409468.55170	134304.24701	Lower Beaver Dam
392206	Inadequate Buffer	5	4	3	409477.07942	134295.71929	Lower Beaver Dam
392207	Erosion site	3	3	2	409504.36813	134276.38978	Lower Beaver Dam
392208	Pipe Outfall	3	3	3	409546.43823	134170.64603	Lower Beaver Dam
392209	Fish Barrier	5	4	3	409522.47766	134167.46217	Lower Beaver Dam
392210	Fish Barrier	5	4	3	409532.33595	134144.92894	Lower Beaver Dam
392211	Erosion site	3	3	3	409543.02714	134137.67217	Lower Beaver Dam
395201	Fish Barrier	5	3	3	408748.91078	133427.98359	Lower Beaver Dam
395202	Inadequate Buffer	3	3	3	408747.52280	133429.37156	Lower Beaver Dam
395203	Erosion site	3	1	3	408747.52280	133430.75954	Lower Beaver Dam
395204	Fish Barrier	5	4	3	408714.21139	133462.68298	Lower Beaver Dam
395205	Fish Barrier	5	4	3	408704.49556	133527.91783	Lower Beaver Dam
395206	Pipe Outfall	3	3	2	409073.67318	133931.52637	Lower Beaver Dam
395207	Erosion site	3	2	2	409065.33174	133939.86781	Lower Beaver Dam
396201	Exposed Pipe	3	4	3	409552.54865	133944.31051	Lower Beaver Dam
396202	Exposed Pipe	3	4	3	409551.16068	133913.77505	Lower Beaver Dam
504201	Unusual Condition	5	2	1	404810.72382	141433.98847	Upper Anacostia
504203	Erosion site	3	3	1	404854.34667	141682.80027	Upper Anacostia
504204	Pipe Outfall	5	1	1	404860.80931	141690.87857	Upper Anacostia
504205	Erosion site	4	1	1	404906.04782	141243.34047	Upper Anacostia
504206	Pipe Outfall	5	1	1	404985.21521	141269.19105	Upper Anacostia
504207	Inadequate Buffer	1	2	1	404983.59955	141275.65369	Upper Anacostia
504208	Pipe Outfall	5	1	1	405001.37182	141668.25932	Upper Anacostia
504209	Channel Alteration	3	5	1	405372.97385	141492.15227	Upper Anacostia
509101	Channel Alteration	3	4	2	404087.56748	140683.16263	Upper Anacostia
509102	Pipe Outfall	4	3	2	404061.46975	140690.46999	Upper Anacostia
509103	Exposed Pipe	4	4	2	404087.56748	140683.16263	Upper Anacostia
509104	Pipe Outfall	5	1	2	404090.69921	140681.07481	Upper Anacostia
509105	Pipe Outfall	3	2	3	404044.76721	140694.64562	Upper Anacostia
509106	Pipe Outfall	3	2	3	404023.88903	140699.86517	Upper Anacostia

Appendix A- Anacostia River

Site number	Problem	Severity	Correctability	Access	X Coordinate	Y Coordinate	Stream
509201	Inadequate Buffer	4	3	2	403881.91740	140763.17825	Upper Anacostia
509202	Pipe Outfall	3	3	2	403869.91244	140767.98024	Upper Anacostia
509203	Pipe Outfall	3	2	1	403819.49164	140803.99510	Upper Anacostia
509204	Channel Alteration	3	5	1	403833.89758	140784.78717	Upper Anacostia
510101	Pipe Outfall	5	1	1	405236.70374	140801.37113	Upper Anacostia
510102	Representative site				405082.33054	141041.75224	Upper Anacostia
510201	Construction	5			405154.00381	141009.77493	Upper Anacostia
510202	Inadequate Buffer	1	1	1	405263.16771	140701.02855	Upper Anacostia
511106	Pipe Outfall	5	1	2	405701.58069	140690.73413	Upper Anacostia
511107	Fish Barrier	4	2	2	405718.37911	140706.24037	Upper Anacostia
511108	Exposed Pipe	3	5	2	405733.88534	140715.28567	Upper Anacostia
511109	Exposed Pipe	3	5	2	405740.34628	140730.79191	Upper Anacostia
511110	Exposed Pipe	3	3	2	405746.80721	140738.54503	Upper Anacostia
511111	Erosion site	2	3	3	405755.85251	140750.17470	Upper Anacostia
511112	Exposed Pipe	2	3	2	405753.26814	140804.44653	Upper Anacostia
511113	Fish Barrier	3	4	3	405758.43688	140823.82932	Upper Anacostia
511114	Exposed Pipe	2	3	2	405768.77437	140841.91993	Upper Anacostia
511115	Exposed Pipe	3	5	2	405788.80326	140861.46425	Upper Anacostia
511116	Pipe Outfall	5	2	2	405876.02584	140873.09393	Upper Anacostia
511117	Exposed Pipe	2	2	1	406004.92142	140931.24231	Upper Anacostia
511118	Fish Barrier	3	3	1	406035.93390	140938.02629	Upper Anacostia
511119	Pipe Outfall	4	3	1	406020.42766	140935.11887	Upper Anacostia
511120	Representative site				406108.61938	140984.54500	Upper Anacostia
511201	Pipe Outfall	3	2	1	406071.79207	140990.35984	Upper Anacostia
511202	Pipe Outfall	3	2	1	406133.81701	140984.54500	Upper Anacostia
511203	Inadequate Buffer	1	3	1	406042.71787	140938.99543	Upper Anacostia
511204	Pipe Outfall	3	2	2	406233.63840	141028.15629	Upper Anacostia
511205	Pipe Outfall	3	1	2	406335.39807	141015.55747	Upper Anacostia
511206	Pipe Outfall	3	2	1	406439.09603	141042.69338	Upper Anacostia
512201	Pipe Outfall	3	2	1	406540.85570	141048.62936	Upper Anacostia
512202	Pipe Outfall	4	2	1	406539.40199	141036.27283	Upper Anacostia
514101	Channel Alteration	1	5	1	404419.16653	140489.67802	Upper Anacostia
514102	Representative site				404421.34709	140483.13633	Upper Anacostia
515101	Pipe Outfall	5	1	3	405400.35503	140562.10007	Upper Anacostia
515102	Fish Barrier	4	4	3	405450.26419	140568.75462	Upper Anacostia
515103	Pipe Outfall	3	3	3	405498.50971	140578.73645	Upper Anacostia
515104	Pipe Outfall	3	4	3	405525.12793	140583.72737	Upper Anacostia
515105	Channel Alteration	3	4	3	405570.04617	140593.70920	Upper Anacostia
515106	Inadequate Buffer	3	3	1	405665.56723	140666.00921	Upper Anacostia
515301	Exposed Pipe	3	3	3	405255.04955	140632.14156	Upper Anacostia
515302	Pipe Outfall	3	3	2	405280.48947	140502.03455	Upper Anacostia
515303	Erosion site	3	4	2	405249.23471	140364.65899	Upper Anacostia
517110	Pipe Outfall	3	3	2	404666.69040	139746.91714	Upper Anacostia
517111	Representative site				404595.15394	140001.45385	Upper Anacostia
518101	Unusual Condition	4	3	1	405260.60939	139402.54395	Upper Anacostia
518102	Pipe Outfall	3	3	1	405224.00934	139457.44403	Upper Anacostia
518103	Pipe Outfall	3	1	1	405217.35478	139472.41677	Upper Anacostia
518104	Pipe Outfall	3	1	2	405054.31820	139630.46244	Upper Anacostia
518105	Pipe Outfall	3	1	2	405014.39087	139630.46244	Upper Anacostia
518106	Erosion site	3	3	2	404894.60889	139668.72613	Upper Anacostia
518107	Trash Dumping	3	3	2	404836.38154	139667.06249	Upper Anacostia
518108	Trash Dumping	5	2	3	404759.85416	139687.02615	Upper Anacostia
518109	Pipe Outfall	3	3	2	404723.25411	139703.66254	Upper Anacostia
518304	Representative site				405332.14585	139512.34410	Upper Anacostia
518305	Channel Alteration	5	5	2	405332.14585	139543.95323	Upper Anacostia

Appendix B

Listing of sites by problem category

Pipe Outfalls

Problem	Site Number	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	345402	Unknown	Concrete Pipe	Left bank	12		Yes	Clear	Sewage	2	4	2
Pipe Outfall	105201	Stormwater	Corrugated Metal	Left bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	111101	Industrial	Corrugated Metal	Right bank	48		Yes	Green Brown	None	3	3	1
Pipe Outfall	122106	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	1
Pipe Outfall	123202	Stormwater	Corrugated Metal	Left bank	18		Yes	Clear	None	3	3	5
Pipe Outfall	128103	Stormwater	Corrugated Metal	Left bank	30		Yes	Clear	None	3	3	1
Pipe Outfall	134103	Stormwater	Concrete Pipe	Left bank	48		Yes	Clear	None	3	2	1
Pipe Outfall	134106	Stormwater	Concrete Pipe	Left bank	36		Yes	Yellow Brown	None	3	4	1
Pipe Outfall	135101	Stormwater	Earth Channel	Left bank		3	Yes	Medium Brown	None	3	3	1
Pipe Outfall	135104	Stormwater	Concrete Pipe	Left bank	48		Yes	Medium Brown	None	3	3	1
Pipe Outfall	136202	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	136203	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	1
Pipe Outfall	136205	Stormwater	Concrete Pipe	Left bank	24		Yes	grey	None	3	3	1
Pipe Outfall	136209	Stormwater	Concrete Pipe	Left bank	48		Yes	Medium Brown	None	3	3	3
Pipe Outfall	136210	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	None	3	3	1
Pipe Outfall	136211	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	3	1
Pipe Outfall	137102	Stormwater	Plastic	Left bank	6		Yes	Clear	None	3	3	1
Pipe Outfall	141101	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	2	1
Pipe Outfall	142302	Stormwater	Concrete Channel	Right bank		2	Yes	Clear	None	3	2	1
Pipe Outfall	142306	Stormwater	Concrete Channel	Right bank		2	Yes	Clear	None	3	1	1
Pipe Outfall	145102	Industrial	Smooth Metal Pipe	Left bank	24		Yes	Clear	None	3	2	2
Pipe Outfall	146101	Stormwater	Concrete Pipe	Left bank	24	2	Yes	Clear	None	3	2	3
Pipe Outfall	146201	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	3	2
Pipe Outfall	147201	Stormwater	Concrete Pipe	Head of stream	40		Yes	Clear	None	3	3	1
Pipe Outfall	150101	Stormwater	Plastic	Left bank	12		Yes	Clear	None	3	2	3
Pipe Outfall	150104	Stormwater	Concrete Pipe	Left bank	40		Yes	Clear	None	3	2	2
Pipe Outfall	151106	Stormwater	Concrete Channel	Left bank		4	Yes	Clear	None	3	2	2
Pipe Outfall	151109	Stormwater	Concrete Pipe	Right bank	60		Yes	Clear	None	3	2	2
Pipe Outfall	151112	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	2	4
Pipe Outfall	155101	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	4	2
Pipe Outfall	155102	Stormwater	Concrete Pipe	Left bank	20		Yes	Clear	None	3	3	2
Pipe Outfall	155103	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	3	2
Pipe Outfall	155106	Stormwater	Concrete Pipe	Left bank	12		Yes	Medium Brown	None	3	3	2
Pipe Outfall	155109	Stormwater	Concrete Pipe	Right bank	24		Yes	Medium Brown	None	3	3	2
Pipe Outfall	156101	Stormwater	Corrugated Metal	Right bank	30		Yes	Clear	None	3	4	1
Pipe Outfall	156109	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	2	1
Pipe Outfall	156110	Stormwater	Corrugated Metal	Left bank	48		Yes	Clear	None	3	3	2
Pipe Outfall	157102	Unknown	Plastic	Left bank	12		Yes	Clear	None	3	2	1

Pipe Outfalls

Problem	Site Number	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	160301	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	3
Pipe Outfall	165101	Stormwater	Concrete Channel	Left bank		3.5	Yes	Medium Brown	None	3	2	2
Pipe Outfall	165103	Stormwater	Corrugated Metal	Head of stream	24		Yes	Clear	None	3	3	1
Pipe Outfall	165104	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	2	1
Pipe Outfall	165108	Stormwater	Concrete Pipe	Head of stream	30		Yes	Medium Brown	None	3	2	1
Pipe Outfall	165109	Stormwater	Concrete Pipe	Left bank	48	4	Yes	Clear	None	3	2	1
Pipe Outfall	168203	Stormwater	Concrete Channel	Right bank	6		Yes	Clear	None	3	1	1
Pipe Outfall	168204	Stormwater	Corrugated Metal	Left bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	168205	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	172201	Stormwater	Concrete Pipe	Right bank	48		Yes	Clear	None	3	3	1
Pipe Outfall	172203	Stormwater	Concrete Pipe	Left bank	12		Yes	Clear	None	3	3	1
Pipe Outfall	172206	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	3	
Pipe Outfall	174101	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	1
Pipe Outfall	178201	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	178203	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	None	3	3	1
Pipe Outfall	178210	Stormwater	Concrete Pipe	Right bank	48		Yes	Clear	None	3	3	1
Pipe Outfall	179201	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	2	1
Pipe Outfall	179202	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	Musky	3	2	1
Pipe Outfall	179203	Stormwater	Concrete Channel	Right bank		3.5	Yes	Medium Brown	Musky	3	2	1
Pipe Outfall	180203	Stormwater	Concrete Pipe	Left bank	36		Yes	Medium Brown	None	3	2	1
Pipe Outfall	180205	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	2	1
Pipe Outfall	180207	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	2	1
Pipe Outfall	180209	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	None	3	2	1
Pipe Outfall	181102	Stormwater	Concrete Pipe	Head of stream	40		Yes	Clear	None	3	3	1
Pipe Outfall	181103	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	2	1
Pipe Outfall	181105	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	Oily	3	2	1
Pipe Outfall	181106	Stormwater	Concrete Pipe	Left bank	30		Yes	Medium Brown	None	3	3	1
Pipe Outfall	182103	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	None	3	3	1
Pipe Outfall	182104	Stormwater	Concrete Pipe	Head of stream	36		Yes	Clear	None	3	3	2
Pipe Outfall	187101	Stormwater	Concrete Pipe	Left bank	36		Yes	Medium Brown	None	3	3	1
Pipe Outfall	187102	Stormwater	Corrugated Metal	Right bank	36		Yes	Clear	Musky	3	3	2
Pipe Outfall	190111	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	3	1
Pipe Outfall	190113	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	None	3	3	1
Pipe Outfall	190115	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	Fishy	3	3	1
Pipe Outfall	190117	Industrial	Concrete Pipe	Left bank	30		Yes	Green Brown	None	3	3	1
Pipe Outfall	190120	Stormwater	Corrugated Metal	Left bank	30		Yes	Clear		3	3	1
Pipe Outfall	190202	Stormwater	Concrete Pipe	Left bank	18		Yes	Clear	None	3	3	1
Pipe Outfall	190204	Stormwater	Concrete Pipe	Head of stream	48		Yes	Medium Brown	Musky	3	5	1

Pipe Outfalls

Problem	Site Number	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	190208	Stormwater	Concrete Channel	Right bank	12		Yes	Clear	None	3	3	3
Pipe Outfall	196301	Stormwater	Concrete Pipe	Left bank	48		Yes	Clear	None	3	2	2
Pipe Outfall	196302	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	2	2
Pipe Outfall	196303	Stormwater	Plastic	Left bank	24		Yes	Clear	None	3	2	2
Pipe Outfall	196304	Stormwater	Concrete Channel	Right bank		4	Yes	Clear	None	3	2	1
Pipe Outfall	200301	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	2	1
Pipe Outfall	200303	Stormwater	Concrete Pipe	Head of stream	24		Yes	Clear	None	3	3	1
Pipe Outfall	200308	Stormwater	Concrete Pipe	Head of stream	24		Yes	Clear	None	3	3	3
Pipe Outfall	310303	Unknown	Plastic	Right bank	12		Yes	Green	Musky	3	4	2
Pipe Outfall	310304	Unknown	Plastic	Left bank	5		Yes	Medium Brown	None	3	3	2
Pipe Outfall	310305	Stormwater	Plastic	Left bank	36		Yes	Clear	Musky	3	2	2
Pipe Outfall	310307	Stormwater	Smooth Metal Pipe	Left bank	6		Yes	Clear	None	3	2	2
Pipe Outfall	310310	Stormwater	Concrete Pipe	Left bank	18		Yes	Yellow Brown	None	3	3	2
Pipe Outfall	310314	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	2	2
Pipe Outfall	310401	Stormwater	Rip-rap	Left bank		2	Yes	Clear	None	3	3	1
Pipe Outfall	310404	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	2	1
Pipe Outfall	310406	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	1	1
Pipe Outfall	310408	Stormwater	Earth Channel	Left bank		2	Yes	Clear	None	3	1	2
Pipe Outfall	311102	Stormwater	Corrugated Metal	Left bank	24		Yes	Clear	None	3	1	1
Pipe Outfall	311104	Industrial	Concrete Pipe	Right bank	36		Yes	Green Brown	None	3	3	1
Pipe Outfall	311105	Stormwater	Corrugated Metal	Left bank	24		Yes	Clear	None	3	1	1
Pipe Outfall	311106	Stormwater	Concrete Pipe	Right bank	16		Yes	Clear	None	3	2	1
Pipe Outfall	311107	Stormwater	Corrugated Metal	Left bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	311109	Stormwater	Concrete Pipe	Right bank	20		Yes	Clear	None	3	3	1
Pipe Outfall	312201	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	1
Pipe Outfall	312202	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	312203	Stormwater	Corrugated Metal	Head of stream	60		Yes	Clear	None	3	3	2
Pipe Outfall	315201	Stormwater	Corrugated Metal	Left bank	24		Yes	Clear	None	3	2	2
Pipe Outfall	316203	Stormwater	Corrugated Metal	Left bank	24		Yes	Clear	None	3	3	3
Pipe Outfall	316204	Stormwater	Corrugated Metal	Right bank	12		Yes	Clear	None	3	3	2
Pipe Outfall	316206	Unknown	Smooth Metal Pipe	Left bank	12		Yes	Clear	None	3	2	2
Pipe Outfall	316209	Stormwater	Corrugated Metal	Left bank	30		Yes	Clear	None	3	4	2
Pipe Outfall	316301	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	2	1
Pipe Outfall	319105	Stormwater	Concrete Pipe	Left bank	48		Yes	Yellow Brown	None	3	3	2
Pipe Outfall	320104	Stormwater	Corrugated Metal	Left bank	36		Yes	Clear	None	3	3	1
Pipe Outfall	320105	Unknown	Smooth Metal Pipe	Right bank	1.5		Yes	Clear	None	3	2	1
Pipe Outfall	321202	Stormwater	Concrete Pipe	Left bank	12		Yes	Clear	None	3	3	1
Pipe Outfall	321207	Industrial	Concrete Pipe	Left bank	36		Yes	Clear	None	3	4	1

Pipe Outfalls

Problem	Site Number	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	321208	Stormwater	Concrete Pipe	Left bank	48		Yes	Clear	None	3	3	2
Pipe Outfall	321210	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	322201	Stormwater	Concrete Pipe	Head of stream	24		Yes	Clear	None	3	3	1
Pipe Outfall	322205	Stormwater	Concrete Pipe	Right bank	18		Yes	Clear	None	3	2	2
Pipe Outfall	322207	Stormwater	Concrete Pipe	Head of stream	36		Yes	Clear	None	3	4	1
Pipe Outfall	323101	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	1
Pipe Outfall	328102	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	2	2
Pipe Outfall	328105	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	2	2
Pipe Outfall	328106	Stormwater	Concrete Pipe	Right bank	48		Yes	Clear	None	3	2	3
Pipe Outfall	328107	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	328109	Stormwater	Concrete Pipe	Right bank	6		Yes	Clear	None	3	2	4
Pipe Outfall	328113	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	2	1
Pipe Outfall	328114	Stormwater	Corrugated Metal	Right bank	24		Yes	Clear	None	3	1	1
Pipe Outfall	328117	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	2	2
Pipe Outfall	328201	Stormwater	Corrugated Metal	Right bank	18		Yes	Clear	None	3	2	2
Pipe Outfall	329201	Stormwater	Concrete Pipe	Left bank	60		Yes	Clear	None	3	4	1
Pipe Outfall	329202	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	2	1
Pipe Outfall	329203	Stormwater	Concrete Pipe	Right bank	48		Yes	Clear	None	3	3	1
Pipe Outfall	329205	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	4	1
Pipe Outfall	329206	Stormwater	Concrete Pipe	Left bank	18		Yes	Clear	None	3	3	1
Pipe Outfall	329207	Stormwater	Concrete Pipe	Left bank	18		Yes	Clear	None	3	3	1
Pipe Outfall	329209	Stormwater	Concrete Pipe	Left bank	12		Yes	Clear	None	3	3	1
Pipe Outfall	329210	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	4	1
Pipe Outfall	329211	Stormwater	Concrete Pipe	Left bank	18		Yes	Clear	None	3	3	2
Pipe Outfall	337302	Stormwater	Concrete Pipe	Left bank	18		Yes	Clear	None	3	3	1
Pipe Outfall	337304	Stormwater	Concrete Pipe	Left bank	18		Yes	Clear	None	3	3	1
Pipe Outfall	337305	Unknown	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	3
Pipe Outfall	337310	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	None	3	3	3
Pipe Outfall	338101	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	338102	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	338103	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	338105	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	2	2
Pipe Outfall	338106	Industrial	Concrete Pipe	Right bank	12		Yes	Clear	None	3	3	2
Pipe Outfall	338110	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	338111	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	None	3	3	2
Pipe Outfall	338112	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	338113	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	338115	Stormwater	Concrete Pipe	Right bank	18		Yes	Clear	None	3	3	2

Pipe Outfalls

Problem	Site Number	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	338116	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	None	3	3	2
Pipe Outfall	338201	Stormwater	Concrete Pipe	Head of stream	30		Yes	Clear	None	3	2	1
Pipe Outfall	338203	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	344101	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	345401	Stormwater	Concrete Pipe	Head of stream	60		Yes	Clear	None	3	5	1
Pipe Outfall	346101	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	346104	Stormwater	Unknown	Right bank	24		Yes	Clear	None	3	3	3
Pipe Outfall	346106	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	3	3
Pipe Outfall	346301	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	3	1
Pipe Outfall	346303	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	346309	Stormwater	Concrete Pipe	Right bank	36		Yes	Medium Brown	None	3	4	3
Pipe Outfall	347302	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	3	1
Pipe Outfall	347305	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	3	1
Pipe Outfall	347306	Unknown	Concrete Pipe	Left bank	48		Yes	Clear	None	3	4	2
Pipe Outfall	347308	Stormwater	Plastic	Left bank	6		Yes	Clear	None	3	3	1
Pipe Outfall	347309	Stormwater	Concrete Pipe	Right bank	60		Yes	Clear	None	3	3	1
Pipe Outfall	347311	Stormwater	Concrete Channel	Head of stream		3	Yes	Clear	None	3	3	1
Pipe Outfall	348101	Stormwater	Unknown	Left bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	349102	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	1
Pipe Outfall	349103	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	349105	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	349309	Stormwater	Plastic	Left bank	16		Yes	Clear	None	3	2	1
Pipe Outfall	349311	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	2	1
Pipe Outfall	349314	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	2	1
Pipe Outfall	349316	Stormwater	Concrete Pipe	Left bank	20		Yes	Clear	None	3	2	1
Pipe Outfall	349317	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	2	1
Pipe Outfall	349318	Stormwater	Concrete Pipe	Left bank	20		Yes	Clear	None	3	2	1
Pipe Outfall	350201	Stormwater	Concrete Pipe	Left bank	6		Yes	Clear	None	3	2	4
Pipe Outfall	350203	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	4	3
Pipe Outfall	354106	Stormwater	Smooth Metal Pipe	Left bank	36		Yes	Clear	None	3	4	2
Pipe Outfall	354108	Stormwater	Concrete Pipe	Right bank	48		Yes	Clear	None	3	4	3
Pipe Outfall	354109	Stormwater	Concrete Pipe	Left bank	48		Yes	Clear	None	3	4	2
Pipe Outfall	354113	Stormwater	Concrete Pipe	Left bank	40		Yes	Clear	Rotten eggs	3	2	3
Pipe Outfall	355102	Stormwater	Concrete Pipe	Head of stream	18		Yes	Clear	None	3	1	1
Pipe Outfall	355105	Stormwater	Concrete Pipe	Head of stream	36		Yes	Clear	None	3	1	1
Pipe Outfall	356201	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	356203	Stormwater	Plastic	Right bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	356207	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	2

Pipe Outfalls

Problem	Site Number	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	356208	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	3
Pipe Outfall	356211	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	356216	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	356403	Stormwater	Plastic	Right bank	30		Yes	Clear	None	3	3	2
Pipe Outfall	356404	Stormwater	Concrete Pipe	Right bank	18		Yes	Clear	None	3	4	1
Pipe Outfall	357103	Stormwater	Concrete Channel	Left bank		4	Yes	Clear	None	3	2	2
Pipe Outfall	357104	Stormwater	Concrete Channel	Left bank		4	Yes	Clear	None	3	2	2
Pipe Outfall	357202	Stormwater	Corrugated Metal	Right bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	358201	Stormwater	Concrete Channel	Right bank		1	Yes	Clear	None	3	2	2
Pipe Outfall	358203	Stormwater	Concrete Pipe	Left bank	18		Yes	Clear	None	3	3	2
Pipe Outfall	358205	Stormwater	Concrete Pipe	Head of stream	30		Yes	Clear	None	3	4	2
Pipe Outfall	358302	Stormwater	Concrete Pipe	Right bank	18		Yes	Clear	None	3	2	1
Pipe Outfall	358303	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	360203	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	1
Pipe Outfall	360206	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	3	1
Pipe Outfall	361205	Stormwater	Concrete Channel	Head of stream		2.5	Yes	Clear	None	3	1	1
Pipe Outfall	364403	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	None	3	4	2
Pipe Outfall	364406	Stormwater	Concrete Pipe	Right bank	18		Yes	Clear	None	3	3	2
Pipe Outfall	364407	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	365101	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	365103	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	365106	Stormwater	Concrete Pipe	Right bank	42		Yes	Clear	None	3	3	1
Pipe Outfall	365110	Stormwater	Concrete Pipe	Left bank	30		Yes	Clear	None	3	3	2
Pipe Outfall	365111	Stormwater	Concrete Pipe	Left bank	4		Yes	Clear	None	3	2	2
Pipe Outfall	365112	Stormwater	Concrete Pipe	Right bank	4		Yes	Clear	None	3	2	2
Pipe Outfall	365113	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	365115	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	3	2
Pipe Outfall	365117	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	
Pipe Outfall	365401	Stormwater	Concrete Pipe	Left bank	60		Yes	Clear	None	3	5	2
Pipe Outfall	365402	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	365403	Stormwater	Concrete Pipe		36		Yes	Clear	None	3	4	2
Pipe Outfall	366105	Stormwater	Concrete Pipe	Head of stream	36		Yes	Clear	None	3	3	3
Pipe Outfall	367202	Stormwater	Concrete Pipe		18		Yes	Clear	None	3	2	1
Pipe Outfall	367205	Stormwater	Concrete Pipe	Head of stream	36		Yes	Clear	None	3	4	2
Pipe Outfall	367206	Stormwater	Concrete Pipe		12		Yes	Clear	None	3	5	2
Pipe Outfall	367210	Stormwater	Concrete Pipe	Head of stream	48		Yes	Clear	None	3	3	1
Pipe Outfall	367212	Stormwater	Plastic	Right bank	18		Yes	Clear	None	3	1	1
Pipe Outfall	371402	Stormwater	Concrete Pipe	Head of stream	48		Yes	Clear	None	3	4	1

Pipe Outfalls

Problem	Site Number	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	372102	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear		3	3	2
Pipe Outfall	372202	Stormwater	Concrete Pipe	Right bank	12		Yes	Clear	None	3	3	1
Pipe Outfall	372203	Stormwater	Concrete Pipe	Left bank	12		Yes	Clear	None	3	3	3
Pipe Outfall	373103	Stormwater	Concrete Pipe	Head of stream	36		Yes	Clear	None	3	4	2
Pipe Outfall	373202	Stormwater	Concrete Pipe	Head of stream	24		Yes	Clear	None	3	3	3
Pipe Outfall	373203	Stormwater	Concrete Pipe	Right bank	12		Yes	Clear	None	3	3	1
Pipe Outfall	373204	Stormwater	Concrete Pipe	Head of stream	45		Yes	Clear	Musky	3	4	3
Pipe Outfall	374106	Stormwater	Concrete Pipe	Right bank	12		Yes	Clear	None	3	4	3
Pipe Outfall	374108	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	3
Pipe Outfall	374112	Stormwater	Corrugated Metal	Right bank	24		Yes	Clear	Rotten eggs	3	4	2
Pipe Outfall	378101	Stormwater	Concrete Pipe	Right bank	48		Yes	Clear	None	3	3	2
Pipe Outfall	378102	Stormwater	Concrete Pipe	Left bank	12		Yes	Clear	None	3	3	2
Pipe Outfall	378103	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	378104	Stormwater	Corrugated Metal	Left bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	378105	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	378106	Stormwater	Concrete Channel	Left bank		3	Yes	Clear	None	3	2	2
Pipe Outfall	378107	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	3	2
Pipe Outfall	382101	Stormwater	Corrugated Metal	Left bank	18		Yes	Clear	None	3	2	3
Pipe Outfall	382103	Stormwater	Concrete Pipe	Right bank	48		Yes	Clear	None	3	3	2
Pipe Outfall	382104	Stormwater	Corrugated Metal	Right bank	36		Yes	Clear	None	3	2	2
Pipe Outfall	382108	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	2	3
Pipe Outfall	382109	Stormwater	Concrete Pipe	Right bank	48		Yes	Clear	None	3	3	2
Pipe Outfall	382110	Stormwater	Concrete Pipe	Right bank	48		Yes	Clear	None	3	3	3
Pipe Outfall	382111	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	386204	Stormwater	Corrugated Metal	Right bank	12		Yes	Clear	None	3	3	3
Pipe Outfall	386206	Stormwater	Smooth Metal Pipe	Right bank	60		Yes	Clear	None	3	3	3
Pipe Outfall	387202	Stormwater	Concrete Pipe	Head of stream	30		Yes	Clear	None	3	4	2
Pipe Outfall	387206	Stormwater	Concrete Pipe	Head of stream	24		Yes	Clear	None	3	3	1
Pipe Outfall	389205	Stormwater	Concrete Pipe	Left bank	24		Yes	Yellow Brown	None	3	2	3
Pipe Outfall	392204	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	3	3
Pipe Outfall	392205	Stormwater	Concrete Pipe	Right bank	18		Yes	Clear	None	3	3	3
Pipe Outfall	392208	Stormwater	Concrete Pipe	Right bank	18		Yes	Clear	None	3	3	3
Pipe Outfall	395206	Stormwater	Concrete Pipe	Head of stream	48		Yes	Clear	None	3	3	2
Pipe Outfall	509105	Stormwater	Concrete Pipe	Right bank	18		Yes	Clear	None	3	2	3
Pipe Outfall	509106	Stormwater	Concrete Pipe	Right bank	18		Yes	Clear	None	3	2	3
Pipe Outfall	509202	Stormwater	Concrete Pipe	Right bank	18		Yes	Clear	None	3	3	2
Pipe Outfall	509203	Stormwater	Concrete Pipe	Left bank	36		Yes	Green	None	3	2	1
Pipe Outfall	511201	Stormwater	Concrete Pipe	Right bank	24		Yes	Clear	None	3	2	1

Pipe Outfalls

Problem	Site Number	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	511202	Stormwater	Concrete Pipe	Left bank	36		Yes	Clear	None	3	2	1
Pipe Outfall	511204	Stormwater	Concrete Pipe	Right bank	30		Yes	Clear	None	3	2	2
Pipe Outfall	511205	Stormwater	Concrete Pipe	Left bank	24		Yes	Medium Brown	None	3	1	2
Pipe Outfall	511206	Stormwater	Corrugated Metal	Left bank	24		Yes	Clear	None	3	2	1
Pipe Outfall	512201	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	Rotten eggs	3	2	1
Pipe Outfall	515103	Stormwater	Plastic	Left bank	24		Yes	Clear	None	3	3	3
Pipe Outfall	515104	Industrial	Concrete Pipe	Left bank	42		Yes	Clear	None	3	4	3
Pipe Outfall	515302	Stormwater	Concrete Channel	Left bank		3	Yes	Clear	None	3	3	2
Pipe Outfall	517110	Stormwater	Concrete Pipe	Right bank	48		Yes	Clear	None	3	3	2
Pipe Outfall	518102	Unknown	Concrete Pipe	Right bank	24		Yes	Clear	Musky	3	3	1
Pipe Outfall	518103	Stormwater	Concrete Pipe	Right bank	20		Yes	Clear	Musky	3	1	1
Pipe Outfall	518104	Sewage Overflow	Corrugated Metal	Left bank	48		Yes	Clear	None	3	1	2
Pipe Outfall	518105	Unknown	Concrete Pipe	Right bank	48		Yes	Clear	None	3	1	2
Pipe Outfall	518109	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	3	2
Pipe Outfall	142307	Stormwater	Concrete Pipe	Right bank	18		No			4	1	2
Pipe Outfall	146102	Stormwater	Concrete Pipe	Left bank	24		No			4	2	1
Pipe Outfall	146103	Stormwater	Concrete Pipe	Left bank	24		No			4	4	1
Pipe Outfall	150102	Stormwater	Concrete Channel	Left bank		3	No			4	2	3
Pipe Outfall	150103	Stormwater	Concrete Pipe	Left bank	36		No			4	2	3
Pipe Outfall	151101	Stormwater	Smooth Metal Pipe	Left bank	8		No			4	3	2
Pipe Outfall	151102	Stormwater	Concrete Channel	Left bank		36	No			4	3	2
Pipe Outfall	151104	Stormwater	Plastic	Right bank	4		No			4	3	2
Pipe Outfall	155107	Stormwater	Concrete Pipe	Right bank	20		No			4	3	2
Pipe Outfall	155108	Unknown	Plastic	Left bank	6		No			4	2	2
Pipe Outfall	182107	Stormwater	Concrete Channel	Left bank		2	No			4	2	1
Pipe Outfall	187103	Unknown	Terra Cotta	Right bank	10		No			4	3	2
Pipe Outfall	187105	Stormwater	Corrugated Metal	Right bank	12		No			4	2	1
Pipe Outfall	311108	Stormwater	Plastic	Left bank	8		No			4	2	1
Pipe Outfall	323102	Stormwater	Concrete Pipe	Left bank	24		No			4	3	1
Pipe Outfall	338107	Stormwater	Concrete Pipe	Left bank	24		No			4	3	2
Pipe Outfall	338108	Stormwater	Concrete Pipe	Right bank	30		No			4	3	2
Pipe Outfall	338109	Stormwater	Concrete Pipe	Right bank			No			4	3	2
Pipe Outfall	346302	Stormwater	Concrete Pipe	Left bank	24		No			4	3	2
Pipe Outfall	349106	Stormwater	Concrete Pipe	Left bank	18		No			4	3	2
Pipe Outfall	354105	Unknown	Concrete Pipe	Right bank	48		No			4	3	4
Pipe Outfall	356214	Unknown	Plastic	Left bank	6		No			4	3	3
Pipe Outfall	357204	Stormwater	Concrete Channel	Right bank		2	No			4	2	2
Pipe Outfall	372101	Stormwater	Concrete Channel	Right bank		2	No			4	2	1

Pipe Outfalls

Problem	Site Number	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	378108	Stormwater	Concrete Channel	Right bank		3	No			4	2	2
Pipe Outfall	382112	Stormwater	Earth Channel	Right bank		3	No			4	2	3
Pipe Outfall	509102	Stormwater	Concrete Pipe	Right bank	24		No			4	3	2
Pipe Outfall	511119	Unknown	Concrete Pipe	Right bank	12		No			4	3	1
Pipe Outfall	512202	Stormwater	Concrete Pipe	Right bank	24		No			4	2	1
Pipe Outfall	118201	Stormwater	Smooth Metal Pipe	Left bank	6		No			5	3	3
Pipe Outfall	135103	Stormwater	Concrete Pipe	Left bank	20		No			5	1	1
Pipe Outfall	136204	Stormwater	Concrete Pipe	Left bank	30		No			5	2	1
Pipe Outfall	142303	Stormwater	Concrete Pipe	Left bank	42		No			5	1	1
Pipe Outfall	142304	Stormwater	Concrete Pipe	Left bank	36		No			5	1	1
Pipe Outfall	142305	Stormwater	Concrete Pipe	Left bank	36		No			5	1	1
Pipe Outfall	142308	Stormwater	Concrete Channel	Left bank		2.5	No			5	1	1
Pipe Outfall	151105	Stormwater	Plastic	Right bank	4		No			5	1	2
Pipe Outfall	151107	Stormwater	Concrete Channel	Left bank	30		No			5	2	2
Pipe Outfall	151108	Stormwater	Concrete Channel	Right bank		3	No			5	1	2
Pipe Outfall	155104	Unknown	Plastic	Left bank	6		No			5	2	2
Pipe Outfall	156106	Stormwater	Concrete Channel	Left bank		3	No			5	1	1
Pipe Outfall	160303	Stormwater	Downspout	Right bank	6		No			5	1	1
Pipe Outfall	160304	Stormwater	Corrugated Metal	Left bank	24		No			5	1	3
Pipe Outfall	165107	Stormwater	Concrete Pipe	Left bank	24		No			5	1	1
Pipe Outfall	165110	Stormwater	Concrete Pipe	Head of stream	12	2	No			5	1	1
Pipe Outfall	168201	Stormwater	Concrete Pipe	Left bank	36		No			5	1	1
Pipe Outfall	172204	Stormwater	Concrete Pipe	Left bank	12		No			5	3	1
Pipe Outfall	172205	Stormwater	Concrete Pipe	Right bank	12		No			5	3	1
Pipe Outfall	178202	Stormwater	Concrete Pipe	Right bank	18		No			5	4	1
Pipe Outfall	178204	Stormwater	Concrete Pipe	Left bank	12		No			5	4	1
Pipe Outfall	178207	Stormwater	Concrete Pipe	Left bank	24		No			5	1	1
Pipe Outfall	179204	Stormwater	Concrete Channel	Right bank		3	No			5	2	2
Pipe Outfall	179205	Stormwater	Corrugated Metal	Right bank	30		No			5	3	3
Pipe Outfall	180204	Stormwater	Concrete Pipe	Right bank	24		No			5	1	1
Pipe Outfall	182105	Stormwater	Concrete Pipe	Right bank	24		No			5	3	1
Pipe Outfall	182106	Stormwater	Concrete Pipe	Right bank	24		No			5	3	1
Pipe Outfall	190114	Stormwater	Concrete Pipe	Left bank	30		No			5	3	1
Pipe Outfall	190118	Stormwater	Plastic	Left bank	30		No			5	3	1
Pipe Outfall	190119	Industrial	Corrugated Metal	Left bank	30		No			5	3	1
Pipe Outfall	190205	Stormwater	Corrugated Metal	Right bank	18		No			5	1	1
Pipe Outfall	190206	Stormwater	Concrete Pipe	Right bank	12		No			5	3	2
Pipe Outfall	196305	Stormwater	Concrete Pipe	Left bank	36		No			5	1	1

Pipe Outfalls

Problem	Site Number	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	310311	Stormwater	Concrete Pipe	Left bank	18		No			5	5	2
Pipe Outfall	310315	Stormwater	Concrete Pipe	Right bank	30		No			5	1	2
Pipe Outfall	319101	Stormwater	Plastic	Right bank	4		No			5	1	1
Pipe Outfall	319104	Unknown	Plastic	Right bank	4		No			5	1	1
Pipe Outfall	319107	Unknown	Smooth Metal Pipe	Right bank	6		No			5	4	3
Pipe Outfall	322202	Stormwater	Plastic	Right bank	24		No			5	2	1
Pipe Outfall	322208	Stormwater	Plastic	Right bank	18		No			5	1	1
Pipe Outfall	327102	Stormwater	Concrete Pipe	Right bank	24		No			5	1	2
Pipe Outfall	328101	Stormwater	Concrete Pipe	Right bank	24		No			5	1	2
Pipe Outfall	328112	Unknown	Concrete Pipe	Left bank	24		No			5	1	3
Pipe Outfall	338104	Stormwater	Concrete Pipe	Right bank	36		No			5	1	2
Pipe Outfall	346306	Stormwater	Concrete Pipe	Left bank	36		No			5	1	1
Pipe Outfall	346307	Stormwater	Concrete Pipe	Left bank	36		No			5	1	1
Pipe Outfall	346308	Stormwater	Concrete Pipe	Left bank	36		No			5	1	1
Pipe Outfall	346310	Stormwater	Concrete Pipe	Left bank	36		No			5	1	1
Pipe Outfall	347301	Stormwater	Concrete Pipe	Left bank	24		No			5	1	2
Pipe Outfall	348103	Stormwater	Concrete Pipe	Left bank	36		No			5	1	1
Pipe Outfall	354103	Stormwater	Smooth Metal Pipe	Left bank	18		No			5	1	4
Pipe Outfall	358202	Stormwater	Concrete Pipe	Right bank	8		No			5	1	2
Pipe Outfall	361203	Pond Drainage	Concrete Pipe	Head of stream	48		No			5	1	3
Pipe Outfall	365102	Stormwater	Concrete Pipe	Right bank	36		No			5	1	1
Pipe Outfall	365107	Stormwater	Concrete Channel	Left bank		4	No			5	2	1
Pipe Outfall	365116	Stormwater	Concrete Pipe	Left bank	30		No			5	1	2
Pipe Outfall	366103	Stormwater	Concrete Pipe	Right bank	36		No			5	1	2
Pipe Outfall	366104	Stormwater	Concrete Pipe	Left bank	36		No			5	1	2
Pipe Outfall	367201	Stormwater	Concrete Channel	Left bank	12		No			5	3	1
Pipe Outfall	372104	Stormwater	Concrete Pipe	Right bank	30		No			5	1	2
Pipe Outfall	389204	Stormwater	Concrete Pipe	Left bank	10		No			5	1	3
Pipe Outfall	504204	Unknown	Smooth Metal Pipe	Left bank	9		No			5	1	1
Pipe Outfall	504206	Stormwater	Smooth Metal Pipe	Left bank	18		No			5	1	1
Pipe Outfall	504208	Stormwater	Corrugated Metal	Left bank	12		No			5	1	1
Pipe Outfall	509104	Stormwater	Corrugated Metal	Right bank	8		No			5	1	2
Pipe Outfall	510101	Unknown	Smooth Metal Pipe	Left bank	1		No			5	1	1
Pipe Outfall	511106	Stormwater	Corrugated Metal	Right bank	24		No			5	1	2
Pipe Outfall	511116	Unknown	Corrugated Metal	Right bank	18		No			5	2	2
Pipe Outfall	515101	Stormwater	Concrete Pipe	Left bank	24		No			5	1	3

Inadequate Buffers

Problem	Site Number	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	LandUseLeft	LandUseRight	Recentlyestablished	Livestock	Severity	Correctability	Access	Wetland
Inadequate Buffer	112201	Both	Both	0	0	2400	2400	Pasture	Pasture	No	No	1	3	2	1
Inadequate Buffer	129201	Both	Neither	0	0	1000	1000	Pasture	Pasture	No	Cattle	1	1	3	5
Inadequate Buffer	141201	Both	Neither	5	5	4800	4800	Shrubs\Small Trees	Shrubs\Small Trees	No	No	1	4	2	1
Inadequate Buffer	146202	Both	Neither	5	5	2300	2300	Lawn	Lawn	No	No	1	2	1	2
Inadequate Buffer	151115	Both	Both	5	5	3000	3000	Paved	Paved	No	No	1	3	2	4
Inadequate Buffer	155105	Both	Both	0	0	2500	2500	Nursery	Paved	No	No	1	4	2	4
Inadequate Buffer	156102	Both	Both	10	10	300	1000	Shrubs	Paved	No	No	1	3	1	4
Inadequate Buffer	156107	Both	Both	0	0	1400	1450	Paved	Paved	No	No	1	4	2	3
Inadequate Buffer	172202	Both	Both	0	0	2000	2200	Paved	Paved	No	No	1	3	1	5
Inadequate Buffer	190112	Both	Both	0	0	2300	2300	Lawn	Lawn	No	No	1	2	1	3
Inadequate Buffer	319103	Both	Right	0	10	2500	2500	Shrubs\Small Trees	Shrubs\Small Trees	No	No	1	1	1	3
Inadequate Buffer	321204	Both	Left	0	5	4300	2900	Paved	Shrubs\Small Trees	No	No	1	3	3	3
Inadequate Buffer	347312	Both	Both	0	0	1700	1700	Lawn	Lawn	No	No	1	3	1	1
Inadequate Buffer	348104	Both	Both	0	0	5000	5000	Lawn	Lawn	No	No	1	2	4	5
Inadequate Buffer	349313	Both	Left	0	5	1800	1800	Lawn	Lawn	No	No	1	3	1	4
Inadequate Buffer	353101	Both	Neither	10	0	6250	6250	Shrubs\Small Trees	Shrubs\Small Trees	No	No	1	3	4	4
Inadequate Buffer	356212	Both	Neither	5	5	6000	6000	Lawn	Lawn	No	No	1	4	1	5
Inadequate Buffer	504207	Both	Both	0	0	1600	1600	Pasture	Pasture	No	No	1	2	1	5
Inadequate Buffer	510202	Left	Both	0	0	5000	5000	Paved		No	No	1	1	1	4
Inadequate Buffer	511203	Both	Both	3	0	1500	1500	Shrubs\Small Trees	Shrubs\Small Trees	No	No	1	3	1	3
Inadequate Buffer	142309	Both	Both	0	0	1000	1000	Paved	Shrubs\Small Trees	No	No	2	3	2	2
Inadequate Buffer	146104	Both	Neither	5	5	1200	1200	Paved	Paved	No	No	2	4	2	4
Inadequate Buffer	180206	Both	Left	5	5	1200	600	Shrubs\Small Trees	Lawn	No	No	2	3	1	2
Inadequate Buffer	181107	Both	Right	10	0	700	750	Lawn	Paved	No	No	2	2	1	3
Inadequate Buffer	200302	Both	Both	5	5	3500	3500	Shrubs\Small Trees	Shrubs\Small Trees	No	No	2	1	1	4
Inadequate Buffer	311101	Right	Both		10		900	Shrubs\Small Trees	Paved	No	No	2	3	1	5
Inadequate Buffer	315202	Both	Both	0	0	600	600	Shrubs\Small Trees	Shrubs\Small Trees	No	No	2	4	1	3
Inadequate Buffer	316202	Both	Left	0	15	1000	1000	Paved	Paved	No	No	2	4	3	5
Inadequate Buffer	316208	Both	Both	5	5	1200	1200	Shrubs\Small Trees	Shrubs\Small Trees	No	No	2	3	2	3
Inadequate Buffer	346105	Both	Both	0	0	900	900	Paved	Railroad	No	No	2	4	2	5
Inadequate Buffer	346305	Both	Both	0	0	800	800	Railroad	Shrubs\Small Trees	No	No	2	2	1	3
Inadequate Buffer	347304	Both	Neither	0	10	1400	900	Shrubs\Small Trees	Paved	No	No	2	4	1	5

Inadequate Buffers

Problem	Site Number	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	LandUseLeft	LandUseRight	RecentlyestablishedLivestock	Severity	Correctability	Access	Wetland
Inadequate Buffer	358301	Both	Both	0	0	800	800	Lawn	Lawn	No	No	2	4	1	3
Inadequate Buffer	365109	Both	Both	0	0	800	800	Paved	Paved	No	No	2	4	1	5
Inadequate Buffer	107201	Both	Both	0	0	1000	1000	Pasture	Pasture	No	No	3	3	1	1
Inadequate Buffer	116101	Left	Both	0		1100		Paved	Forest	No	No	3	5	1	5
Inadequate Buffer	122104	Left	Left	0		4000		Paved	Forest	No	No	3	5	1	5
Inadequate Buffer	157101	Both	Both	0	0	2500	2500	Pasture	Pasture	No	Horses	3	3	1	1
Inadequate Buffer	165102	Both	Right	0	0	700	700	Railroad	Lawn	No	No	3	3	1	1
Inadequate Buffer	180201	Both	Both	10	5	900	900	Paved	Shrubs\Small Trees	No	No	3	4	1	2
Inadequate Buffer	182101	Both	Left	5	20	1200	1200	Lawn	Shrubs\Small Trees	No	No	3	2	1	4
Inadequate Buffer	190201	Left	Left	5		2200		Lawn	Shrubs\Small Trees	No	No	3	3	1	3
Inadequate Buffer	310306	Right	Right		15		700	Shrubs\Small Trees	Paved	No	No	3	3	2	3
Inadequate Buffer	320101	Both	Both	0	0	700	400	Paved	Forest	No	No	3	1	1	3
Inadequate Buffer	328104	Both	Neither	10	10	850	850	Lawn	Lawn	No	No	3	4	2	3
Inadequate Buffer	345404	Both	Neither	15	10	1000	1000	Paved	Paved	No	No	3	5	4	5
Inadequate Buffer	356202	Right	Neither		0		1600	Shrubs\Small Trees	Other	No	No	3	5	1	5
Inadequate Buffer	360202	Left	Left	0		500		Lawn	Lawn	No	No	3	3	1	4
Inadequate Buffer	361201	Both	Both	0	0	300	300	Pasture	Pasture	No	No	3	1	1	5
Inadequate Buffer	365118	Right	Right		20		2300	Shrubs\Small Trees	Shrubs\Small Trees	No	No	3	2	2	3
Inadequate Buffer	372107	Right	Right		10		500	Shrubs\Small Trees	Lawn	No	No	3	2	3	3
Inadequate Buffer	372109	Both	Both	10	10	600	600	Shrubs\Small Trees	Lawn	No	No	3	3	2	3
Inadequate Buffer	385102	Both	Left	10	5	800	400	Lawn	Shrubs\Small Trees	No	No	3	2	1	5
Inadequate Buffer	388201	Both	Both	10	10	2200	2200	Lawn	Lawn	No	No	3	3	2	5
Inadequate Buffer	395202	Both	Neither	0	0	200	300	Shrubs\Small Trees	Shrubs\Small Trees	No	No	3	3	3	5
Inadequate Buffer	515106	Both	Both	0	0	500	500	Lawn	Lawn	No	No	3	3	1	5
Inadequate Buffer	168202	Both	Both	0	0	100	100	Lawn	Lawn	No	No	4	1	1	5
Inadequate Buffer	174102	Right	Neither		20		1300	Shrubs\Small Trees	Lawn	No	No	4	2	1	3
Inadequate Buffer	174103	Left	Neither	20		600		Other	Shrubs\Small Trees	No	No	4	4	2	1
Inadequate Buffer	310403	Both	Both	0	0	200	200	Paved	Shrubs\Small Trees	No	No	4	5	1	3
Inadequate Buffer	311110	Left		5		400		Paved	Shrubs\Small Trees	No	No	4	3	1	2
Inadequate Buffer	312204	Both	Neither	10	5	500	500	Paved	Paved	No	No	4	5	1	5
Inadequate Buffer	323103	Both	Both	0	0	500	500	Paved	Paved	No	No	4	2	1	4
Inadequate Buffer	328115	Both	Both	0	0	350	350	Lawn	Shrubs\Small Trees	No	No	4	2	2	3

Inadequate Buffers

Problem	Site Number	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	LandUseLeft	LandUseRight	RecentlyestablishedLivestock	Severity	Correctability	Access	Wetland
Inadequate Buffer	337303	Left	Neither	20		700		Shrubs\Small Trees	Forest	No	No	4	4	1	5
Inadequate Buffer	350214	Left	Left	10		600		Lawn	Shrubs\Small Trees	No	No	4	2	1	5
Inadequate Buffer	360205	Both	Both	30	10	200	200	Paved	Paved	No	No	4	4	1	4
Inadequate Buffer	364402	Right	Neither		20		800	Shrubs\Small Trees	Paved	No	No	4	5	2	5
Inadequate Buffer	364405	Left	Neither	20		800		Paved	Shrubs\Small Trees	No	No	4	5	2	5
Inadequate Buffer	365104	Both	Neither	20	10	200	400	Paved	Paved	No	No	4	2	1	4
Inadequate Buffer	372201	Left	Neither	15		1500		Shrubs\Small Trees	Shrubs\Small Trees	No	No	4	4	2	5
Inadequate Buffer	374109	Right	Both		10		500	Shrubs\Small Trees	Forest	No	No	4	1	3	5
Inadequate Buffer	386202	Left	Both	10		450		Paved	Forest	No	No	4	2	3	3
Inadequate Buffer	389203	Left	Both	20		1300		Lawn	Forest	No	No	4	3	3	5
Inadequate Buffer	509201	Both	Neither	8	40	600	600	Lawn	Shrubs\Small Trees	No	No	4	3	2	4
Inadequate Buffer	128102	Left	Left	20		200		Paved	Shrubs\Small Trees	No	No	5	4	1	3
Inadequate Buffer	151111	Both	Right	20	10	500	500	Paved	Paved	No	No	5	3	2	4
Inadequate Buffer	164201	Both	Both	5	5	100	100	Lawn	Lawn	No	No	5	1	1	5
Inadequate Buffer	311201	Both	Neither	10	10	200	100	Shrubs\Small Trees	Paved	No	No	5	4	3	2
Inadequate Buffer	328116	Right	Neither		20		200	Shrubs\Small Trees	Shrubs\Small Trees	No	No	5	1	2	3
Inadequate Buffer	358204	Right	Neither		5		300	Shrubs\Small Trees	Lawn	No	No	5	3	1	3
Inadequate Buffer	371401	Left	Both	0		200		Pasture	Shrubs\Small Trees	No	No	5	3	1	5
Inadequate Buffer	374102	Both	Both	10	10	300	300	Shrubs\Small Trees	Shrubs\Small Trees	No	No	5	1	2	5
Inadequate Buffer	391202	Right	Both		15		300	Forest	Paved	No	No	5	4	3	5
Inadequate Buffer	392206	Right	Neither		5		500	Shrubs\Small Trees	Lawn	No	No	5	4	3	5

Erosion

Problem	Site Number	Type	Possible Cause	Height(ft)	Length(ft)	Landuseleft	Landuseright	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion site	349312	Downcutting	Below road crossing	8	1800	Lawn	Lawn	No		1	3	1
Erosion site	354110	Downcutting	Below channelization	10	6250	Paved	Paved	Yes		1	4	2
Erosion site	373104	Downcutting	Bend at steep slope	12	2600	Forest	Forest	No		1	5	3
Erosion site	321203	Widening	Bend at steep slope	12	80	Paved	Paved	Yes	below parking lot	2	3	1
Erosion site	327101	Widening	Land use change	7	1200	Other	Other	No		2	1	2
Erosion site	346102	Widening	Below road crossing	5	1200	Paved	Paved	Yes	right below industry	2	3	1
Erosion site	350204	Downcutting	Unknown	5	900	Shrubs\Small Trees	Shrubs\Small Trees	No		2	3	3
Erosion site	353102	Downcutting	Land use change	5	2750	Shrubs\Small Trees	Shrubs\Small Trees	No		2	3	4
Erosion site	355401	Downcutting	Below road crossing	5	2000	Shrubs\Small Trees	Shrubs\Small Trees	No		2	3	2
Erosion site	387204	Downcutting	Unknown	7	1300	Shrubs\Small Trees	Shrubs\Small Trees	No		2	3	4
Erosion site	511111	Widening	Unknown	6	1600	Forest	Forest	No		2	3	3
Erosion site	122101	Widening	Unknown	4	1300	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	2
Erosion site	124202	Downcutting	Land use change	3	800	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	5
Erosion site	161105	Widening	Land use change	3.5	1200	Forest	Forest	no		3	3	3
Erosion site	174104	Widening	Land use change	3	500	Shrubs &small trees	Forest	no		3	1	1
Erosion site	174105	Widening	Below channelization	3	600	Shrubs	Lawn	no		3	2	1
Erosion site	316207	Headcutting	Land use change	4	400	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	2
Erosion site	319108	Widening	Land use change	7	100	Forest	Forest	Yes	undercutting trees	3	2	3
Erosion site	321209	Downcutting	Unknown	3	1200	Paved	Paved	No		3	4	2
Erosion site	322203	Widening	Below road crossing	6	1100	Shrubs\Small Trees	Shrubs\Small Trees	No		3	2	2
Erosion site	328108	Widening	Below channelization	10	50	Paved	Shrubs\Small Trees	No		3	2	3
Erosion site	328111	Widening	Below channelization	5	200	Shrubs\Small Trees	Forest	Yes		3	3	3
Erosion site	329208	Downcutting	Unknown	4	2200	Paved	Paved	No		3	3	1
Erosion site	337301	Widening	Land use change	3	2000	Shrubs\Small Trees	Forest	No		3	3	1
Erosion site	340204	Downcutting	Unknown	2	3000	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	3
Erosion site	347303	Widening	Unknown	10	20	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	1
Erosion site	347306	Unknown	Pipe Outfall	75	15	Shrubs\Small Trees	Shrubs\Small Trees	Yes	pipe outfall	3	3	1
Erosion site	347307	Widening	Unknown	20	30	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	1
Erosion site	347310	Widening	Below road crossing	5	100	Shrubs\Small Trees	Paved	Yes	road	3	3	1
Erosion site	349101	Unknown	Land use change	4.5	800	Forest	Forest	No		3	3	2
Erosion site	350209	Downcutting	Below channelization	4	400	Shrubs\Small Trees	Shrubs\Small Trees	No		3	4	1
Erosion site	350212	Downcutting	Unknown	3	2200	Lawn	Shrubs\Small Trees	No		3	1	1
Erosion site	355104	Downcutting	Below road crossing	3	1000	Shrubs\Small Trees	Shrubs\Small Trees	No		3	2	2
Erosion site	355402	Downcutting	Below road crossing	3	1000	Shrubs\Small Trees	Shrubs\Small Trees	No		3	2	4
Erosion site	355405	Downcutting	Unknown	4	1800	Lawn	Shrubs\Small Trees	No		3	3	1

Erosion

Problem	Site Number	Type	Possible Cause	Height(ft)	Length(ft)	Landuseleft	Landuseright	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion site	356205	Widening	Below road crossing	15	100	Other	Shrubs\Small Trees	No		3	3	1
Erosion site	356402	Downcutting	Bend at steep slope	10	150	Paved	Shrubs\Small Trees	Yes		3	4	2
Erosion site	359201	Downcutting	Unknown	5	1600	Forest	Lawn	No		3	3	1
Erosion site	361202	Downcutting	Bend at steep slope	3	1800	Paved	Shrubs\Small Trees	No		3	2	1
Erosion site	364411	Downcutting	Bend at steep slope	10	40	Shrubs\Small Trees	Paved	Yes	close to road	3	2	2
Erosion site	372108	Widening	Unknown	7	800	Shrubs\Small Trees	Lawn	No		3	3	2
Erosion site	373201	Downcutting	Unknown	3	900	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	2
Erosion site	382105	Widening	Land use change	8	400	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	3
Erosion site	385103	Widening	Below road crossing	8	500	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	2
Erosion site	386203	Widening	Bend at steep slope	6	350	Shrubs\Small Trees	Paved	No		3	1	2
Erosion site	387205	Downcutting	Unknown	8	300	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	3
Erosion site	389207	Widening	Bend at steep slope	4	800	Lawn	Forest	No		3	4	3
Erosion site	390302	Downcutting	Unknown	7	900	Forest	Forest	No		3	3	2
Erosion site	392207	Headcutting	Land use change	5	400	Shrubs\Small Trees	Lawn	No		3	3	2
Erosion site	392211	Widening	Bend at steep slope	7	400	Shrubs\Small Trees	Shrubs\Small Trees	No		3	3	3
Erosion site	395203	Widening	Land use change	5	1000	Other	Other	No		3	1	3
Erosion site	395207	Widening	Land use change	5	500	Shrubs\Small Trees	Shrubs\Small Trees	No		3	2	2
Erosion site	504203	Downcutting	Bend at steep slope	8	300	Lawn		No		3	3	1
Erosion site	515303	Widening	Unknown	3	2000	Shrubs\Small Trees	Shrubs\Small Trees	No		3	4	2
Erosion site	518106	Widening	Unknown	3	2400	Forest	Forest	No		3	3	2
Erosion site	160306	Widening	Stormwater runoff	6	200	Paved	Paved	Yes	parking lot	4	2	1
Erosion site	184201	Downcutting	Bend at steep slope	4	200	Lawn	Lawn	No		4	2	3
Erosion site	311202	Downcutting	Below road crossing	5	200	Shrubs\Small Trees	Pasture	No		4	3	2
Erosion site	316211	Widening	Below road crossing	2	400	Shrubs\Small Trees	Shrubs\Small Trees	No		4	4	2
Erosion site	328202	Downcutting	Below channelization	2	200	Shrubs\Small Trees	Pasture	No		4	3	2
Erosion site	331201	Downcutting	Below channelization	6	30	Shrubs\Small Trees	Shrubs\Small Trees	No		4	2	2
Erosion site	383302	Downcutting	Below road crossing	3	300	Shrubs\Small Trees	Shrubs\Small Trees	No		4	2	1
Erosion site	386210	Headcutting	Unknown	5	200	Shrubs\Small Trees	Shrubs\Small Trees	No		4	3	2
Erosion site	504205	Downcutting	Below road crossing	4	100	Shrubs\Small Trees	Other	No		4	1	1
Erosion site	117201	Downcutting	Unknown	2	20	Pasture	Pasture	No		5	2	2
Erosion site	117203	Headcutting	Unknown	2	30	Pasture	Pasture	No		5	1	2
Erosion site	165105	Headcutting	Below road crossing	3	10	Lawn	Lawn	no		5	1	1
Erosion site	316201	Downcutting	Below road crossing	3	100	Paved	Paved	Yes	parking lot	5	4	2
Erosion site	357201	Widening	Below road crossing	5	200	Other	Lawn	No		5	3	2

Fish Barriers

Problem	Site Number	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access
Fish Barrier	134105	Total	Road crossing	Too shallow		1.5	3	4	1
Fish Barrier	136208	Total	Channelized	Too shallow		0.25	3	3	2
Fish Barrier	145101	Total	Channelized	Too shallow		0.25	3	3	2
Fish Barrier	321206	Partial	Channelized	Too high	12		3	2	2
Fish Barrier	328103	Partial	Road crossing	Too high	12		3	5	2
Fish Barrier	337307	Total	Railroad crossing	Too fast			3	3	2
Fish Barrier	349310	Total	Pipe crossing	Too high	12		3	4	3
Fish Barrier	349315	Total	Pipe crossing	Too high	24		3	4	3
Fish Barrier	350202	Total	Road crossing	Too high	24		3	4	1
Fish Barrier	350208	Total	Road crossing	Too high	36		3	5	1
Fish Barrier	350211	Partial	Road crossing	Too fast			3	3	1
Fish Barrier	356209	Total	Road crossing	Too high	6		3	4	1
Fish Barrier	357209	Total	Channelized	Too high	8		3	2	2
Fish Barrier	364410	Total	Pipe crossing	Too high	10		3	2	2
Fish Barrier	372103	Total	Road crossing	Too high	12		3	3	1
Fish Barrier	372112	Total	Channelized	Too high	6		3	3	2
Fish Barrier	511113	Total	Pipe crossing	Too high	12		3	4	3
Fish Barrier	511118	Total	Road crossing	Too high	36		3	3	1
Fish Barrier	122102	Total	Road crossing	Too high	72	2	4	3	2
Fish Barrier	178205	Total	Road crossing	Too shallow		0.5	4	3	1
Fish Barrier	178208	Partial	Pipe crossing	Too high	3		4	2	1
Fish Barrier	178209	Total	Channelized	Too shallow		0.25	4	4	1
Fish Barrier	320103	Total	Channelized	Too shallow		4	4	5	1
Fish Barrier	320108	Total	Road crossing	Too high	3		4	5	1
Fish Barrier	332203	Partial	Road crossing	Too shallow	6	1	4	4	1
Fish Barrier	337308	Total	Instream pond	Too high	3		4	3	1
Fish Barrier	337311	Total	Railroad crossing	Too high	60		4	4	3
Fish Barrier	355404	Total	Other	Too shallow		4	4	1	1
Fish Barrier	360204	Partial	Road crossing	Too fast			4	1	1
Fish Barrier	387203	Total	Road crossing	Too high	6		4	4	3
Fish Barrier	511107	Temporary	Debris dam	Too high	6		4	2	2
Fish Barrier	515102	Total	Other	Too high	4		4	4	3
Fish Barrier	123201	Total	Beaver dam	Too high	48		5	1	5
Fish Barrier	161102	Temporary	Beaver Dam	Too high	36		5	3	3
Fish Barrier	181104	Total	Pipe crossing	Too high	6		5	3	1
Fish Barrier	182108	Total	Road crossing	Too high	20		5	3	1
Fish Barrier	187106	Total	Channelized	Too high	4		5	1	1
Fish Barrier	188101	Total	Channelized	Too high	24		5	3	2

Fish Barriers

Problem	Site Number	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access
Fish Barrier	310302	Temporary	Debris dam	Too high	12		5	1	2
Fish Barrier	310309	Partial	Natural falls	Too shallow		6	5	5	2
Fish Barrier	310402	Total	Underground	Too shallow		1	5	4	1
Fish Barrier	310405	Total	Road crossing	Too shallow		3	5	4	1
Fish Barrier	310410	Total	Road crossing	Too shallow		2	5	4	1
Fish Barrier	350207	Total	Road crossing	Too high	36		5	4	1
Fish Barrier	356210	Temporary	Debris dam	Too shallow		1	5	3	1
Fish Barrier	357206	Temporary	Debris dam	Too high	3		5	1	4
Fish Barrier	357207	Temporary	Beaver dam	Too high	48		5	2	4
Fish Barrier	364408	Total	Channelized	Too high	12		5	5	1
Fish Barrier	366102	Total	Debris dam	Too high	20		5	2	3
Fish Barrier	367203	Total	Pipe crossing	Too high	24		5	3	2
Fish Barrier	367208	Total	Channelized	Too high	24		5	4	2
Fish Barrier	373101	Temporary	Debris dam	Too high	12		5	1	4
Fish Barrier	373102	Temporary	Debris dam	Too high	12		5	1	4
Fish Barrier	374101	Total	Natural falls	Too high	24		5	2	3
Fish Barrier	374103	Total	Natural falls	Too high	24		5	2	3
Fish Barrier	374104	Total	Natural falls	Too shallow		1	5	2	3
Fish Barrier	374105	Total	Natural falls	Too high	36		5	2	3
Fish Barrier	374107	Total	Natural falls	Too high	24		5	1	3
Fish Barrier	385101	Temporary	Debris dam	Too high	36		5	2	1
Fish Barrier	386207	Temporary	Debris dam	Too shallow		1	5	1	4
Fish Barrier	386211	Total	Natural falls	Too high	48		5	3	2
Fish Barrier	392201	Total	Natural falls	Too high	42		5	3	3
Fish Barrier	392202	Total	Natural falls	Too high	24		5	3	2
Fish Barrier	392209	Total	Natural falls	Too high	36		5	4	3
Fish Barrier	392210	Total	Natural falls	Too high	36		5	4	3
Fish Barrier	395201	Partial	Natural falls	Too high	24	2	5	3	3
Fish Barrier	395204	Total	Natural falls	Too high	24		5	4	3
Fish Barrier	395205	Total	Natural falls	Too high	42		5	4	3

Channel Alterations

Problem	Site number	Type	BottomWidth(in)	Length(ft)	Perennial Flow	Sedimentation	Veg in Channel	Road Crossing	LengthAbove(ft)	LengthBelow(ft)	Severity	Correctability	Access
Channel Alteration	136207	Concrete	96	1400	Yes	No	No	No			1	4	2
Channel Alteration	146105	Concrete	48	3000	Yes	No	Yes	No			1	5	2
Channel Alteration	146106	Concrete	96	750	Yes	No	Yes	Above	2000		1	4	2
Channel Alteration	156104	Concrete	240	2700	Yes	Yes	Yes	Both	2700	2700	1	4	2
Channel Alteration	156108	Concrete, Gabion	35	1800	Yes	Yes	Yes	Both	1800	1800	1	4	2
Channel Alteration	181108	Concrete	48	700	Yes	No	Yes	Below		700	1	3	1
Channel Alteration	182102	Concrete	48	1300	Yes	No	No	Above	1300		1	4	1
Channel Alteration	321205	Concrete	48	1000	yes	no	no	below			1	5	2
Channel Alteration	348102	Concrete	420	3600	yes	No	yes	both	1800	1800	1	5	2
Channel Alteration	354107	Concrete	240	700	Yes	No	No	Both			1	5	1
Channel Alteration	365108	Concrete	48	800	Yes	Yes	Yes	Both	15	800	1	4	2
Channel Alteration	382106	Concrete	240	4500	Yes	No	No	Below			1	3	2
Channel Alteration	514101	Concrete	96	2400	Yes	No	No	Both			1	5	1
Channel Alteration	128101	Concrete	96	400	Yes	No	Yes	Above	400		2	4	1
Channel Alteration	187104	Concrete	96	600	Yes	No	No	No			2	4	1
Channel Alteration	190110	Concrete	36	1000	No	No	No	No			2	4	1
Channel Alteration	190203	Concrete	48	700	Yes	Yes	Yes	Below		700	2	4	3
Channel Alteration	320107	Concrete	72	600	Yes	No	No	Both			2	5	2
Channel Alteration	332202	Concrete	36	600	Yes	No	No	Both			2	5	1
Channel Alteration	357208	Concrete	60	900	Yes	Yes	No	No			2	2	1
Channel Alteration	142301	Concrete	36	500	Yes	No	Yes	Below		500	3	4	1
Channel Alteration	151113	Earth Channel	6	850	Yes	No	No	Both	850	850	3	4	1
Channel Alteration	151114	Gabion	15	1400	Yes	Yes	Yes	Both	1400	1400	3	4	3
Channel Alteration	160302	Earth Channel	72	400	Yes	Yes	No	No			3	2	2
Channel Alteration	165106	Concrete	60	700	Yes	No	Yes	Below		700	3	4	1
Channel Alteration	172202	Earth channel	48	2300	Yes	No	No	No			3	3	1
Channel Alteration	180202	Concrete	48	300	Yes	Yes	No	No			3	4	1
Channel Alteration	320102	Gabion, Rip-rap	180	100	Yes	Yes	Yes	Above	200		3	3	1
Channel Alteration	320109	Gabion	240	300	Yes	Yes	No	Below	600		3	3	2
Channel Alteration	338202	Concrete	36	600	Yes	Yes	Yes	No			3	3	1
Channel Alteration	372110	Concrete	96	400	Yes	No	No	Below		300	3	4	1
Channel Alteration	391203	Concrete	72	300	Yes	Yes	No	Above	500		3	2	2
Channel Alteration	504209	Earth channel	24	300	Yes	No	Yes	No			3	5	1

Channel Alterations

Problem	Site number	Type	BottomWidth(in)	Length(ft)	Perennial Flow	Sedimentation	Veg in Channel	Road Crossing	LengthAbove(ft)	LengthBelow(ft)	Severity	Correctability	Access
Channel Alteration	509101	Rip-rap	84	200	Yes	No	Yes	Above	200		3	4	2
Channel Alteration	509204	Concrete	60	200	Yes	Yes	No	Below			3	5	1
Channel Alteration	515105	Concrete	144	450	Yes	No	No	Both			3	4	3
Channel Alteration	122105	Concrete	24	1000	No	No	No	No			4	5	1
Channel Alteration	156103	Gabion	35	1000	Yes	Yes	Yes	Above	1000		4	3	1
Channel Alteration	190209	Concrete	240	100	Yes	Yes	No	Both	100	100	4	5	3
Channel Alteration	200304	Rip-rap	36	200	Yes	Yes	No	No			4	3	2
Channel Alteration	310313	Concrete and riprap	48	150	Yes	No	No	Below		125	4	2	2
Channel Alteration	310407	Rip-rap	6	400	Yes	No	No	Below		400	4	3	2
Channel Alteration	344103	Concrete	48	200	Yes	Yes	No	Both	20	20	4	3	2
Channel Alteration	355103	Concrete	120	100	Yes	Yes	No	Both			4	5	2
Channel Alteration	355406	Gabion	72	200	Yes	No	No	Both	200	200	4	1	1
Channel Alteration	356215	Concrete	120	250	Yes	Yes	No	Both	150	100	4	3	1
Channel Alteration	367211	Concrete	24	500	Yes	No	No	Both			4	4	1
Channel Alteration	383303	Rip-rap	96	200	No	Yes	No	Below		2	4	2	1
Channel Alteration	116102	Concrete	12	500	No	No	No	No			5	1	1
Channel Alteration	122103	Concrete	36	500	No	No	No	Below			5	3	1
Channel Alteration	168206	Concrete	48	600	Yes	Yes	No	No			5	3	1
Channel Alteration	310301	Concrete	16	300	Yes	Yes	No	Below			5	3	2
Channel Alteration	310308	Rip-rap	40	8	Yes	No	No	No		8	5	5	2
Channel Alteration	316210	Gabion	36	400	Yes	Yes	No	Below		400	5	5	2
Channel Alteration	316303	Concrete	100	200	Yes	No	No	Both	5	30	5	5	1
Channel Alteration	329204	Gabion	144	200	yes	no	yes	no			5	4	1
Channel Alteration	349308	Gabion	30	10	Yes	Yes	Yes				5	3	1
Channel Alteration	350206	Gabion	84	575	Yes		Yes	No			5	1	3
Channel Alteration	367207	Gabion	96	15	Yes	Yes	No	No			5	3	2
Channel Alteration	387201	Concrete	10	400	No	No	No	No			5	3	1
Channel Alteration	392203	Concrete	24	100	Yes	No	No	No			5	2	3
Channel Alteration	518305	Earth channel	2400	3400	Yes	No	No	No			5	5	2

Exposed Pipes

Problem	Site Number	Location of Pipe	Type	Diameter(in)	Length(ft)	Purpose	Discharge	Color	Odor	Severity	Correctability	Access
Exposed Pipe	185201	Exposed along bank	Smooth metal	12	25	unknown	no			2	3	4
Exposed Pipe	321201	Exposed along bottom	Smooth metal	18	30	unknown	no			2	4	2
Exposed Pipe	346304	Exposed manhole	Concrete	36	10	sewage	no			2	3	1
Exposed Pipe	349310	Exposed along bottom	Smooth metal	12	20	sewage	no			2	3	1
Exposed Pipe	511112	Exposed along bottom & exposed manhole	Concrete & Smooth metal	36	20	sewage	no			2	3	2
Exposed Pipe	511114	Exposed along bottom	Smooth metal	24	20	sewage	no			2	3	2
Exposed Pipe	511117	Above stream	Smooth metal	24	15	sewage	no			2	2	1
Exposed Pipe	134104	Exposed manhole	Concrete	36	1	sewage	no			3	3	1
Exposed Pipe	135102	Exposed along bottom	Plastic	4	15	unknown	no			3	3	1
Exposed Pipe	140102	Exposed along bottom	Smooth metal	6	10	unknown	no			3	3	2
Exposed Pipe	311103	Exposed manhole	Concrete	36	0.5	sewage	no		sewage	3	3	2
Exposed Pipe	315203	Exposed along bottom	Concrete	8	4	unknown	no			3	4	4
Exposed Pipe	315204	Exposed along bottom	Concrete	8	8	unknown	no			3	3	3
Exposed Pipe	316205	Exposed manhole	Concrete	36	0.75	unknown	no			3	3	2
Exposed Pipe	319106	Exposed manhole	Concrete	4	10	sewage	no			3	3	2
Exposed Pipe	322204	Exposed manhole	Concrete	24	5	sewage	no			3	3	2
Exposed Pipe	322206	Exposed manhole	Concrete	24	0.5	sewage	no		none	3	3	2
Exposed Pipe	322209	Exposed manhole	Smooth metal	24	5	sewage	no			3	3	2
Exposed Pipe	330201	Exposed manhole	Concrete	24	0.5	sewage	no			3	3	1
Exposed Pipe	337309	Exposed along bottom	Smooth metal	12	10	unknown	no			3	3	1
Exposed Pipe	346108	Exposed manhole	Concrete	36	12	sewage	no		none	3	3	1
Exposed Pipe	349315	Exposed along bottom	Smooth metal	12	20	sewage	no			3	3	1
Exposed Pipe	356206	Exposed manhole	Concrete	24	5	sewage	no			3	4	3
Exposed Pipe	357205	Exposed manhole	Concrete	24	2	sewage	no			3	3	3
Exposed Pipe	365105	Exposed along bottom	Terra cotta	10	10	unknown	no			3	3	2
Exposed Pipe	365114	Exposed manhole	Concrete	36	5	sewage	no			3	3	2
Exposed Pipe	367204	Exposed along bottom	Smooth metal	12	6	sewage	no			3	3	2
Exposed Pipe	382102	Exposed along bank	Terra cotta	24	20	sewage	no			3	3	2
Exposed Pipe	385104	Exposed manhole	Concrete	36	10	sewage	no			3	4	2
Exposed Pipe	385105	Exposed manhole	Concrete	36	15	sewage	no			3	3	2
Exposed Pipe	388202	Above stream	Smooth metal	4	15	unknown	no			3	4	2
Exposed Pipe	389201	Above stream	Smooth metal	4	15	unknown	no			3	3	3
Exposed Pipe	389202	Exposed along bank	Smooth metal	4	30	unknown	no			3	3	3

Exposed Pipes

Problem	Site Number	Location of Pipe	Type	Diameter(in)	Length(ft)	Purpose	Discharge	Color	Odor	Severity	Correctability	Access
Exposed Pipe	389206	Exposed manhole	Concrete	36	7	unknown	no			3	3	3
Exposed Pipe	391201	Exposed manhole	Concrete	24	5	sewage	no			3	3	3
Exposed Pipe	396201	Exposed along bank	Corrugated metal	12	44	unknown	no			3	4	3
Exposed Pipe	396202	Exposed manhole	Concrete	24	3	sewage	no			3	4	3
Exposed Pipe	511108	Exposed manhole	Concrete	36	7	sewage	no			3	5	2
Exposed Pipe	511109	Exposed manhole	Concrete	36	7	sewage	no			3	5	2
Exposed Pipe	511110	Exposed along bank	Smooth metal	24	30	sewage	no			3	3	2
Exposed Pipe	511115	Exposed manhole	Concrete	36	0.5	sewage	no			3	5	2
Exposed Pipe	515301	Exposed along bottom	Plastic	12	250	unknown	no			3	3	3
Exposed Pipe	181101	Exposed manhole	Concrete	36	4	sewage	no			4	3	1
Exposed Pipe	190207	Exposed manhole	Concrete	24	30	sewage	no			4	3	2
Exposed Pipe	200305	Exposed manhole	Concrete	24	4	sewage	no			4	4	2
Exposed Pipe	357101	Exposed manhole	Concrete	36	2	sewage	no			4	3	1
Exposed Pipe	357102	Exposed manhole	Concrete	36	8	sewage	no			4	3	1
Exposed Pipe	364410	Exposed along bottom	Concrete	36	25	unknown	no			4	4	
Exposed Pipe	372105	Exposed manhole	Concrete	36	5	sewage	no			4	3	2
Exposed Pipe	374110	Exposed along bottom	Concrete	36	15	unknown	yes	clear	none	4	3	3
Exposed Pipe	509103	Exposed manhole	Concrete	36	6	sewage	no			4	4	2
Exposed Pipe	134101	Exposed manhole	Concrete	36	1	sewage	no			5	3	2
Exposed Pipe	134108	Exposed manhole	Concrete	36	0.5	sewage	no			5	3	2
Exposed Pipe	134109	Exposed manhole	Concrete	36	1	sewage	no			5	3	2
Exposed Pipe	140101	Exposed manhole	Concrete	36	1	sewage	no			5	3	2
Exposed Pipe	338114	Exposed manhole	Concrete	30	2	sewage	no			5	2	2
Exposed Pipe	344102	Exposed along bank	Smooth metal	4	5	unknown	no			5	1	3
Exposed Pipe	350213	Exposed along bank	Unknown	4	2	unknown	no			5	1	1

Trash Dumping

Problem	Site Number	Type	Truckloads	Other measure	Extent	Volunteer Project?	Owner Type	Owner Name	Severity	Correctability	Access
Trash Dumping	346107	Construction	12		Large Area	no	Private		3	3	2
Trash Dumping	354112	Industrial	12		Large Area	no	Unknown		3	5	3
Trash Dumping	355101	Industrial	10		Large Area	no	Unknown		3	4	2
Trash Dumping	364401	Mixed	7		Large Area	no	Private		3	1	2
Trash Dumping	386205	Mixed	4		Large Area	no	Unknown		3	4	4
Trash Dumping	390301	Residential	6		Single Site	no	Private		3	3	3
Trash Dumping	518107	Casket Liners	15		Single Site	no	Private		3	3	2
Trash Dumping	161104	Floatables/Tires	6		Single Site	yes	Unknown		4	2	2
Trash Dumping	360207	Residential	3		Large Area	yes	Unknown		4	1	1
Trash Dumping	364404	Mixed	4		Large Area	no	Unknown		4	1	1
Trash Dumping	156105	Mixed	2.5		Single site	yes	Unknown		5	2	1
Trash Dumping	346103	Floatables	2		Single site	yes	Private		5	2	2
Trash Dumping	350210	Residential	1		Single site	yes	Unknown		5	1	1
Trash Dumping	356401	Car	1		Single site	no	Unknown		5	3	2
Trash Dumping	357203	Floatables	1		Single Site	yes	Private		5	2	2
Trash Dumping	386209	Residential	2		Single Site	yes	Unknown		5	1	1
Trash Dumping	386212	Residential	1		Single Site	yes	Private		5	1	3
Trash Dumping	518108	Yard waste	3		Single Site	no	Unknown		5	2	3

Unusual Conditions

Problem	Site Number	Describe	Description	Potential Cause	Severity	Correctability	Access
Unusual Condition	345403	Sewage discharge	below pipe water becomes dark and cloudy. It also smells like sewage.	broken pipe	2	3	2
Unusual Condition	130201	Piped Stream	Stream Piped underground- 500 ft		3	4	1
Unusual Condition	136206	Piped Stream	Stream Piped underground-1600 ft		3	5	3
Unusual Condition	161101	Excessive Algae		Large Farm	3	2	1
Unusual Condition	310402	Piped Stream	piped underground - 100 ft.		3	4	1
Unusual Condition	367209	Manhole damage	manhole is not covered	open cover	3	1	1
Unusual Condition	134102	Red Flock			4	4	2
Unusual Condition	160305	Red Flock		Pipe Outfall	4	3	1
Unusual Condition	161106	No stream	Stream channel filled in w/ grass lawn	used by agricultural center	4	5	1
Unusual Condition	200306	Excessive Algae		Excessive nutrients possible upstream sewage pipes	4	3	2
Unusual Condition	356405	Debris	leaves and branches blocking water flowing into culvert	leaves and branches	4	1	1
Unusual Condition	383304	Piped Stream	Stream Piped underground		4	5	2
Unusual Condition	518101	Excessive Algae	small wetland pond with excessive algae that is draining into the tributary	possible failing septic system, cemetery nearby	4	3	1
Unusual Condition	364408	Piped Stream	Stream Piped underground- 700 ft		5	5	1
Unusual Condition	504201	Sediment Deposition	large sand bar in the middle of channel		5	2	1
Comment	310312		water flow upstream - deep pool at intersection				2

Unusual Conditions

Problem	Site Number	Describe	Description	Potential Cause	Severity	Correctability	Access
Comment	316302		steel in stream supporting hwy 50 overpass	highway overtop			2
Comment	346304		sewage pipe collapsing; location - right across street from Suburban Floor Cover				
Comment	347306		Erosion at Pipe Outfall -pipe collapsing				2
Comment	349107	Odor	gasoline	seep thru road			1
Comment	374111		dumping of tombstone/construction slates from cemetary				
Comment	383301		section of stream minimal at best but almost non-existent	frozen, surrounded by snow and ice-winter time			3

In/Near Stream Construction

Problem	Site Number	Type of Activity	Sediment Control	Why, if inadequate	Excess Sediment?	Length	Company	Location	Severity
Construction	319102	Residential development	Inadequate	not stopping sediment	Yes	6200		off of 65th ave	1
Construction	151116	Unknown	Adequate		No	100		Near Odell Rd	3
Construction	510201	Building bridge	Unknown		No	50	FMG	near Bladensburg park visitor center	5

Representative Sites A

Problem	Site Number	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation
Indian Creek											
Representative site	117202	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Optimal
Representative site	124201	Poor	Poor	Suboptimal	Suboptimal	Marginal	Poor	Marginal	Optimal	Suboptimal	Optimal
Representative site	134107	Poor	Poor	Marginal	Suboptimal	Poor	Marginal	Suboptimal	Marginal	Suboptimal	Optimal
Representative site	136201	Poor	Poor	Poor	Suboptimal	Poor	Marginal	Suboptimal	Suboptimal	Marginal	Poor
Representative site	137101	Marginal	Marginal	Suboptimal	Suboptimal	Poor	Marginal	Suboptimal	Optimal	Optimal	Optimal
Representative site	141102	Marginal	Poor	Marginal	Marginal	Poor	Marginal	Marginal	Poor	Marginal	Marginal
Representative site	151103	Marginal	Poor	Marginal	Poor	Poor	Suboptimal	Suboptimal	Poor	Marginal	Poor
Representative site	161103	Marginal	Poor	Marginal	Suboptimal	Poor	Suboptimal	Suboptimal	Marginal	Marginal	Suboptimal
Representative site	166101	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Suboptimal	Optimal
Representative site	178206	Marginal	Poor	Marginal	Poor	Marginal	Marginal	Suboptimal	Poor	Suboptimal	Poor
Representative site	179206	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal
Representative site	180208	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Optimal
Representative site	188102	Marginal	Poor	Marginal	Suboptimal	Marginal	Poor	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative site	190116	Poor	Poor	Poor	Poor	Suboptimal	Poor	Poor	Optimal	Optimal	Poor
Representative site	200307	Marginal	Marginal	Marginal	Optimal	Marginal	Marginal	Marginal	Optimal	Optimal	Optimal
Representative site	202301	Optimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Optimal
Lower Beaver Dam											
Representative site	310409	Marginal	Suboptimal	Suboptimal	Suboptimal	Optimal	Marginal	Optimal	Poor	Suboptimal	Poor
Representative site	320106	Suboptimal	Poor	Marginal	Optimal	Poor	Suboptimal	Optimal	Poor	Suboptimal	Suboptimal
Representative site	328110	Suboptimal	Poor	Suboptimal	Optimal	Poor	Marginal	Suboptimal	Marginal	Marginal	Suboptimal
Representative site	332201	Poor		Poor	Poor	Poor	Poor	Marginal	Poor	Poor	Marginal
Representative site	337306	Marginal	Poor	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Optimal
Representative site	338117	Poor		Poor	Poor	Marginal	Marginal	Suboptimal	Marginal	Poor	Poor
Representative site	340201	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Marginal	Suboptimal	Marginal	Marginal	Suboptimal
Representative site	340203	Poor	Poor	Poor	Optimal	Marginal	Poor	Marginal	Suboptimal	Marginal	Optimal
Representative site	340205	Poor	Marginal	Marginal	Optimal	Optimal	Suboptimal	Marginal	Optimal	Marginal	Optimal
Representative site	346110	Suboptimal	Marginal	Marginal	Suboptimal	Poor	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative site	349104	Suboptimal	Marginal	Marginal	Suboptimal	Poor	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative site	350205	Suboptimal	Suboptimal	Marginal		Optimal	Suboptimal	Suboptimal	Optimal	Poor	Suboptimal
Representative site	354104	Suboptimal	Suboptimal	Marginal	Suboptimal	Marginal	Marginal	Suboptimal	Marginal	Marginal	Poor
Representative site	354111	Optimal	Optimal	Marginal	Poor	Marginal	Marginal	Suboptimal	Poor	Poor	Poor
Representative site	355403	Marginal	Marginal	Poor	Suboptimal	Poor	Suboptimal	Suboptimal	Suboptimal	Marginal	Optimal

Representative Sites A

Problem	Site Number	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation
Representative site	356213	Marginal	Poor	Marginal	Poor	Marginal	Suboptimal	Marginal	Marginal	Marginal	Suboptimal
Representative site	360201	Optimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal
Representative site	361204	Poor	Poor	Poor	Optimal	Poor	Marginal	Marginal	Marginal	Suboptimal	Optimal
Representative site	366101	Suboptimal	Marginal	Suboptimal	Suboptimal	Poor	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative site	372106	Marginal	Marginal	Suboptimal	Suboptimal	Marginal	Marginal	Suboptimal	Marginal	Suboptimal	Suboptimal
Representative site	372111	Poor		Poor	Poor	Poor	Suboptimal	Suboptimal	Poor	Poor	Poor
Representative site	382107	Poor	Poor	Poor	Poor	Suboptimal	Marginal	Optimal	Poor	Poor	Suboptimal
Representative site	386208	Poor	Poor	Poor	Suboptimal	Poor	Marginal	Suboptimal	Marginal	Poor	Optimal
Representative site	390303	Poor	Poor	Poor	Optimal	Poor	Marginal	Marginal	Marginal	Poor	Marginal
Representative site	391204	Optimal	Optimal	Suboptimal	Marginal	Marginal	Suboptimal	Suboptimal	Marginal	Marginal	Suboptimal
Upper Anacostia											
Representative site	510102	Poor	Poor	Poor	Poor	Marginal	Suboptimal	Optimal	Suboptimal	Suboptimal	Marginal
Representative site	511120	Marginal	Poor	Optimal	Marginal	Poor	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal
Representative site	514102	Poor	Poor	Poor	Poor	Poor	Poor	Suboptimal	Poor	Poor	Suboptimal
Representative site	517111	Poor	Poor	Poor	Optimal	Poor	Poor	Marginal	Marginal	Suboptimal	Optimal
Representative site	518304	Poor	Poor	Marginal	Poor	Marginal	Marginal	Suboptimal	Suboptimal	Suboptimal	Optimal

Representative Sites B

Problem	Site Number	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type
Indian Creek								
Representative site	117202	2	6	12	12	12	4	Silt
Representative site	124201	12	60	60	2	10	20	Cobble
Representative site	134107	36	96	24	3	6	8	Silt
Representative site	136201		96			20		Silt
Representative site	137101	24	36	30	4	4	10	Sand
Representative site	141102			60			18	Silt
Representative site	151103	48	60	36	3	5	5	Concrete
Representative site	161103	2	70	10	4	18	36	Sand
Representative site	166101	2	14	2	6	12	4	Silt
Representative site	178206	36	48		0.5	10		Sand
Representative site	179206	2	36	3	2	40	4	Gravel
Representative site	180208	4	12	8	2	4	4	Silt
Representative site	188102	12	72	36	2	6	8	Silt
Representative site	190116		36			12		Sand
Representative site	200307		78	12		3	6	Silt
Representative site	202301	180	240	60	12	24	36	Sand
Lower Beaver Dam								
Representative site	310409		48	48		6	12	Cobble
Representative site	320106	12	72	48	12	8	20	Silt
Representative site	328110	48	120	10	2	24	42	Silt
Representative site	332201		36			2		Concrete
Representative site	337306	96	180	48	3	12	36	Sand
Representative site	338117					2		Concrete
Representative site	340201	48	96	48	3	10	36	Silt
Representative site	340203		60	24		18	24	Sand
Representative site	340205	48	60	18	6	18	12	Clay
Representative site	346110	24	288	60	3	6	12	Sand
Representative site	349104	60	48	30	1	3	18	Sand
Representative site	350205	60	96	48	4	10	14	Silt
Representative site	354104	180	240	96	4	10	36	Sand
Representative site	354111	144	172		6	12		Sand
Representative site	355403	18	48	24	6	2	18	Sand
Representative site	356213	20	36	72	2	2	36	Sand

Representative Sites B

Problem	Site Number	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type
Representative site	360201	30	48	36	3	6	24	Gravel
Representative site	361204	8	4.5	6	0.5	24	18	Silt
Representative site	366101	12	24	36	2	2	20	Sand
Representative site	372106	24	180	36	1	3	6	Gravel
Representative site	372111	24	120	24	15	8	6	Cobble
Representative site	382107	180	120		2	2		Concrete
Representative site	386208	12	24		2	4		Silt
Representative site	390303	12	18		2	2		Silt
Representative site	391204	72	72	42	3	4	12	Gravel
Upper Anacostia								
Representative site	510102	36			36			Silt
Representative site	511120	12			12			Silt
Representative site	514102	24	96		2	4		Concete
Representative site	517111	118	144	36	2	5	12	Silt
Representative site	518304		2400	144		60	60	Silt