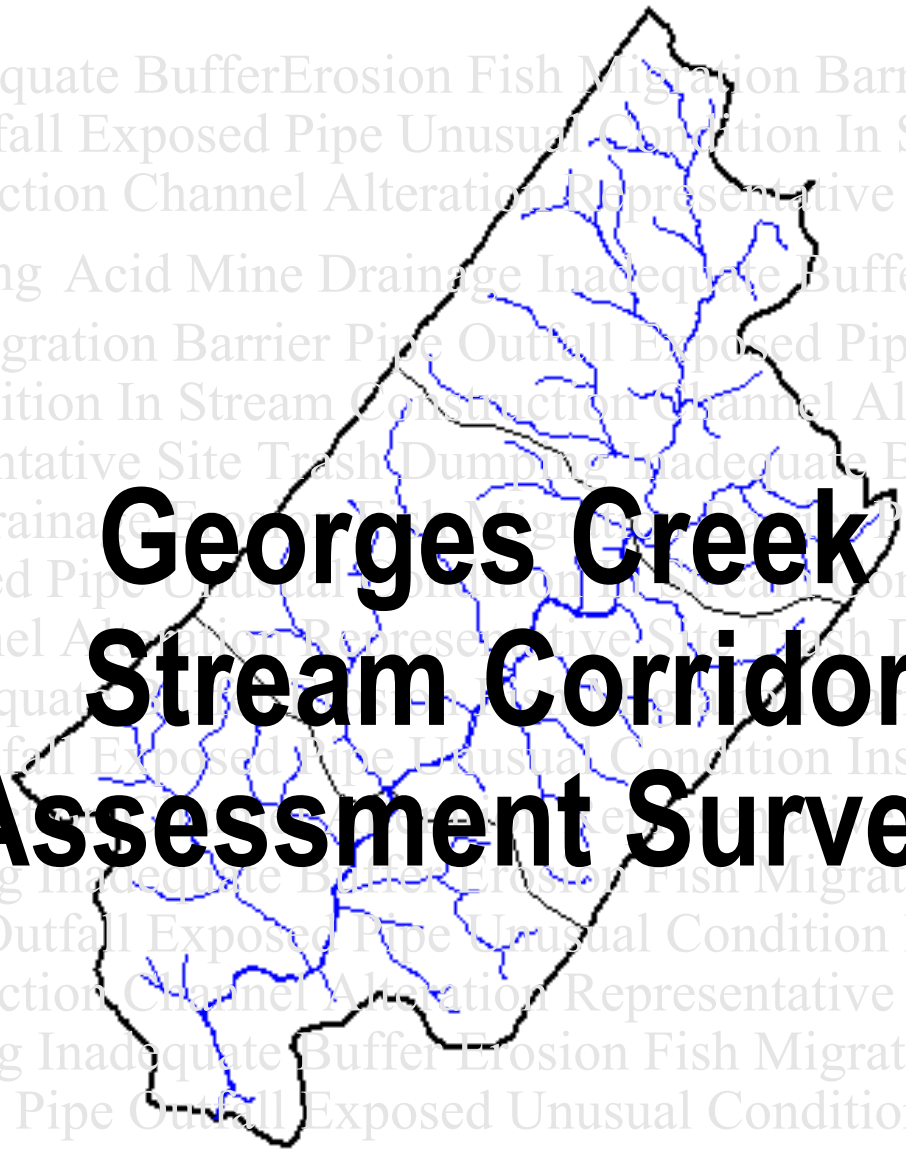

Georges Creek Stream Corridor Assessment Survey

Watershed Restoration Division
Chesapeake & Coastal Watershed Services
Maryland Department of Natural Resources
December, 2002

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GEORGES CREEK
STREAM CORRIDOR ASSESSMENT SURVEY

BY

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Watershed Restoration Division
Coastal and Chesapeake Watershed Services
Maryland Department of Natural Resources

December, 2002

SUMMARY

The Georges Creek watershed encompasses over 47,700 acres (74 sq miles) of land in Western Maryland. Approximately 67% of the land in the watershed is in Allegany County, Maryland, with the remaining 33% in Garrett County, Maryland. In 1998, the Maryland Clean Water Action Plan identified Georges Creek 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 and Allegany County formed a partnership to develop a Watershed Restoration Action Strategy (WRAS) for the Georges Creek Watershed. As part of the WRAS development process, a Stream Corridor Assessment (SCA) survey of Georges Creek was performed from November 2000 to February 2001. Problems were encountered with the data taken from the survey, and the watershed was resurveyed from August 2001 to May 2002. The data and results from the initial survey are available upon request from the Watershed Restoration Division of the Maryland Department of Natural Resources. Neff Run (a tributary of Georges Creek) was surveyed separately in March 2000. The results from the Neff Run Survey were included with the results of this work.

The SCA survey was developed by the Watershed Restoration Division of the Maryland Department of Natural Resources to provide a rapid visual examination of the stream network in a watershed. The survey is done using specially trained field teams that walked the entire stream network and note the location of a variety of potential environmental problems. As part of the survey, field teams also collected some basic information about stream habitat conditions at regular intervals. This survey is not intended to be a detailed scientific evaluation of the watershed, and the data collected about any specific problem is limited. Instead the survey is designed to give an overview of the condition of the stream system so that future restoration efforts can be better targeted.

Approximately 108 miles of streams were surveyed, and 1058 potential environmental problems were identified during the Georges Creek survey. The most common environmental concern seen during the SCA survey were pipe outfalls, which were reported at 225 sites. Other potential environmental problems identified during the survey include: 156 erosion sites, 129 inadequate buffers, 111 channel alteration sites, 102 fish barriers, 91 flood prone structure sites, 54 exposed pipes, 48 unusual conditions, 47 acid mine drainage sites, 28 trash dumping sites, 25 debris problems, and 5 in/near stream construction sites. Thirty-seven comments were recorded out in addition to the aforementioned problems sites.

At each site, data was collected about the problem, its location noted on field maps, and photographs taken to document existing conditions. To aid in prioritizing future restoration work, field crews rated all problem sites on a scale of 1 to 5 in three categories. They were: 1) the severity of the problem, 2) how correctable the specific problem was, and 3) how accessible the site was. Field teams also collected information on both in and near stream habitat conditions at 175 representative sites that were spaced at approximately ½ to ¾ mile intervals along the streams.

The SCA survey was specifically developed as a watershed management tool. The goal of the SCA survey is to compile a list of observable environmental problems so that future restoration efforts can be better targeted. It is hoped that once a list of environmental problems has been compiled, a dialog can be initiated among resource managers on the goals and targets of future environmental restoration efforts in the Georges Creek Watershed. It is important to note that all of the problems identified as part of the Georges Creek Stream Corridor Assessment survey can be addressed through existing State or Local government programs. The value of the present survey is that it can help to place the problems in a watershed context, and can be used by a variety of resource managers to plan future restoration work.

Results of the present survey will be given to the Georges Creek WRAS committee, which is developing a Watershed Restoration Action Strategy for Georges Creek. Information on the Georges Creek Watershed Action Strategy can be found on DNR's site (www.dnr.state.md.us) or by contacting the Allegany County Department of Planning in Cumberland, Maryland.

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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 water bodies identified in the report was Georges Creek. The Georges Creek watershed encompasses approximately 47,700 acres in the Appalachian plateau region of Maryland. A map showing the location of the Georges Creek Watershed is presented in Figure 1. Approximately 67% (30,000 acres) of the watershed lies in Allegany County with the remaining 33% (14,700 acres) in Garrett County, Maryland (Shanks, 2001). In response to the findings of the Maryland Clean Water Action Plan, the Maryland Department of Natural Resources has formed a partnership with Allegany County to assess and improve environmental conditions in the Georges Creek watershed. It should also be noted that Garrett County gave full permission to conduct the survey in their part of the watershed. The main goals of this partnership are to develop and implement a Watershed Restoration Action Strategy (WRAS) for Georges Creek.

The first step in developing a Restoration Action Strategy for the Georges Creek Watershed is to complete an overall assessment of the condition of the watershed and the streams within it. This initial step was accomplished using two approaches. First, a watershed characterization was done that compiles and analyzes existing water quality, land use, and living resources data about the Georges Creek watershed (Shanks, 2001). The watershed characterization provides good overall information on environmental conditions within the Georges Creek watershed; however, information on the location of specific environmental problem sites is limited. To provide specific information on the present location of environmental problems and restoration opportunities, a Stream Corridor Assessment (SCA) survey of the Georges Creek Watershed was also done.

The Stream Corridor Assessment survey is a new survey that has been developed by DNR's Watershed Restoration Division as a watershed management tool to identify environmental problems and helps prioritize restoration opportunities on a watershed basis. As part of the survey, members of the Watershed Restoration Division along with specially trained personnel walk the watershed's entire stream network and record information on a variety of environmental problems that can be easily observed within the stream corridor. The initial SCA survey of the Georges Creek watershed was done over a 5-month period from January through April 2001. The resurvey was conducted over a 9-month period from August 2001 to May 2002.

The SCA survey was completed in Allegany and Garrett Counties in Maryland. The targeted watershed encompasses 47,700 acres (74 square miles) of land. Approximately 70% (33,230 acres) of the land in the watershed is categorized as forest land, 18% (8,750 acres) as urbanized and 12% (5,719 acres) as agricultural (Shanks, 2001). Additional information on land use, and other information about the watershed, can be found in the Georges Creek Watershed Characterization by Shanks (2001).

There is an estimated 108 miles of stream within the Georges Creek Watershed. A digital orthophoto map of the Georges Creek watershed is shown in Figure 2. Figure 3 shows the same watershed boundaries superimposed on seven and ½ minute USGS topographic quadrangle maps.

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

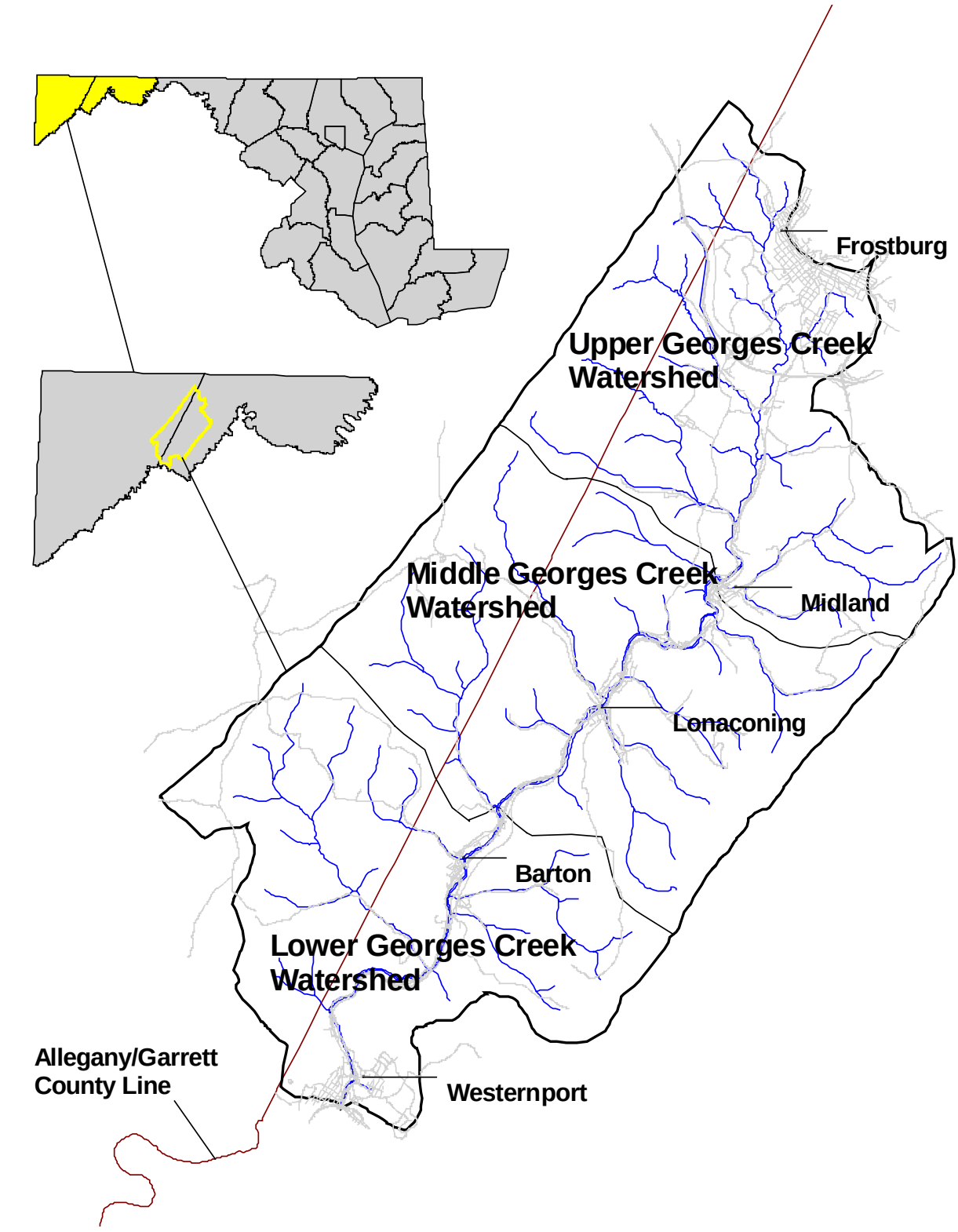

Figure 1: Georges Creek watershed segments and towns.

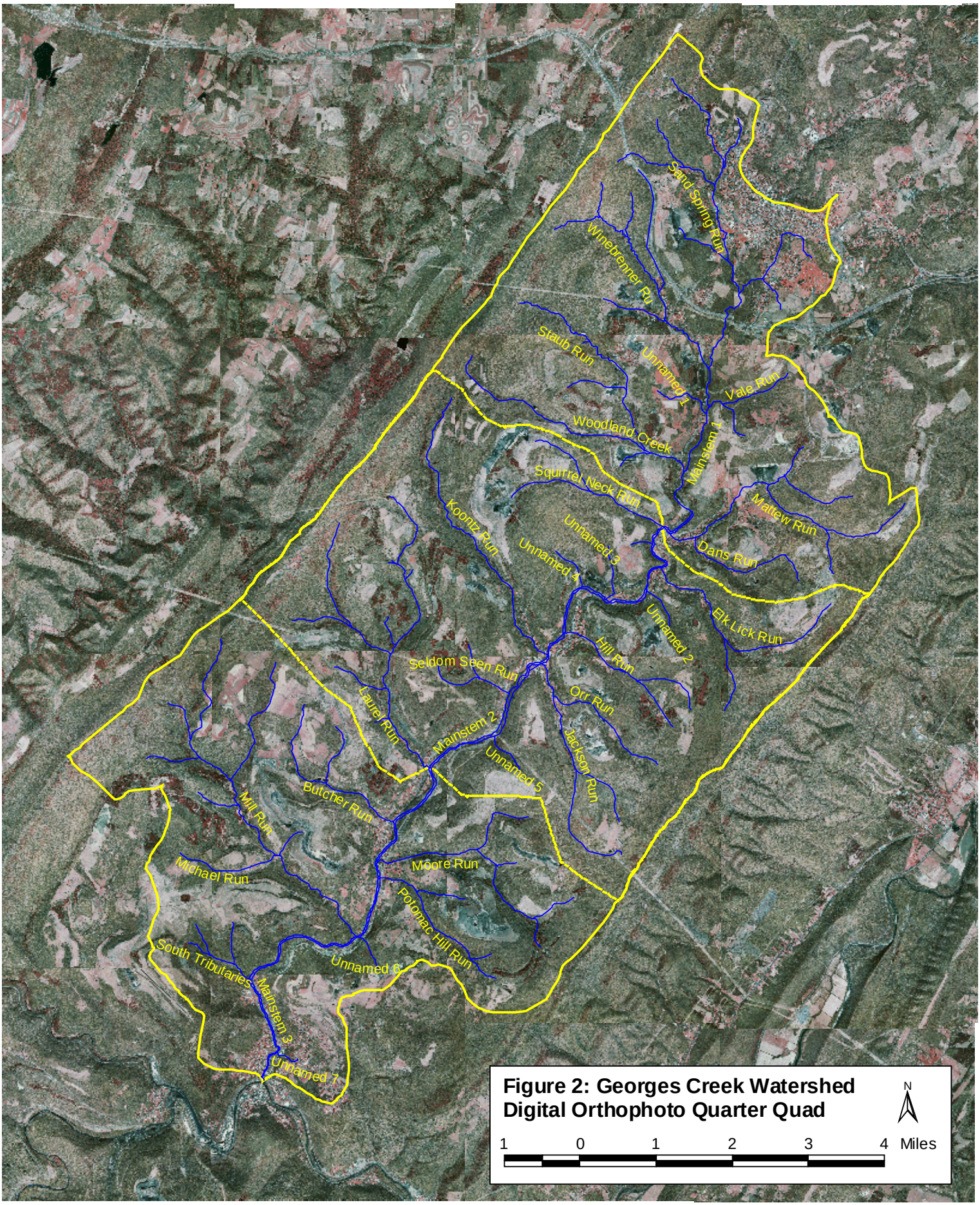
Sand Spring Run
Winebrenner Run
Staub Run
Unnamed 1
Vale Run
Woodland Creek
Mainstem 1
Squirrel Neck Run
Koontz Run
Unnamed 3
Unnamed 4
Mattew Run
Dans Run
Elk Lick Run
Unnamed 2
Hill Run
Seldom Seen Run
Orr Run
Laurel Run
Mainstem 2
Unnamed 5
Jackson Run
Butcher Run
Mill Run
Michael Run
Moore Run
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Figure 2: Georges Creek Watershed
Digital Orthophoto Quarter Quad
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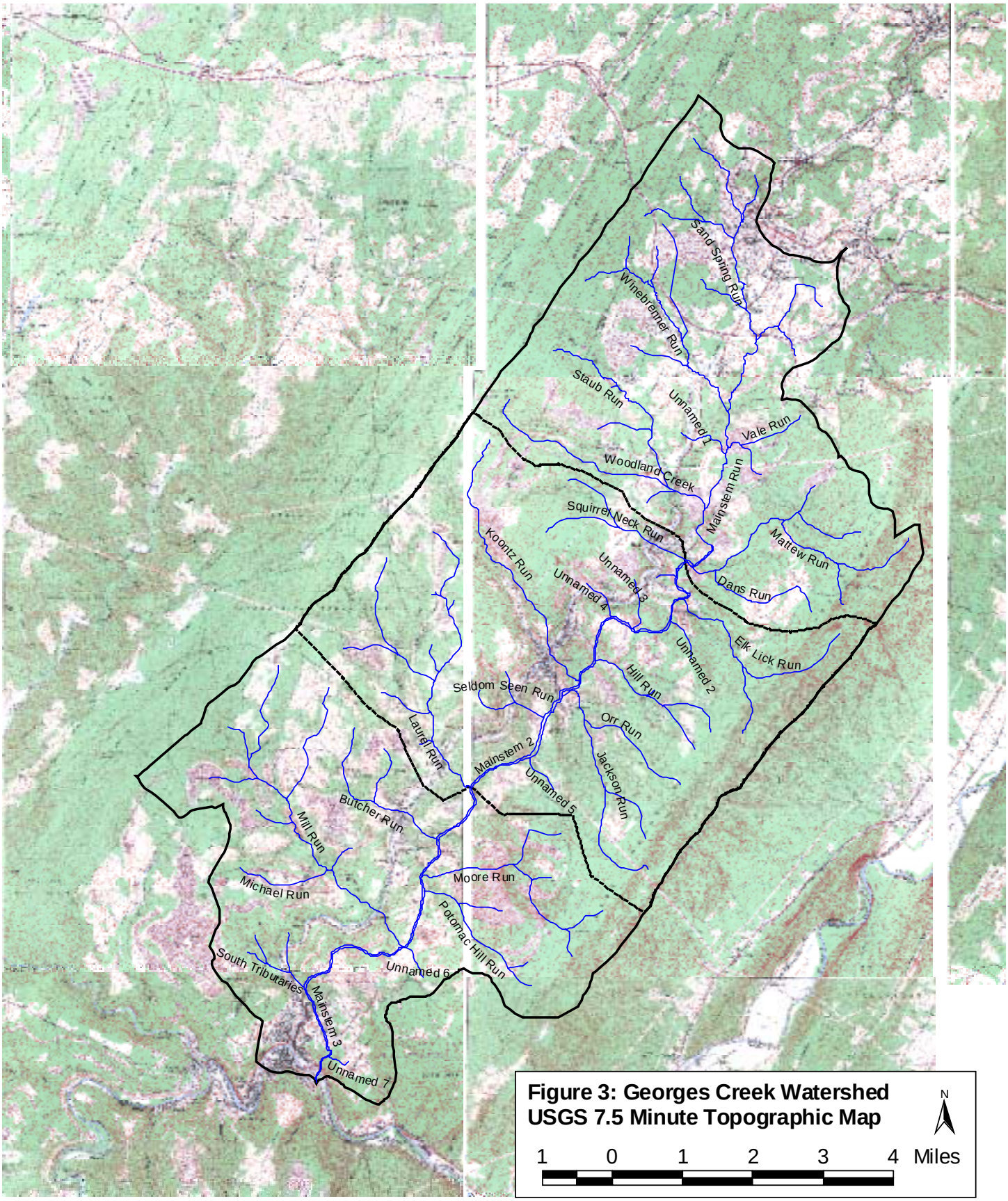

Figure 3: Georges Creek Watershed
USGS 7.5 Minute Topographic Map

METHODS

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

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

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

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

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

It is important to note that the SCA survey is not intended to be a detailed scientific survey, nor will it replace the more traditional chemical and biological surveys. Instead, the SCA survey provides a rapid method of examining an entire drainage network so that future monitoring, management and/or conservation efforts can be better targeted. One advantage of the SCA survey over chemical and biological surveys is that the SCA survey can be done on a watershed basis both quickly and at relatively low cost. A copy of the survey protocols is available on DNR web site at http://dnrweb.dnr.state.md.us/download/bays/streams/surveyprotocols2.pdf .

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

As mentioned earlier, a walking survey of stream systems is not a new concept, and there have been several attempts to standardize this approach over the years. Many earlier approaches such as EPA's, "Streamwalk Manual" (EPA, 1992), Maryland Save our Stream's "Conducting a Stream Survey," (SOS, 1970) and Maryland Public Interest Research Foundation "Streamwalk Manual" (Hosmer, 1988) are designed to be done by citizen volunteers with little or no training. While these surveys can be a good guide for citizens that are interested in looking at their community streams, the data collected during these surveys can vary significantly based on the background of the surveyor. In the Maryland Save our Stream "Stream Survey," for example, citizen groups are given some guidance on how to organize a survey and are provided a slide show explaining how to do the survey. After approximately one hour of training, citizen volunteers are then sent out in groups to walk designated stream segments. During the survey, volunteers usually walk their assigned stream segment in a couple of hours and return their data sheets to the survey organizers to be analyzed. While these surveys can help make communities more aware of the

problems present in their local stream, citizen groups normally do not have the expertise or resources to properly analyze or fully interpret the information collected. In addition, the data collected is usually only enough to indicate that a potential environmental problem exists at a specific location but does not provide sufficient information to judge the severity of the problem.

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

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

While almost any group of dedicated volunteers can be trained to do a SCA survey, the Maryland Conservation Corps (MCC) has proven to be an ideal group to do this work in Maryland. The Maryland Conservation Corps is part of the AmeriCorps Program, which was started to promote greater involvement of young volunteers in their communities and the environment. 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, these young, intelligent and motivated volunteers are able to significantly contribute to the State's efforts to inventory and evaluate water quality and habitat problems from a watershed perspective. For more information on the Maryland Conservation Corps call their main office in Annapolis at (410) 260-8166 or visit their web site at: www.dnr.state.md.us/mcc.

Prior to the start of the Georges Creek SCA Survey, the members of the MCC's Potomac/Garrett Crew received a week of training. As part of this training, crewmembers learn how to identify common problems observable within the stream corridor, how to record problem locations on survey maps and how to fill out data sheets for specific problem. Procedures for documenting general stream conditions at reference sites were also reviewed during training. Reference sites are located at approximately 1/2-mile intervals along the stream. In addition to filling out a half page data sheet, field crews took photographs at all problem and reference sites to help document existing conditions. Detailed information on the procedures used in the Maryland SCA survey can be found in, "Stream Corridor Assessment Survey – Survey Protocols" (Yetman, 2001). Copies of the survey protocols can be obtained by contacting the Watershed Restoration Division of the Maryland Department of Natural Resources in Annapolis, MD.

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

Field surveys of the Georges Creek watershed began in January 2001, and over the next several months, the survey teams walked the streams' drainage network collecting information on potential environmental problems. Due to problems with inconsistency in the data, members of the Watershed Restoration Division, MCC, and community volunteers from the Georges Creek Watershed Association resurveyed the watershed from October 2001 to May 2002. Potential environmental problems frequently identified during the SCA Survey include: channelized stream sections, inadequate stream buffers, fish migration blockages, excessive bank erosion, near stream construction, trash dumping sites, unusual conditions, and pipe outfalls. Flood prone structures, debris problems and acid mine drainage also were recorded during the Georges Creek survey. In addition, the survey recorded information on the location of potential wetlands creation sites and collected data on the general condition of in-stream and riparian habitats.

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

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

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

The problem **severity rating** has generally been found to be the most useful rating and indicates how bad a specific problem is relative to others in the same problem category. The severity rating is used

to answer questions such as, “where are the worst stream bank erosion sites in the watershed?”, or “where is the largest section of stream with an inadequate buffer?” The scoring is based on the overall impression of the survey team of the severity of the problem at the time of the survey.

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

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

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

The **correctability rating** provides a relative measure on how easily the field teams believe the problem can be corrected. The correctability rating can be helpful in determining which problems can be easily dealt with when developing a restoration plan for a drainage basin. One restoration strategy would initially target the severest problems that are the easiest to fix. The correctability rating can also be useful in identifying simple projects that can be done by volunteers, as opposed to projects that require more significant planning and engineering efforts.

* A minor correctability rating of 1 is assigned to problems that can be corrected quickly and easily using hand labor, with a 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 would be removing debris from a blocked culvert pipe, removing less than two pickup truck loads of trash from an easily accessible area or planting trees along a short stretch of stream.

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

* A very difficult correctability rating of 5 is given to problems that would require a large, expensive effort to correct. These projects would usually require heavy equipment, significant amount of funding ($100,000.00 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** is used to provide a relative measure of how difficult it is to reach a specific problem site. The rating is made at the site by the field survey team, using their field map and field observations. While factors such as land ownership and surrounding land use can enter into the field judgments of accessibility, the rating assumes that access to the site could be obtained if requested from the property owner.

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

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

* A very difficult accessibility rating of 5 is assigned to sites that are difficult to reach both on foot and by a vehicle. Examples include a site where there are no roads or trails nearby. To reach the site it would be necessary to hike at least a mile. If equipment were needed to do the restoration work, an access road would need to be built through rough terrain.

Following the completion of the survey, information from the field data sheets were entered into a Microsoft Access database and verified by the field teams. In addition, the 415 photographs were taken during the survey were labeled and organized by site number in a binder as an accessible reference. The photographs also were digitized using a flat bed scanner and placed on a photo CD so they can be distributed to interested parties. Finally, all data collected during the survey was incorporated into an ArcView Geographical Information System (GIS). A final copy of the ArcView files was given to Allegany County for their use in developing a Watershed Action Strategy for Georges Creek.

RESULTS

The Stream Corridor Assessment resurvey of the Georges Creek watershed started in October 2001, and most field data collection was completed by May 2002. An overall summary of survey results is presented in Table 1, while Table 2 summarizes the data by major stream segments. All data collected during the survey is presented in Appendices A and B. Appendix A provides a listing of information by problem number along with its location, using Maryland State Plane 83 meter coordinates. Information in this format is useful when working with maps showing the location of problem sites to determine what problems may be present along a specific stream reach. In Appendix B, the data is presented by problem type, with more detailed information about each problem. Presenting the data by problem type allows the reader to see which problems the field crews rated as the most severe or easiest to fix within each category.

Table 1: Summary of results from the Georges Creek SCA Survey.

5/24/02 Potential Problems Identified	Number	Estimated Length	Very Severe	Severe	Moderate	Low Severity	Minor
Acid Mine Drainage	47						
Channel Alteration	111	70,655 ft. (13.4miles)	2	5	22	25	57
Comments	37						
Debris Problem	25		1	4	7	11	2
Exposed Pipe	54	919 ft. (0.2 miles)	3	6	19	12	14
Erosion Site	156	54,036 ft. (10.2 miles)	13	25	37	42	39
Fish Barrier	102		4	14	19	39	26
Flood Prone Structures	91						
Inadequate Buffers	129	100,500 ft. (19.0 miles)	15	25	21	40	28
In/Near Stream Construction	5	1,930 ft. (0.4 miles)	1		2	2	
Pipe Outfall	225		7	16	49	20	133
Trash Dumping	28			1	5	8	14
Unusual Condition	48		7	6	18	12	5
Total	1058		53	102	199	211	318

Pipe Outfalls

Pipe outfalls include any pipes or small man made channels that discharge into the stream through the stream corridor. Pipe outfalls are considered a potential environmental problem in the survey because they can carry uncontrolled runoff and pollutants such as oil, heavy metals and nutrients to a stream system. Two hundred twenty-five pipe outfalls were identified during the Georges Creek survey. Pipe outfalls were the most numerous problem in the watershed. Georges Creek runs through the communities of Frostburg, Midland, Midlothian, Lonaconing, and Westernport. Most of the land adjacent to Georges Creek has been urbanized in these areas; therefore pipe outfalls can be expected to be numerous.

Thirty-two percent or 73 of 225 pipe outfalls observed in the survey were releasing a discharge. Of these, only 21 had an odor or coloration associated with the outfall (Appendix C). The remaining discharges were reported as having a clear discharge with no odor. Colors of discharge found throughout the watershed include dark brown, milky, orange, white, and yellow. Odors found include rotten eggs, sewage, and musky. Stormwater pipes were the most frequently reported type of outfall with 115 sites. There were no estimates of the amount of fluid discharging from the pipes. No immediate follow up actions were taken as part of this study to determine the source of color or odor discharging from the pipes. In some cases, coloration or smell from a storm drainpipe may be a sporadic occurrence. This is especially true in areas where there is no stormwater management system present. (Yetman, Rice, Pelicano, 2002)

Severity ratings for pipe outfalls were given based on discharge, type of discharge, and location in the watershed of the outfall. In the Georges Creek SCA Survey, 7 pipe outfalls were given very severe ratings, along with16 severe, 49 moderate, 20 low severity, and 133 minor sites. This can be seen in Fig 4a.

Upper Watershed

This survey identified 75 pipe outfalls in the upper portion of the Georges Creek watershed (Figure 4b). Two of these outfalls (552710, 652705) were given very severe ratings. 552710 is a 6 in. diameter pipe on the left bank of Sand Spring Run with an odor of sewage. 652705 is a 48 in. diameter concrete pipe on the left bank of the mainstem with a dark brown discharge that was reported as having a sewage odor. In addition to the very severe sights, 8 sites were found to be severe.

Middle Watershed

One hundred one pipe outfalls were found in the middle portion of the watershed (Figure 4c). Three of these (382411, 382415, 514509) were given very severe ratings. 382411 is a 4 in. diameter plastic pipe on the left bank of Hill Run with an odor of sewage. 382415 is a 3 in. diameter plastic pipe on the left bank of Hill Run with an odor of sewage. 514509 is a 36 in. diameter concrete on the left bank of the mainstem with a dark brown discharge having a sewage odor. Five severe sights also were documented for the middle portion of the watershed.

Lower Watershed

The lower portion of the watershed contains 49 reported pipe outfalls (Figure 4d). Two of these (191909, 192904) were given very severe ratings. Both of these pipes were found on Butcher Run. 191909 is a plastic pipe on the left bank with a 4 in. diameter. This pipe was found to have dark brown discharge with a sewage odor. 192904 is a plastic pipe on the right bank with 36 in. diameter and a sewage odor. Three severe sights were recorded in addition to the very severe sights.

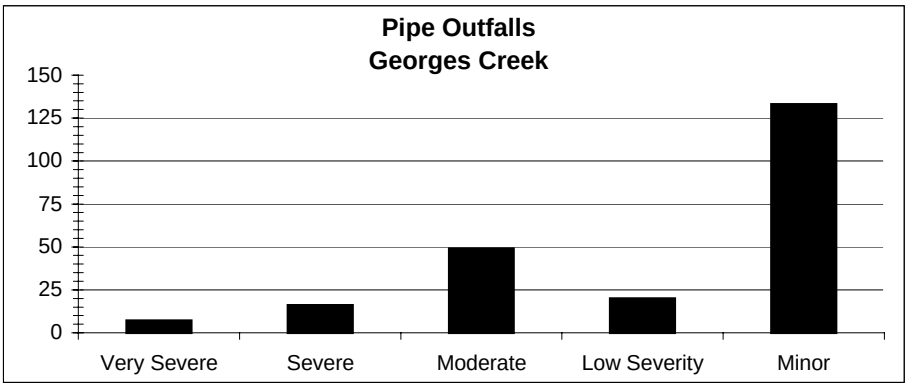

Figure 4a: Histograph showing the frequency of severity ratings given to Pipe outfall sites during the Georges Creek SCA survey.

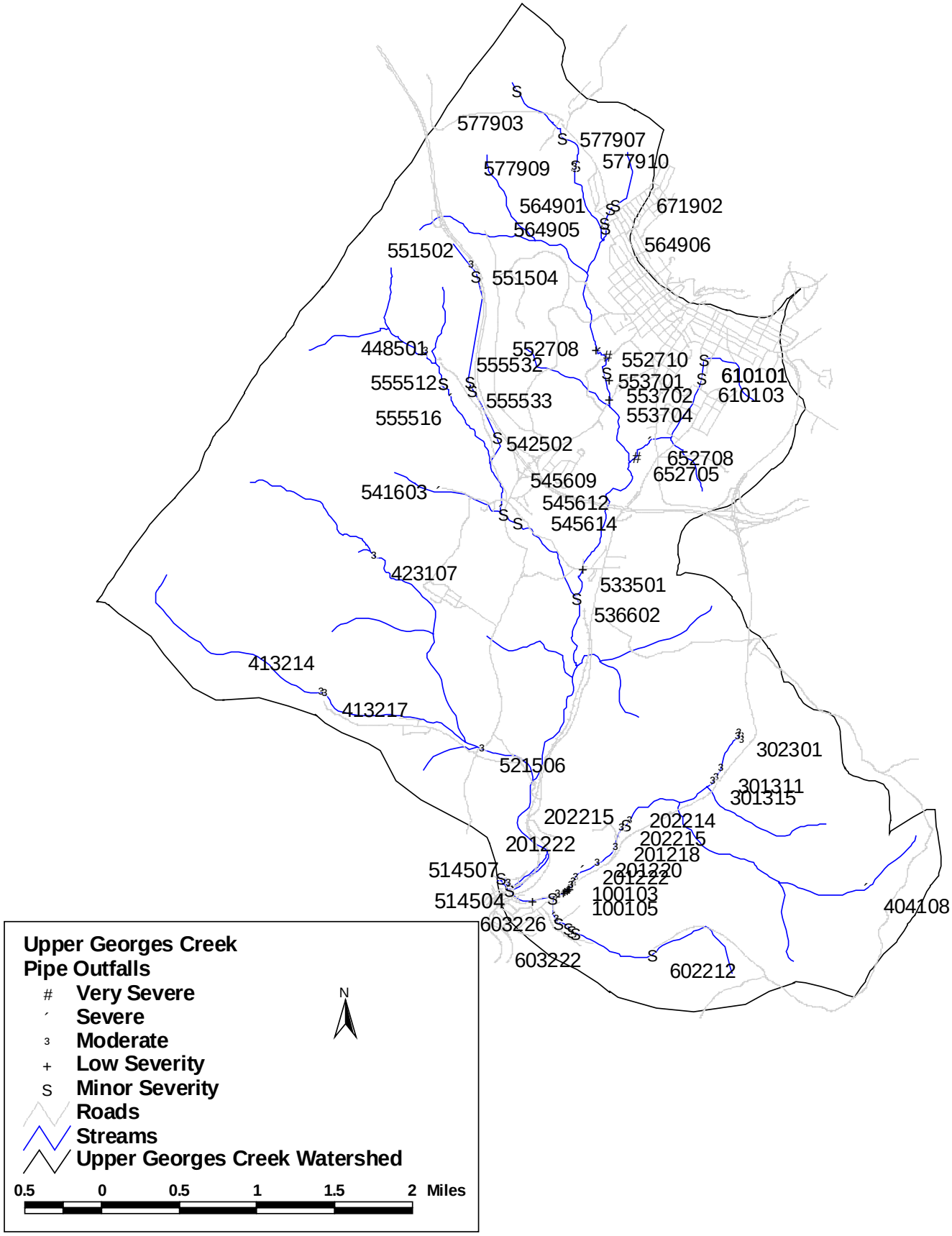

Figure 4b: Upper Georges Creek Pipe Outfall Locations.

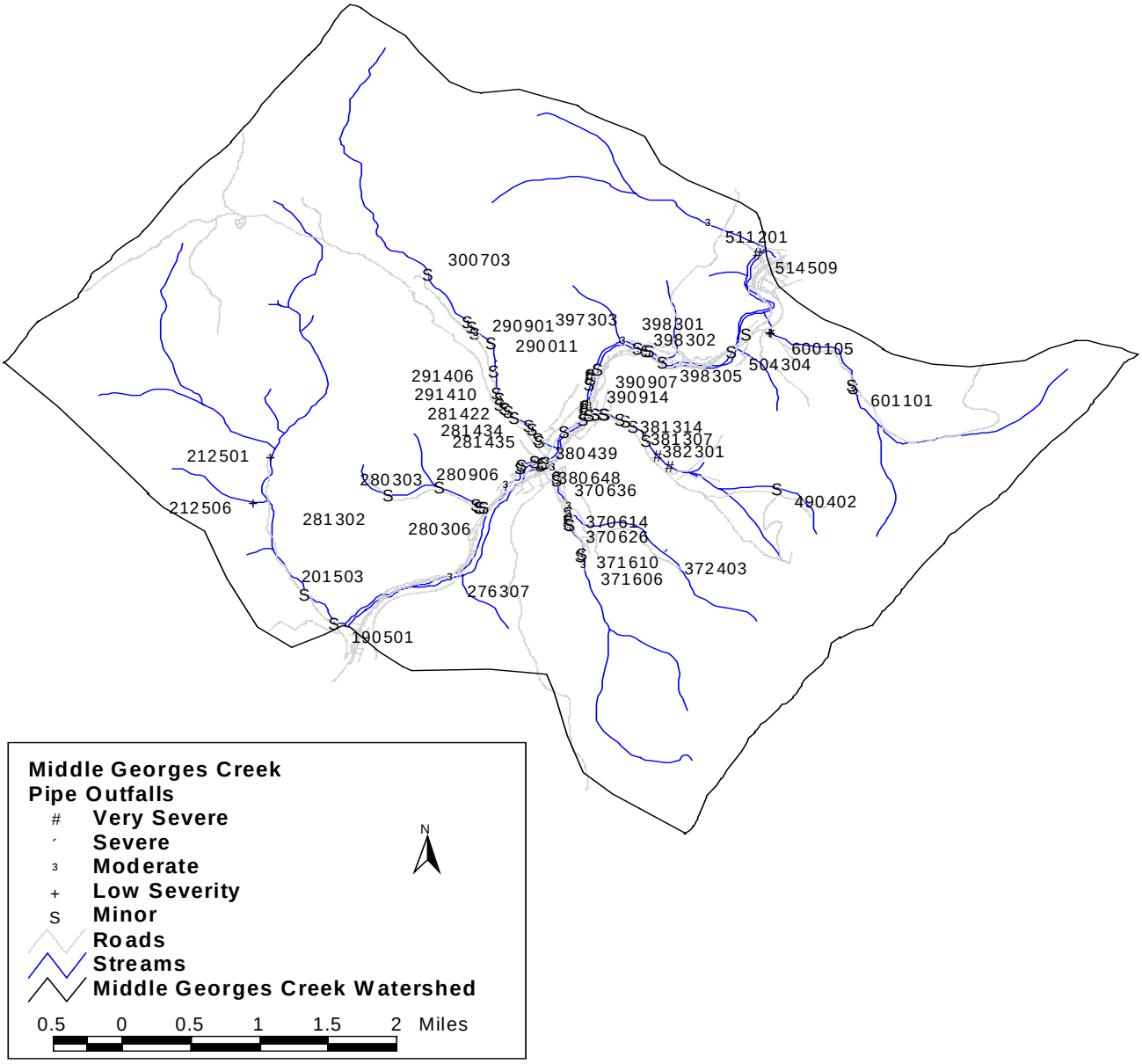

Figure 4c: Middle Georges Creek Pipe Outfall Locations.

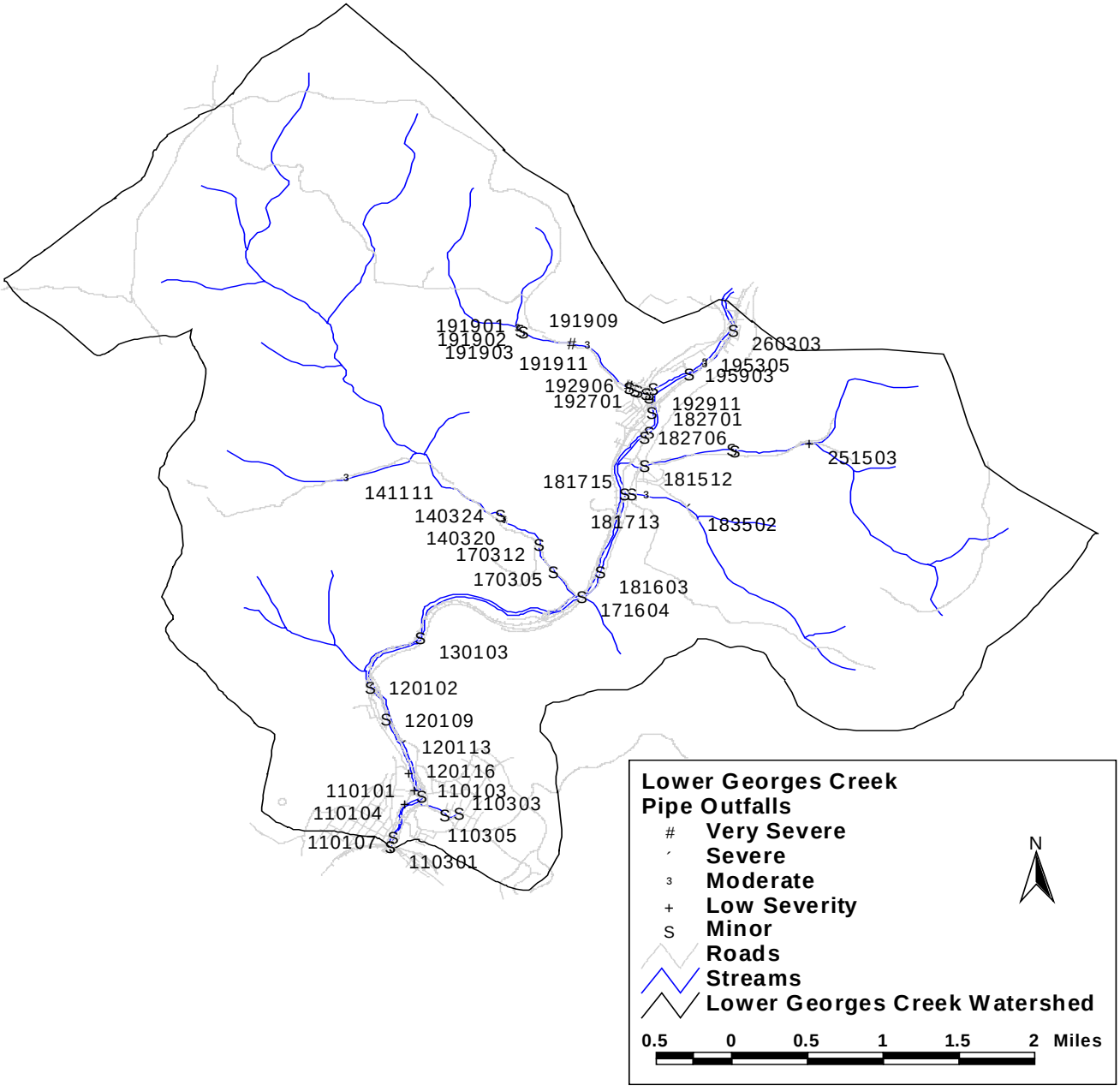

Figure 4d: Lower Georges Creek Pipe Outfall Locations.

Erosion Sites

Erosion is a natural process, and it is necessary to maintain good aquatic habitat in a stream. Too much erosion, however, can have the opposite effect, destabilizing stream banks, destroying in-stream habitat and causing significant sediment pollution problems downstream. Severe erosion problems occur when a stream's hydrology, geometry and/or sediment supply have been significantly altered. This often occurs when land use in a watershed changes. Increases in the amount of impervious surfaces, construction in the floodplain and alterations to channel alignments can all destabilize stream banks. These activities can set off a series of channel readjustments and these changes can extend over decades, during which time excessive amounts of sediment from unstable eroding stream banks can have very detrimental impacts on the stream's aquatic resources.

In this survey, unstable eroding streams are defined as areas where the stream banks are almost vertical and the roots from the vegetation along the stream's banks are unable to hold the soil on the banks. Unstable eroding stream banks were reported at 156 sites. The locations of bank erosion sites are shown in Figures 5b, 5c, and 5d. It is important to note that the SCA survey is only a visual survey of the stream network. While survey teams are asked to comment whether they believed the stream was down-cutting, widening, or headcutting at a specific site, the only way to really know the full significance of the erosion processes at a specific site is to complete more detailed surveys.

Erosion sites were spread out evenly throughout the Georges Creek Watershed, with 58 being reported in the upper, 45 in the middle, and 53 in the lower watershed. Neff Run was the stream with the most reported erosion sites with 22. Mill Run had 13, and Potomac Hill had 11. The lengths of the erosion sites reported ranged from 6ft. to 5,000ft., with heights ranging from 1ft to 60ft. Widening was cited as the type of erosion in 104 of the sites reported. Downcutting was reported at 41 sites, and headcutting at 11. The most frequently reported causes for erosion were bend at steep slope (64), unknown (27), natural (12), below channelization (11), land use change upstream (10), below road crossing (9), and flooding (7). Other causes included below debris jam (2), below dam (1), end of mine tailings (1), inadequate buffers (1), road runoff (1), and a washed-out road (1). Threats to infrastructure were also cited at 22 locations, which had 15 roads, 5 houses, and 2 gabion baskets marked as the threatened structures.

Upper Watershed

The upper portion of Georges Creek contains 58 erosion sites as identified by this survey. Two of these erosion sites were given very severe ratings. Site 533504 is widening below a channelization for 1,000ft., and is 5ft. high on the mainstem of Georges Creek. Land use is reported as multiflora rose on the right bank and lawn on the left. It is also threatening a house. Site 542501 is a widening channel undercutting its own trapezoidal concrete channel on Winebrenner Run. It is threatening to undercut I-68 as well, and is stated as being caused by channelization. It is marked as 1,000ft. long and 5ft. high.

Middle Watershed

Middle Georges Creek has 45 erosion sites found in this survey. Of these, 2 were very severe, both found on Seldom Seen Run. Site 309201 is a stream that has headcut its way upstream for 1,500ft. It is 6ft. high and forested on both banks. This erosion site was most probably the work of natural stream processes. Site 408203 is a 5ft. tall widening erosion site caused by bends at steep slopes for 1,400ft. Both bank are surrounded by forest.

Lower Watershed

Lower Georges Creek contains 53 erosion sites as identified by this survey. Of these, 9 sites were rated as being very severe. Site 181711 is 7 ft. in height, and is downcutting for 1,600 ft on Potomac Hill Run due to a land use change upstream. This site is surrounded by forest on both banks with the exception of one small segment of erosion threatening a house on the right bank. Site 183503 is a 5ft. high, 1,500ft. long widening erosion site with forest on both banks. Site 183509 is a 6ft. high, 1,500ft. long, widening erosion site that is caused by unknown circumstances on Moore Run. The left bank is forested, while the right bank has a road threatened by the erosion. Site 183510 is a 10ft. high downcut of unknown causes stretching for 1,600ft on Potomac Hill Run. This site was forested on both banks and was not a threat to infrastructure. Site 250502 is a 5ft. tall widening erosion site with unknown causes stretching for 5,000ft on Moore Run. A lawn on the right bank and a threatened road on the left surround the site. Site 251504 is a 10ft. tall widening erosion site with unknown causes stretching for 1,000ft. on Moore Run. The right bank is forested and the left bank has a road that is being threatened by the erosion. Site 252101 is a 10ft. tall, 1,100ft long downcut passing through forest on both sides with a mine road being threatened on Moore Run. Site 253101 is a 12ft. tall, 2,000ft long downcut with forest on each bank. Site 279502 is a 6ft. tall widening erosion site. This site is 2,300ft. long, has forest along both banks, and can be found on Moore Run.

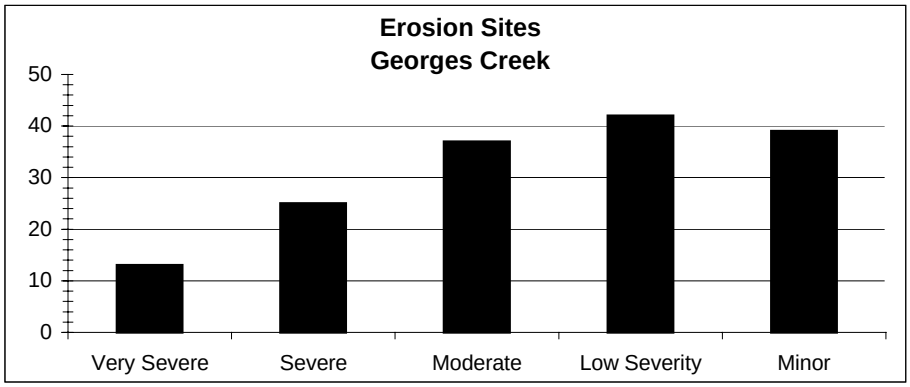

Figure 5a: Histograph showing the frequency of severity ratings given to stream bank erosion sites during the Georges Creek SCA Survey.

Figure 5b: Upper Georges Creek Erosion Site Locations.

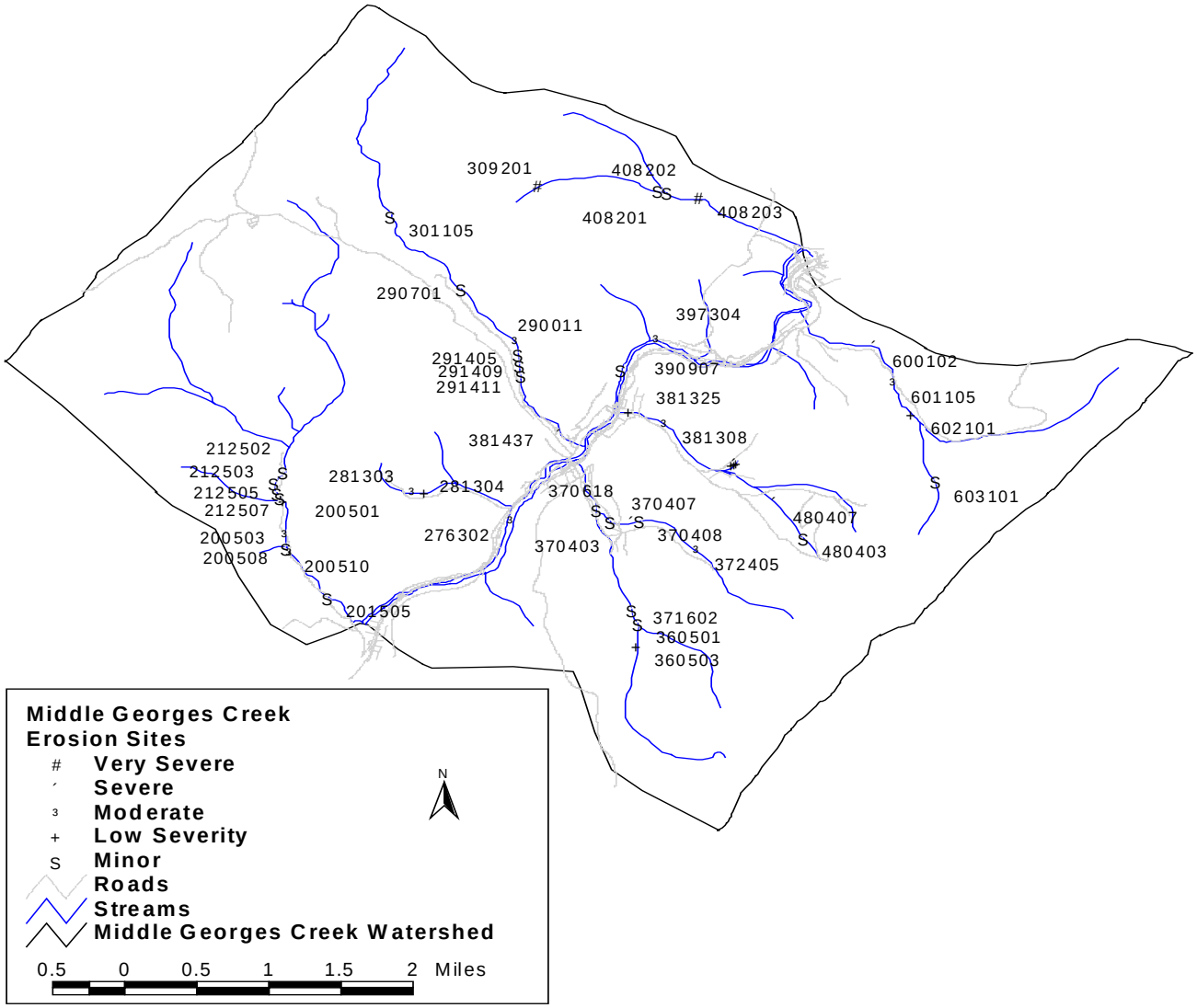

Figure 5c: Middle Georges Creek Erosion Site Locations.

Figure 5d: Lower Georges Creek Erosion Site Locations.

Inadequate Buffers

Forested stream buffers are very important for maintaining healthy Maryland streams. They help shade the stream to prevent excessive solar heating and their roots stabilize the streams banks. Forest buffers also help remove nutrients, sediment and other pollutants from runoff, and the leaves from trees are a major component of the stream's food web. Because of the importance of stream buffers, the state of Maryland has set a goal of recreating 1,200 miles of forest stream buffers by the year 2010.

While there is no single minimum standard for how wide a forested stream buffer should be in Maryland, for the purposes of this study a forest buffer is generally considered inadequate if it is less than 50 feet wide, measured from the edge of the stream's banks. Inadequate buffers were the third most frequently reported problem. Survey crews reported inadequate stream buffers at 129 sites in the Georges Creek watershed survey. The locations of the inadequate buffer sites are shown in Figure 6b, 6c, and 6d. The stream segments with the highest amount of inadequate buffers were the mainstem (29), Koontz Run (17), Neff Run (13), Sand Spring Run (12), and Hill Run (10).

As part of the data collected by the field crews, a rough estimate of the length of the inadequate stream buffer at each site was made. Based on this data, there is an estimated 100,500 feet (19.03 miles) of inadequately buffered stream banks in the Georges Creek watershed. This accounts for 17.59% of the total stream miles surveyed by the field crews. The length of inadequate buffers ranged from 15ft. to 7,450ft. (1.41 miles). Most sites received severity ratings low in severity (Figure 6a). The very severe sites involve areas were the inadequately buffered area totaled over 1000ft. of stream with no buffer on either stream bank. The severe sites were sites in which there were no buffer on either side for 500ft. – 1000ft, or sites where there was a buffer on one side and inadequate buffer on the other for over 1000ft.

Upper Watershed

The upper portion of the Georges Creek watershed has the most reported inadequate buffers, 53. Of these 53, 8 were rated as very severe -- the highest amount in the watershed. Site 413219 has 0ft. of buffer on both banks for 6,000ft. Shrubs and small trees were reported as the most common land use on either side of this unshaded inadequate buffer on Woodland Creek. Site 434606 on Winebrenner Run is unshaded and inadequate on both banks for 1,500ft. Lawn is the most prevalent land use surrounding the stream at this inadequate buffer. Site 514503 is unshaded and inadequately buffered on both sides. The land use is cited as being lawn on both sides. The right bank has an inadequate buffer for 250ft., while the left has one for 1,400ft. This site is located on the mainstem. Site 523502 is unshaded on both sides for 2,000ft. and is a pasture on the mainstem with cows present. Site 545602 is 1,500ft. of unshaded inadequately buffered stream on Winebrenner Run, with lawn as its primary land use. Site 569901 is located on Sand Spring Run and is unshaded for 1,000ft. This area has been identified as pasture with horses present. Site 610102 unshaded for 2,400ft. along the mainstem of Georges Creek. The site is reported as being lawn. Site NR100124 is on Neff Run, and is 1,100ft. long. The right side has a buffer averaging 2ft. wide. Land use is lawn on the right and paved on the left.

Middle Watershed

The middle watershed of Georges Creek has 48 reported inadequate buffers. Of these, survey crews rated 5 sites very severe. Site 276306 is 1,500ft. long along the left bank, and 3,000ft. long along the right bank of the mainstem. Land use on the right is paved, and land use on the left is designated as shrubs and small trees. The right buffer has a width of 2ft. Site 381907 is 6,000ft. long on both sides, and 5ft. wide on the left. The land use is lawn on the right and shrubs and small trees on the left. This site is

along the mainstem. Site 390901 is 2,400ft.on the left, and 400ft. on the right. This inadequate buffer is on Unnamed Tributary #4 and is lawn on the left and shrubs and small trees on the right. Site 502306 stretches for 2,800ft. on both sides of the mainstem. Shrubs and small trees are the land use on the right, and lawn is the land use on the left. Site 511203 is 1,000ft. long on both sides of Squirrel Neck Run. The stream is unshaded on the left and has a 20ft. wide recently established buffer on the right. Land is paved on the right and lawn on the left.

Lower Watershed

The lower portion of the Georges Creek watershed contains 28 inadequate buffers. Of these, 2 were given very severe rankings. Site 171606 is unshaded and 1,500ft. long on both sides of the mainstem. The right side has a 30ft. wide buffer. Land use on the right is railroad, while land use on the left is paved. Site 191912 is unshaded on both sides. The inadequate buffer is 3,300ft. long on the left, and 1,000ft. long on the right. Land use is paved on the left and lawn on the right.

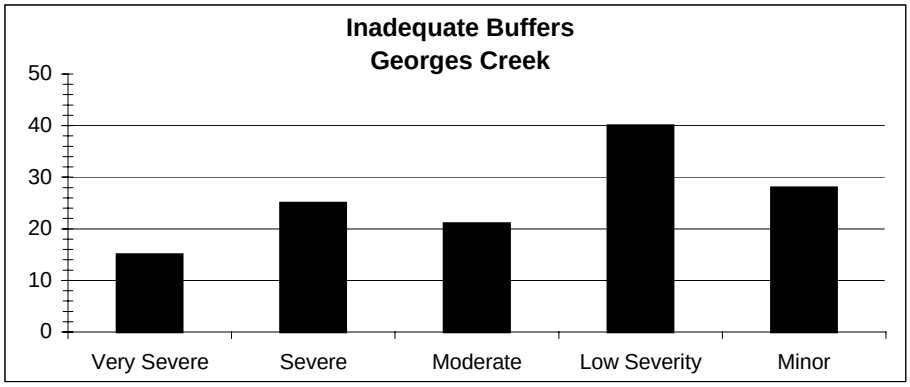

Figure 6a: Histograph showing the frequency of severity ratings given to inadequate buffers during the Georges Creek SCA Survey.

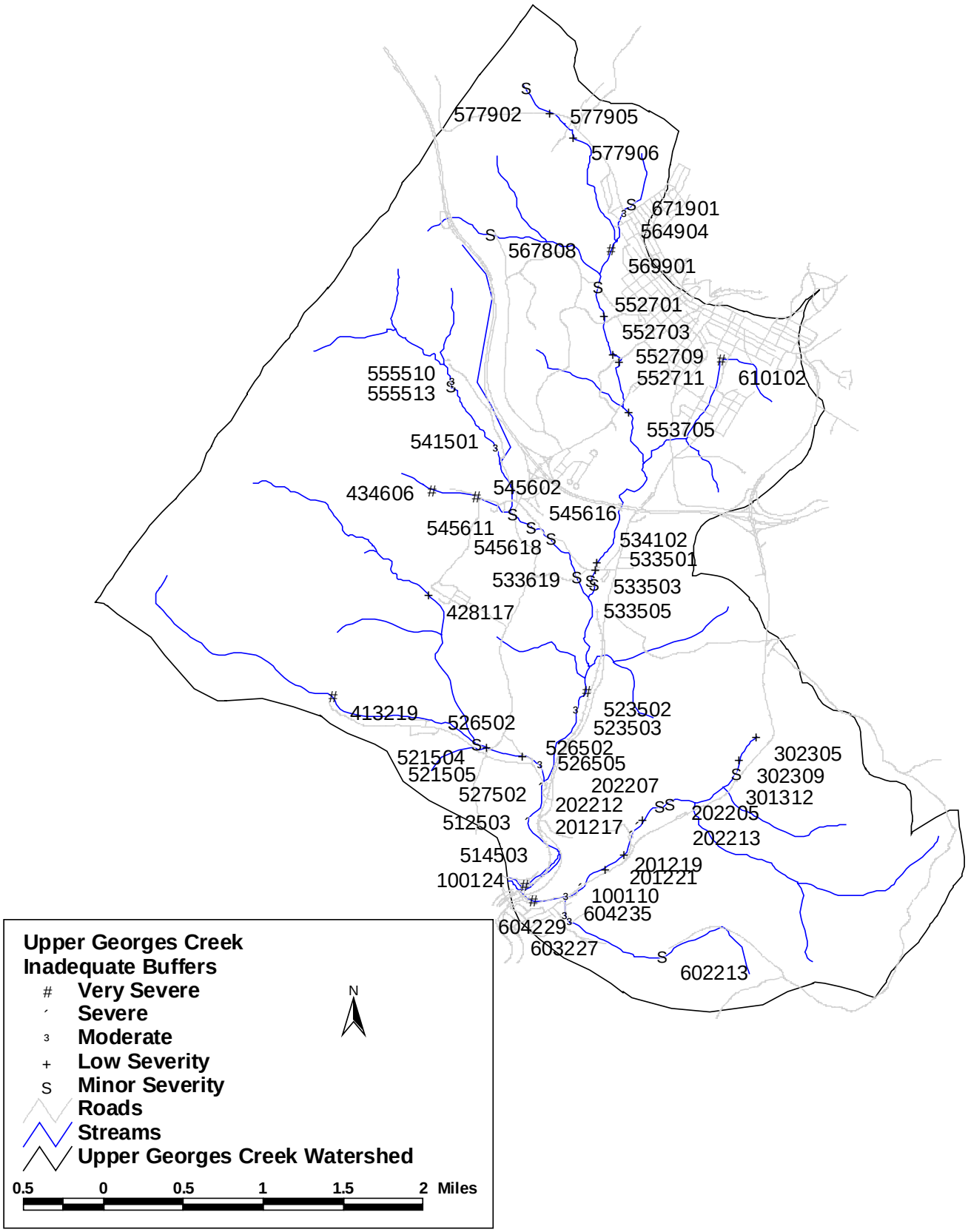

Figure 6b: Upper Georges Creek Inadequate Buffers Locations.

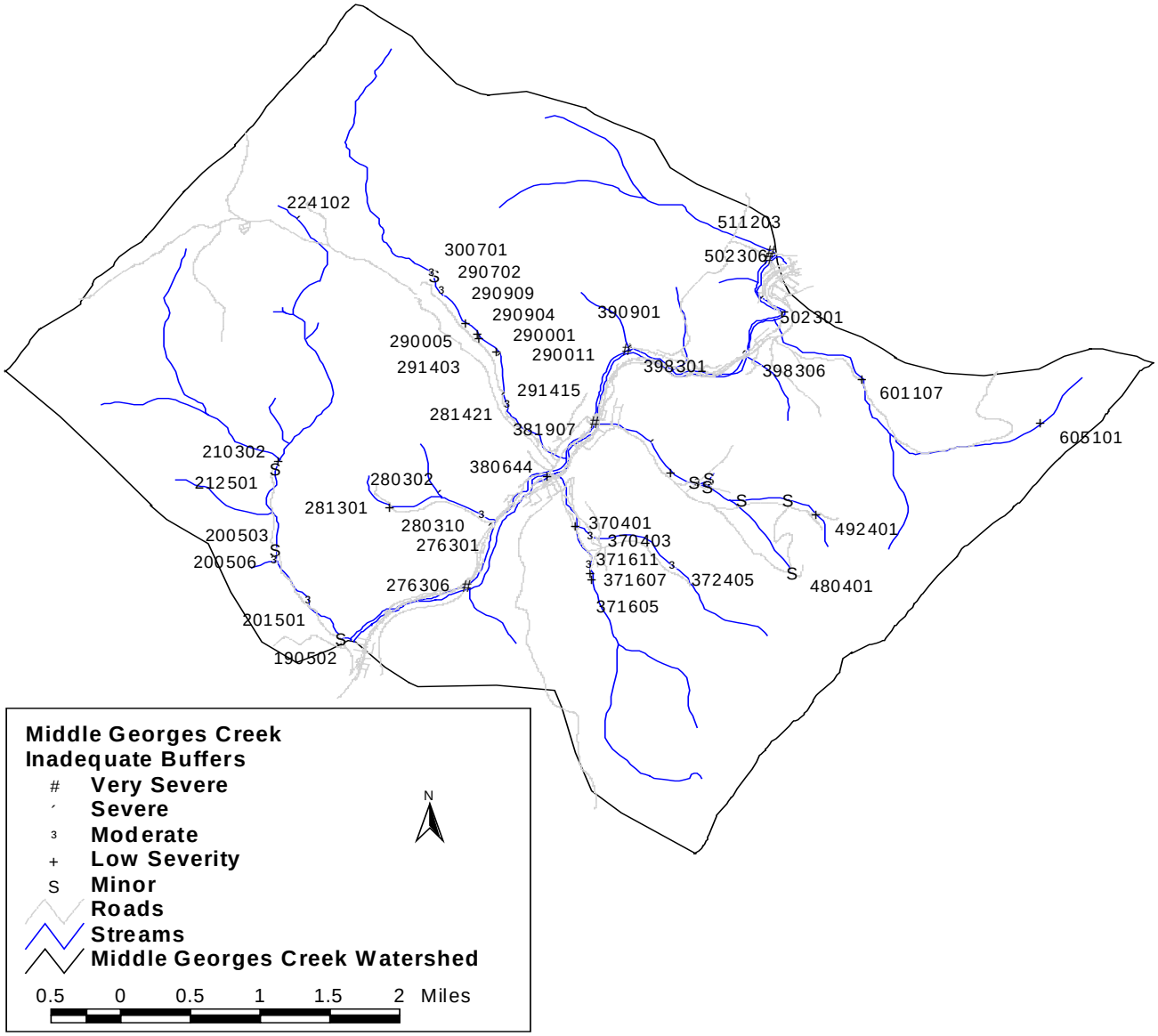

Figure 6c: Middle Georges Creek Inadequate Buffers Locations.

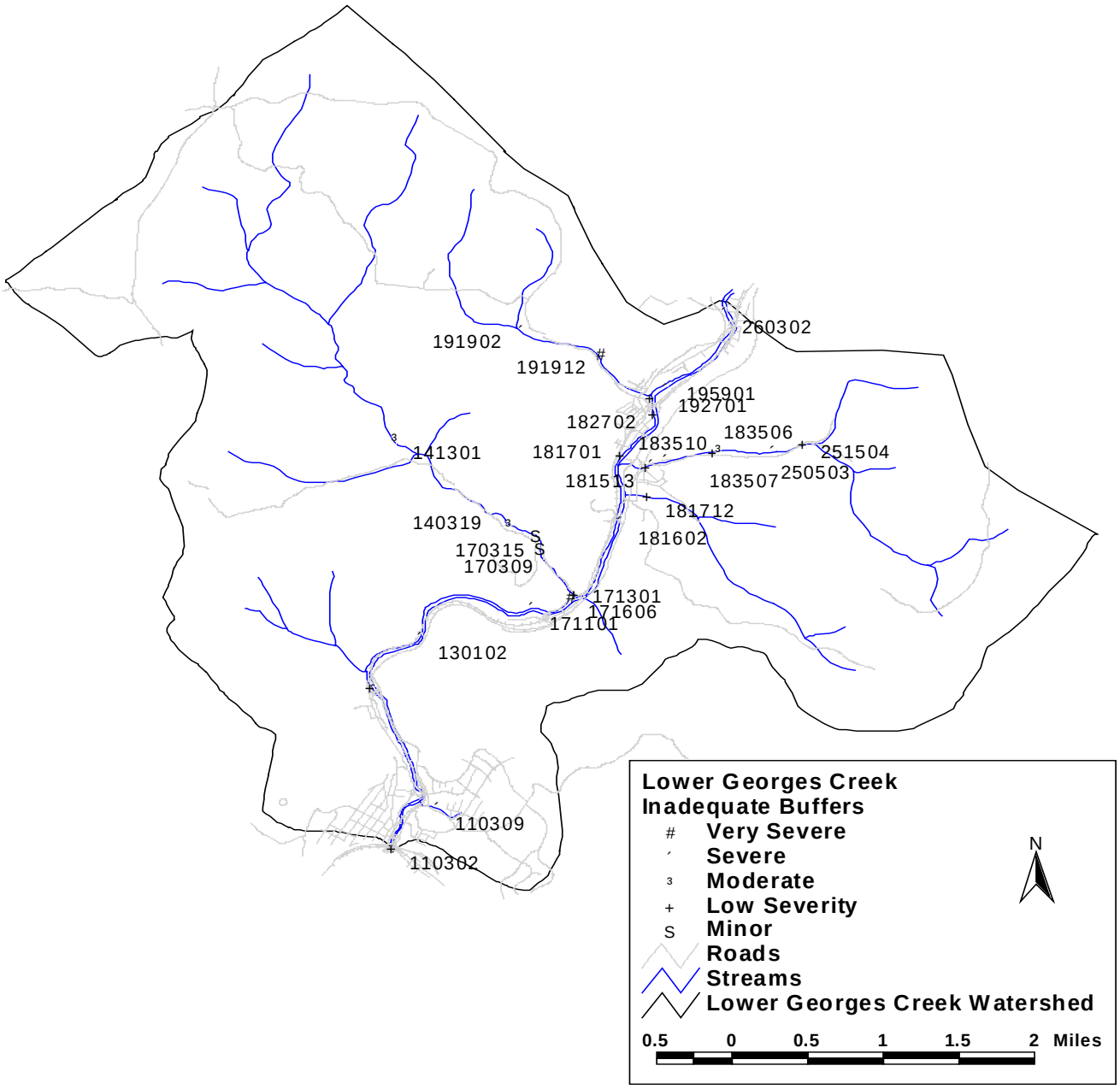

Figure 6d: Lower Georges Creek Inadequate Buffers Locations.

Channel Alterations

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

Channel alteration was the fourth most frequently reported problem. Survey crews found 111 areas in the Georges Creek watershed were the stream channel had been recognizably altered. Location of channel alteration sites are shown in Figure 7b, 7c, and 7d. The total length of stream affected by channelization was estimated to be 70,655ft., or about 13.38 miles. This accounts for 12.39% of stream miles in the Georges Creek watershed. The majority of the sites were concrete (36), rip-rap (33), and gabion (27). Other sites were found to have earth channels (8), bridges (3), road crossings (2), metal (1), metal pipe (1), and pipe (1). Most of the sites in the Georges Creek watershed were given severity ratings of moderate to minor (Figure 7a). In one site (567809), it was estimated that there were 4 miles of channelized stream present. Very severe ratings were given where cement channels have been constructed and there is virtually no natural in-stream habitat present. The lengths of stream present at channel alteration sites varied from 4ft. to 21,000ft. Bottom widths ranged from 2in. to 55ft. Perennial flow was reported to be present at 86 sites, and sediment deposition was reported at 36 sites. Road crossings are attributed to 49 channel alteration sites in the Georges Creek watershed.

Upper Watershed

The upper watershed of Georges Creek has 53 channel alteration sites as reported by this survey. Of these, 2 were designated as very severe. Site 542501 is a severely damaged concrete channel along I-68 on Winebrenner Run. The channel has been blown out by high flow and the stream is now undercutting the concrete channel as well as the highway. The width of the bottom of the channel is 120in., and the length of the channelized section of stream stretches 1,500ft. The channel has no perennial flow or vegetation, but sedimentation is occurring in the channel. Site 567809 is a part of Sand Spring Run in the town of Frostburg. The stream appears to have been piped under town for about 21,000ft. (4 miles). The channel has perennial flow and sedimentation in the channel.

Middle Watershed

The middle portion of the watershed has 48 channelized stream segments recognized by this survey. None of these channelized sections were given a very severe rating. Only 1 was given a severe rating. Site 600104 on Elk Lick Run is a channel containing gabion and rip-rap. The bottom width of the channel is 112in. The length of the channelization is 1,300ft. The channel does have perennial flow. The stream runs directly alongside a road and was given its severe rating because of the length and material used.

Lower Watershed

The lower portion of Georges Creek contains 26 channel alteration sites. None of these sites were given very severe or severe ratings. Seven sites were given moderate ratings, 5 were given low severity ratings, and 14 were given minor ratings. The streams with the most channel alterations in the lower portion of the watershed are the mainstem and Moore Run.

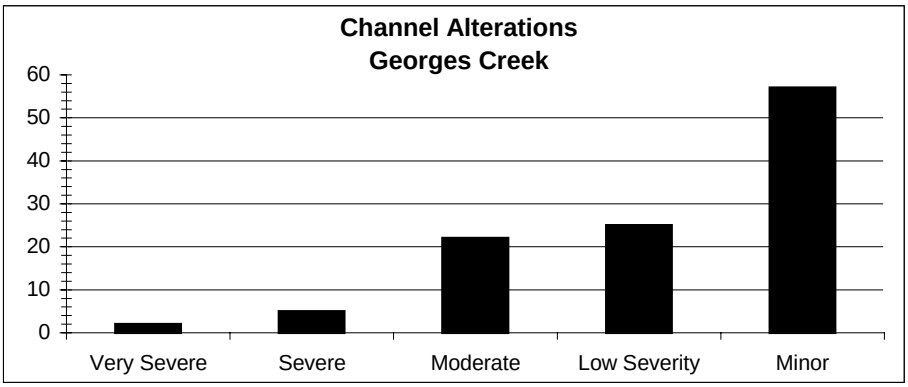

Figure 7a: Histograph showing the frequency of severity ratings given to channel alteration sites during the Georges Creek SCA survey.

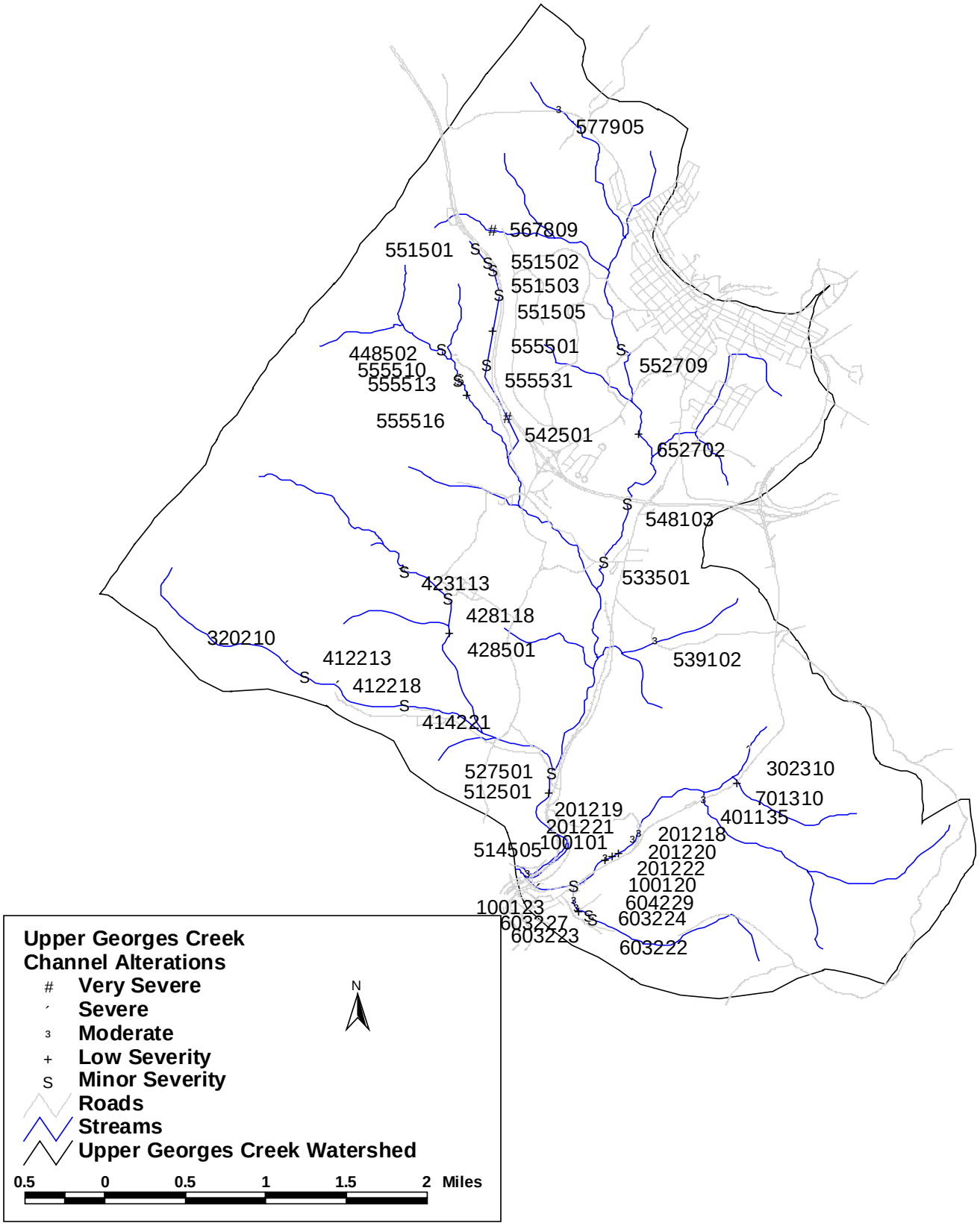

Figure 7b: Upper Georges Creek Channel Alteration Locations.

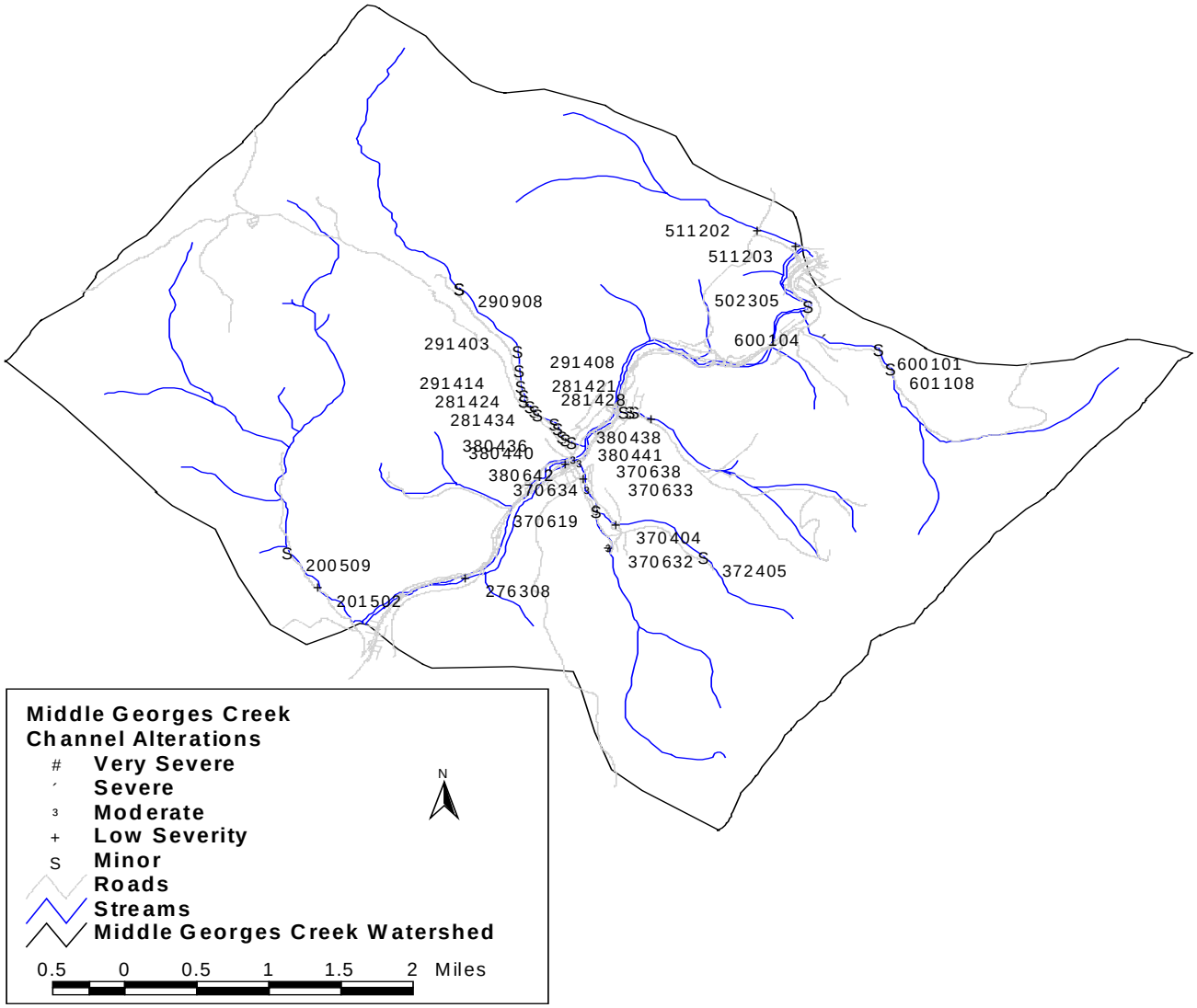

Figure 7c: Middle Georges Creek Channel Alteration Locations.

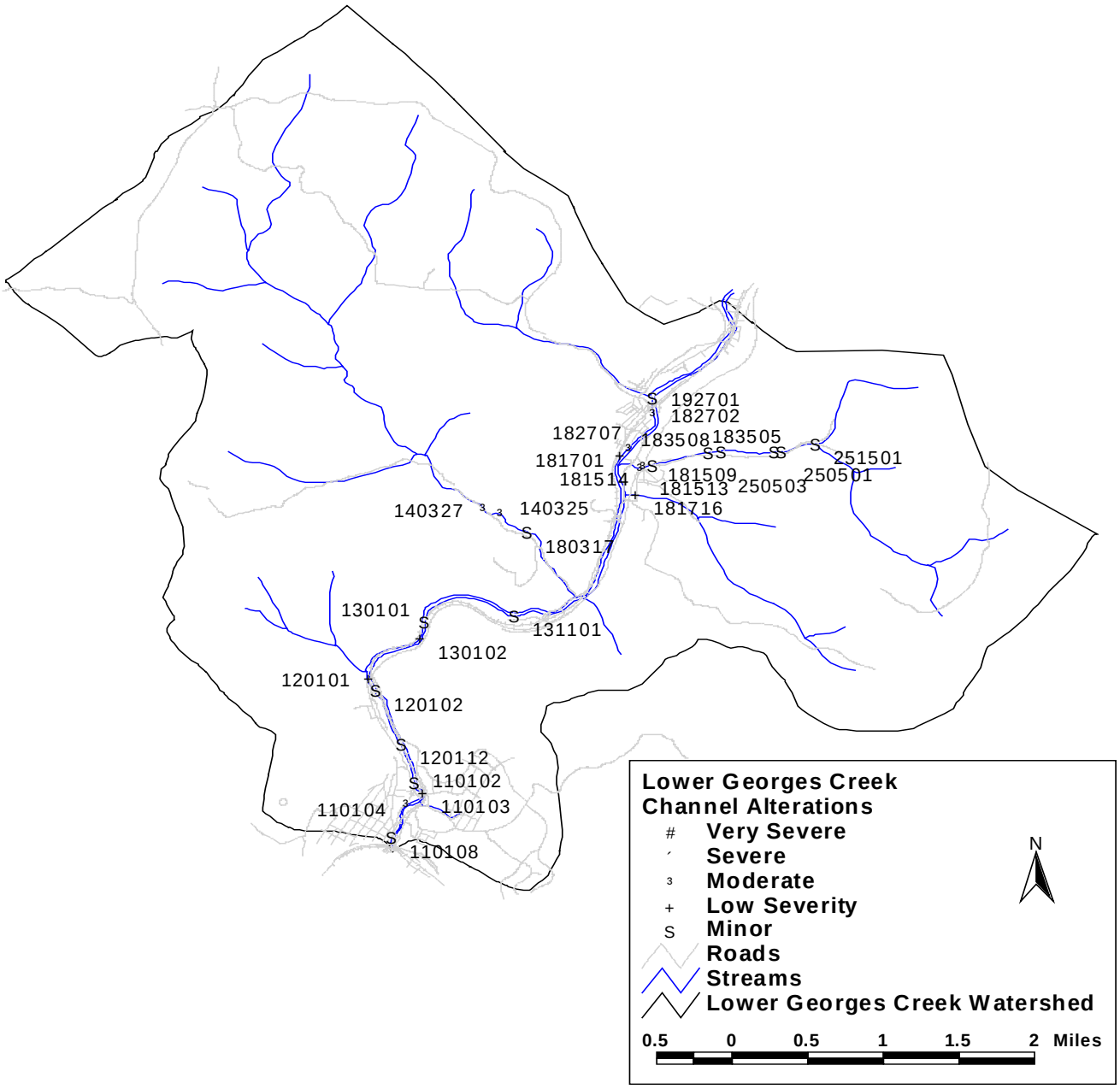

Figure 7d: Lower Georges Creek Channel Alteration Locations.

Fish Migration Barriers

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

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

Survey crews identified 102 fish migration barriers during the survey. The locations of fish migration blockages are shown in Figure 8b, 8c, and 8d. At 95 sites the survey crews reported a water drop that was too high for some fish to move upstream, while at an additional 10 sites they reported that the water was too shallow for fish migration. Natural falls were cited as the main type of fish barrier and were reported at 46 sites. Fish migration barriers at road crossings were found at 29 sites. Other causes of fish barriers in the watershed were dams (12), in-stream debris (9), pipe crossings (3), channelized sections of stream (2), in-stream ponds (2), log weirs (2), and railroad crossings. The majority (60 of 102 sites) of the fish migration blockages were characterized as being total fish migration barriers, blocking the whole width of the stream with a permanent structure. Temporary structures blocking full movement of fish were cited at 39 sites. Partial barriers allowing some flow through unimpeded were found in 3 cases. Most of the fish migration blockages also were given low severity or minor ratings (Figure 8a).

Upper Watershed

Almost half (45 out of 102) of the fish migration barriers reported in this survey were found in the upper portion of the watershed. Two of these, NR202201 and NR604233, were given very severe ratings. These sites can both be found on Neff Run. Both are total blockages found at road crossings with drops that are too high. Site NR202201 has a drop of 12in., and site NR604233 has a drop of 18in. These sites were given very severe ratings due to their placement in the Neff Run watershed. These blockages cut off a significant length of stream. In addition to the two severe ratings given in the upper potion of the watershed, 9 severe ratings were recorded. The details of these can be found in Appendix B.

Middle Watershed

Forty-one fish barriers were recorded in the middle watershed. One site was given a very severe rating, and two were given severe ratings. Site 601103 is the dam at the Midland-Gilmore reservoir on Elk Lick Run. This very severe site is a total blockage that has a water drop of 84in. The two severe ratings are 224103 and 371605. These sites are both dams and have drops of 24in. and 100in., respectively. Site 224103 can be found on Laurel Run and site 371605 can be found on Jackson Run.

Lower Watershed

Sixteen fish migration barriers were reported in the lower portion of the Georges Creek watershed. One was given a very severe rating and three were given severe ratings. Site 182706 is a total blockage dam on the mainstem with a water drop of 48in. It was given a very severe rating due to its position in the watershed in the mainstem. Site 141110 is a natural falls with a water drop of 360in that was given a severe rating. This site is on Michaels Run and is associated with a very severe erosion site. Site 191907 is a severe total blockage dam on Butcher Run with a water drop of 18in. Site 195304 is a severe total blockage due to a pipe crossing with a water drop of 12in. on the mainstem. This site received a severe rating due to its position in the watershed.

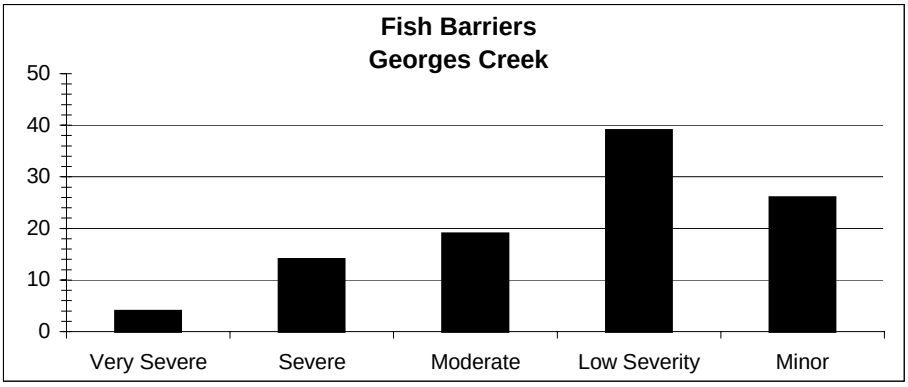

Figure 7a: Histograph showing the frequency of severity ratings given to fish migration blockages seen during Georges Creek SCA survey.

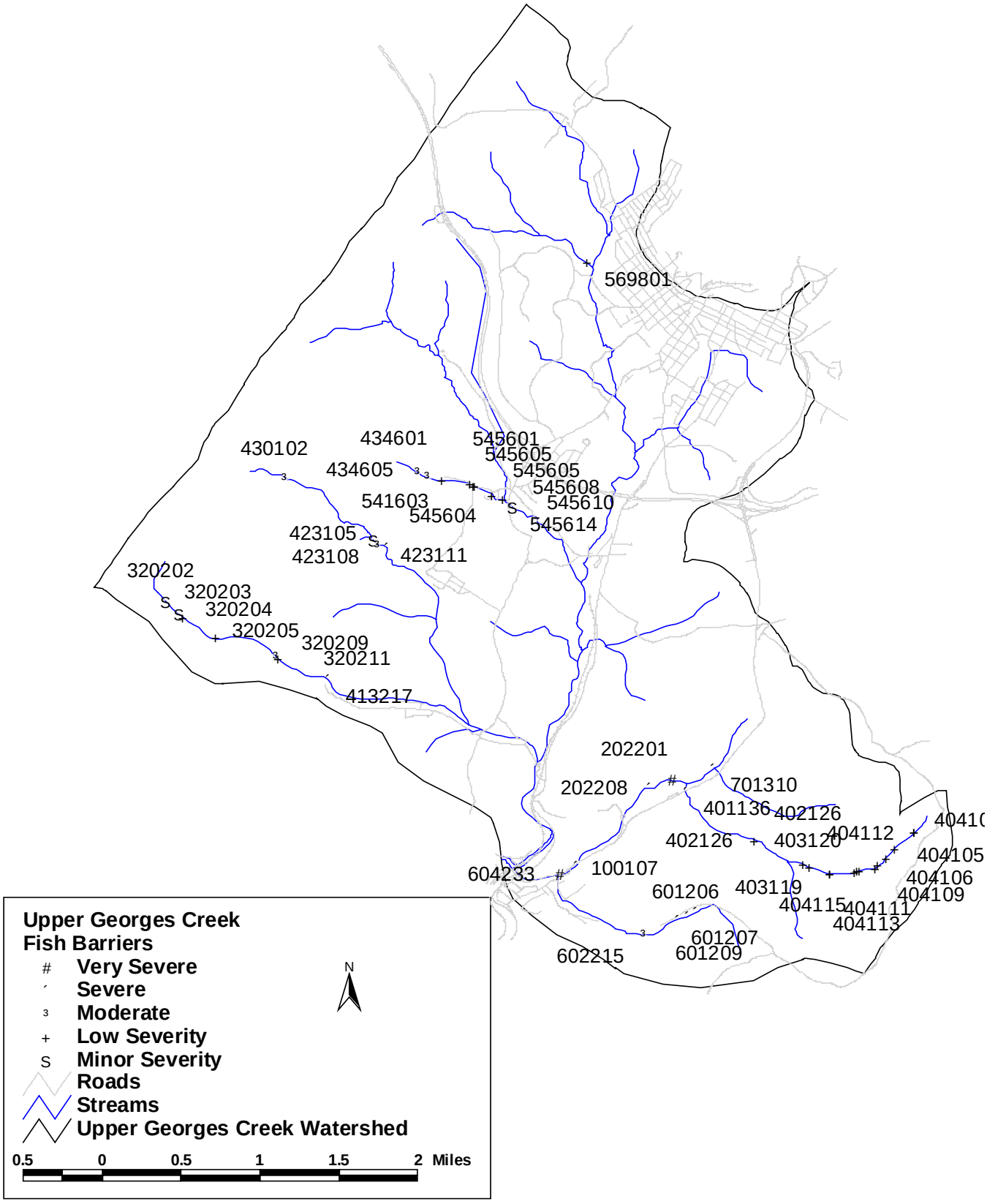

Figure 8b: Upper Georges Creek Fish Barrier Locations.

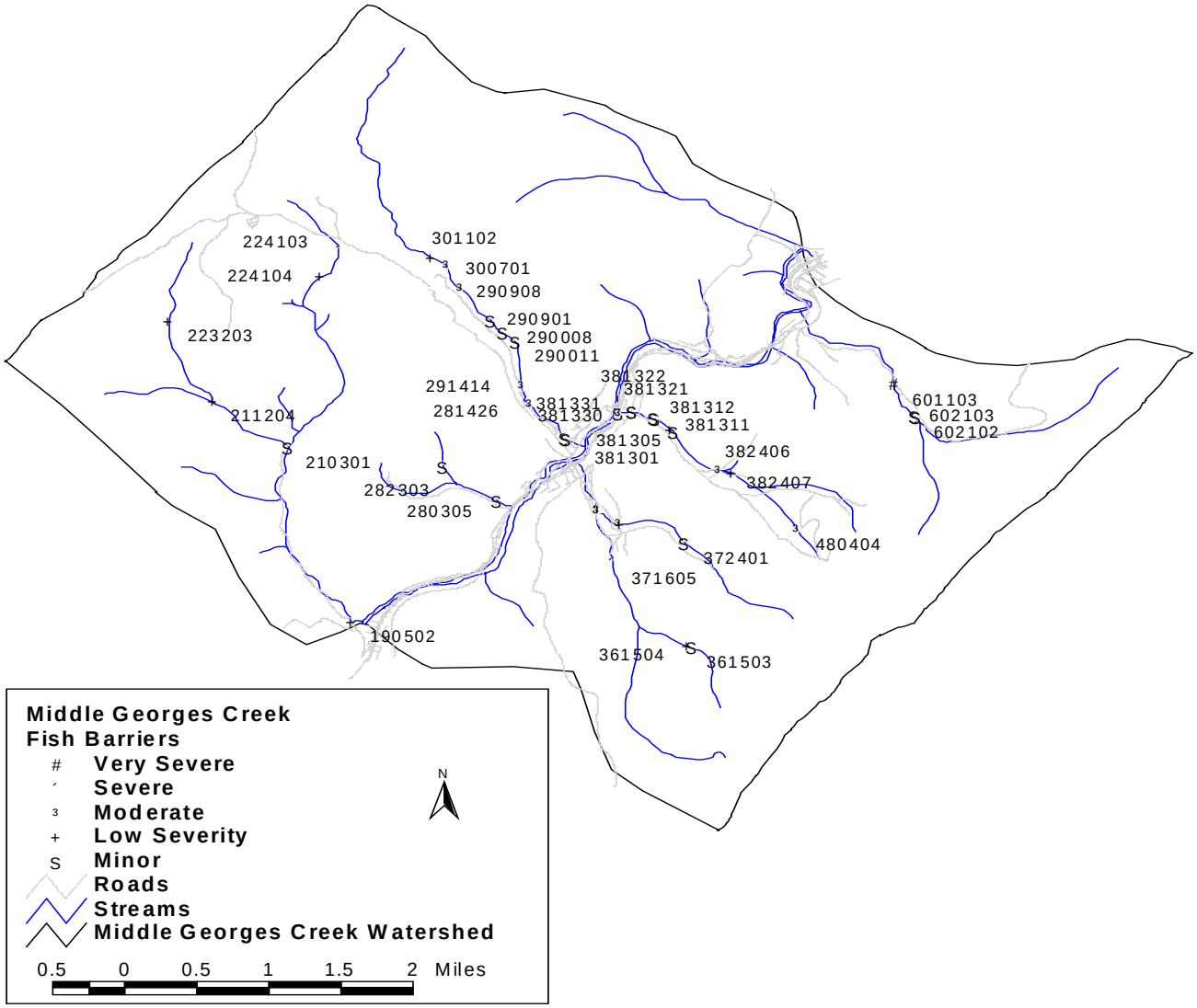

Figure 8c: Middle Georges Creek Fish Barrier Locations.

Figure 8d: Lower Georges Creek Fish Barrier Locations.

Flood Prone Structures

The flood prone structure category was included with this survey at the request of Allegany County. Flooding is a common occurrence in the Georges Creek watershed. The high slopes of the region combined with the tendency to build in the flood plain are causes for a high amount of property loss and collection of material in the stream. Georges Creek runs through the towns of Frostburg, Midland, Lonaconing, Barton, and Westernport, as well as numerous smaller communities. The goal of this category is to gain some idea of how many structures may be affected by future flooding caused by major storm events.

Flood Prone Structure data was taken for every structure within 50ft. of the banks of Georges Creek and its tributaries. It is understood that the flood plain reaches well beyond 50ft. in many places, but structures within a 50ft. reach of the stream banks will be the most affected throughout the watershed. The locations of these structures can be seen in Figures 9a, 9b, and 9c.

Ninety-one flood prone structure sites were cited during the Georges Creek Survey. Multiple structures were recorded at each site. Type of structure, location, distance from the top of the bank, and the existence of flood proofing and floodwalls were all recorded at these sites, as well as the number of structures. These sites were not given severity rankings. In total, 261 structures (183 houses, 61 sheds, 15 businesses, 1 pool, and 1 school) were recorded during this survey. Six sites involving 34 houses, 3 sheds, and several garages were found to have had a floodwall. Three sites with 4 houses were found to have had flood proofing, including 1 concrete wall, 1 stone wall, and 1 failing gabion basket. The majority of structures (126 or 48.28%) were recorded on the mainstem and Jackson Run. The mainstem contains 61 houses, 15 sheds, 7 businesses, and 1 school. Jackson Run contains thirty-two houses, 5 sheds, and 6 businesses.

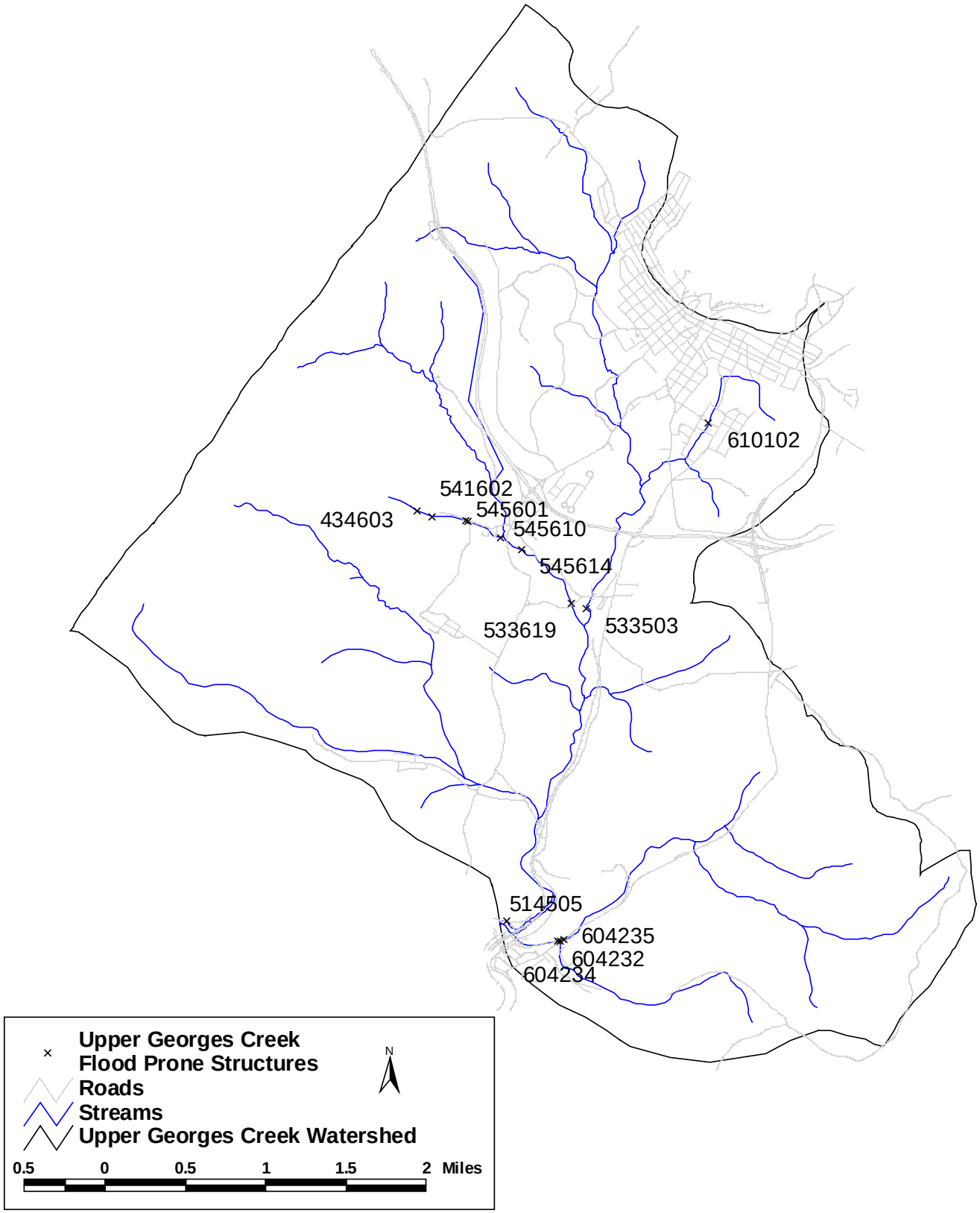

Figure 9a: Upper Georges Creek Flood Prone Structures.

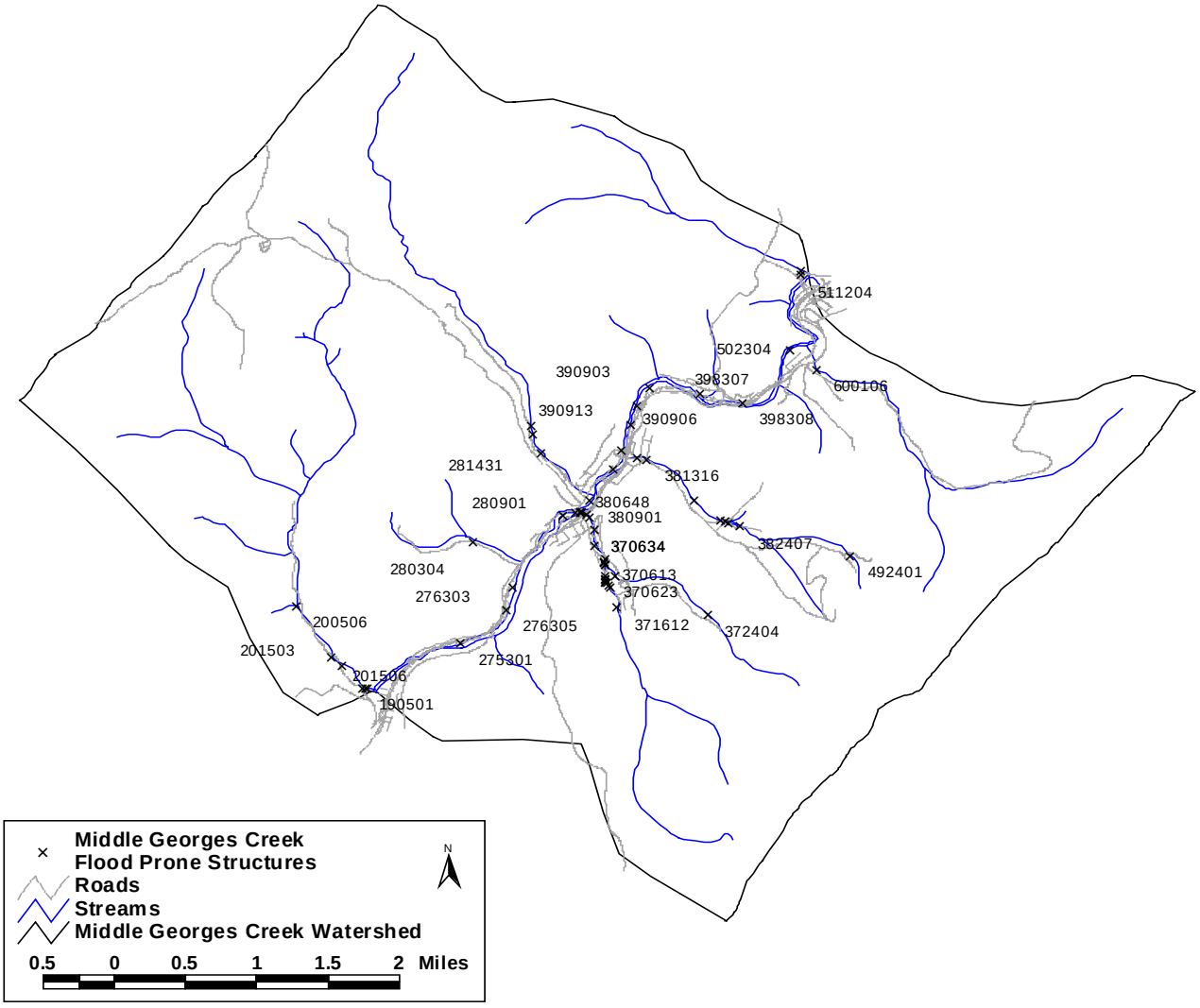

Figure 9b: Middle Georges Creek Flood Prone Structures.

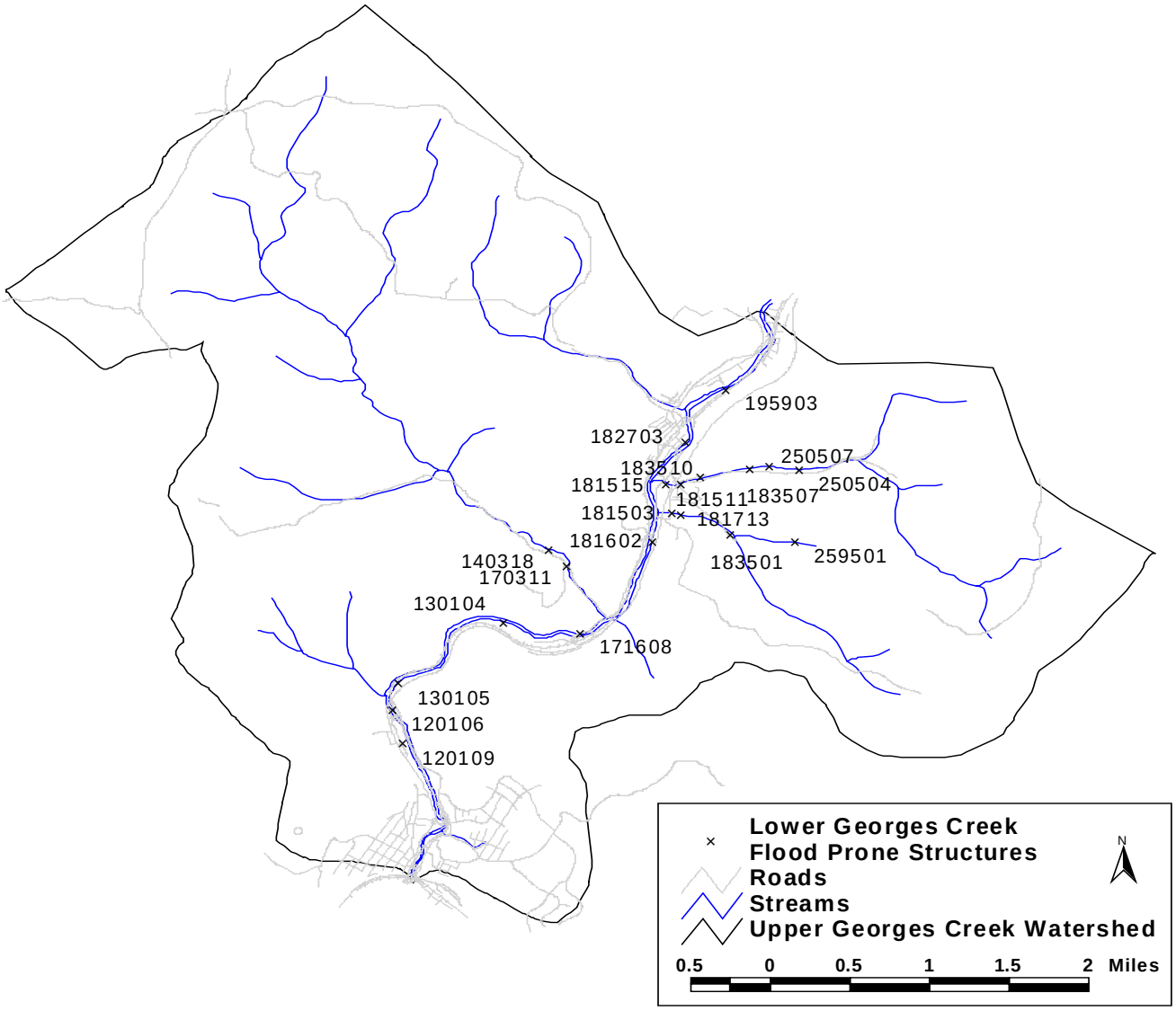

Figure 9c: Lower Georges Creek Flood Prone Structures.

Exposed Pipes

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

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

Exposed pipes were reported at 54 sites during the Georges Creek survey. Locations of these sites are shown in Figure 10b, 10c, and 10d. The length of the combined exposed pipes is 919ft. (0.2 miles). The type of pipes found include: 35 smooth metal, 9 plastic, 7 concrete, 1 corrugated metal, and 1 terra cotta pipe. Exposed pipes were found across the stream bottom (27), above the stream (13), along the stream bank (7), and under road crossings (1). Three exposed manholes were also found. Lengths of the pipes exposed ranged from 1ft. to 50ft., while diameters of pipes ranged from 1in. to 36in. Purposes of pipes were cited as water supply (14), sewage (9), gas (5), and unknown (26). The mainstem is the tributary with the highest amount of exposed pipes with 15, followed by Koontz Run with 7. Public works officials should review the exposed pipes reported and follow-up visits should be done based on their evaluations.

Upper Watershed

The upper portion of the Georges Creek watershed contains 24 exposed pipes. One pipe was given a severity rating of very severe, and 3 were given severe ratings. Site 552701 is a corrugated metal sewage pipe 6in. in diameter and exposed for 30ft. across the bottom of Sand Spring Run. This pipe was found to have a gray discharge and had a sewage odor. This site was given a very severe rating. Site 423109 was given a severe rating. This terra cotta pipe was exposed for 6ft. across the bottom of Staub Run, and had a clear discharge with no odor. The purpose of the pipe was unknown. Site 569904 is an 8in. diameter concrete sewage pipe exposed for 20ft. across the bottom of Sand Spring Run. Site 652703 10in. diameter smooth metal pipe exposed for 20ft. across the bottom of Sand Spring Run. Site NR201221 is a 10in. diameter plastic active sewage pipe exposed for 20ft. across the bottom of Neff Run.

Middle Watershed

Fifteen exposed pipes were found in the middle portion of the Georges Creek watershed. No very severe or severe pipes were found in this section. There were 7 pipes found on Koontz Run, 3 on Hill Run, and 5 on the mainstem portion of the middle watershed. Seven pipes were rated as moderate, 2 low severity, and 6 minor.

Lower Watershed

Fifteen exposed pipes were found on the lower portion of the watershed. Two were found to be very severe, and 2 were found to be severe. Site 120110 is an 8in. diameter sewage pipe exposed for 5ft. along the stream bank of the mainstem. It was found to have a discharge with no color and a sewage odor, and was given a very severe rating. Site 251502 is a 10in. diameter smooth metal pipe with a white discharge exposed for 12ft. across the bottom of Moore Run. The purpose of the pipe is unknown, and it was given a very severe rating due to its impact on the stream. Site 150102 is a 6in. diameter smooth metal pipe with unknown purpose exposed for 15ft. above Butcher Run. 150102 was given a severe rating. Site 279501 6in. diameter smooth metal pipe exposed for 25ft. across the bottom Potomac Hill Run. This site was given a severe rating.

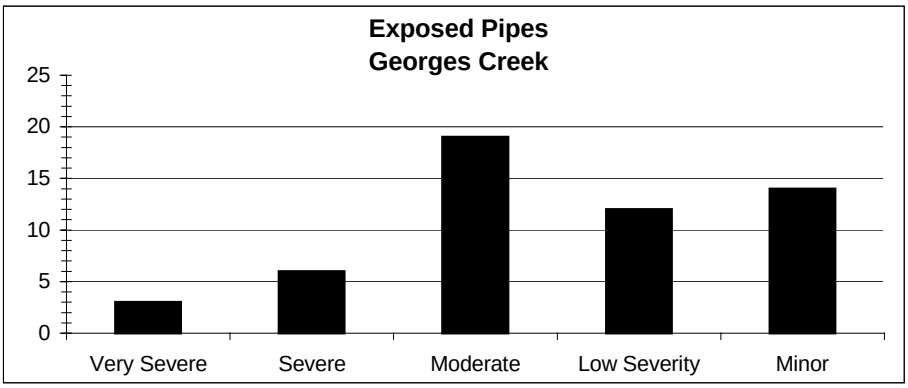

Figure 10a: Histograph showing the frequency of severity ratings given to Exposed pipes seen during Georges Creek SCA survey.

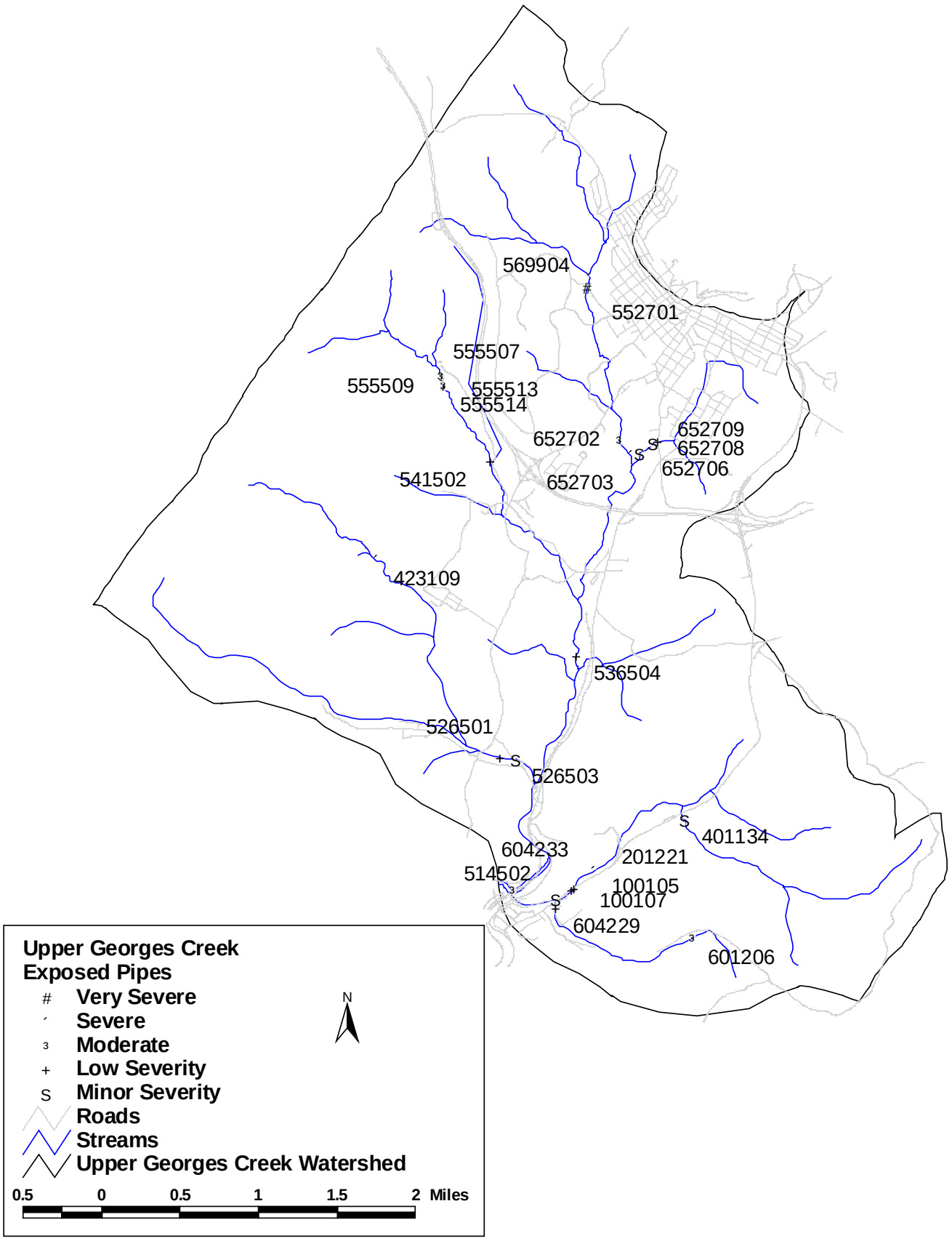

Figure 10b: Upper Georges Creek Exposed Pipes.

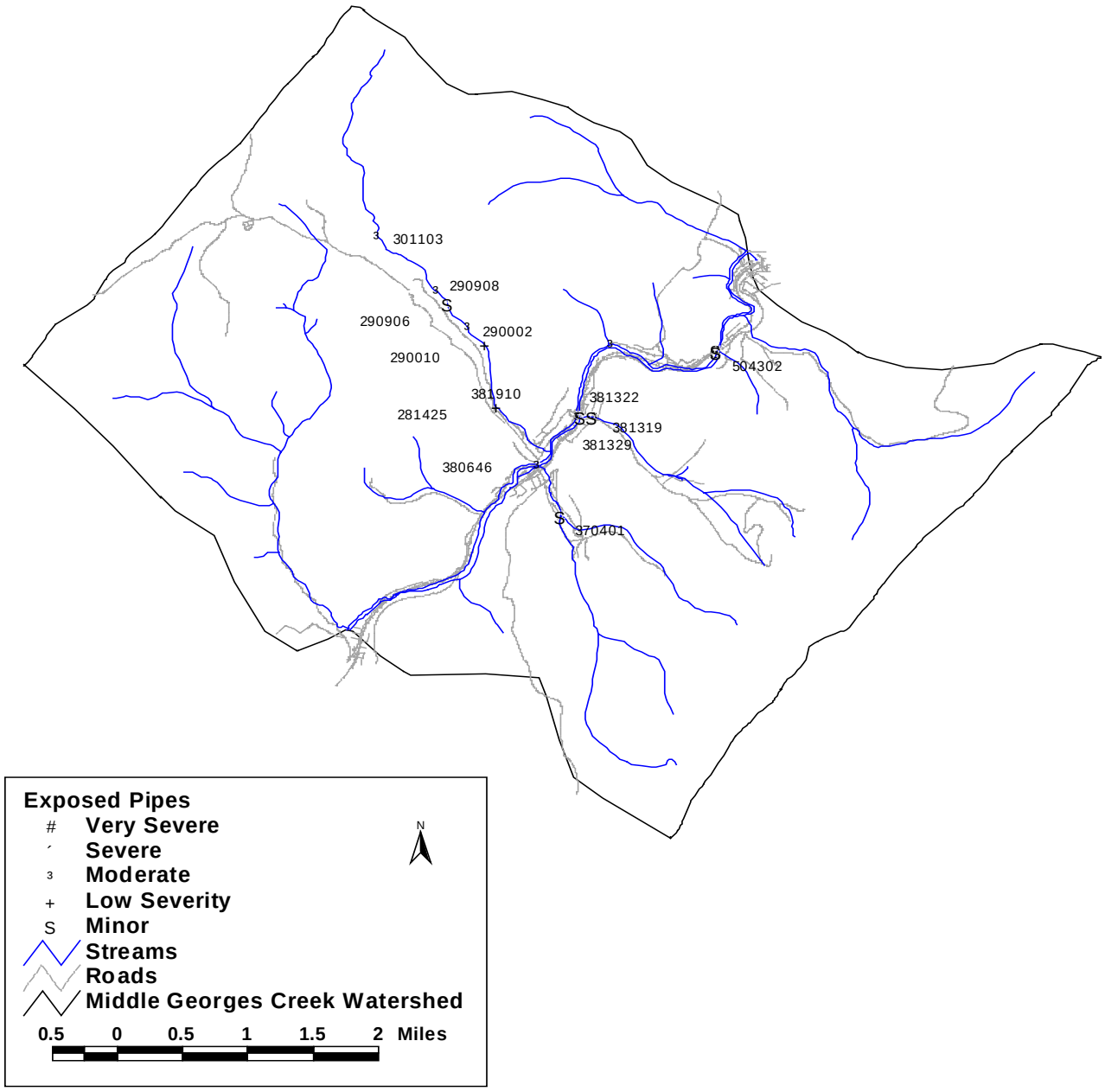

Figure 10c: Middle Georges Creek Exposed Pipes.

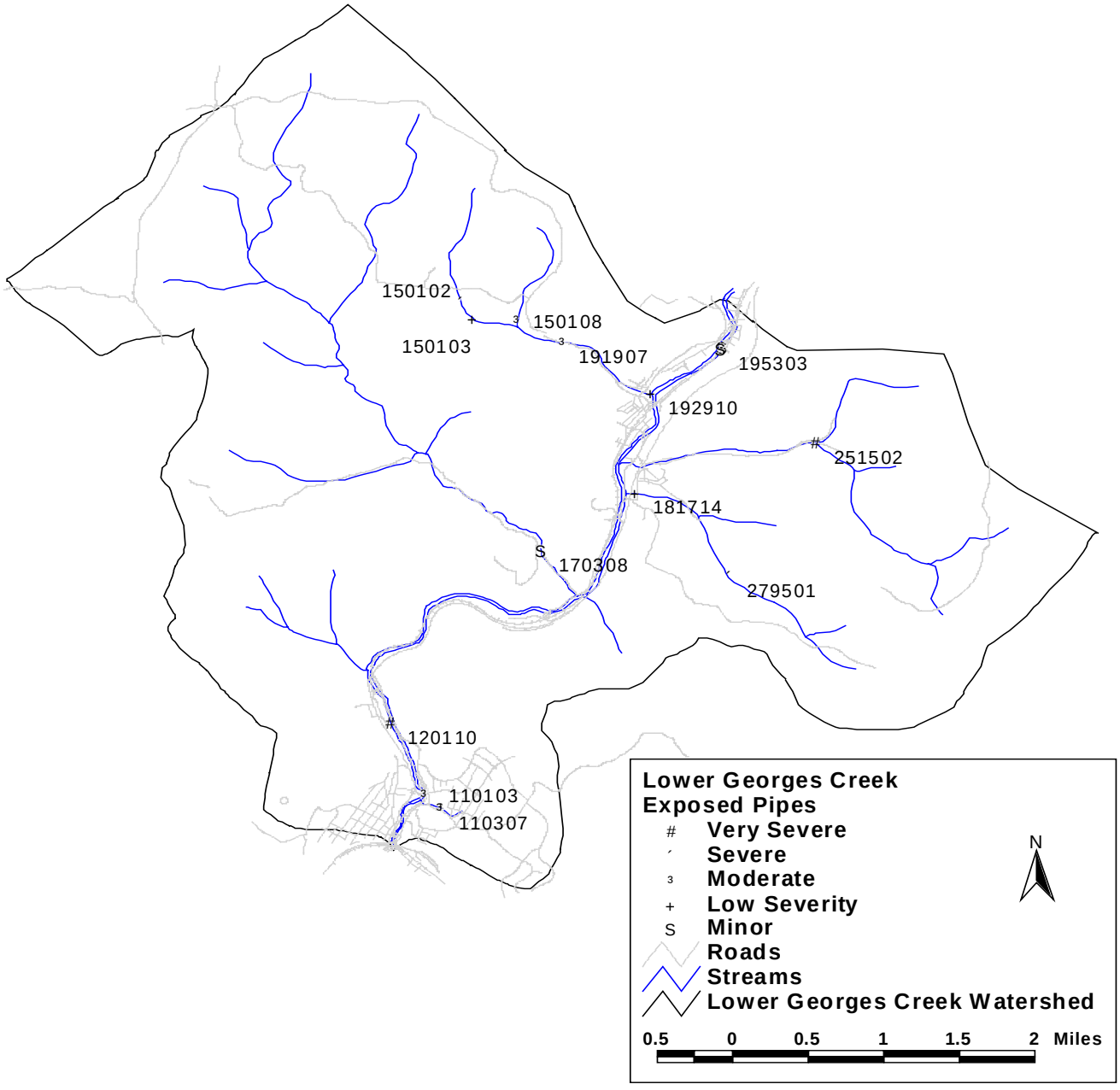

Figure 10d: Lower Georges Creek Exposed Pipes.

Unusual Conditions

The unusual condition/comment data sheets are used to record the location of anything out of the ordinary seen during the survey, or to provide some additional written comments on a specific problem. Forty-eight unusual conditions were reported during the Georges Creek survey. The unusual condition sheets are also used for comment sheets to make general observations during the survey. Thirty-seven comment sheets were filled out in addition to the unusual condition sheets. The locations of the unusual conditions can be found in Figures 11b, 11c, and 11d.

Upper Watershed

Twenty unusual conditions and 14 comments were recorded on in the upper portion of the watershed. Of these, 1 was ranked very severe and five severe (Figure 11a). Site 536601 is a very large lake not on the map and was given a very severe rating. The stream channel is dry and the mainstem of Georges Creek is several feet above the water surface of the lake. For severe sits please refer to appendix B.

Middle Watershed

Thirteen unusual conditions and 14 comment sites were cited in the middle watershed. Site 382403 is a clogged culvert pipe on Hill Run. The culvert pipe is buried and sediment is building on the upstream side of a farm road. The road is being washed out. This site was given a very severe rating. Site 371605 is a site where the stream is completely dry due to a dam on Jackson Run; it was given a severe rating. Site 390902 is where white foam on the water and green algae on the rocks can be seen downstream in the mainstem for 2 miles due to sewage. This site was given a severe rating.

Lower Watershed

Fifteen unusual conditions and 9 comments were recorded in the Lower watershed. Out of these fifteen, 4 were given very severe ratings, and none were given severe ratings. Site 181707 is major acid mine drainage in the mainstem. Site 191908 is a sewage leak out of a pipe on the left bank of Butcher Run. Site 191909 is a sewage leak from a blue house on the left bank of Butcher Run. Site 251502 is a leak from a pipe on the bottom of Moore Run. Moore Run is white from this pipe downstream. The pipe is on the border of county property and a mine.

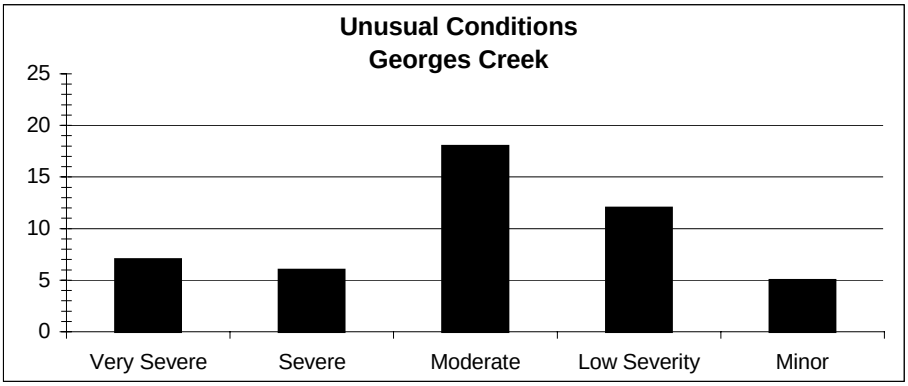

Figure 11a: Histograph showing the frequency of severity ratings given to unusual conditions seen during Georges Creek SCA survey.

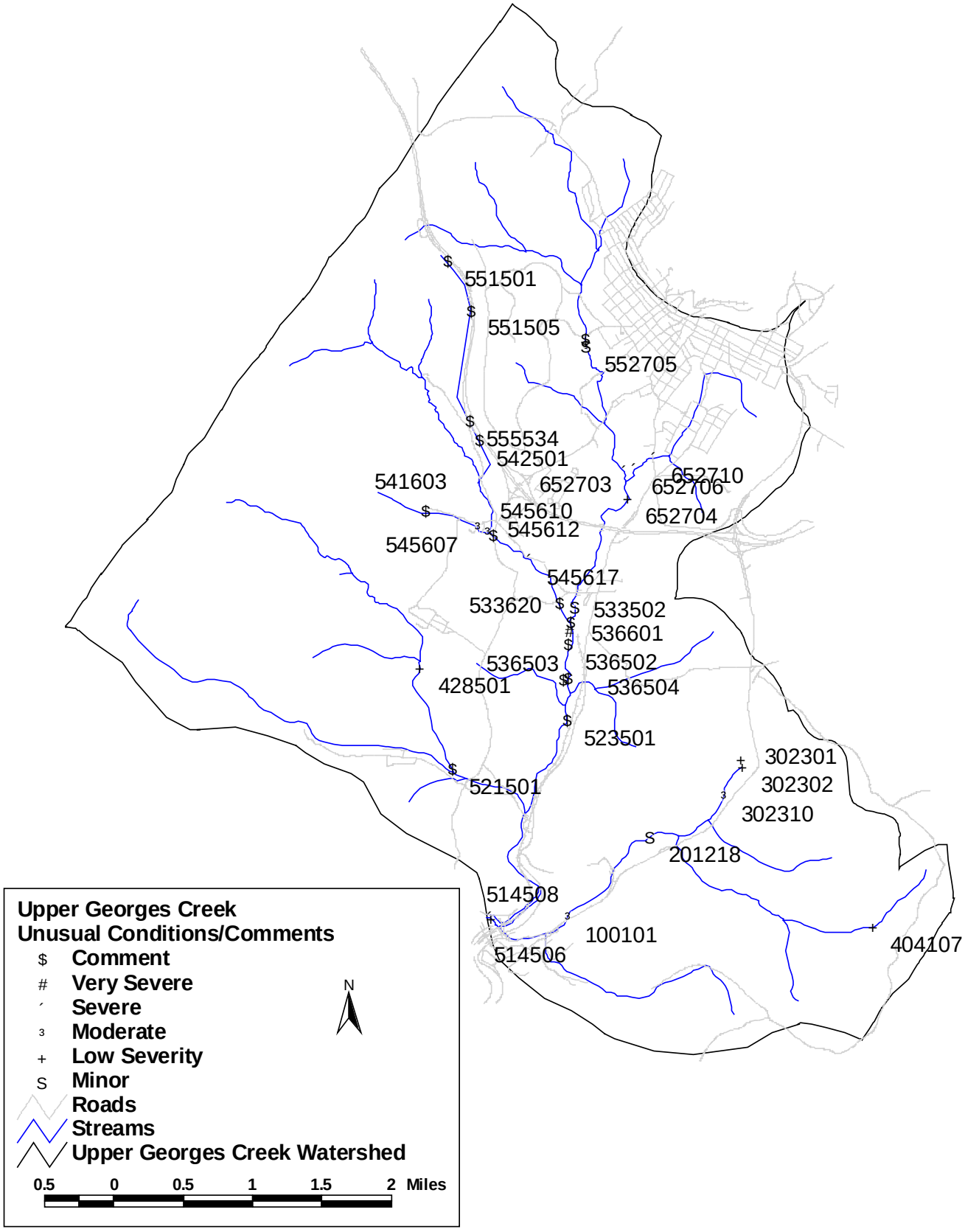

Figure 11b: Upper Georges Creek Unusual Conditions/Comments.

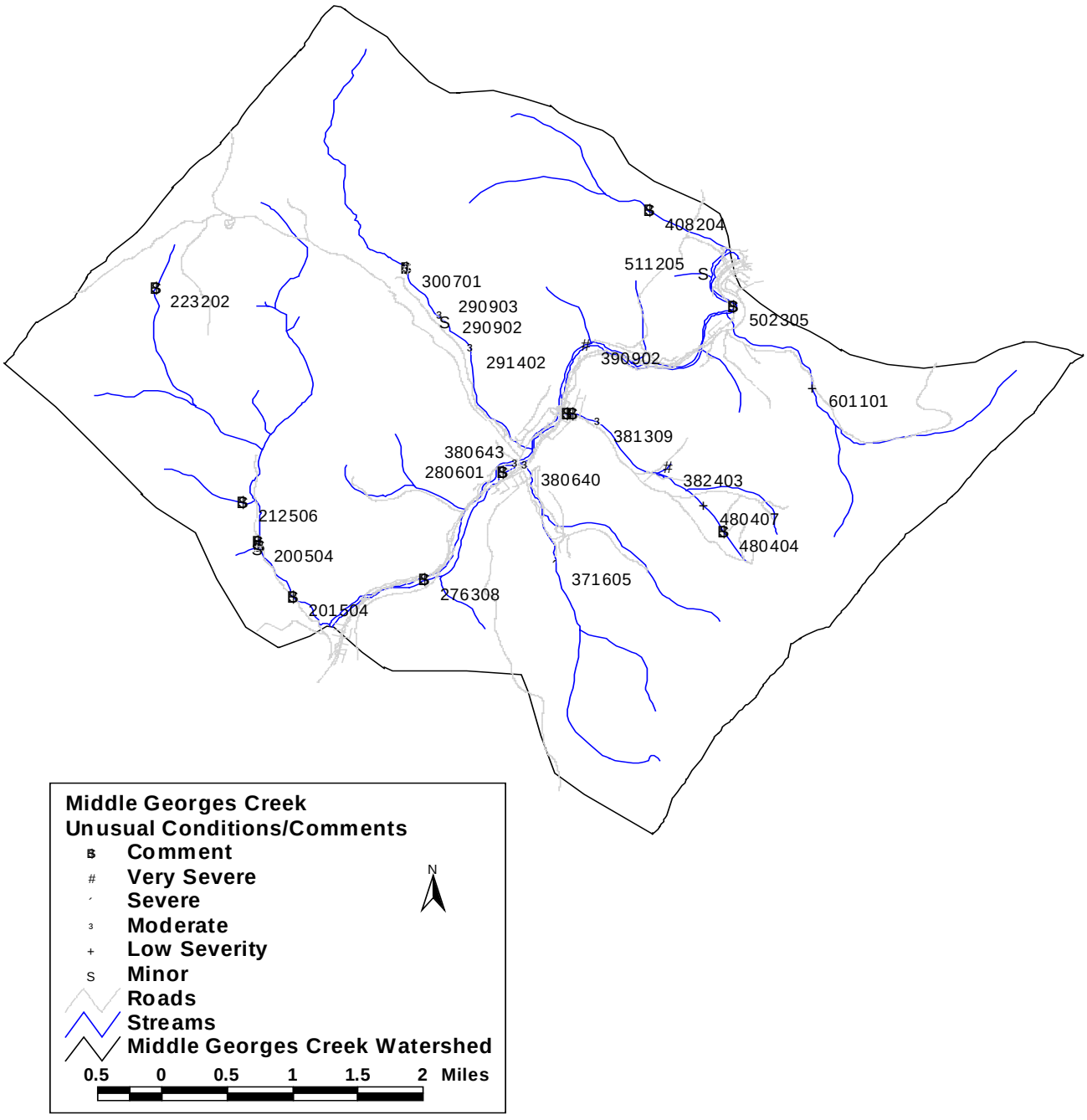

Figure 11c: Middle Georges Creek Unusual Conditions/Comments.

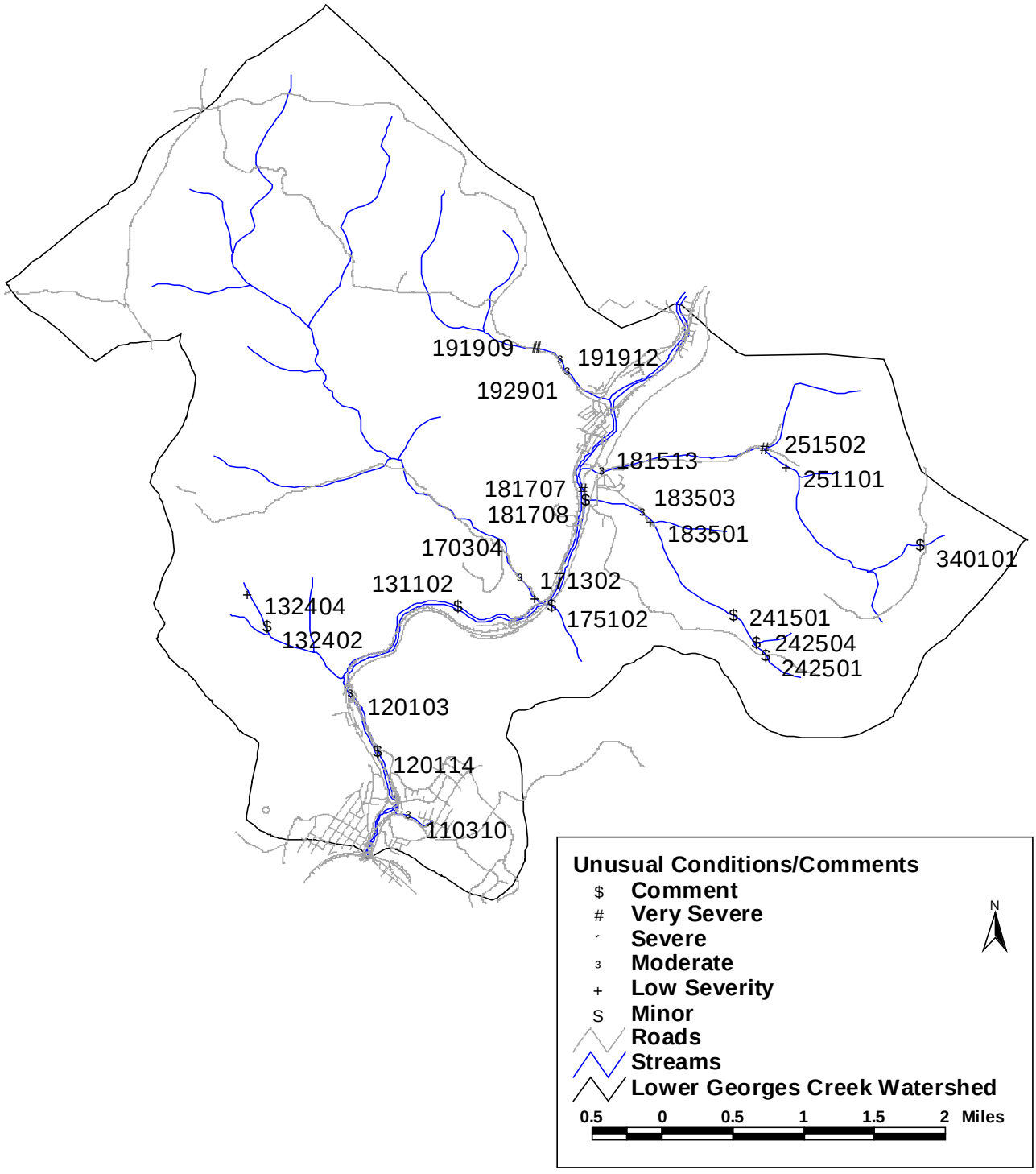

Figure 11d: Lower Georges Creek Unusual Conditions/Comments.

Acid Mine Drainage

Mining for coal and related activities in the Georges Creek watershed have been, and continue to be, important activities. The Georges Creek watershed has numerous stream segments where water quality is impacted by acid mine drainage (AMD). In some places, acidic waters associated with AMD have severely altered aquatic habitat conditions and have eliminated habitat for species sensitive to low pH. Pyrite (FeS_2), a sulfide mineral, often occurs in association with coal deposits. This mineral may react with water and atmospheric oxygen to produce sulfuric acid, which, in turn, can dissolve metals such as iron, aluminum and manganese. Ground and surface waters that come in contact with exposed pyrite may become acidic and their concentrations of sulfate and metals may increase. Mining has deteriorated the quality of surface and groundwater supplies in the Georges Creek watershed by exposing pyrite to air and water, thus promoting the chemical reactions that produce acid (State of Maryland, 1990). While the present SCA survey can visually identify some possible sites where acidic water is entering the stream, more extensive water quality monitoring is needed to determine the severity of the problem. The Bureau of Mines has conducted such a study, and their report will provide a much more detail evaluation of AMD problems in the watershed.

Forty-seven sites were recorded as having acid mine drainage during this survey. The locations are shown in Figures 12a, 12b, and 12c. The sites appear to be widespread across the watershed. AMD was spotted the most on the mainstem (12 times), Koontz Run (5 times), Neff Run (4 times), and Winebrenner Run (4 times). Overall acid mine drainage was seen by the survey teams as a significant problem in the Georges Creek Watershed. Noting how many times AMD appears in the stream does not determine which streams are the most impacted by AMD. Severity ratings were not given to AMD sites. Ranking the sites by impact on the stream or its system cannot be completed by visible observation.

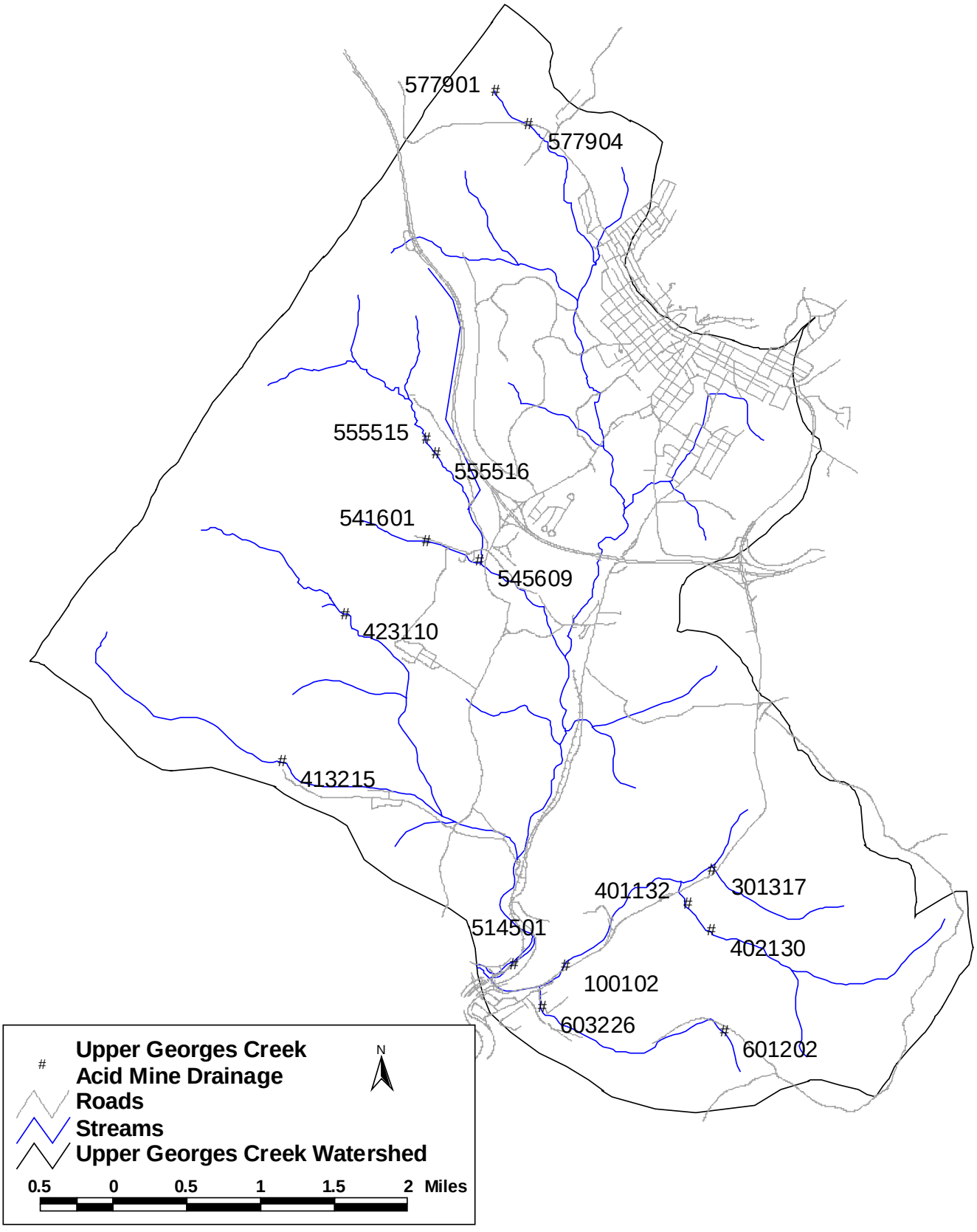

Figure 12a: Upper Georges Creek Acid Mine Drainage.

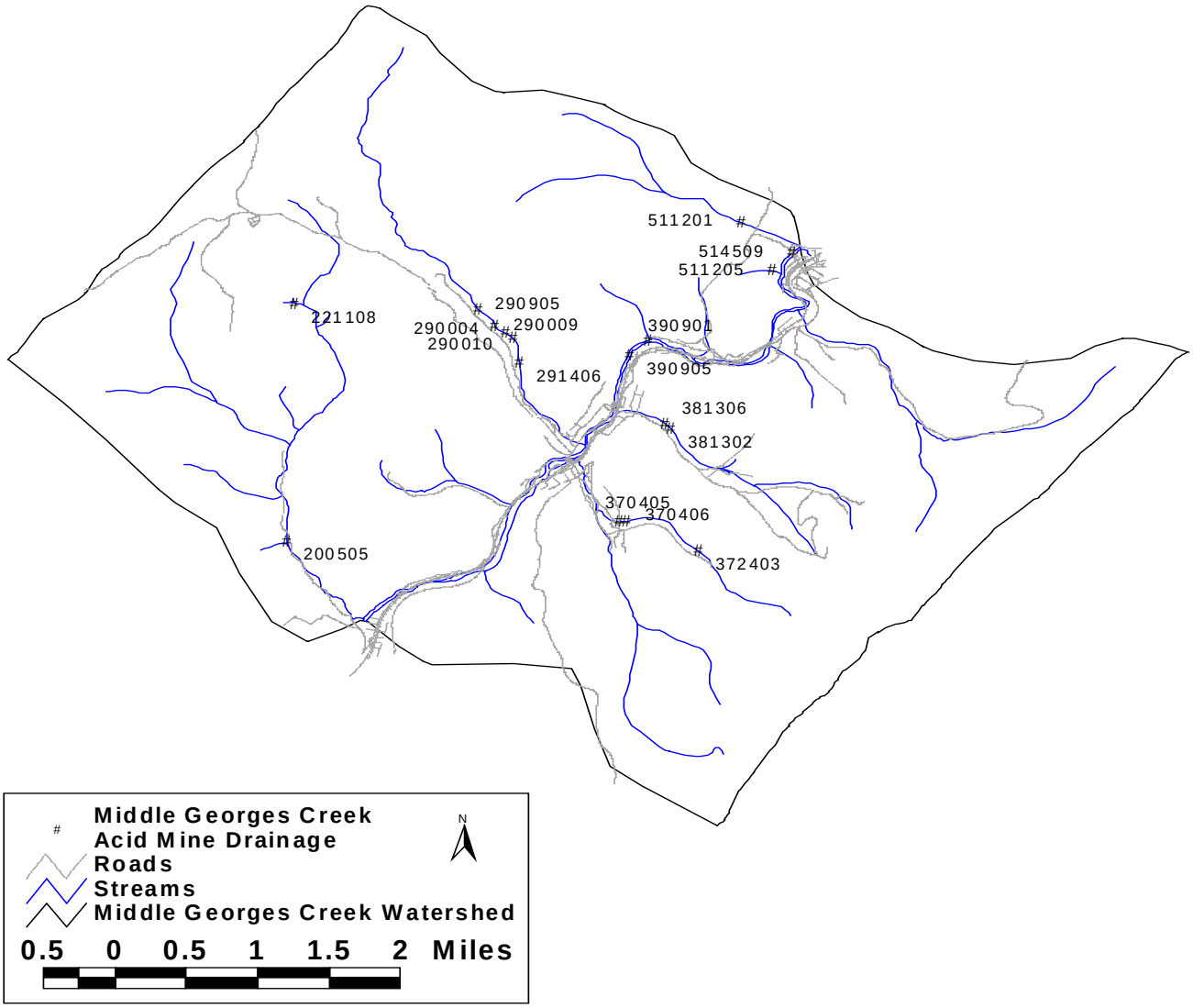

Figure 12b: Middle Georges Creek Acid Mine Drainage.

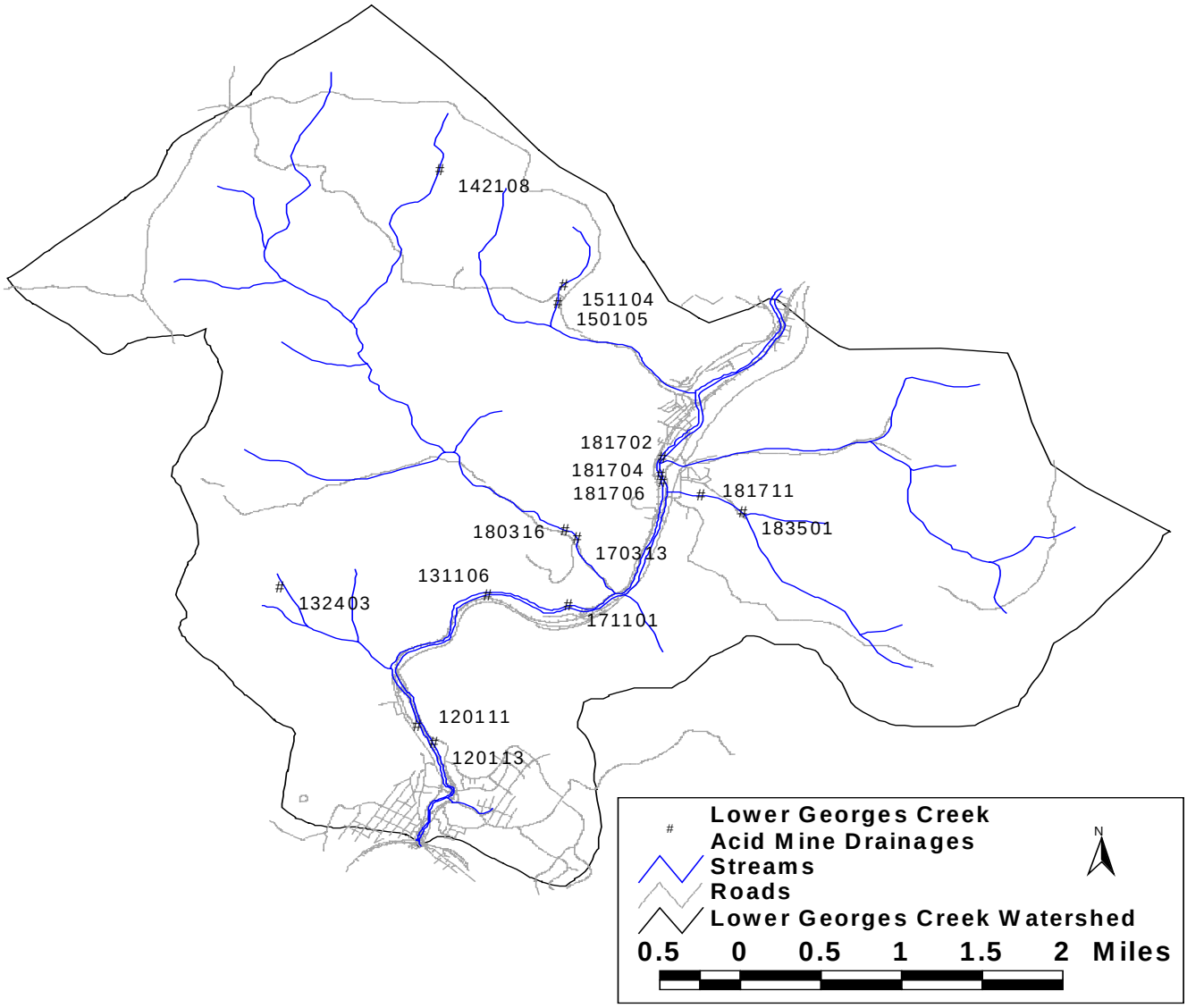

Figure 12c: Lower Georges Creek Acid Mine Drainage.

Additional Acid Mine Drainage Data

Acid Mine Drainage (AMD) data was collected on two surveys in the Georges Creek watershed. The Stream Corridor Assessment Survey's acid mine drainage data was collected solely at sites where there was visible evidence of AMD occurring in the stream. A data sheet was then filled out noting only the physical characteristics observable by eye. This survey only indicates where AMD is visibly observable, and was not meant to describe chemical characteristics or severity of AMD occurrences. Data taken of these sites includes location, and visual extent of the discolored water. A picture was taken and locations were noted on field maps. This was a watershed wide survey in which 105 miles of streams were assessed. This does not include areas where access was not permitted by landowners

Maryland Department of the Environment's (MDE) Bureau of Mines also conducted a chemical based AMD survey in this watershed. Samples were taken below the confluences of most streams**.** Representatives from the Bureau of Mines took water samples, flow measurements, pH, specific conductivity, and GPS coordinates at each site. Samples were then taken to a laboratory where more extensive chemical evaluations were completed. The loads of certain chemicals associated with AMD when occurring in a high enough capacity were recorded. These chemicals include: Al, Ca, Fe, Mn, Mg, Zn, along with suspended solids, dissolved solids, sulfates**,** Alkalinity and acidity. pH readings were also taken in the lab.

The occurrences of AMD have been mapped in both surveys, and can be found together in Figures 13a and 13b. Figure 13a shows areas in which sample sites from both surveys were found to correspond, and figure 13b shows areas in which they do not overlap. Bureau of Mines data for each site can be found in Appendix B. It is the intent of this document to show the extent of all areas identified in Georges Creek as having Acid Mine Drainage, in order to have a better understanding of AMD properties and occurrences at these sites. MDE's Bureau of Mines expects to publish their report in the near future.

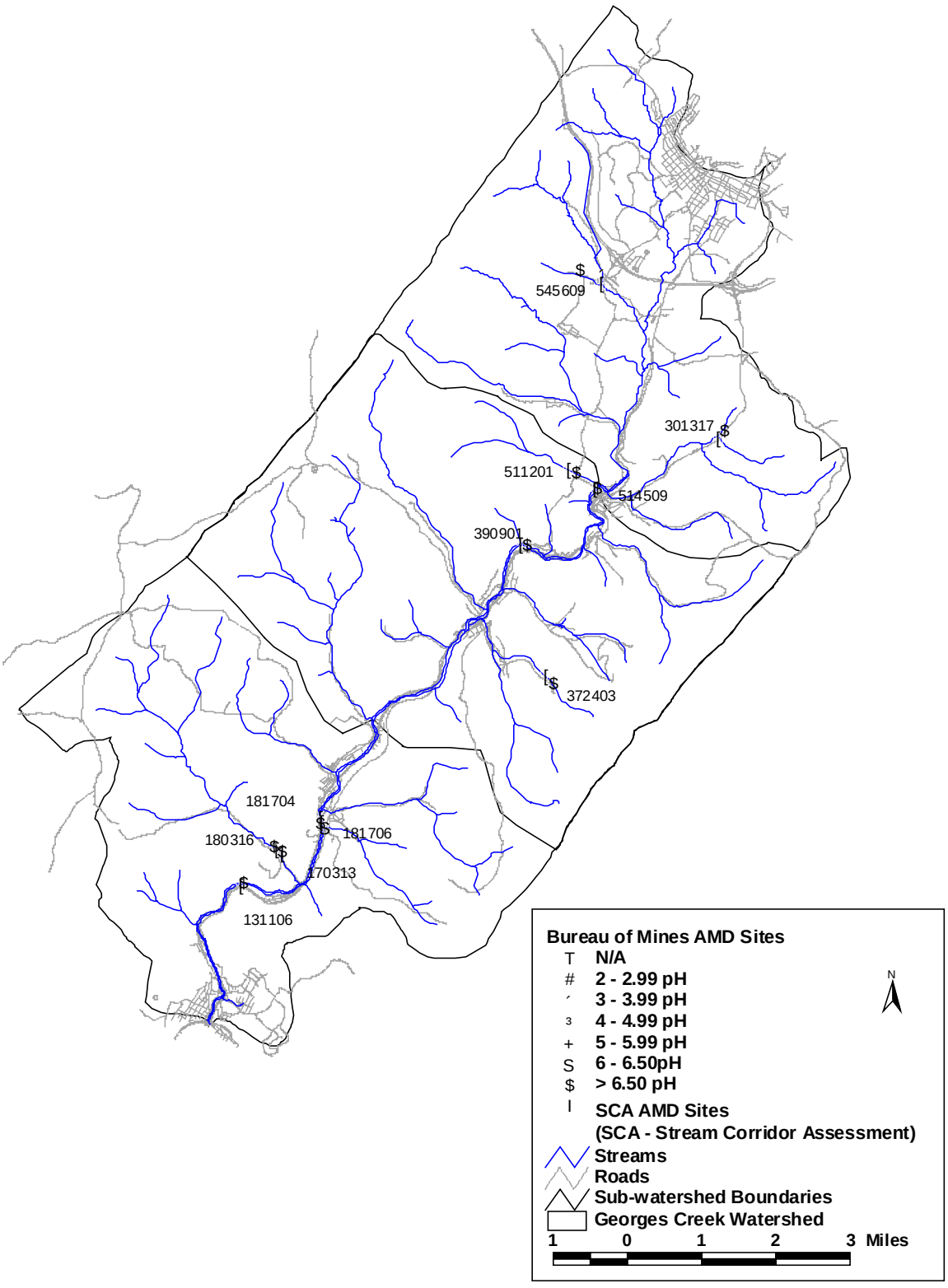

Figure 13a: Georges Creek BoM and SCA Corresponding AMD Sites.

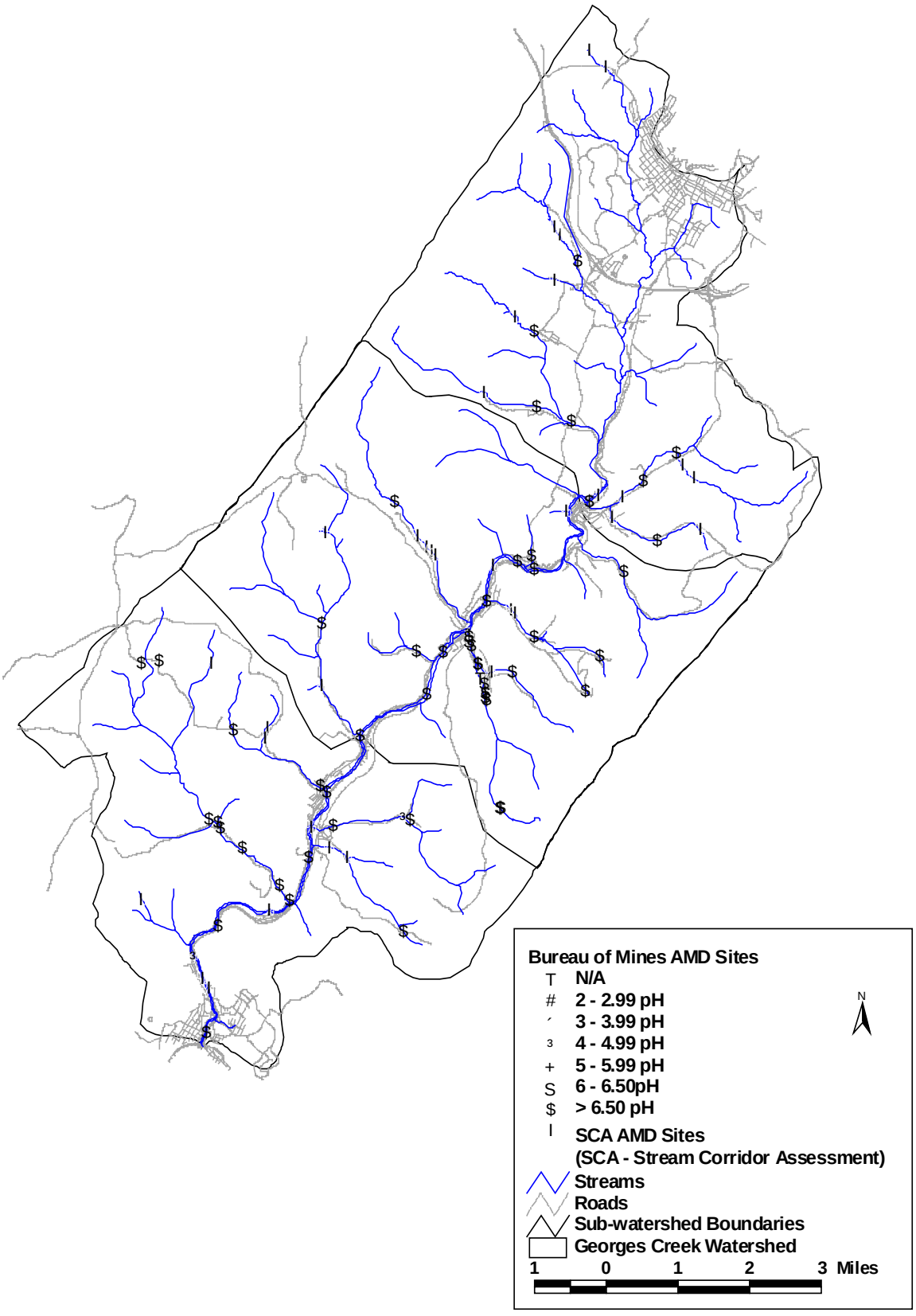

Figure 13b: Georges Creek BoM and SCA Non-corresponding AMD Sites.

Trash Dumping

Trash dumping data sheets are used to record the location of places where large amounts of trash have been dumped inside the stream corridor or to note places where trash tends to accumulate. The field survey crew found 28 sites where there was excessive trash, and their locations are shown in Figures 14b, 14c, and 14d. The sites were given severity ratings based on size, contents of trash, and impact on the stream. Severity ratings for trash dumping sites throughout the Georges Creek watershed can be found in Figure 14a. Most sites found were ranked as minor to moderate trash dumping sites.

Trash dumping sites in the Georges Creek watershed range in size form 1 to 40 truckloads, to 1 acre. Single site trash dumping sites were recorded 21 times, while large area dumping sites were recorded 7 times. Types of trash found include: residential (18 times), industrial (6 times), tires (4 times), and yard waste (3 times). Fifteen trash dumping sites were found on private land, and 5 were found on public land. Eight sites could not be identified as private or public. Two trash sites were found in Savage State Forest, two off county roads, and one by the Gilmore reservoir. Site 381303 was the only site given a severe rating. Here, an estimated 40 truckloads of clay pigeons were found on Jackson Run.

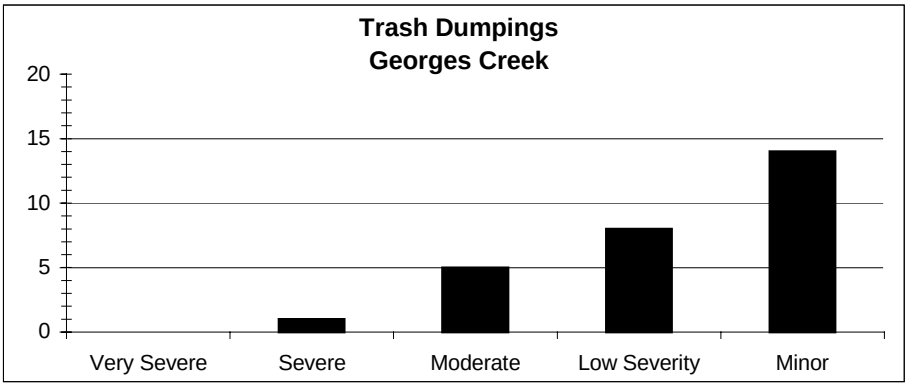

Figure 14a: Histograph showing the frequency of severity ratings given to trash dumping sites seen during Georges Creek SCA survey.

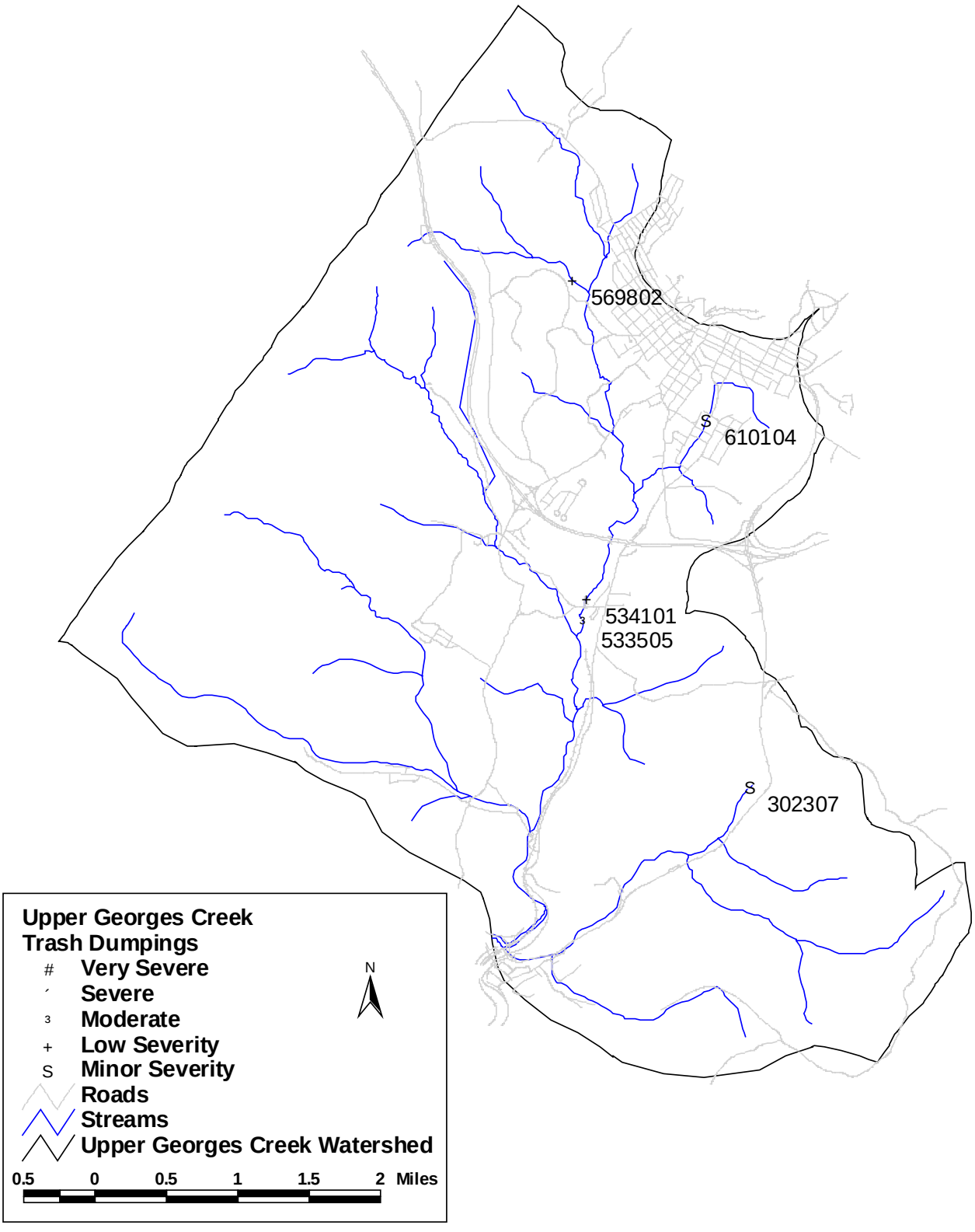

Figure 14b: Upper Georges Creek Trash Dumpings.

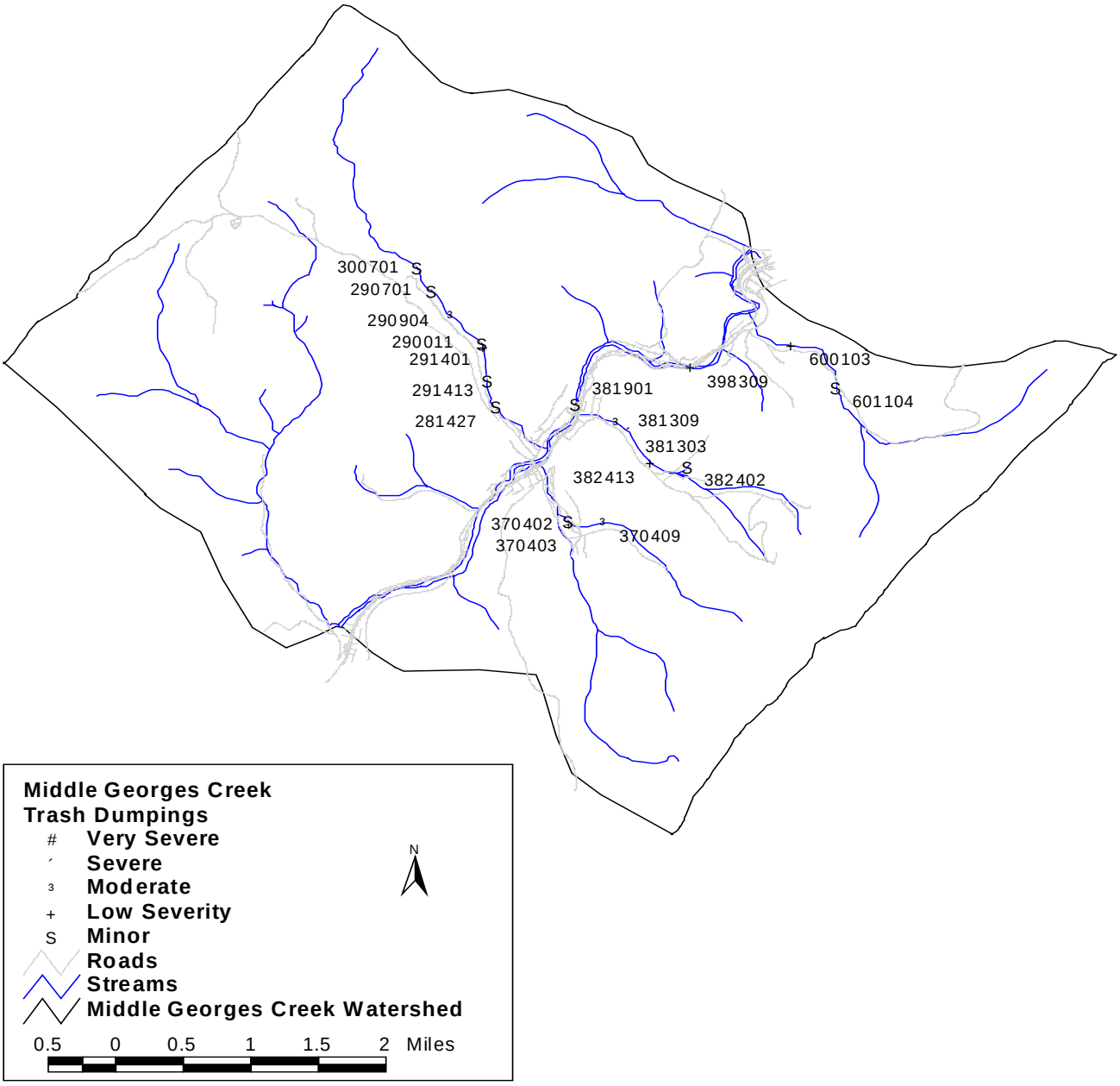

Figure 14c: Middle Georges Creek Trash Dumpings.

Figure 14d: Lower Georges Creek Trash Dumpings.

Debris Problems

Debris flows of rock and soil are a natural geomorphic process in high gradient valleys. However, they can be problematic if their frequency and magnitude has increased due to anthropogenic impacts. This category was added at the request of the watershed workgroup during the Neff Run survey, based on their experience with stream stability problems in the larger Georges Creek stream system. We have included woody debris and other materials in this category (Watershed Restoration Division 2000).

Twenty-five debris problem sites were recorded in the Georges Creek watershed. The locations of these sites can be viewed in Figures 15b, 15c, and 15d. Information was gathered on the type of material present, ponding or flow diversion, vegetative growth within the material, and erosion caused by the debris jam. Debris material identified in the survey included: woody debris (17), boulders (6), cobble (3), silts (1), and metal pipe (1). Fifteen sites were stated to have not been recent problems, and 5 of these sites were found to have had vegetation growing within the debris. Vegetation included grasses (2), shrubs (2), and small trees (1). Ponding or some flow diversions were found at 7 sites, while erosion caused by debris was found at 12 sites. Severities given to the sites can be seen in Figure 15a. No debris sites were recorded in the lower third of the Georges Creek watershed.

Upper Watershed

Sixteen debris problems were identified in the upper part of the watershed. Of these 16, none were given very severe ratings, and 4 were given severe ratings. Site 430103 is a 200ft. long woody debris and silt blockage found to be a recent problem, that is forming a pond and eroding the stream banks of Staub Run. The pond is 5ft. long by 10ft. wide by 1ft. deep. Site 652707 is a 10ft. long woody debris site that is ponding and eroding on the mainstem. The pond is 10ft. long by 25ft. wide by 1ft. deep. Site NR601205 is a 40ft. long boulder jam that is ponding and eroding on Dans Tributary on Neff Run. The pond is 3ft. long by 5ft. wide by 1ft. deep. Site NR701308 is a 20ft. long woody debris jam that is ponding and eroding on Neff Run. The pond is 10ft. long by 3ft. wide by 5ft. deep.

Middle Watershed

Nine debris problem sites were found in the middle portion of the watershed. One problem in the middle watershed was given a very severe rating, and none were given severe ratings. Site 360501 is a 20 ft. long woody debris jam that is ponding and eroding on Jackson Run. The pond is 50ft. long by 50ft. wide by 1ft. deep.

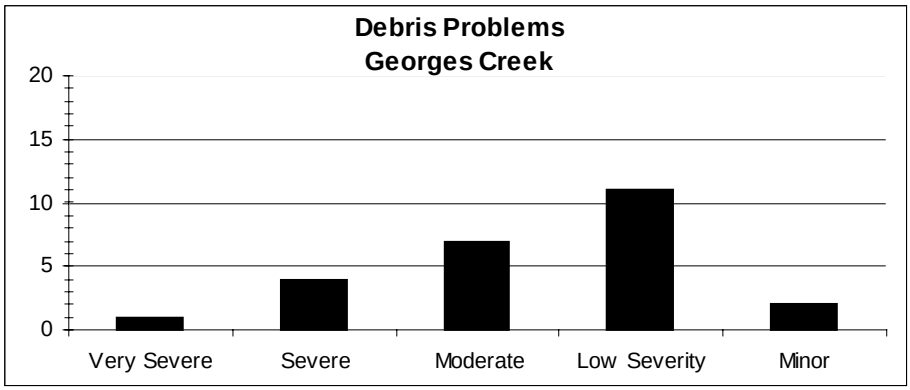

Figure 15a: Histograph showing the frequency of severity ratings given to Debris problem sites seen during Georges Creek SCA survey.

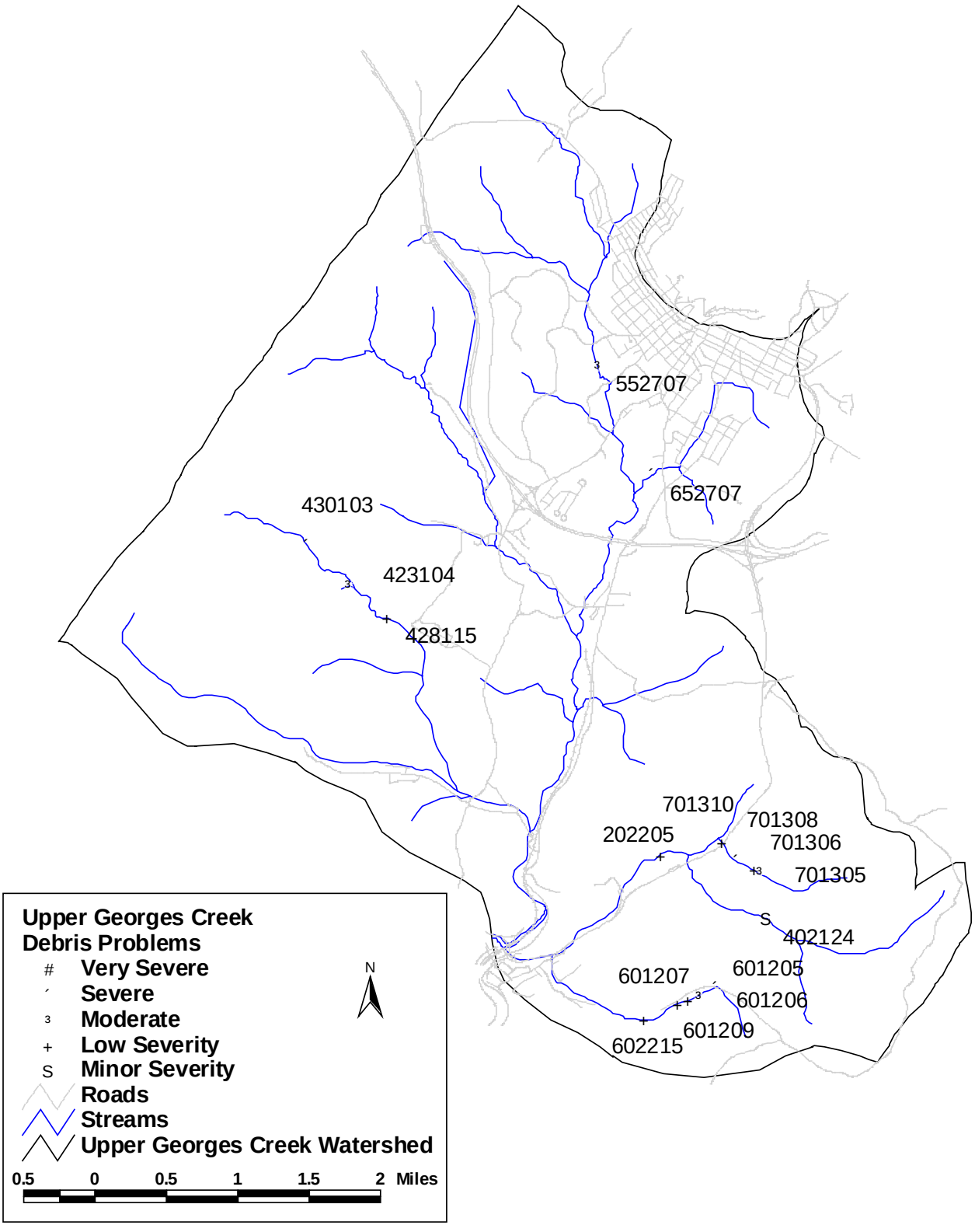

Figure 15b: Upper Georges Creek Debris Problems.

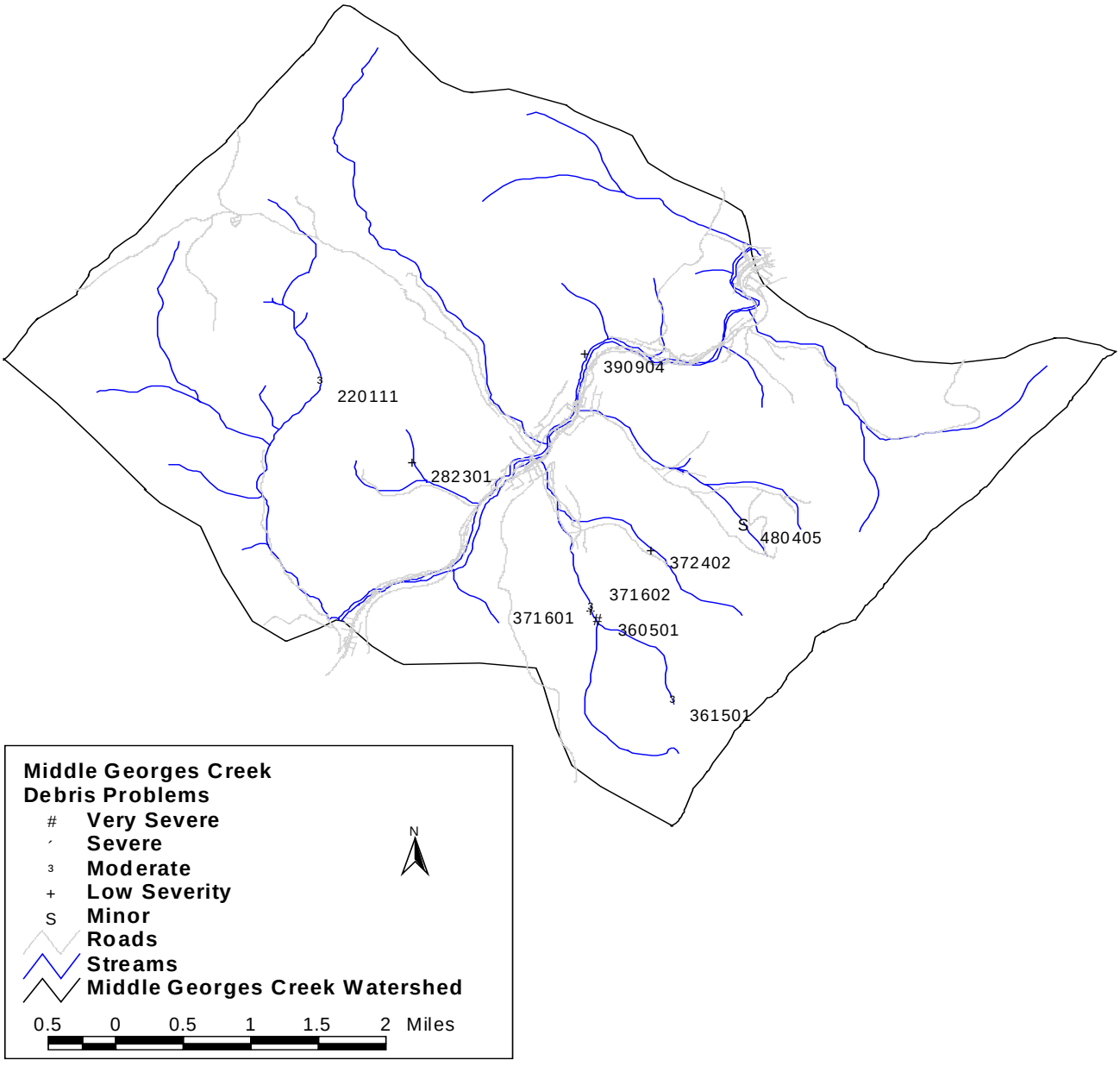

Figure 15c: Middle Georges Creek Debris Problems.

In/Near Stream Construction

In or near stream construction data sheets are used to document the locations of 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 an SCA survey. Survey teams report evidence of inadequate sediment control measures or fine sediment pollution from the site that has affected the stream. In or near stream construction was reported at 5 sites during the Georges Creek survey. Two sites were found on the middle mainstem segment. One site was on the lower mainstem segment, one on Unnamed Tributary #7, and one site on Winebrenner Run. The locations of in/near stream construction sites are shown in Figures 16b, 16c, and 16d.

Most sites were given a moderate to low severity rating (Figure 16a). One site (182703) was given a very severe rating. At Site 182703 survey crews reported that the Carl Belt Co. was constructing a wall in the lower Georges Creek mainstem. Field crews indicated that they did not believe the construction site had adequate sediment control and reported excess sediment washing into Georges Creek.

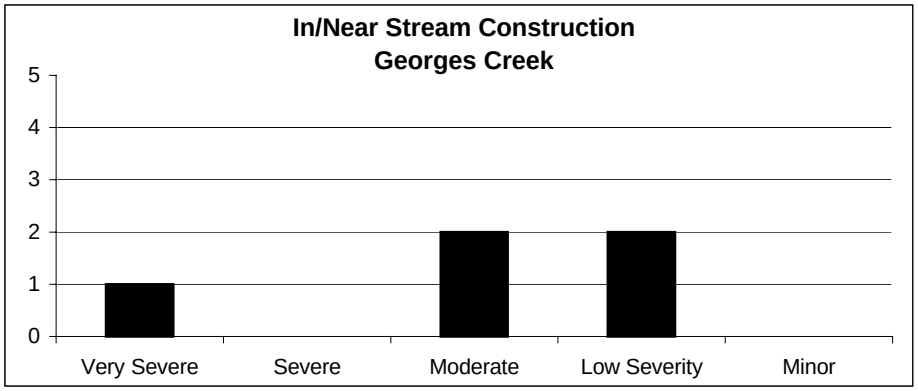

Figure 16a: Histograph showing the frequency of severity ratings given to in/near stream construction seen during Georges Creek SCA survey.

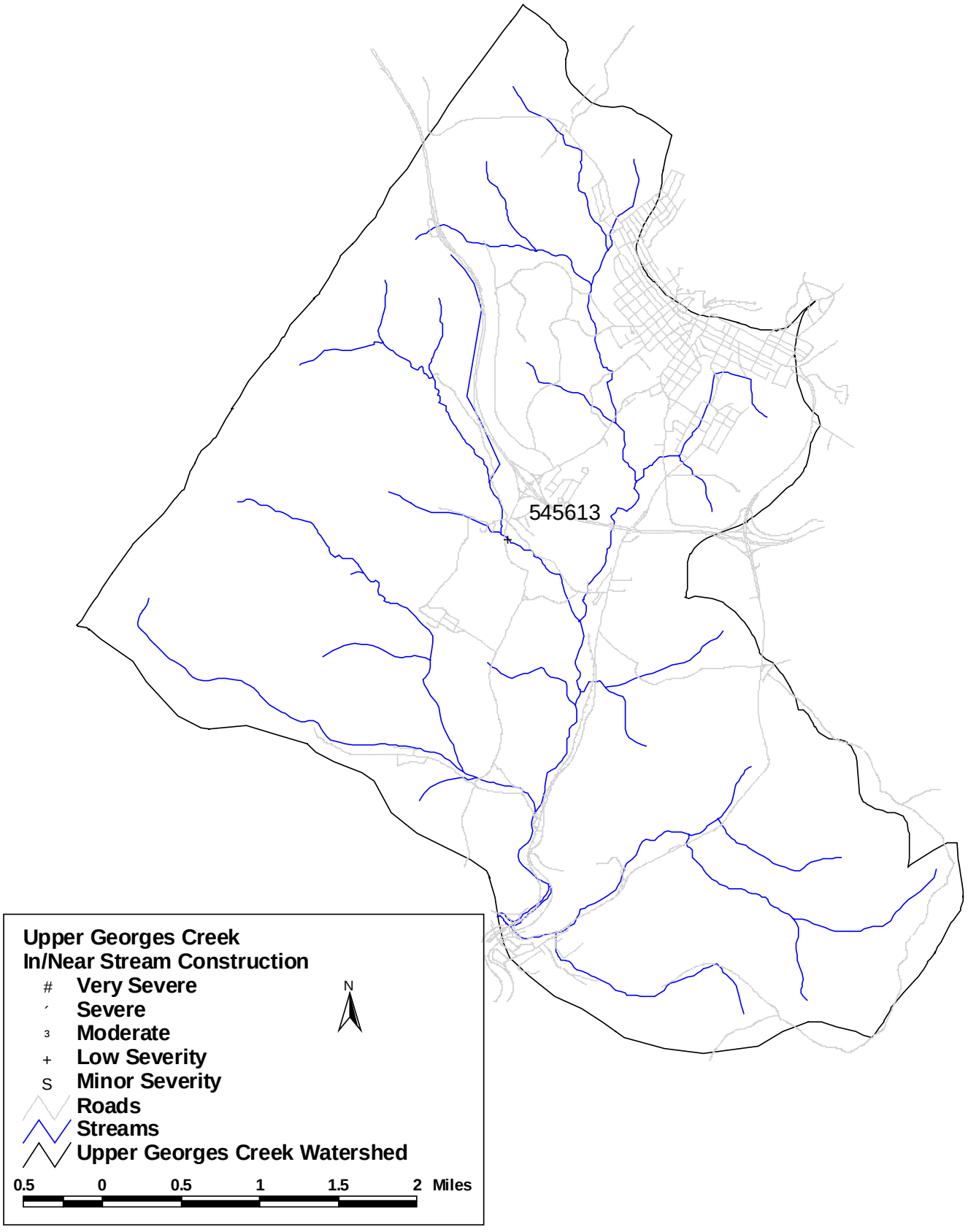

Figure 16b: Upper Georges Creek In/Near Stream Construction.

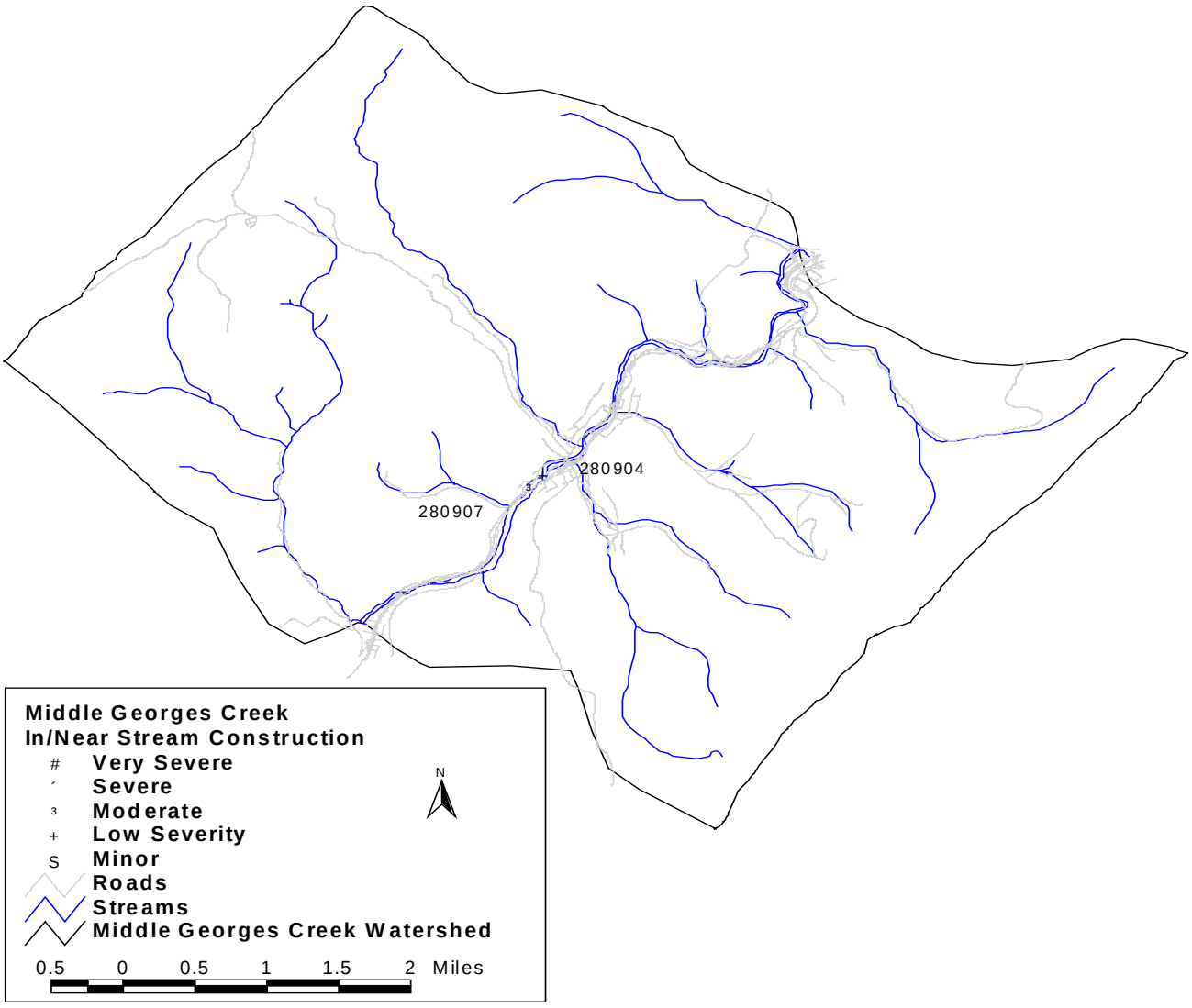

Figure 16c: Middle Georges Creek In/Near Stream Construction.

Figure 16d: Lower Georges Creek In/Near Stream Construction.

Representative Sites

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

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

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

Representative site evaluations were done at approximately ½ mile intervals along the stream. One hundred seventy-five representative data sheets were filled out during this survey. Locations of representative sites are shown in Figures 17a, 17b, and 17c, and the data is presented in Appendix B.

The waterways flowing through the urban areas received low ratings for conditions such as channel alteration, shelter for fish, and bank and riparian vegetation. This is common in areas where there is a tendency to build in a flood plain (one of the only flat areas) and maintain lawns. Other parameters, including sediment deposition, channel flow and bank condition measured more in the suboptimal and marginal range indicating the watershed does have erosion problems. These findings are not surprising due to the high amount of gradient in the stream, people in the watershed, and manipulations to the channel flow.

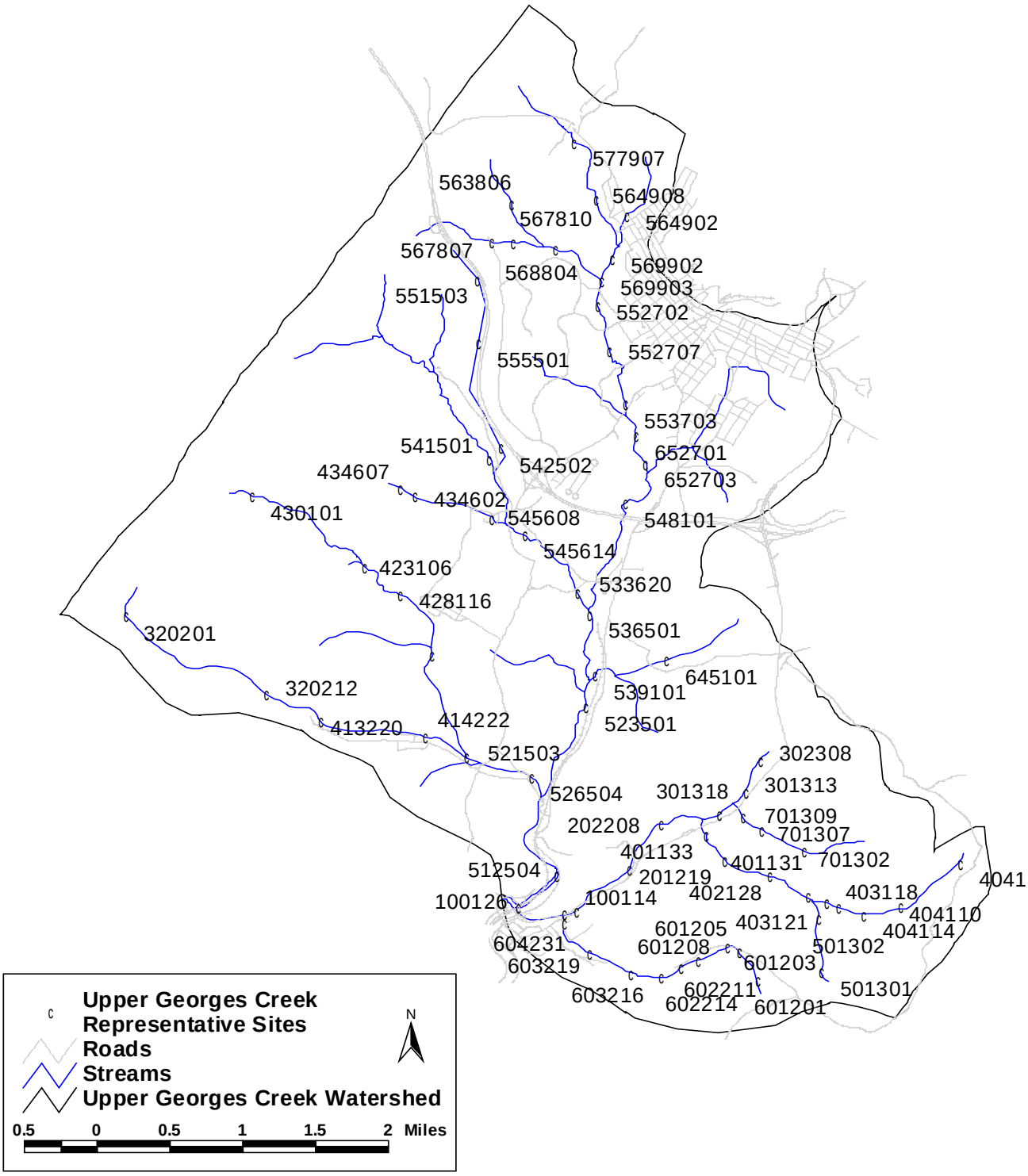

Figure 17a: Upper Georges Creek Representative Sites.

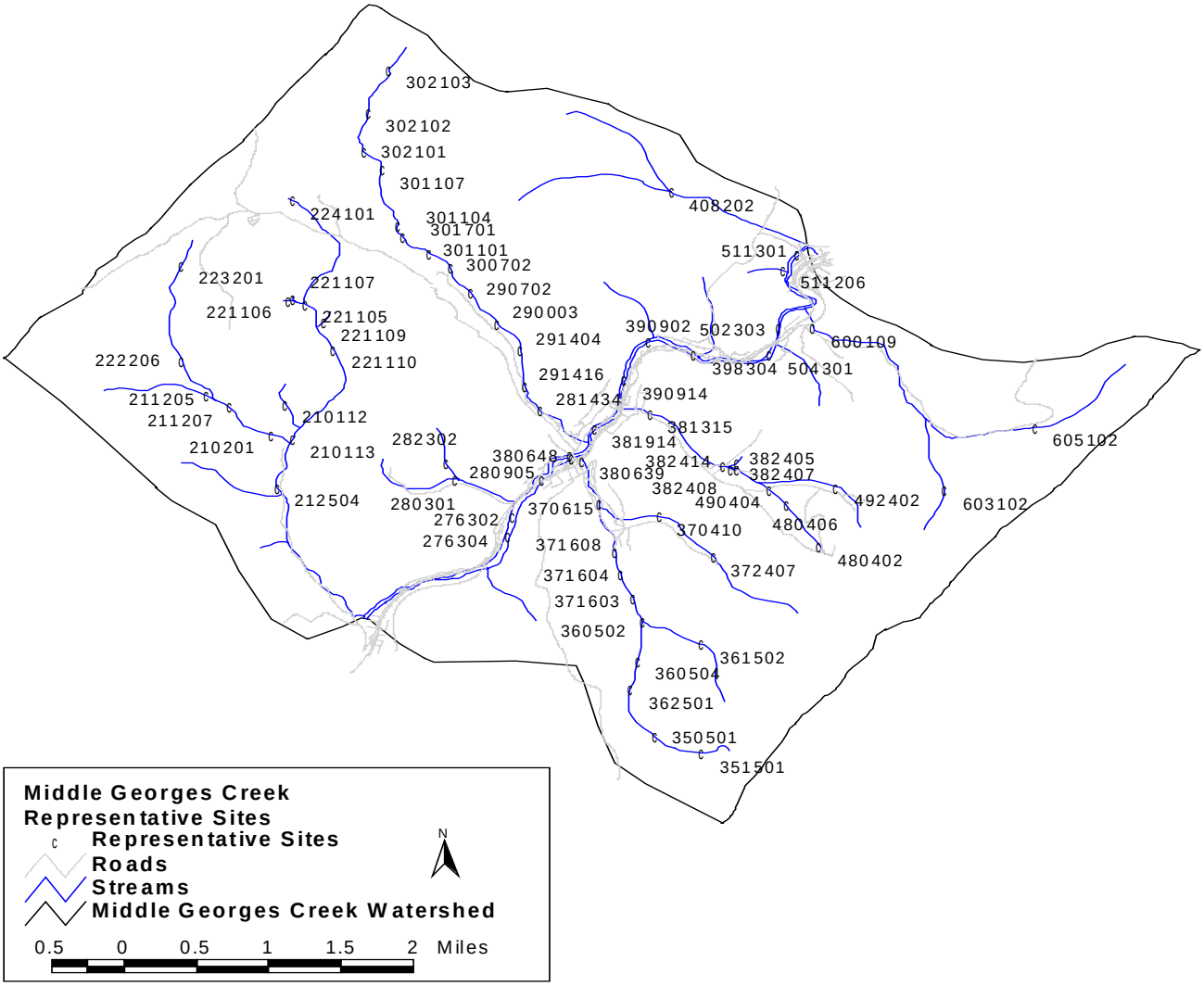

Figure 17b: Middle Georges Creek Representative Sites.

Figure 17c: Lower Georges Creek Representative Sites.

DISCUSSION

One of the main objectives of the Georges Creek Stream Corridor Assessment survey was to walk the stream network quickly in order to identify potential environmental problems in or along the edge of the streams. The survey was originally done in the Winter/Spring of 2001 and over 108 miles of stream were walked. The resurvey took place in the Fall/Winter/Spring of 2002/2002. During the SCA survey, 1058 potential environmental problem sites were identified. These include: 225 channel alterations, 156 erosion sites, 129 inadequate buffers, 111 channel alterations, 102 fish migration barriers, 91 flood prone structures, 54 exposed pipes, 48 unusual conditions, 47 acid mine drainages, 28 trash dumpings, 25 debris problems, and 5 in/near stream construction sites. Thirty-seven comments and 175 representative sites were also recorded.

Pipe outfalls were the most commonly reported problem during this survey. Field crews found most of the pipe outfalls in urban or settled areas in the watershed. Most of the pipes were found on the mainstem. As discussed earlier, some of these pipes have sewage leaks or other discharges, while most were of a stormwater nature.

Pipe outfalls are a bad problem in the Georges Creek watershed, but the problem with the most impact on the system is acid mine drainage. While AMD does not change the geomorphic processes of the stream, the biological integrity is affected greatly. AMD is widespread throughout the Appalachian region and Georges Creek is no exception. As stated earlier, this survey should not be used to determine where all AMD could be found in the watershed, only where it is visible to the eye. Many more extensive surveys on AMD are being completed in the area by a plethora of groups.

While the streams in the Georges Creek Watershed have been extensively polluted with AMD and sewage, there were also extensive erosion problems, channelized streams and inadequately buffered stream banks in the watershed. The high incident of erosion problems is due in a large part to the high gradient of streams and high flows associated with snow melt.

As mentioned earlier, the Maryland Dept. of Natural Resources has formed a partnership with Allegany County to develop a Watershed Restoration Action Strategy (WRAS) for the Georges Creek watershed. Results from this survey will be combined with other information about the area to help establish priorities for the types and location of restoration projects that will be pursued in the Georges Creek watershed in the future. Information on the Georges Creek Watershed Action Strategy can be found on DNR's site (www.dnr.state.md.us/watersheds/surf/proj/wras.html) or by contacting the Allegany County Department of Planning in Cumberland, Maryland.

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Appendix A

Listing of sites by site number

Appendix A - Upper Georges Creek Watershed

Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Channel Alteration	GC542501	1	4	1	221119.83863	232336.21277	Winebrenner Run
Channel Alteration	GC567809	1	5	2	223442.29033	232162.24247	Sand Spring Run
Erosion Site	GC533504	1	3	2	219327.07468	233462.60325	Mainstem 1
Erosion Site	GC542501	1	4	1	221119.04379	232335.70982	Winebrenner Run
Exposed Pipe	GC552701	1	2	1	222791.26007	233496.75956	Sand Spring Run
Fish Barrier	NR202201	1	5	1	216438.263570	234485.357590	Neff Run
Fish Barrier	NR604233	1	4	1	215386.809240	233122.760240	Neff Run
Inadequate Buffers	GC413219	1	3	2	217798.56933	230355.87237	Woodland Creek
Inadequate Buffers	GC434606	1	2	2	220305.86833	231525.73724	Winebrenner Run
Inadequate Buffers	GC514503	1	3	2	215493.41001	232632.62343	Mainstem 1
Inadequate Buffers	GC523502	1	3	2	217852.19092	233355.10689	Mainstem 1
Inadequate Buffers	GC545602	1	3	2	220227.57444	232058.52093	Winebrenner Run
Inadequate Buffers	GC569901	1	3	3	223255.72591	233648.24379	Sand Spring Run
Inadequate Buffers	GC610102	1	1	2	221894.714770	234953.981320	Mainstem 1
Inadequate Buffers	NR100124	1	4	1	215321.09832	232719.96970	Neff Run
Pipe Outfall	GC552710	1	4	1	221936.68109	233774.70084	Sand Spring Run
Pipe Outfall	GC652705	1	4	1	220701.12914	234116.79114	Mainstem 1
Unusual Condition	GC536601	1	5	4	218900.69083	233380.17398	Mainstem 1
Channel Alteration	GC320210	2	5	2	218067.51085	229747.84075	Woodland Creek
Channel Alteration	GC413218	2	4	1	217814.78147	230347.76630	Woodland Creek
Channel Alteration	NR100123	2	5	1	215338.65169	232717.44170	Neff Run
Channel Alteration	NR302310	2	3	1	216996.50985	235126.38833	Neff Run
Debris Problem	GC430103	2	3	2	220050.047620	230345.891070	Staub Run
Debris Problem	GC652707	2	1	3	220857.232040	234239.396680	Mainstem 1
Debris Problem	NR601205	2	1	4	214899.916050	234928.572180	Matthews Run
Debris Problem	NR701308	2	2	5	216417.906450	235179.065650	Neff Run
Erosion Site	GC320208	2	5	5	218323.88678	229385.28408	Woodland Creek
Erosion Site	GC545615	2	4	3	219886.62461	232702.66610	Winebrenner Run
Erosion Site	GC552707	2	5	2	222108.53173	233629.93800	Sand Spring Run
Erosion Site	GC555502	2	3	2	222129.01428	232157.38439	Winebrenner Run
Erosion Site	GC555533	2	4	1	221518.12011	232134.97176	Winebrenner Run
Erosion Site	NR100121	2	3	1	215353.22084	232998.94868	Neff Run
Exposed Pipe	GC423109	2	3	2	219481.84551	230954.00155	Staub Run
Exposed Pipe	GC569904	2	5	3	222915.26684	233529.23651	Sand Spring Run
Exposed Pipe	GC652703	2	1	1	220763.92438	234025.12790	Sand Spring Run
Exposed Pipe	NR201221	2	5	1	215701.49725	233587.88761	Neff Run
Fish Barrier	GC413217	2	5	1	217805.939080	230351.450630	Woodland Creek
Fish Barrier	GC423111	2	4	1	219434.331210	231053.083940	Staub Run
Fish Barrier	NR100107	2	4	1	215499.961320	233293.745610	Neff Run
Fish Barrier	NR202208	2	1	1	216461.608460	234198.215390	Neff Run
Fish Barrier	NR401136	2	4	1	216389.239290	234578.737160	Matthews Run
Fish Barrier	NR601206	2	4	4	214902.974990	234770.075240	Matthews Run
Fish Barrier	NR601207	2	4	4	214865.500550	234655.309770	Matthews Run
Fish Barrier	NR601209	2	4	4	214816.315350	234532.346770	Matthews Run
Fish Barrier	NR701310	2	3	1	216685.719440	234975.600350	Neff Run
Inadequate Buffers	GC512503	2	3	4	216254.94784	232675.50278	Mainstem 1
Inadequate Buffers	GC527502	2	3	3	216685.01473	232830.93548	Mainstem 1
Inadequate Buffers	NR100110	2	3	1	215483.83633	233284.46717	Neff Run
Inadequate Buffers	NR201217	2	3	1	216099.18944	233899.82028	Neff Run
Inadequate Buffers	NR202213	2	2	1	216200.90069	233965.93259	Neff Run
Pipe Outfall	GC541603	2	4	1	220288.01629	231710.73156	Winebrenner Run
Pipe Outfall	GC545609	2	5	1	220075.99515	232471.64627	Winebrenner Run
Pipe Outfall	GC552709	2	5	1	221975.02918	233678.14420	Sand Spring Run
Pipe Outfall	GC555516	2	2	2	221420.44338	231869.08189	Winebrenner Run

Appendix A - Upper Georges Creek Watershed

Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Pipe Outfall	GC652708	2	4	3	220891.05338	234292.10626	Mainstem 1
Pipe Outfall	NR201222	2	5	1	215641.59389	233505.92481	Neff Run
Pipe Outfall	NR404108	2	3	4	215452.47850	236936.44801	Matthews Run
Pipe Outfall	NR603226	2	4	1	215112.14398	233135.73325	Matthews Run
Unusual Condition	GC545617	2	5	3	219742.76010	232922.05915	Winebrenner Run
Unusual Condition	GC652703	2	5	1	220764.06715	234025.30635	Sand Spring Run
Unusual Condition	GC652706	2	5	5	220790.35285	234137.02058	Mainstem 1
Unusual Condition	GC652710	2	5	5	220925.56247	234362.77107	Mainstem 1
Channel Alteration	GC514505	3	3	3	215490.78041	232587.77428	Neff Run
Channel Alteration	GC539102	3	4	2	218350.441390	234075.727620	Vale Run
Channel Alteration	GC577905	3	4	1	224922.11738	232941.03556	Sand Spring Run
Channel Alteration	NR100101	3	4	1	215674.13058	233492.26146	Neff Run
Channel Alteration	NR201218	3	5	3	215983.10963	233833.77048	Neff Run
Channel Alteration	NR201219	3	3	3	215913.05985	233806.71573	Neff Run
Channel Alteration	NR401135	3	4	1	214904.34307	233323.37227	Matthews Run
Channel Alteration	NR603227	3	4	1	215054.95009	233137.74036	Matthews Run
Channel Alteration	NR604229	3	5	1	215128.50236	233067.69058	Matthews Run
Debris Problem	GC423104	3	4	4	219853.876500	230812.494480	Staub Run
Debris Problem	GC552707	3	1	3	222112.405420	233627.787590	Sand Spring Run
Debris Problem	NR601206	3	4	4	214884.886440	234773.266230	Matthews Run
Debris Problem	NR701305	3	3	5	216317.709060	235454.608460	Neff Run
Erosion Site	GC548102	3	3	3	220330.500960	233848.545710	Mainstem 1
Erosion Site	NR100125	3	3	1	215321.72152	232618.89237	Neff Run
Erosion Site	NR201220	3	4	1	215757.44312	233641.68722	Neff Run
Erosion Site	NR202202	3	4	4	216580.95187	234563.11317	Neff Run
Erosion Site	NR302306	3	3	4	217408.19328	235470.84469	Neff Run
Erosion Site	NR402127	3	3	4	215802.63567	235429.30378	Matthews Run
Erosion Site	NR402130	3	3	5	215988.42728	234987.42103	Matthews Run
Erosion Site	NR601204	3	4	5	214872.88278	235039.87968	Matthews Run
Erosion Site	NR601206	3	2	4	214909.92452	234772.64998	Matthews Run
Erosion Site	NR603216	3	4	3	214740.59085	233703.73116	Matthews Run
Erosion Site	NR603217	3	4	3	214703.54911	233812.21055	Matthews Run
Erosion Site	NR604230	3	3	2	215187.54911	233812.21055	Matthews Run
Erosion Site	NR701304	3	3	5	216353.22559	235344.95355	Neff Run
Erosion Site	NR701305	3	3	5	216302.86914	235455.73775	Neff Run
Exposed Pipe	GC555507	3	2	2	221717.70258	231737.72116	Winebrenner Run
Exposed Pipe	GC555509	3	1	2	221700.84914	231747.60202	Winebrenner Run
Exposed Pipe	GC555513	3	2	1	221588.40315	231761.91653	Winebrenner Run
Exposed Pipe	GC555514	3	1	1	221581.78640	231757.10596	Winebrenner Run
Exposed Pipe	GC652702	3	4	2	220936.50108	233889.49721	Sand Spring Run
Exposed Pipe	NR601206	3	4	3	214896.22551	234752.43444	Matthews Run
Fish Barrier	GC320209	3	5	2	218086.669370	229730.155960	Woodland Creek
Fish Barrier	GC423108	3	4	2	219490.333030	230945.501490	Staub Run
Fish Barrier	GC430102	3	4	4	220325.175330	229823.414810	Staub Run
Fish Barrier	GC434601	3	4	3	220398.687000	231430.439630	Winebrenner Run
Fish Barrier	GC434605	3	4	1	220330.012410	231545.452500	Winebrenner Run
Fish Barrier	NR602215	3	4	4	214671.101900	234118.956870	Matthews Run
Inadequate Buffers	GC523503	3	4	3	217628.16863	233237.20042	Mainstem 1
Inadequate Buffers	GC526505	3	5	1	216953.15408	232812.73713	Woodland Creek
Inadequate Buffers	GC541501	3	1	2	220817.93013	232294.63873	Winebrenner Run
Inadequate Buffers	GC555510	3	1	2	221616.56081	231769.40264	Winebrenner Run
Inadequate Buffers	GC564904	3	3	2	223678.90853	233806.27981	Sand Spring Run
Inadequate Buffers	NR603227	3	3	1	215046.47793	233157.32810	Matthews Run
Inadequate Buffers	NR604229	3	3	1	215112.59025	233091.21579	Matthews Run

Appendix A - Upper Georges Creek Watershed

Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Inadequate Buffers	NR604235	3	2	1	215387.21064	233131.90029	Neff Run
Pipe Outfall	GC413214	3	3	2	217843.72848	230282.25464	Woodland Creek
Pipe Outfall	GC413217	3	4	1	217828.49321	230320.34282	Woodland Creek
Pipe Outfall	GC423107	3	1	2	219503.59662	230927.81671	Staub Run
Pipe Outfall	GC448501	3	2	2	221988.55594	231552.44006	Winebrenner Run
Pipe Outfall	GC521506	3	4	1	217155.16679	232250.98303	Woodland Creek
Pipe Outfall	GC551502	3	4	1	223039.29160	232105.73357	Winebrenner Run
Pipe Outfall	GC577909	3	3	3	224236.97607	233378.07528	Sand Spring Run
Pipe Outfall	NR100103	3	2	1	215560.30556	233383.99233	Neff Run
Pipe Outfall	NR100104	3	3	2	215519.29022	233377.22679	Neff Run
Pipe Outfall	NR100108	3	3	1	215485.42008	233330.42442	Neff Run
Pipe Outfall	NR100117	3	4	1	215410.04534	233159.83363	Neff Run
Pipe Outfall	NR201218	3	1	1	215952.35062	233883.45923	Neff Run
Pipe Outfall	NR201220	3	3	1	215756.75234	233645.10027	Neff Run
Pipe Outfall	NR202214	3	1	1	216286.01160	233991.08510	Neff Run
Pipe Outfall	NR212216	3	1	1	216184.85050	233939.76072	Neff Run
Pipe Outfall	NR301311	3	1	1	216896.41028	235205.87037	Neff Run
Pipe Outfall	NR301314	3	1	1	216782.43140	235129.39617	Neff Run
Pipe Outfall	NR301315	3	1	1	216727.80555	235111.55997	Neff Run
Pipe Outfall	NR302301	3	1	1	217521.09938	235597.31736	Neff Run
Pipe Outfall	NR302302	3	1	1	217438.717890	235607.752350	Neff Run
Pipe Outfall	NR302302	3	1	1	217438.71789	235607.75235	Neff Run
Pipe Outfall	NR302303	3	1	1	217399.72398	235612.69524	Neff Run
Pipe Outfall	NR302304	3	1	1	217422.24159	235524.82165	Neff Run
Pipe Outfall	NR603225	3	1	1	215090.47852	233154.99143	Matthews Run
Trash Dumping	GC533505	3	1	2	233461.10138	219172.46862	Mainstem 1
Unusual Condition	GC545607	3	4	1	220102.35616	232321.87617	Winebrenner Run
Unusual Condition	GC545610	3	5	3	220049.23236	232446.75720	Winebrenner Run
Unusual Condition	GC552705	3	3	2	222225.45339	233588.74521	Sand Spring Run
Unusual Condition	NR100101	3	4	1	215554.49799	233372.12714	Neff Run
Unusual Condition	NR302310	3	3	1	217002.95865	235136.41756	Neff Run
Channel Alteration	GC423113	4	4	3	219279.02874	231121.15229	Staub Run
Channel Alteration	GC428501	4	4	3	218465.48436	231659.95475	Staub Run
Channel Alteration	GC512501	4	4	3	216504.02526	232835.41343	Mainstem 1
Channel Alteration	GC555501	4	5	1	222210.40483	232169.01161	Winebrenner Run
Channel Alteration	GC555516	4	2	2	221420.84113	231869.63716	Winebrenner Run
Channel Alteration	GC652702	4	5	2	220936.97469	233889.78790	Sand Spring Run
Channel Alteration	NR201220	4	5	1	215758.95034	233649.10373	Neff Run
Channel Alteration	NR201221	4	4	1	215716.92048	233579.05395	Neff Run
Channel Alteration	NR201222	4	5	1	215670.81536	233488.84040	Neff Run
Channel Alteration	NR603224	4	1	1	215026.93018	233176.26774	Matthews Run
Channel Alteration	NR701310	4	4	1	216611.27851	235012.65336	Neff Run
Debris Problem	GC428115	4	1	1	219219.876240	231248.513780	Staub Run
Debris Problem	NR202205	4	4	3	216493.054490	234357.447080	Neff Run
Debris Problem	NR601207	4	2	4	214844.807480	234648.019500	Matthews Run
Debris Problem	NR601209	4	4	4	214799.718660	234532.792510	Matthews Run
Debris Problem	NR602215	4	4	4	214594.314020	234137.012830	Matthews Run
Debris Problem	NR701306	4	3	5	216342.758410	235399.499900	Neff Run
Debris Problem	NR701310	4	1	1	216633.330830	235018.749830	Neff Run
Erosion Site	GC434604	4	3	1	220333.59350	231536.65762	Winebrenner Run
Erosion Site	GC521502	4	4	3	217240.64799	232046.85933	Woodland Creek
Erosion Site	GC521504	4	2	1	217225.91067	232074.86024	Woodland Creek
Erosion Site	GC526505	4	2	1	216954.74396	232813.20004	Woodland Creek
Erosion Site	GC545608	4	3	2	220100.56587	232322.10315	Winebrenner Run

Appendix A - Upper Georges Creek Watershed

Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Erosion Site	GC552703	4	3	1	22243.81666	233577.61216	Sand Spring Run
Erosion Site	GC555508	4	2	3	221704.66724	231731.30257	Winebrenner Run
Erosion Site	GC563805	4	3	2	223533.11030	232690.12306	Sand Spring Run
Erosion Site	GC564904	4	3	3	223677.78675	233798.86409	Sand Spring Run
Erosion Site	GC564907	4	5	4	224163.65914	233377.57143	Sand Spring Run
Erosion Site	GC568803	4	3	1	223312.81136	233046.16529	Sand Spring Run
Erosion Site	GC577908	4	4	4	224315.60173	233406.26476	Sand Spring Run
Erosion Site	NR100109	4	3	4	215506.37338	233307.76446	Neff Run
Erosion Site	NR100119	4	2	1	215410.96688	233139.54774	Neff Run
Erosion Site	NR202203	4	4	4	216590.99466	234505.36713	Neff Run
Erosion Site	NR202204	4	4	5	216601.03745	234457.66388	Neff Run
Erosion Site	NR202206	4	4	5	216500.60956	234246.76529	Neff Run
Erosion Site	NR202209	4	4	4	216410.22445	234143.82670	Neff Run
Erosion Site	NR402123	4	3	5	215712.25057	235579.94562	Matthews Run
Erosion Site	NR402129	4	3	4	215938.21334	235075.29544	Matthews Run
Erosion Site	NR404106	4	4	4	215623.47577	236946.71183	Matthews Run
Erosion Site	NR404117	4	3	4	215390.88130	236220.17346	Matthews Run
Erosion Site	NR601210	4	4	4	214777.63259	234457.79518	Matthews Run
Erosion Site	NR701303	4	2	5	215187.54911	235697.44872	Neff Run
Erosion Site	NR701308	4	3	5	216431.27810	235186.33073	Neff Run
Exposed Pipe	GC526501	4	3	2	217098.40162	232455.19411	Woodland Creek
Exposed Pipe	GC536504	4	4	2	218331.35834	233367.47151	Mainstem 1
Exposed Pipe	GC541502	4	3	1	220701.70158	232334.59806	Winebrenner Run
Exposed Pipe	GC652709	4	4	1	220927.72027	234359.06995	Mainstem 1
Exposed Pipe	NR100105	4	4	2	21515.66531	233323.59330	Neff Run
Exposed Pipe	NR100107	4	4	1	215495.01731	233298.81571	Neff Run
Exposed Pipe	NR604229	4	2	1	21489622551	234752.43444	Neff Run
Fish Barrier	GC320204	4	4	5	218575.948440	228617.488210	Woodland Creek
Fish Barrier	GC320205	4	4	5	218318.045320	229002.132290	Woodland Creek
Fish Barrier	GC320211	4	3	2	218057.194730	229758.156870	Woodland Creek
Fish Barrier	GC541603	4	4	1	220289.054440	231711.498430	Winebrenner Run
Fish Barrier	GC545601	4	4	2	220242.625040	232052.368290	Winebrenner Run
Fish Barrier	GC545604	4	4	1	220219.158450	232101.473610	Winebrenner Run
Fish Barrier	GC545605	4	5	1	220208.181180	232120.181530	Winebrenner Run
Fish Barrier	GC545608	4	4	1	220103.619170	232321.721600	Winebrenner Run
Fish Barrier	GC545610	4	4	1	220049.481300	232445.948940	Winebrenner Run
Fish Barrier	GC569801	4	3	2	223010.663870	233455.749930	Sand Spring Run
Fish Barrier	NR402126	4	4	4	215793.944500	235475.181080	Matthews Run
Fish Barrier	NR403119	4	4	4	215407.882500	236119.545680	Matthews Run
Fish Barrier	NR403120	4	2	4	215431.524890	236044.678090	Matthews Run
Fish Barrier	NR404102	4	3	5	215947.717220	237305.605920	Matthews Run
Fish Barrier	NR404103	4	4	5	215947.717220	237305.605920	Matthews Run
Fish Barrier	NR404105	4	4	4	215752.667450	237043.569360	Matthews Run
Fish Barrier	NR404106	4	4	4	215634.455470	236962.791170	Matthews Run
Fish Barrier	NR404108	4	3	4	215518.213680	236889.893780	Matthews Run
Fish Barrier	NR404109	4	3	4	215472.899090	236862.310980	Matthews Run
Fish Barrier	NR404111	4	4	4	215455.167290	236722.426800	Matthews Run
Fish Barrier	NR404112	4	4	4	215453.197090	236694.844010	Matthews Run
Fish Barrier	NR404113	4	4	4	215433.495090	236659.380410	Matthews Run
Fish Barrier	NR404115	4	2	4	215390.150700	236367.790850	Matthews Run
Fish Barrier	NR404116	4	3	4	215390.150700	236367.790850	Matthews Run
In/Near Stream Construction	GC545613	4	3	3	219964.182760	232557.40346	Winebrenner Run
Inadequate Buffers	GC428117	4	1	2	219041.34923	231493.79184	Staub Run
Inadequate Buffers	GC521505	4	3	1	217177.27425	232194.24054	Woodland Creek

Appendix A - Upper Georges Creek Watershed

Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Inadequate Buffers	GC526502	4	3	1	217078.42971	232609.34847	Woodland Creek
Inadequate Buffers	GC533501	4	2	1	219351.21556	233472.17447	Mainstem 1
Inadequate Buffers	GC534102	4	2	2	219441.589260	233493.452000	Mainstem 1
Inadequate Buffers	GC552703	4	2	1	222442.60916	233576.81889	Sand Spring Run
Inadequate Buffers	GC552709	4	2	1	221970.37829	233678.14420	Sand Spring Run
Inadequate Buffers	GC552711	4	3	1	221891.13905	233758.42678	Sand Spring Run
Inadequate Buffers	GC553705	4	3	2	221265.69294	233870.48154	Sand Spring Run
Inadequate Buffers	GC577905	4	4	2	224921.71547	232941.03003	Sand Spring Run
Inadequate Buffers	GC577906	4	3	3	224626.84602	233206.89593	Sand Spring Run
Inadequate Buffers	NR201219	4	4	1	215905.93805	233798.10902	Neff Run
Inadequate Buffers	NR201221	4	4	1	215702.51554	233599.77207	Neff Run
Inadequate Buffers	NR202212	4	3	3	216307.69751	234037.13047	Neff Run
Inadequate Buffers	NR302305	4	1	1	217441.77803	235537.37151	Neff Run
Inadequate Buffers	NR302309	4	2	2	217065.44638	235135.61205	Neff Run
Pipe Outfall	GC533501	4	5	1	219351.21535	233472.17481	Mainstem 1
Pipe Outfall	GC552708	4	3	1	222019.21262	233638.61165	Sand Spring Run
Pipe Outfall	GC553702	4	5	1	221648.05456	233800.00856	Sand Spring Run
Pipe Outfall	GC553704	4	5	1	221416.28873	233796.30297	Sand Spring Run
Pipe Outfall	NR100105	4	2	1	215503.89470	233356.28889	Neff Run
Pipe Outfall	NR100111	4	3	1	215462.26353	233309.48652	Neff Run
Pipe Outfall	NR100112	4	3	1	215457.95279	233299.63339	Neff Run
Pipe Outfall	NR100113	4	3	1	215449.94712	233289.16444	Neff Run
Pipe Outfall	NR100115	4	3	1	215422.47982	215422.47982	Neff Run
Pipe Outfall	NR100116	4	3	1	215416.32162	233232.38239	Neff Run
Pipe Outfall	NR100118	4	4	1	215405.11877	233154.29124	Neff Run
Pipe Outfall	NR100122	4	3	1	215344.94418	232868.72039	Neff Run
Trash Dumping	GC534101	4	2	3	233499.569200	219445.183870	Mainstem 1
Trash Dumping	GC569802	4	2	1	233345.49252	223092.10165	Sand Spring Run
Unusual Condition	GC428501	4	5	4	218465.48436	231659.95475	Woodland Creek
Unusual Condition	GC652704	4	2	1	220445.59943	234071.60025	Mainstem 1
Unusual Condition	NR302301	4	3	1	217525.71136	235593.82618	Neff Run
Unusual Condition	NR302302	4	3	1	217433.14057	235610.16221	Neff Run
Unusual Condition	NR404107	4	5	4	215461.92720	236895.26264	Matthews Run
Channel Alteration	GC412213	5	3	2	217929.04600	229960.79044	Woodland Creek
Channel Alteration	GC414221	5	3	1	217573.69310	231137.20667	Woodland Creek
Channel Alteration	GC423114	5	2	3	217929.04600	229960.79044	Staub Run
Channel Alteration	GC428118	5	5	3	218893.97633	231642.10092	Staub Run
Channel Alteration	GC448502	5	1	2	221967.81233	231569.82989	Winebrenner Run
Channel Alteration	GC527501	5	5	1	216750.83664	232855.21928	Mainstem 1
Channel Alteration	GC533501	5	5	1	219351.21530	233472.17482	Mainstem 1
Channel Alteration	GC548103	5	5	2	220068.715580	233755.942390	Mainstem 1
Channel Alteration	GC551501	5	5	1	223217.44416	231970.50802	Winebrenner Run
Channel Alteration	GC551502	5	5	1	223039.64299	232105.73196	Winebrenner Run
Channel Alteration	GC551503	5	5	1	222957.28619	232166.77648	Winebrenner Run
Channel Alteration	GC551505	5	5	1	222643.51879	232241.68174	Winebrenner Run
Channel Alteration	GC552709	5	5	1	221981.91634	233678.46188	Sand Spring Run
Channel Alteration	GC555510	5	1	2	221615.37018	231769.40264	Winebrenner Run
Channel Alteration	GC555513	5	2	1	221589.25646	231759.86710	Winebrenner Run
Channel Alteration	GC555531	5	5	1	221788.91808	232102.15509	Winebrenner Run
Channel Alteration	NR100120	5	4	1	215391.18902	233109.72045	Neff Run
Channel Alteration	NR603222	5	1	1	214904.34307	233323.37227	Matthews Run
Channel Alteration	NR603223	5	1	1	214928.86049	233256.82498	Matthews Run
Debris Problem	NR402124	5	2	5	215781.653040	235524.756630	Matthews Run
Erosion Site	GC320206	5	5	5	218338.62411	229273.28044	Woodland Creek

Appendix A - Upper Georges Creek Watershed

Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Erosion Site	GC320207	5	5	5	218332.72918	229333.70346	Woodland Creek
Erosion Site	GC423112	5	3	2	219309.97711	231095.36197	Staub Run
Erosion Site	GC434602	5	4	3	220383.27919	231464.59549	Winebrenner Run
Erosion Site	GC448503	5	3	2	221934.51510	231570.15207	Winebrenner Run
Erosion Site	GC521505	5	2	1	217177.27751	232194.23254	Woodland Creek
Erosion Site	GC541603	5	4	1	220288.50735	231712.66863	Winebrenner Run
Erosion Site	GC553705	5	3	1	221267.64497	233873.94220	Sand Spring Run
Erosion Site	GC564903	5	3	3	223710.93124	233806.73403	Sand Spring Run
Erosion Site	NR404104	5	5	4	215812.20119	237136.18616	Matthews Run
Erosion Site	NR601205	5	2	4	214888.75782	234941.98365	Matthews Run
Exposed Pipe	GC526503	5	1	1	217073.52133	232624.88512	Woodland Creek
Exposed Pipe	GC652706	5	5	4	220786.23160	234134.24527	Mainstem 1
Exposed Pipe	GC652708	5	5	3	220907.62906	234289.10464	Mainstem 1
Exposed Pipe	NR401134	5	2	2	216329.19624	234640.93527	Matthews Run
Exposed Pipe	NR604233	5	1	1	215375.25895	233121.24296	Neff Run
Fish Barrier	GC320202	5	4	1	218783.744670	228403.797050	Woodland Creek
Fish Barrier	GC320203	5	3	3	218618.686670	228567.381320	Woodland Creek
Fish Barrier	GC423105	5	1	2	219547.808580	230893.920870	Staub Run
Fish Barrier	GC545614	5	4	2	219949.336230	232572.209920	Winebrenner Run
Inadequate Buffers	GC521504	5	2	1	217225.91067	232074.86024	Woodland Creek
Inadequate Buffers	GC533503	5	2	1	219223.92936	233419.12914	Mainstem 1
Inadequate Buffers	GC533505	5	2	2	219172.47487	233461.10893	Mainstem 1
Inadequate Buffers	GC533619	5	3	2	219262.74992	233261.47873	Winebrenner Run
Inadequate Buffers	GC545611	5	3	2	220029.19286	232488.73691	Winebrenner Run
Inadequate Buffers	GC545616	5	1	4	219872.10579	232720.38358	Winebrenner Run
Inadequate Buffers	GC545618	5	4	1	219737.67089	232949.23110	Winebrenner Run
Inadequate Buffers	GC552701	5	4	1	222788.93462	233499.08501	Sand Spring Run
Inadequate Buffers	GC555513	5	1	2	221588.54103	231762.17091	Winebrenner Run
Inadequate Buffers	GC567808	5	2	1	223446.32045	232235.79207	Sand Spring Run
Inadequate Buffers	GC577902	5	1	3	225226.05241	232651.69580	Sand Spring Run
Inadequate Buffers	GC671901	5	3	3	223809.12357	233899.64345	Sand Spring Run
Inadequate Buffers	NR202205	5	1	3	216495.86334	234352.43537	Neff Run
Inadequate Buffers	NR202207	5	2	4	216460.26440	234230.38186	Neff Run
Inadequate Buffers	NR301312	5	5	1	216917.96506	235084.75642	Neff Run
Inadequate Buffers	NR602213	5	2	1	214690.48853	234245.63855	Matthews Run
Pipe Outfall	GC536602	5	4	4	218991.80377	233396.73905	Mainstem 1
Pipe Outfall	GC542502	5	3	1	220942.83093	232428.57876	Winebrenner Run
Pipe Outfall	GC545612	5	5	2	220012.09741	232504.10835	Winebrenner Run
Pipe Outfall	GC545614	5	3	2	219910.18892	232683.02057	Winebrenner Run
Pipe Outfall	GC551504	5	5	1	222906.97588	232174.43471	Winebrenner Run
Pipe Outfall	GC553701	5	5	1	221743.22345	233763.83083	Sand Spring Run
Pipe Outfall	GC555511	5	2	1	221608.22642	231771.78390	Winebrenner Run
Pipe Outfall	GC555512	5	2	1	221605.84516	231772.97453	Winebrenner Run
Pipe Outfall	GC555532	5	5	1	221616.78830	232091.18004	Winebrenner Run
Pipe Outfall	GC555533	5	5	1	221516.25931	232133.70806	Winebrenner Run
Pipe Outfall	GC564901	5	1	1	223733.91848	233816.64858	Sand Spring Run
Pipe Outfall	GC564905	5	1	2	223560.42725	233745.51857	Sand Spring Run
Pipe Outfall	GC564906	5	1	1	223500.69003	233752.81530	Sand Spring Run
Pipe Outfall	GC577903	5	1	2	225169.34362	232673.44105	Sand Spring Run
Pipe Outfall	GC577907	5	1	2	224602.19659	233226.64247	Sand Spring Run
Pipe Outfall	GC577910	5	1	3	224259.31240	233389.41777	Sand Spring Run
Pipe Outfall	GC610101	5	1	1	221904.537750	234958.258530	Mainstem 1
Pipe Outfall	GC610103	5	1	2	221670.006990	234922.389120	Mainstem 1
Pipe Outfall	GC671902	5	1	4	223771.32840	233874.04565	Sand Spring Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Pipe Outfall	NR202215	5	1	1	216245.10086	233970.25782	Neff Run
Pipe Outfall	NR602212	5	1	1	214635.66493	234328.92134	Matthews Run
Pipe Outfall	NR603221	5	1	1	214889.16725	233359.80399	Matthews Run
Pipe Outfall	NR603222	5	3	1	214906.82058	233322.89247	Matthews Run
Pipe Outfall	NR603223	5	1	1	214969.21528	233296.57070	Matthews Run
Pipe Outfall	NR603228	5	3	1	215066.05318	233186.18878	Matthews Run
Pipe Outfall	NR604233	5	3	2	215386.64415	233124.11603	Neff Run
Trash Dumping	GC610104	5	5	2	234852.598210	221491.864920	Mainstem 1
Trash Dumping	NR302307	5	3	4	235321.55914	217324.23375	Neff Run
Unusual Condition	GC533502	5	3	1	219174.12864	233461.21560	Mainstem 1
Unusual Condition	GC552706	5	5	1	222235.47892	233585.61892	Sand Spring Run
Unusual Condition	NR201218	5	3	2	216512.87797	234308.72575	Neff Run
Comment	GC521501				217280.43876	232027.70081	Woodland Creek
Comment	GC523501				217853.66465	233355.10689	Mainstem 1
Comment	GC533620				219220.07734	233265.18607	Winebrenner Run
Comment	GC536502				218739.37766	233363.94928	Mainstem 1
Comment	GC536503				218328.20640	233310.89493	Mainstem 1
Comment	GC536504				218332.62759	233366.89675	Mainstem 1
Comment	GC536602				218992.90733	233395.63549	Mainstem 1
Comment	GC541603				220287.83714	231708.16159	Winebrenner Run
Comment	GC542501				221117.18522	232333.99651	Winebrenner Run
Comment	GC545612				220011.94255	232501.72185	Winebrenner Run
Comment	GC551501				223218.18269	231968.28588	Winebrenner Run
Comment	GC551505				222643.51879	232241.68174	Winebrenner Run
Comment	GC552704				222304.56566	233567.66202	Sand Spring Run
Comment	GC555534				221353.58181	232224.95224	Winebrenner Run
Acid Mine Drainage	GC413215			2	217845.252010	230286.063460	Woodland Creek
Acid Mine Drainage	GC423110			1	219477.696660	230980.378390	Staub Run
Acid Mine Drainage	GC514501			4	215604.424840	232829.858970	Mainstem 1
Acid Mine Drainage	GC541601			1	220285.376790	231872.460650	Winebrenner Run
Acid Mine Drainage	GC545609			2	220074.318470	232449.341830	Winebrenner Run
Acid Mine Drainage	GC555515			2	221420.301150	231871.827440	Winebrenner Run
Acid Mine Drainage	GC555516			2	221262.882800	231970.905040	Winebrenner Run
Acid Mine Drainage	GC577901			2	225264.801410	232623.574770	Sand Spring Run
Acid Mine Drainage	GC577904			2	224907.336460	232991.991500	Sand Spring Run
Acid Mine Drainage	NR100102			1	215590.312450	233389.589210	Neff Run
Acid Mine Drainage	NR301317			2	216649.743990	234997.859390	Neff Run
Acid Mine Drainage	NR401132			3	216275.714070	234722.334070	Matthews Run
Acid Mine Drainage	NR402130			5	215979.594890	234984.589110	Matthews Run
Acid Mine Drainage	NR601202			2	214862.262300	235129.268390	Neff Run
Acid Mine Drainage	NR603226			1	215130.297040	233136.702720	Neff Run
Flood Prone Structures	GC434603			1	220361.66734	231495.00214	Winebrenner Run
Flood Prone Structures	GC514505			1	215596.81563	232517.14366	Mainstem 1
Flood Prone Structures	GC533503			1	219223.91343	233419.12816	Mainstem 1
Flood Prone Structures	GC533619			1	219289.25467	233255.31071	Winebrenner Run
Flood Prone Structures	GC541602			2	220295.16353	231664.29709	Winebrenner Run
Flood Prone Structures	GC545601			2	220242.57742	232050.45742	Winebrenner Run
Flood Prone Structures	GC545603			2	220230.24115	232080.71943	Winebrenner Run
Flood Prone Structures	GC545610			2	220043.97395	232445.21738	Winebrenner Run
Flood Prone Structures	GC545614			1	219908.93675	232679.34118	Winebrenner Run
Flood Prone Structures	GC610102			1	221383.280990	234812.626850	Mainstem 1
Flood Prone Structures	NR604232			2	215366.47519	233128.50980	Neff Run
Flood Prone Structures	NR604234			1	215361.26748	233094.13891	Neff Run
Flood Prone Structures	NR604235			2	215382.09832	233163.92223	Neff Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Representative Site	GC320201				218938.48654	228267.47683	Woodland Creek
Representative Site	GC320212				218002.66664	229822.26422	Woodland Creek
Representative Site	GC413220				217683.61823	230422.92718	Woodland Creek
Representative Site	GC414222				217493.50678	231579.80690	Woodland Creek
Representative Site	GC423106				219531.59753	230906.44759	Staub Run
Representative Site	GC428116				219190.40159	231311.14739	Staub Run
Representative Site	GC428501				218466.95809	231659.21789	Staub Run
Representative Site	GC430101				220370.86103	229663.51487	Staub Run
Representative Site	GC434602				220383.00650	231465.34076	Winebrenner Run
Representative Site	GC434607				220467.34118	231306.53537	Winebrenner Run
Representative Site	GC512504				215831.98672	233037.30402	Mainstem 1
Representative Site	GC521503				217248.01665	232034.33261	Mainstem 1
Representative Site	GC523501				217853.66465	233352.89629	Mainstem 1
Representative Site	GC526504				217009.15590	232758.94590	Mainstem 1
Representative Site	GC533620				219219.98078	233266.44016	Winebrenner Run
Representative Site	GC536501				218962.11569	233407.99914	Mainstem 1
Representative Site	GC539101				218231.493520	233465.088650	Vale Run
Representative Site	GC541501				220816.10853	232295.13573	Winebrenner Run
Representative Site	GC542502				220941.64030	232425.00688	Winebrenner Run
Representative Site	GC545608				220102.58892	232324.31143	Winebrenner Run
Representative Site	GC545614				219910.10543	232686.78777	Winebrenner Run
Representative Site	GC548101				220281.568240	233792.511980	Mainstem 1
Representative Site	GC551503				222960.19299	232165.09942	Winebrenner Run
Representative Site	GC552702				222644.75709	233489.78323	Sand Spring Run
Representative Site	GC552707				222100.66231	233630.70245	Sand Spring Run
Representative Site	GC553703				221473.46444	233802.02257	Sand Spring Run
Representative Site	GC555501				222207.49802	232166.10481	Winebrenner Run
Representative Site	GC563806				223866.68854	232539.30120	Sand Spring Run
Representative Site	GC564902				223716.98139	233809.96427	Sand Spring Run
Representative Site	GC564908				223922.83695	233477.10396	Sand Spring Run
Representative Site	GC567807				223406.25874	232320.35918	Sand Spring Run
Representative Site	GC567810				223396.75130	232549.16273	Sand Spring Run
Representative Site	GC568804				223328.54605	233015.64799	Sand Spring Run
Representative Site	GC569902				223210.75680	233651.45882	Sand Spring Run
Representative Site	GC569903				222939.54089	233528.75180	Sand Spring Run
Representative Site	GC577907				224599.71847	233229.92077	Sand Spring Run
Representative Site	GC645101				218411.096890	234248.998850	Vale Run
Representative Site	GC652701				221093.94588	233922.82587	Sand Spring Run
Representative Site	GC652703				220763.04997	234025.34651	Sand Spring Run
Representative Site	NR100114				215430.49718	233248.33377	Neff Run
Representative Site	NR100126				215450.96506	232606.74225	Neff Run
Representative Site	NR201219				215899.96484	233837.53431	Neff Run
Representative Site	NR202208				216466.45932	234198.43717	Neff Run
Representative Site	NR301313				216817.51209	235158.91938	Neff Run
Representative Site	NR301318				216561.07849	234846.81878	Neff Run
Representative Site	NR302308				217202.58156	235304.68456	Neff Run
Representative Site	NR401131				216028.42396	234905.68013	Matthews Run
Representative Site	NR401133				216324.21495	234724.06443	Matthews Run
Representative Site	NR402128				215832.33087	235393.62621	Matthews Run
Representative Site	NR403118				215468.19309	236148.74122	Matthews Run
Representative Site	NR403121				215520.46131	236022.89703	Matthews Run
Representative Site	NR403122				215582.96905	235824.05041	Matthews Run
Representative Site	NR404101				215986.25228	237504.53670	Matthews Run
Representative Site	NR404110				215461.50503	236853.29485	Matthews Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Representative Site	NR404114				215393.39587	236427.93055	Matthews Run
Representative Site	NR501301				214686.88464	235964.73452	Matthews Run
Representative Site	NR501302				215330.58649	235952.65455	Matthews Run
Representative Site	NR601201				214540.28738	235269.29082	Dan's Run
Representative Site	NR601203				214925.42599	235075.75465	Dan's Run
Representative Site	NR601205				214958.66473	234937.05000	Dan's Run
Representative Site	NR601208				214808.92833	234605.53861	Dan's Run
Representative Site	NR602211				214689.70142	234430.62254	Dan's Run
Representative Site	NR602214				214579.79415	234202.92467	Dan's Run
Representative Site	NR603216				214622.44224	233861.01312	Dan's Run
Representative Site	NR603219				214861.85432	233419.61855	Dan's Run
Representative Site	NR604231				215261.18191	233129.11945	Dan's Run
Representative Site	NR604235				215374.61855	233129.11966	Dan's Run
Representative Site	NR701302				216141.16315	235776.05922	Neff Run
Representative Site	NR701307				216406.96428	235312.77406	Neff Run
Representative Site	NR701309				216560.59934	235125.45801	Neff Run

Appendix A - Middle Georges Creek Watershed

Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Debris Problem	GC360501	1	2	5	210374.68574	230585.73317	Jackson Run
Erosion Site	GC309201	1	5	4	216438.98340	229461.91815	Seldom Seen Run
Erosion Site	GC408203	1	5	4	216265.40763	231271.27854	Seldom Seen Run
Fish Barrier	GC601103	1	5	1	213676.58402	233441.67417	Elk Lick Run
Inadequate Buffers	GC276306	1	3	3	211101.95842	228844.33950	Mainstem 2
Inadequate Buffers	GC381907	1	5	1	213329.37622	230310.40588	Mainstem 2
Inadequate Buffers	GC390901	1	4	3	214299.88000	230692.03791	Unnamed Trib. 4
Inadequate Buffers	GC502306	1	3	3	215524.03103	232328.87952	Mainstem 2
Inadequate Buffers	GC511203	1	3	1	215626.42401	232365.47990	Squirrel Neck Run
Pipe Outfall	GC382411	1	4	3	212569.10206	231303.82711	Hill Run
Pipe Outfall	GC382415	1	4	1	212722.97829	231159.09204	Hill Run
Pipe Outfall	GC514509	1	4	1	215510.91389	232331.76941	Mainstem 2
Unusual Condition	GC382403	1	3	2	212579.48684	231663.23294	Hill Run
Unusual Condition	GC390902	1	4	3	214256.02803	230655.83890	Mainstem 2
Channel Alteration	GC600104	2	4	1	214306.60004	232672.94883	Elk Lick Run
Erosion Site	GC370407	2	5	3	211774.34212	230515.80524	Orr Run
Erosion Site	GC380437	2	5	4	212994.26713	229716.49190	Koontz Run
Erosion Site	GC382403	2	3	2	212578.94207	231665.41287	Hill Run
Erosion Site	GC480407	2	4	2	212047.85335	232114.00711	Hill Run
Erosion Site	GC600102	2	3	1	214212.77640	233227.14646	Elk Lick Run
Fish Barrier	GC224103	2	2	1	215536.62139	227228.28878	Laurel Run
Fish Barrier	GC371605	2	5	1	211206.78660	230297.82482	Jackson Run
Inadequate Buffers	GC224102	2	1	1	216015.12370	226913.48755	Koontz Run
Inadequate Buffers	GC276301	2	3	3	211878.66729	229130.26269	Mainstem 2
Inadequate Buffers	GC280302	2	2	2	212322.29039	228543.67800	Seldom Seen Run
Inadequate Buffers	GC291403	2	5	1	214176.40640	229236.16550	Koontz Run
Inadequate Buffers	GC291415	2	3	3	213650.92058	229280.52632	Koontz Run
Inadequate Buffers	GC381304	2	3	2	213013.26796	230990.02349	Hill Run
Inadequate Buffers	GC397301	2	3	2	214280.33219	230732.98035	Mainstem 2
Inadequate Buffers	GC398306	2	3	3	214212.53597	232066.79730	Mainstem 2
Inadequate Buffers	GC502301	2	3	2	214934.49867	232265.50479	Mainstem 2
Pipe Outfall	GC291406	2	5	2	213965.29175	229271.84923	Laurel Run
Pipe Outfall	GC291410	2	4	1	213830.34006	229263.51535	Laurel Run
Pipe Outfall	GC372403	2	2	3	211350.67466	231269.54504	Orr Run
Pipe Outfall	GC600105	2	4	1	214395.81167	232523.78517	Elk Lick Run
Pipe Outfall	GC601102	2	4	1	213683.02212	233449.95172	Elk Lick Run
Trash Dumping	GC381303	2	4	3	230965.77415	213054.36948	Jackson Run
Unusual Condition	GC371605	2	2	1	211207.02175	230298.14788	Jackson Run
Unusual Condition	GC514508	2	2	3	215556.39808	232465.05704	Mainstem 2
Channel Alteration	GC370619	3	2	1	211941.69930	230118.97727	Jackson Run
Channel Alteration	GC370622	3	1	1	211911.58654	230119.10575	Jackson Run
Channel Alteration	GC370633	3	2	2	212209.20894	230013.77722	Jackson Run
Channel Alteration	GC370638	3	4	2	212558.92211	229939.08437	Jackson Run
Channel Alteration	GC371611	3	2	3	211397.47907	230263.70805	Jackson Run
Channel Alteration	GC380642	3	4	2	212626.69273	229861.14898	Jackson Run
Debris Problem	GC220111	3	2	5	213696.89599	227293.45118	Laurel Run
Debris Problem	GC361501	3	2	4	209247.44066	231499.82034	Jackson Run
Debris Problem	GC371602	3	2	4	210561.88294	230519.46215	Jackson Run
Erosion Site	GC200503	3	3	1	211602.44547	226640.89552	Laurel Run
Erosion Site	GC200510	3	4	1	211356.33221	226682.16001	Laurel Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Erosion Site	GC276302	3	3	2	211793.17789	229153.83939	Mainstem 2
Erosion Site	GC281303	3	3	3	212180.89023	228066.51475	Seldom Seen Run
Erosion Site	GC290011	3	4	1	214278.72774	229207.19280	Koontz Run
Erosion Site	GC372405	3	4	3	211385.77945	231229.17774	Orr Run
Erosion Site	GC381308	3	3	4	213138.54359	230879.48603	Hill Run
Erosion Site	GC397304	3	3	3	214303.91379	230788.98360	Mainstem 2
Erosion Site	GC601105	3	4	2	213699.49029	233440.32946	Elk Lick Run
Exposed Pipe	GC290002	3	3	1	214520.09453	228974.44394	Koontz Run
Exposed Pipe	GC290908	3	4	1	215024.65475	228592.13321	Koontz Run
Exposed Pipe	GC301103	3	2	2	215774.94582	227866.97024	Koontz Run
Exposed Pipe	GC380646	3	3	1	212621.80376	229833.22337	Mainstem 2
Exposed Pipe	GC381319	3	3	1	213304.45021	230546.21223	Hill Run
Exposed Pipe	GC381910	3	4	2	213302.71333	230334.45322	Mainstem 2
Exposed Pipe	GC397302	3	5	3	214305.28793	230741.40092	Mainstem 2
Exposed Pipe	GC514502	3	1	1	215464.81690	232595.53002	Mainstem 2
Fish Barrier	GC281426	3	2	1	213413.13961	229357.26699	Koontz Run
Fish Barrier	GC290908	3	4	1	215024.63094	228591.27156	Koontz Run
Fish Barrier	GC291414	3	3	1	213668.21168	229277.13124	Koontz Run
Fish Barrier	GC300701	3	5	1	215326.80278	228443.33247	Koontz Run
Fish Barrier	GC370401	3	5	1	211935.87557	230117.22412	Jackson Run
Fish Barrier	GC370404	3	5	1	211756.47006	230359.80987	Orr Run
Fish Barrier	GC370619	3	2	1	211941.85691	230118.62208	Jackson Run
Fish Barrier	GC370620	3	2	2	211932.78251	230123.63464	Jackson Run
Fish Barrier	GC381331	3	2	1	213287.38707	230354.38833	Hill Run
Fish Barrier	GC382406	3	3	2	212506.82597	231485.07988	Hill Run
Fish Barrier	GC480404	3	4	2	211677.94659	232362.33097	Hill Run
In/Near Stream Construction	GC280907	3	3	3	212248.57196	229408.40160	Mainstem 2
Inadequate Buffers	GC200506	3	5	1	211456.53553	226626.15735	Koontz Run
Inadequate Buffers	GC201501	3	4	1	210920.72826	227009.79714	Koontz Run
Inadequate Buffers	GC280310	3	2	3	212064.36999	229025.62070	Seldom Seen Run
Inadequate Buffers	GC281421	3	5	1	213551.91090	229309.87404	Koontz Run
Inadequate Buffers	GC290909	3	5	1	215091.56906	228561.12280	Koontz Run
Inadequate Buffers	GC300701	3	4	1	215331.99138	228443.17426	Koontz Run
Inadequate Buffers	GC370403	3	3	2	211784.47595	230273.56020	Orr Run
Inadequate Buffers	GC371611	3	3	2	211396.65502	230253.27436	Jackson Run
Inadequate Buffers	GC372405	3	2	3	211386.38009	231229.00412	Orr Run
Inadequate Buffers	GC382409	3	3	3	212494.47949	231516.18111	Hill Run
Pipe Outfall	GC276307	3	3	2	211044.13991	228735.60477	Mainstem 2
Pipe Outfall	GC280906	3	5	1	212317.21740	229385.19105	Mainstem 2
Pipe Outfall	GC281422	3	3	2	213465.86934	229307.73758	Laurel Run
Pipe Outfall	GC290007	3	3	1	214411.13490	229036.55618	Laurel Run
Pipe Outfall	GC370614	3	4	2	212010.85379	230118.66085	Jackson Run
Pipe Outfall	GC370621	3	2	2	211918.83681	230120.13031	Jackson Run
Pipe Outfall	GC370636	3	2	2	212440.76767	229985.10281	Jackson Run
Pipe Outfall	GC370638	3	3	2	212558.10392	229939.78653	Jackson Run
Pipe Outfall	GC371606	3	4	1	211217.94858	230299.97617	Jackson Run
Pipe Outfall	GC380641	3	4	1	212628.04961	229867.14727	Jackson Run
Pipe Outfall	GC380906	3	5	2	212651.13280	229713.86598	Mainstem 2
Pipe Outfall	GC381904	3	3	2	213390.15433	230357.93772	Mainstem 2
Pipe Outfall	GC382301	3	2	1	212965.38240	231015.67696	Hill Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Pipe Outfall	GC390911	3	3	2	213798.11101	230382.15558	Mainstem 2
Pipe Outfall	GC397303	3	3	3	214308.33498	230754.35090	Mainstem 2
Pipe Outfall	GC511201	3	3	2	215938.23910	231757.61014	Squirrel Neck Run
Pipe Outfall	GC514505	3	5	1	215513.56977	232561.25066	Mainstem 2
Trash Dumping	GC290904	3	2	1	228832.10389	214668.22859	Koontz Run
Trash Dumping	GC370409	3	1	3	230659.81727	211814.73679	Orr Run
Trash Dumping	GC381309	3	3	2	230813.62637	213189.61194	Jackson Run
Unusual Condition	GC290903	3	5	1	214648.57177	228862.23474	Koontz Run
Unusual Condition	GC291402	3	5	3	214204.38007	229240.42570	Koontz Run
Unusual Condition	GC300702	3	3	1	215313.45790	228449.55823	Koontz Run
Unusual Condition	GC380640	3	5	1	212593.98899	229915.07344	Jackson Run
Unusual Condition	GC380643	3	4	2	212609.02530	229797.56891	Jackson Run
Unusual Condition	GC381309	3	1	2	213191.08567	230814.36324	Hill Run
Channel Alteration	GC201502	4	4	1	210881.05446	227020.70324	Laurel Run
Channel Alteration	GC276308	4	4	1	211015.00240	228673.37512	Mainstem 2
Channel Alteration	GC370404	4	5	1	211756.36260	230359.80919	Orr Run
Channel Alteration	GC370632	4	2	2	211430.16672	230269.27371	Jackson Run
Channel Alteration	GC370634	4	2	1	212398.59717	229992.36784	Jackson Run
Channel Alteration	GC380644	4	3	2	212597.71106	229784.13104	Jackson Run
Channel Alteration	GC381313	4	3	1	213221.86147	230745.15707	Hill Run
Channel Alteration	GC511202	4	3	1	215835.19691	231928.91486	Squirrel Neck Run
Channel Alteration	GC511203	4	3	1	215624.95018	232367.69064	Squirrel Neck Run
Debris Problem	GC282301	4	4	5	212579.43460	228395.39051	Seldom Seen Run
Debris Problem	GC371601	4	4	5	210512.02267	230522.08974	Jackson Run
Debris Problem	GC372402	4	1	3	211368.68415	231250.47569	Orr Run
Debris Problem	GC390904	4	1	3	214101.61975	230458.58949	Mainstem 2
Erosion Site	GC200501	4	4	2	212072.56602	226615.84207	Laurel Run
Erosion Site	GC281304	4	3	2	212186.78516	228196.20317	Seldom Seen Run
Erosion Site	GC360503	4	2	5	210062.78636	230570.68918	Jackson Run
Erosion Site	GC381325	4	3	1	213307.11663	230484.34871	Hill Run
Erosion Site	GC382401	4	4	3	212608.41672	231686.04512	Hill Run
Erosion Site	GC382402	4	4	3	212586.31074	231671.30780	Hill Run
Erosion Site	GC382404	4	4	3	212559.78356	231649.20182	Hill Run
Erosion Site	GC602101	4	2	2	213277.69903	233658.08721	Elk Lick Run
Exposed Pipe	GC281425	4	4	1	213439.58162	229334.46892	Koontz Run
Exposed Pipe	GC290010	4	3	1	214303.76824	229192.71739	Koontz Run
Fish Barrier	GC190502	4	5	1	210404.13169	227381.44107	Laurel Run
Fish Barrier	GC211204	4	3	5	213455.71162	225825.29580	Laurel Run
Fish Barrier	GC223203	4	3	5	214571.32684	225334.54300	Laurel Run
Fish Barrier	GC224104	4	3	2	215187.34687	227029.33495	Laurel Run
Fish Barrier	GC301102	4	5	2	215450.10416	228275.69556	Koontz Run
Fish Barrier	GC361504	4	2	5	210067.00027	231140.00783	Jackson Run
Fish Barrier	GC370405	4	3	2	211756.63398	230387.34888	Orr Run
Fish Barrier	GC381305	4	3	3	213069.10680	230951.77369	Hill Run
Fish Barrier	GC382407	4	2	3	212462.61401	231635.40056	Hill Run
In/Near Stream Construction	GC280904	4	3	3	212421.03154	229564.71242	Mainstem 2
Inadequate Buffers	GC210302	4	2	2	212807.06368	226665.79310	Koontz Run
Inadequate Buffers	GC281301	4	3	3	212195.54093	227957.09331	Seldom Seen Run
Inadequate Buffers	GC290001	4	2	1	214533.39269	228975.46493	Koontz Run
Inadequate Buffers	GC290005	4	5	1	214451.96557	228991.61055	Koontz Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Inadequate Buffers	GC290011	4	5	1	214279.39958	229205.66782	Koontz Run
Inadequate Buffers	GC290904	4	5	1	214667.23321	228833.83665	Koontz Run
Inadequate Buffers	GC370401	4	1	2	211935.91233	230117.32140	Jackson Run
Inadequate Buffers	GC371605	4	3	2	211204.84260	230297.86319	Jackson Run
Inadequate Buffers	GC371607	4	2	2	211290.25172	230290.63981	Jackson Run
Inadequate Buffers	GC380644	4	3	2	212599.92123	229780.59115	Jackson Run
Inadequate Buffers	GC382414	4	3	2	212658.07472	231212.57195	Hill Run
Inadequate Buffers	GC492401	4	3	2	212081.77349	232895.12252	Hill Run
Inadequate Buffers	GC601107	4	5	1	213906.16784	233422.72267	Elk Lick Run
Inadequate Buffers	GC605101	4	5	1	213314.56957	235492.87604	Elk Lick Run
Pipe Outfall	GC212501	4	3	1	212698.72642	226633.08939	Laurel Run
Pipe Outfall	GC212506	4	5	1	212086.26857	226438.07793	Laurel Run
Pipe Outfall	GC600107	4	4	1	214436.27972	232489.75522	Elk Lick Run
Pipe Outfall	GC600108	4	3	1	214424.32325	232494.35386	Elk Lick Run
Trash Dumping	GC291401	4	1	1	229234.67611	214234.56486	Koontz Run
Trash Dumping	GC370403	4	2	2	230262.88856	211796.41700	Orr Run
Trash Dumping	GC382413	4	2	3	231233.93097	212627.34178	Jackson Run
Trash Dumping	GC398309	4	2	2	231703.34761	213950.24252	Mainstem 2
Trash Dumping	GC600103	4	2	1	232912.81759	214255.48275	Elk Lick Run
Unusual Condition	GC480407	4	5	2	212047.85335	232114.74398	Hill Run
Unusual Condition	GC514506	4	3	3	215540.18703	232485.68929	Mainstem 2
Unusual Condition	GC601101	4	4	1	213674.24190	233457.93773	Elk Lick Run
Channel Alteration	GC200509	5	3	1	211373.56786	226673.72604	Laurel Run
Channel Alteration	GC281421	5	5	1	213554.32279	229313.21853	Koontz Run
Channel Alteration	GC281424	5	5	1	213458.10432	229317.20623	Koontz Run
Channel Alteration	GC281428	5	5	1	213391.51522	229386.18266	Koontz Run
Channel Alteration	GC281433	5	5	1	213323.61313	229436.54033	Koontz Run
Channel Alteration	GC281434	5	5	1	213264.05721	229475.92468	Koontz Run
Channel Alteration	GC281435	5	5	1	213155.55387	229660.30969	Koontz Run
Channel Alteration	GC290907	5	5	1	215018.11758	228598.75592	Koontz Run
Channel Alteration	GC290908	5	5	1	215023.97799	228591.46200	Koontz Run
Channel Alteration	GC291403	5	5	1	214141.93059	229241.62469	Koontz Run
Channel Alteration	GC291408	5	5	1	213888.35910	229261.62903	Koontz Run
Channel Alteration	GC291414	5	5	5	213669.74758	229276.84960	Koontz Run
Channel Alteration	GC370401	5	5	1	211935.82811	230117.18681	Jackson Run
Channel Alteration	GC372405	5	2	3	211300.08510	231325.26317	Orr Run
Channel Alteration	GC380436	5	5	1	213081.81175	229696.32217	Koontz Run
Channel Alteration	GC380438	5	5	2	212959.48593	229746.01207	Koontz Run
Channel Alteration	GC380440	5	5	5	212924.44457	229785.73650	Koontz Run
Channel Alteration	GC380441	5	5	3	212888.96205	229850.23488	Koontz Run
Channel Alteration	GC381318	5	3	2	213304.13193	230553.19267	Hill Run
Channel Alteration	GC381323	5	3	1	213307.17898	230495.29864	Hill Run
Channel Alteration	GC381327	5	2	1	213304.13193	230426.73993	Hill Run
Channel Alteration	GC502305	5	3	3	214790.05738	232483.47869	Mainstem 2
Channel Alteration	GC600101	5	4	1	214173.93250	233274.98495	Elk Lick Run
Channel Alteration	GC601108	5	4	1	213902.19280	233423.20660	Elk Lick Run
Comment	GC200507	5	4	1	211446.41850	226616.45445	Laurel Run
Debris Problem	GC480405	5	4	4	211719.21109	232337.27753	Hill Run
Erosion Site	GC200508	5	3	1	211422.65015	226651.21164	Laurel Run
Erosion Site	GC201505	5	3	1	210737.43211	227117.17069	Laurel Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Erosion Site	GC212502	5	3	1	212471.77168	226623.51013	Laurel Run
Erosion Site	GC212503	5	3	2	212305.23995	226520.34888	Laurel Run
Erosion Site	GC212505	5	3	1	212174.13032	226549.82353	Laurel Run
Erosion Site	GC212507	5	3	2	212115.12850	226585.19310	Laurel Run
Erosion Site	GC290701	5	4	1	215011.34640	228615.61539	Koontz Run
Erosion Site	GC291405	5	4	2	214095.91774	229246.59637	Koontz Run
Erosion Site	GC291409	5	3	3	213949.40461	229257.37455	Koontz Run
Erosion Site	GC291411	5	2	1	213810.41001	229271.41100	Koontz Run
Erosion Site	GC301105	5	1	3	216014.31010	227820.35466	Koontz Run
Erosion Site	GC360501	5	2	5	210373.42518	230582.87547	Jackson Run
Erosion Site	GC370403	5	1	2	211784.11268	230273.49553	Orr Run
Erosion Site	GC370408	5	2	3	211801.02795	230607.83164	Orr Run
Erosion Site	GC370618	5	3	2	211952.30191	230118.25134	Jackson Run
Erosion Site	GC371602	5	2	4	210559.23653	230518.71332	Jackson Run
Erosion Site	GC390907	5	3	2	213889.02815	230400.58651	Mainstem 2
Erosion Site	GC408201	5	4	4	216367.09515	230808.52665	Seldom Seen Run
Erosion Site	GC408202	5	5	4	216342.04170	230911.68790	Seldom Seen Run
Erosion Site	GC480403	5	2	4	211555.62682	232438.22818	Hill Run
Erosion Site	GC603101	5	1	5	212337.13196	233908.78310	Elk Lick Run
Exposed Pipe	GC290906	5	3	1	214853.82024	228726.32554	Koontz Run
Exposed Pipe	GC370401	5	2	1	211935.85133	230117.18649	Koontz Run
Exposed Pipe	GC381322	5	4	1	213306.91322	230509.11715	Hill Run
Exposed Pipe	GC381329	5	2	1	213293.28698	230370.55945	Hill Run
Exposed Pipe	GC504302	5	4	1	214201.69974	232053.28063	Mainstem 2
Exposed Pipe	GC504303	5	4	1	214184.42176	232053.28063	Mainstem 2
Fish Barrier	GC210301	5	3	2	212808.53742	226666.52996	Laurel Run
Fish Barrier	GC280305	5	2	2	212073.20202	229013.61308	Seldom Seen Run
Fish Barrier	GC282303	5	4	5	212552.16496	228403.48798	Seldom Seen Run
Fish Barrier	GC290008	5	3	1	214396.60107	229075.73938	Koontz Run
Fish Barrier	GC290011	5	3	3	214283.19622	229211.91610	Koontz Run
Fish Barrier	GC290901	5	3	3	214572.53157	228940.28087	Koontz Run
Fish Barrier	GC361503	5	1	5	210048.23628	231184.59623	Jackson Run
Fish Barrier	GC372401	5	1	2	211489.20952	231105.15073	Orr Run
Fish Barrier	GC380439	5	5	5	212941.63564	229765.95927	Koontz Run
Fish Barrier	GC380440	5	5	5	212932.20933	229777.49470	Koontz Run
Fish Barrier	GC381301	5	2	2	213038.15842	230975.35340	Hill Run
Fish Barrier	GC381311	5	2	1	213207.80553	230781.77065	Hill Run
Fish Barrier	GC381312	5	5	1	213215.17419	230761.13840	Hill Run
Fish Barrier	GC381321	5	2	1	213305.07185	230523.86752	Hill Run
Fish Barrier	GC381322	5	3	1	213305.07185	230516.49886	Hill Run
Fish Barrier	GC381330	5	2	1	213290.33453	230363.23072	Hill Run
Fish Barrier	GC602102	5	3	2	213246.15110	223680.80356	Elk Lick Run
Fish Barrier	GC602103	5	4	3	213232.35517	233690.00085	Elk Lick Run
Inadequate Buffers	GC190502	5	4	1	210404.62003	227382.56170	Koontz Run
Inadequate Buffers	GC200503	5	4	1	211600.97095	226640.89566	Koontz Run
Inadequate Buffers	GC212501	5	3	1	212699.47403	226633.36882	Koontz Run
Inadequate Buffers	GC290702	5	5	1	215290.20185	228465.82173	Koontz Run
Inadequate Buffers	GC382404	5	3	2	212559.32805	231648.82589	Hill Run
Inadequate Buffers	GC382407	5	3	3	212463.52904	231635.56141	Hill Run
Inadequate Buffers	GC382410	5	3	2	212509.21780	231482.28300	Hill Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Inadequate Buffers	GC480401	5	1	1	211300.64312	232606.25166	Hill Run
Inadequate Buffers	GC490401	5	2	1	212279.26682	232557.61525	Hill Run
Inadequate Buffers	GC490403	5	2	1	212276.31916	232034.40528	Hill Run
Pipe Outfall	GC190501	5	3	1	210418.96017	227374.56078	Laurel Run
Pipe Outfall	GC201503	5	4	1	210822.03520	227024.83956	Laurel Run
Pipe Outfall	GC280303	5	2	1	212284.38611	228614.19871	Seldom Seen Run
Pipe Outfall	GC280306	5	2	1	212051.09604	229037.92966	Seldom Seen Run
Pipe Outfall	GC280307	5	1	3	212024.91042	229080.77886	Seldom Seen Run
Pipe Outfall	GC280308	5	2	2	212020.14940	229090.30090	Seldom Seen Run
Pipe Outfall	GC280309	5	2	2	212013.00786	229118.86703	Seldom Seen Run
Pipe Outfall	GC280902	5	1	5	212602.32908	229573.69747	Mainstem 2
Pipe Outfall	GC280903	5	1	5	212574.16007	229559.90239	Mainstem 2
Pipe Outfall	GC281302	5	2	2	212186.78516	228002.40740	Seldom Seen Run
Pipe Outfall	GC281420	5	4	2	213526.88453	229313.06628	Laurel Run
Pipe Outfall	GC281423	5	3	2	213445.67264	229315.92656	Laurel Run
Pipe Outfall	GC281429	5	4	2	213386.28829	229374.28294	Laurel Run
Pipe Outfall	GC281430	5	4	2	213373.98190	229391.26378	Laurel Run
Pipe Outfall	GC281432	5	3	1	213338.99225	229422.30827	Laurel Run
Pipe Outfall	GC281434	5	3	1	213261.64955	229478.12107	Laurel Run
Pipe Outfall	GC281435	5	5	1	213158.98561	229657.56953	Laurel Run
Pipe Outfall	GC290003	5	3	1	214509.20390	228980.59961	Laurel Run
Pipe Outfall	GC290006	5	1	1	214430.47645	229015.98046	Laurel Run
Pipe Outfall	GC290011	5	3	1	214286.02691	229207.08028	Laurel Run
Pipe Outfall	GC290901	5	5	1	214570.70875	228941.65517	Laurel Run
Pipe Outfall	GC291407	5	4	1	213913.05924	229243.76592	Laurel Run
Pipe Outfall	GC291417	5	1	1	213602.74160	229280.58047	Laurel Run
Pipe Outfall	GC300703	5	1	1	215222.71094	228476.12953	Laurel Run
Pipe Outfall	GC370619	5	2	1	211941.40544	230119.63340	Jackson Run
Pipe Outfall	GC370624	5	2	2	211847.64926	230118.27262	Jackson Run
Pipe Outfall	GC370625	5	2	2	211823.09462	230121.00236	Jackson Run
Pipe Outfall	GC370626	5	1	1	211799.03361	230126.46022	Jackson Run
Pipe Outfall	GC370627	5	3	2	211781.67275	230132.78686	Jackson Run
Pipe Outfall	GC370634	5	2	2	212398.38193	229992.19486	Jackson Run
Pipe Outfall	GC370635	5	3	2	212421.38386	229990.71335	Jackson Run
Pipe Outfall	GC371609	5	3	3	211377.92117	230270.79622	Jackson Run
Pipe Outfall	GC371610	5	3	3	211353.23892	230266.82970	Jackson Run
Pipe Outfall	GC380436	5	5	5	213096.57135	229691.64982	Laurel Run
Pipe Outfall	GC380439	5	5	5	212954.19699	229753.09222	Laurel Run
Pipe Outfall	GC380440	5	5	2	212931.19334	229777.77189	Laurel Run
Pipe Outfall	GC380645	5	1	1	212623.14315	229837.49508	Jackson Run
Pipe Outfall	GC380647	5	3	2	212611.23563	229807.70845	Jackson Run
Pipe Outfall	GC380648	5	3	2	212606.47263	229790.70903	Jackson Run
Pipe Outfall	GC380902	5	1	2	212633.51442	229846.21844	Mainstem 2
Pipe Outfall	GC380903	5	1	5	212626.93274	229818.99454	Mainstem 2
Pipe Outfall	GC380905	5	1	2	212654.95133	229730.28250	Mainstem 2
Pipe Outfall	GC381307	5	2	3	213138.54359	230877.27543	Hill Run
Pipe Outfall	GC381310	5	2	3	213200.43687	230798.71857	Hill Run
Pipe Outfall	GC381314	5	1	1	213229.00300	230720.16170	Hill Run
Pipe Outfall	GC381319	5	2	2	213304.85835	230546.40139	Hill Run
Pipe Outfall	GC381320	5	2	1	213305.48238	230531.42451	Hill Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Pipe Outfall	GC381326	5	2	1	213305.48238	230432.82672	Hill Run
Pipe Outfall	GC381328	5	1	1	213304.23431	230428.45846	Hill Run
Pipe Outfall	GC381330	5	2	1	213290.50550	230364.80672	Hill Run
Pipe Outfall	GC381902	5	1	3	213418.18552	230319.92959	Mainstem 2
Pipe Outfall	GC381903	5	1	2	213406.84246	230317.87988	Mainstem 2
Pipe Outfall	GC381905	5	1	2	213375.26205	230318.57530	Mainstem 2
Pipe Outfall	GC381908	5	1	2	213343.63916	230315.17722	Mainstem 2
Pipe Outfall	GC381909	5	1	2	213321.15849	230314.07680	Mainstem 2
Pipe Outfall	GC381911	5	1	3	213245.41489	230293.43446	Mainstem 2
Pipe Outfall	GC381913	5	1	1	213073.47896	230067.17072	Mainstem 2
Pipe Outfall	GC382302	5	2	1	212945.41323	231023.49814	Hill Run
Pipe Outfall	GC390907	5	1	2	213929.08271	230467.06614	Mainstem 2
Pipe Outfall	GC390908	5	3	2	213857.39436	230386.84152	Mainstem 2
Pipe Outfall	GC390909	5	1	2	213835.19262	230386.84152	Mainstem 2
Pipe Outfall	GC390910	5	1	2	213814.47415	230383.78053	Mainstem 2
Pipe Outfall	GC390912	5	1	2	213779.79231	230380.53062	Mainstem 2
Pipe Outfall	GC390914	5	1	2	213725.14767	230357.27069	Mainstem 2
Pipe Outfall	GC398301	5	3	1	214223.01747	230923.46240	Mainstem 2
Pipe Outfall	GC398302	5	1	2	214180.35871	231027.06223	Mainstem 2
Pipe Outfall	GC398303	5	2	1	214177.31166	231066.67394	Mainstem 2
Pipe Outfall	GC398305	5	2	2	214023.43543	231215.97958	Mainstem 2
Pipe Outfall	GC490402	5	1	2	212276.71799	232565.11754	Hill Run
Pipe Outfall	GC502302	5	2	1	214409.17563	232202.57840	Mainstem 2
Pipe Outfall	GC504304	5	2	1	214173.02894	232033.08602	Mainstem 2
Pipe Outfall	GC514504	5	5	1	215445.01105	232587.15062	Mainstem 2
Pipe Outfall	GC514507	5	3	2	215588.22259	232483.55079	Mainstem 2
Pipe Outfall	GC601101	5	4	1	213674.74456	233459.14901	Elk Lick Run
Pipe Outfall	GC601106	5	4	2	213696.81804	233439.83471	Elk Lick Run
Trash Dumping	GC281427	5	2	1	229383.96744	213404.84970	Koontz Run
Trash Dumping	GC290011	5	1	1	229203.51981	214280.44316	Koontz Run
Trash Dumping	GC290701	5	1	1	228610.90592	215012.60746	Koontz Run
Trash Dumping	GC291413	5	2	1	229282.79851	213768.36032	Koontz Run
Trash Dumping	GC300701	5	1	1	228444.96446	215328.72188	Koontz Run
Trash Dumping	GC370402	5	1	2	230239.98883	211820.84338	Orr Run
Trash Dumping	GC381901	5	2	2	230325.15556	213440.28117	Mainstem 2
Trash Dumping	GC382402	5	1	2	231670.57093	212584.83700	Jackson Run
Trash Dumping	GC601104	5	1	1	233441.66145	213672.37491	Elk Lick Run
Unusual Condition	GC290902	5	5	1	214586.41701	228928.02352	Koontz Run
Unusual Condition	GC511205	5	5	1	215258.84859	232112.04272	Mainstem 2
Comment	GC200504				211539.26362	226631.19177	Laurel Run
Comment	GC200505				211484.73554	226634.13923	Laurel Run
Comment	GC201504				210784.43645	227055.39635	Laurel Run
Comment	GC212506				212087.39987	226437.94864	Laurel Run
Comment	GC223202				215054.16215	225357.61808	Laurel Run
Comment	GC276308				211016.13900	228672.97116	Mainstem 2
Comment	GC280601				212504.30178	229640.44654	Jackson Run
Comment	GC300701				215330.21125	228444.93405	Koontz Run
Comment	GC381323				213308.98424	230494.56337	Hill Run
Comment	GC381327				213304.56305	230425.29796	Hill Run
Comment	GC408204				216115.08696	231437.07340	Squirrel Neck Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Comment	GC480404				211677.94659	232362.33097	Hill Run
Comment	GC502305				214790.05738	232484.21556	Mainstem 2
Acid Mine Drainage	GC200505			1	211483.26180	226634.87610	Laurel Run
Acid Mine Drainage	GC221108			5	214803.62369	226729.29397	Laurel Run
Acid Mine Drainage	GC290004			1	214482.02663	228980.99386	Koontz Run
Acid Mine Drainage	GC290009			1	214393.96642	229103.73987	Koontz Run
Acid Mine Drainage	GC290010			3	214308.26992	229194.95967	Koontz Run
Acid Mine Drainage	GC290905			1	214707.95792	228795.97458	Koontz Run
Acid Mine Drainage	GC291406			3	213967.75436	229258.40373	Koontz Run
Acid Mine Drainage	GC370405			2	211756.48717	230387.32673	Orr Run
Acid Mine Drainage	GC370406			2	211758.01382	230466.71247	Orr Run
Acid Mine Drainage	GC372403			3	211350.32529	231269.72979	Orr Run
Acid Mine Drainage	GC381302			3	213051.67177	230968.60634	Hill Run
Acid Mine Drainage	GC381306			3	213124.35574	230895.22448	Hill Run
Acid Mine Drainage	GC390901			3	214283.65447	230712.72255	Mainstem 2
Acid Mine Drainage	GC390905			3	214080.07518	230494.22600	Mainstem 2
Acid Mine Drainage	GC511201			2	215938.29684	231757.73232	Squirrel Neck Run
Acid Mine Drainage	GC511205			1	215257.26226	232111.38337	Mainstem 2
Acid Mine Drainage	GC514509			1	215510.84188	232331.75614	Mainstem 2
Flood Prone Structures	GC190501			1	210419.35834	227374.45563	Laurel Run
Flood Prone Structures	GC190503			1	210418.43108	227429.78180	Laurel Run
Flood Prone Structures	GC190504			2	210419.35834	227411.23671	Laurel Run
Flood Prone Structures	GC200506			1	211456.73285	226626.77003	Laurel Run
Flood Prone Structures	GC201503			1	210818.95661	227023.03180	Laurel Run
Flood Prone Structures	GC201506			1	210696.16761	227153.18502	Laurel Run
Flood Prone Structures	GC275301			2	210985.52578	228491.35700	Mainstem 2
Flood Prone Structures	GC276303			2	211685.59545	229085.31085	Mainstem 2
Flood Prone Structures	GC276305			2	211405.56758	228999.82866	Mainstem 2
Flood Prone Structures	GC280304			2	212260.80482	228637.04309	Seldom Seen Run
Flood Prone Structures	GC280901			2	212575.88051	229644.05494	Mainstem 2
Flood Prone Structures	GC281431			1	213358.80066	229404.63508	Koontz Run
Flood Prone Structures	GC291412			1	213696.15761	229288.37354	Koontz Run
Flood Prone Structures	GC291419			1	213593.20429	229309.24954	Koontz Run
Flood Prone Structures	GC370402			2	211820.07686	230239.88122	Orr Run
Flood Prone Structures	GC370613			2	212048.30630	230124.09947	Jackson Run
Flood Prone Structures	GC370614			2	212007.80691	230120.35842	Jackson Run
Flood Prone Structures	GC370615			2	211985.11838	230118.62418	Jackson Run
Flood Prone Structures	GC370616			2	211974.78356	230126.37277	Jackson Run
Flood Prone Structures	GC370617			2	211963.87336	230128.94891	Jackson Run
Flood Prone Structures	GC370623			2	211836.65360	230137.56159	Jackson Run
Flood Prone Structures	GC370626			2	211796.74777	230128.66020	Jackson Run
Flood Prone Structures	GC370627			1	211783.25537	230133.83266	Jackson Run
Flood Prone Structures	GC370628			1	211762.00834	230122.91640	Jackson Run
Flood Prone Structures	GC370629			1	211746.79179	230126.93807	Jackson Run
Flood Prone Structures	GC370630			2	211739.32787	230145.89768	Jackson Run
Flood Prone Structures	GC370631			2	211708.02463	230158.24938	Jackson Run
Flood Prone Structures	GC370632			2	211680.16768	230177.20899	Jackson Run
Flood Prone Structures	GC370633			2	212201.47400	230004.29873	Jackson Run
Flood Prone Structures	GC370634			1	212401.92033	230001.99582	Jackson Run
Flood Prone Structures	GC370638			2	212558.42032	229944.63269	Jackson Run

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Problem	Survey/Site	Severity		Correctability	Access	Northing	Easting	Stream
Flood Prone Structures	GC371612				2	211430.54734	230261.08874	Jackson Run
Flood Prone Structures	GC372404				3	211337.52733	231283.96348	Orr Run
Flood Prone Structures	GC380640				1	212591.69685	229914.47014	Jackson Run
Flood Prone Structures	GC380641				1	212627.66498	229866.45870	Jackson Run
Flood Prone Structures	GC380642				2	212635.21105	229846.32862	Mainstem 2
Flood Prone Structures	GC380645				1	212620.86484	229841.51759	Jackson Run
Flood Prone Structures	GC380648				1	212611.28622	229789.19240	Jackson Run
Flood Prone Structures	GC380901				2	212766.27266	229954.70859	Mainstem 2
Flood Prone Structures	GC381316				2	213273.21793	230592.67533	Hill Run
Flood Prone Structures	GC381324				1	213315.95902	230483.61185	Hill Run
Flood Prone Structures	GC381906				2	213393.83938	230309.35200	Mainstem 2
Flood Prone Structures	GC381912				2	213173.90031	230213.42575	Mainstem 2
Flood Prone Structures	GC382406				2	212508.29970	231484.34302	Hill Run
Flood Prone Structures	GC382407				3	212446.39881	231653.83357	Hill Run
Flood Prone Structures	GC382409				2	212493.56139	231516.76730	Hill Run
Flood Prone Structures	GC382410				2	212521.56418	231432.75894	Hill Run
Flood Prone Structures	GC382414				2	212767.69394	231133.57127	Hill Run
Flood Prone Structures	GC390903				2	214190.35982	230625.70265	Mainstem 2
Flood Prone Structures	GC390906				2	213946.66965	230485.14929	Mainstem 2
Flood Prone Structures	GC390913				2	213726.36359	230421.52672	Mainstem 2
Flood Prone Structures	GC398307				1	214119.93165	231192.86821	Mainstem 2
Flood Prone Structures	GC398308				2	213985.81304	231677.75857	Mainstem 2
Flood Prone Structures	GC492401				1	212082.36258	232895.53608	Hill Run
Flood Prone Structures	GC502304				3	214645.74715	232216.83064	Mainstem 2
Flood Prone Structures	GC511203				1	215651.21520	232339.38801	Squirrel Neck Run
Flood Prone Structures	GC511204				1	215587.84047	232333.49269	Squirrel Neck Run
Flood Prone Structures	GC600106				2	214400.82738	232515.21607	Elk Lick Run
Representative Site	GC210112					213380.75277	226613.04787	Laurel Run
Representative Site	GC210113					212891.27222	226708.79821	Laurel Run
Representative Site	GC210201					212945.59450	226466.10239	Laurel Run
Representative Site	GC211205					213488.13373	225749.39859	Laurel Run
Representative Site	GC211207					213331.50727	225999.69831	Laurel Run
Representative Site	GC212504					212210.06206	226528.71246	Laurel Run
Representative Site	GC220110					214129.92054	227159.47269	Laurel Run
Representative Site	GC221105					214769.88296	226839.69872	Laurel Run
Representative Site	GC221106					214809.67372	226664.32460	Laurel Run
Representative Site	GC221107					214852.41196	226711.48403	Laurel Run
Representative Site	GC221109					214519.34850	227046.02122	Laurel Run
Representative Site	GC222206					213968.15955	225475.04967	Laurel Run
Representative Site	GC223201					215313.67698	225472.10220	Laurel Run
Representative Site	GC224101					216221.49597	226702.66853	Laurel Run
Representative Site	GC241503					206703.39166	227950.75097	Laurel Run
Representative Site	GC276302					211791.70416	229153.83939	Mainstem 2
Representative Site	GC276304					211536.74850	229090.46891	Mainstem 2
Representative Site	GC280301					212328.14266	228509.81845	Seldom Seen Run
Representative Site	GC280905					212331.42988	229472.94707	Mainstem 2
Representative Site	GC281434					213280.14799	229463.55672	Koontz Run
Representative Site	GC282302					212540.36008	228406.65720	Seldom Seen Run
Representative Site	GC290003					214497.76750	228982.59788	Koontz Run
Representative Site	GC290702					214937.58036	228687.68774	Koontz Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Representative Site	GC291404				214127.24289	229242.12465	Koontz Run
Representative Site	GC291416				213634.48521	229280.78526	Koontz Run
Representative Site	GC300702				215287.08364	228466.15906	Koontz Run
Representative Site	GC301101				215488.77466	228215.31552	Koontz Run
Representative Site	GC301104				215873.63956	227875.29498	Koontz Run
Representative Site	GC301107				216653.03103	227696.42820	Koontz Run
Representative Site	GC301701				215714.37882	227922.09885	Koontz Run
Representative Site	GC302101				216912.57028	227493.13996	Koontz Run
Representative Site	GC302102				217443.83128	227542.60002	Koontz Run
Representative Site	GC302103				218054.63340	227776.15478	Koontz Run
Representative Site	GC350501				208724.35415	230726.73640	Jackson Run
Representative Site	GC351501				208494.56769	231247.35687	Jackson Run
Representative Site	GC360502				210332.64365	230595.88348	Jackson Run
Representative Site	GC360504				209787.90577	230532.36955	Jackson Run
Representative Site	GC361502				210015.24700	231253.16577	Jackson Run
Representative Site	GC362501				209381.40585	230460.53980	Jackson Run
Representative Site	GC370410				211804.08938	230773.38415	Orr Run
Representative Site	GC370615				211984.52105	230118.86663	Jackson Run
Representative Site	GC371603				210663.39153	230488.27498	Jackson Run
Representative Site	GC371604				210999.77889	230344.33365	Jackson Run
Representative Site	GC371608				211303.75429	230288.60220	Jackson Run
Representative Site	GC372407				211240.71680	231378.86890	Orr Run
Representative Site	GC380639				212584.11944	229921.81059	Jackson Run
Representative Site	GC380648				212611.02362	229803.54777	Jackson Run
Representative Site	GC380904				212642.90131	229789.00545	Mainstem 2
Representative Site	GC381315				213240.79286	230675.21287	Hill Run
Representative Site	GC381914				213032.94126	230061.03779	Mainstem 2
Representative Site	GC382405				212548.13876	231639.03368	Hill Run
Representative Site	GC382407				212462.66230	231636.08622	Hill Run
Representative Site	GC382408				212470.44360	231573.86525	Hill Run
Representative Site	GC382414				212509.11433	231484.26234	Hill Run
Representative Site	GC390902				214256.55310	230656.97619	Mainstem 2
Representative Site	GC390914				213711.44580	230392.88388	Mainstem 2
Representative Site	GC398304				214052.91007	231165.13582	Mainstem 2
Representative Site	GC408202				216340.56797	230910.95103	Squirrel Neck Run
Representative Site	GC480402				211378.77897	232559.07421	Hill Run
Representative Site	GC480406				211960.90316	232184.74625	Hill Run
Representative Site	GC490404				212165.75192	232007.89840	Hill Run
Representative Site	GC492402				212212.91135	232743.29073	Hill Run
Representative Site	GC502303				214434.22907	232107.52268	Mainstem 2
Representative Site	GC504301				214054.00619	232004.36143	Mainstem 2
Representative Site	GC511206				215245.47241	232150.43727	Mainstem 2
Representative Site	GC511301				215465.05849	232315.49527	Mainstem 2
Representative Site	GC600109				214431.12593	232491.19637	Elk Lick Run
Representative Site	GC603102				212162.92782	233942.51827	Elk Lick Run
Representative Site	GC605102				213047.62009	234954.08169	Elk Lick Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Erosion Site	GC181711	1	5	2	207947.28465	226880.71670	Potomac Hill Run
Erosion Site	GC183503	1	3	2	207837.36865	227110.80596	Potomac Hill Run
Erosion Site	GC183509	1	4	1	208513.46000	227303.18700	Moore Run
Erosion Site	GC183510	1	5	4	207641.84136	227855.70027	Potomac Hill Run
Erosion Site	GC250502	1	4	1	208526.60853	228088.31183	Moore Run
Erosion Site	GC251504	1	3	1	208617.91372	228354.18326	Moore Run
Erosion Site	GC252101	1	4	3	208254.83902	228892.46265	Moore Run
Erosion Site	GC253101	1	5	5	207547.15763	229049.61578	Moore Run
Erosion Site	GC279502	1	5	5	206967.94834	227557.24054	Potomac Hill Run
Exposed Pipe	GC120110	1	3	2	205174.19149	223955.41887	Mainstem 3
Exposed Pipe	GC251502	1	3	2	208621.77800	228485.26224	Moore Run
Fish Barrier	GC182706	1	5	1	208699.70642	226682.22598	Mainstem 3
In/Near Stream Construction	GC182703	1	3	3	208808.26664	226763.59380	Mainstem 3
Inadequate Buffers	GC171606	1	5	3	206732.60270	225881.74947	Mainstem 3
Inadequate Buffers	GC191912	1	3	1	209716.47403	226195.64711	Butcher Run
Pipe Outfall	GC191909	1	3	2	209841.22233	225902.23817	Butcher Run
Pipe Outfall	GC192904	1	3	2	209310.06214	226505.58719	Butcher Run
Unusual Condition	GC181707	1	5	4	208116.08039	226423.72092	Mainstem 3
Unusual Condition	GC191908	1	4	2	209841.38644	225884.50334	Butcher Run
Unusual Condition	GC191909	1	3	2	209841.99820	225899.68227	Butcher Run
Unusual Condition	GC251502	1	3	2	208623.13395	228485.37906	Moore Run
Erosion Site	GC110304	2	3	1	204045.05900	224580.57432	Unnamed Trib. 7
Erosion Site	GC120112	2	3	2	204938.30016	224086.07983	Mainstem 3
Erosion Site	GC140328	2	4	2	207849.97627	224936.22247	Mill Run
Erosion Site	GC141110	2	3	2	208180.39967	223508.60722	Michaels Run
Erosion Site	GC150106	2	2	2	210292.97751	225352.84197	Butcher Run
Erosion Site	GC170306	2	4	2	207072.74872	225706.69978	Mill Run
Erosion Site	GC171101	2	4	2	206603.61747	225469.17743	Mainstem 3
Erosion Site	GC175101	2	4	1	206708.29648	226068.03227	Unnamed Trib. 6
Erosion Site	GC181513	2	3	1	208337.68553	226686.18486	Moore Run
Erosion Site	GC191910	2	3	3	209842.41228	225871.01364	Butcher Run
Erosion Site	GC192903	2	3	3	209370.21084	226395.73910	Butcher Run
Erosion Site	GC241505	2	5	5	206859.60726	227684.74233	Potomac Hill Run
Erosion Site	GC242502	2	5	5	206115.37254	228499.71619	Potomac Hill Run
Erosion Site	GC251503	2	2	1	208617.15822	228442.49747	Moore Run
Exposed Pipe	GC150102	2	1	2	210341.40566	224702.01565	Butcher Run
Exposed Pipe	GC279501	2	4	3	206967.94834	227559.47114	Potomac Hill Run
Fish Barrier	GC141110	2	5	2	208181.17692	223508.58170	Michaels Run
Fish Barrier	GC191907	2	3	3	209856.31382	225785.24285	Butcher Run
Fish Barrier	GC195304	2	2	2	209762.30580	227444.41499	Mainstem 3
Inadequate Buffers	GC110309	2	3	2	204135.93650	224464.32000	Unnamed Trib. 7
Inadequate Buffers	GC120107	2	5	2	205596.50290	223789.30546	Mainstem 3
Inadequate Buffers	GC130102	2	5	2	206235.15356	224286.32589	Mainstem 3
Inadequate Buffers	GC171101	2	2	2	206600.71404	225468.96016	Mainstem 3
Inadequate Buffers	GC181510	2	4	1	208359.96112	226740.52385	Moore Run
Inadequate Buffers	GC181602	2	4	2	226409.03671	226409.03671	Mainstem 3
Inadequate Buffers	GC183510	2	2	1	208428.09757	226895.15290	Moore Run
Inadequate Buffers	GC191902	2	3	2	210005.06348	225360.49515	Butcher Run
Inadequate Buffers	GC195901	2	3	1	209290.06131	226896.75875	Mainstem 3
Inadequate Buffers	GC250503	2	4	1	208527.28326	228041.10655	Moore Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Inadequate Buffers	GC260302	2	3	3	210236.25801	227518.00562	Mainstem 3
Pipe Outfall	GC120104	2	4	3	205606.44234	223775.82330	Mainstem 3
Pipe Outfall	GC120113	2	3	2	204902.57286	224124.71099	Mainstem 3
Pipe Outfall	GC183502	2	2	2	207794.96674	227159.22149	Potomac Hill Run
Channel Alteration	GC110104	3	5	2	204195.63693	224132.69724	Mainstem 3
Channel Alteration	GC140325	3	4	2	207755.40042	225127.63666	Mill Run
Channel Alteration	GC140327	3	4	2	207822.40973	224957.10840	Mill Run
Channel Alteration	GC181513	3	2	1	208338.94835	226653.45636	Moore Run
Channel Alteration	GC181514	3	5	1	208324.20172	226629.12057	Moore Run
Channel Alteration	GC182702	3	5	1	208990.51476	226759.96871	Mainstem 3
Channel Alteration	GC182707	3	5	1	208556.05801	226503.81670	Mainstem 3
Erosion Site	GC130104	3	4	2	206146.76051	224128.81806	Mainstem 3
Erosion Site	GC132402	3	5	5	206961.73437	222574.03067	South Tributaries
Erosion Site	GC132405	3	5	5	207045.73710	223346.26630	South Tributaries
Erosion Site	GC140326	3	5	3	207761.94706	225108.49976	Mill Run
Erosion Site	GC141101	3	2	1	208475.33439	224352.47133	Mill Run
Erosion Site	GC141106	3	2	3	209570.10916	223388.49449	Mill Run
Erosion Site	GC150101	3	1	2	210408.63495	224696.52596	Butcher Run
Erosion Site	GC150109	3	2	3	210095.06908	225306.21072	Butcher Run
Erosion Site	GC170314	3	4	4	207462.30597	225542.97140	Mill Run
Erosion Site	GC171606	3	4	2	206733.36456	225883.67191	Mainstem 3
Erosion Site	GC241501	3	5	5	206591.38802	228137.17809	Potomac Hill Run
Erosion Site	GC241504	3	5	5	206775.60453	227811.48329	Potomac Hill Run
Erosion Site	GC241506	3	5	5	206875.81832	227658.21515	Potomac Hill Run
Erosion Site	GC243101	3	3	5	207246.52646	229462.10041	Moore Run
Exposed Pipe	GC110103	3	3	1	204287.00696	224317.18944	Mainstem 3
Exposed Pipe	GC110307	3	1	1	204120.07912	224501.11920	Unnamed Trib. 7
Exposed Pipe	GC110308	3	1	1	204132.44414	224479.48040	Unnamed Trib. 7
Exposed Pipe	GC150108	3	4	3	210128.82661	225307.77647	Butcher Run
Exposed Pipe	GC191907	3	3	1	209854.74197	225779.26932	Butcher Run
Fish Barrier	GC171605	3	5	3	206747.68678	225934.87702	Mainstem 3
Fish Barrier	GC181705	3	5	3	208166.33774	226403.80238	Mainstem 3
In/Near Stream Construction	GC110306	3	3	3	204086.96256	224538.42492	Unnamed Trib.7
Inadequate Buffers	GC140319	3	3	1	207632.53226	225230.82071	Mill Run
Inadequate Buffers	GC141301	3	3	3	208686.22814	224014.03012	Mill Run
Inadequate Buffers	GC183506	3	5	1	208542.60864	227456.77332	Moore Run
Pipe Outfall	GC140320	3	3	2	207658.14634	225188.00325	Mill Run
Pipe Outfall	GC140321	3	4	3	207679.90465	225180.34992	Mill Run
Pipe Outfall	GC141111	3	3	1	208182.73095	223512.31239	Michaels Run
Pipe Outfall	GC181713	3	3	2	207964.60869	226694.64560	Potomac Hill Run
Pipe Outfall	GC191901	3	3	1	210021.31083	225326.44568	Butcher Run
Pipe Outfall	GC191911	3	3	1	209797.67876	226067.86872	Butcher Run
Pipe Outfall	GC195305	3	3	3	209595.84300	227326.03282	Mainstem 3
Pipe Outfall	GC195306	3	3	3	209583.65478	227315.36813	Mainstem 3
Trash Dumping	GC181602	3	1	2	226409.42359	207649.80731	Mainstem 3
Unusual Condition	GC181513	3	5	1	208336.47563	226654.42172	Moore Run
Unusual Condition	GC183503	3	3	2	207834.61870	227111.01563	Potomac Hill Run
Unusual Condition	GC192901	3	1	1	209549.48984	226253.80677	Butcher Run
Unusual Condtion	GC110310	3	5	1	204143.90160	224453.24845	Mainstem 3
Unusual Condtion	GC120103	3	4	2	205630.89731	223793.01646	Mainstem 3

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Unusual Condtion	GC170304	3	3	2	225724.31040	207033.75429	Mill Run
Unusual Condtion	GC191912	3	5	1	209702.88425	226180.20574	Butcher Run
Channel Alteration	GC110103	4	5	1	204343.40881	224317.41209	Mainstem 3
Channel Alteration	GC120101	4	4	2	205732.09534	223746.56436	Mainstem 3
Channel Alteration	GC130102	4	5	1	206234.87144	224286.39873	Mainstem 3
Channel Alteration	GC181701	4	4	2	208484.10086	226416.93578	Mainstem 3
Channel Alteration	GC181716	4	3	2	208000.76362	226578.43168	Potomac Hill Run
Erosion Site	GC120105	4	2	2	205642.50904	223793.84659	Mainstem 3
Erosion Site	GC131105	4	3	2	206730.35843	224780.20766	Mainstem 3
Erosion Site	GC141102	4	3	2	208526.52741	224341.02073	Mill Run
Erosion Site	GC141104	4	2	1	208488.76745	224225.20460	Michaels Run
Erosion Site	GC141109	4	2	2	208365.79432	224070.08425	Michaels Run
Erosion Site	GC142101	4	2	4	210612.91073	223649.99399	Mill Run
Erosion Site	GC150104	4	2	3	210093.51346	224955.38337	Butcher Run
Erosion Site	GC191906	4	3	3	209856.81208	225774.02441	Butcher Run
Erosion Site	GC241502	4	5	4	206660.65343	228029.59564	Potomac Hill Run
Exposed Pipe	GC150103	4	1	3	210143.43715	224840.66681	Butcher Run
Exposed Pipe	GC181714	4	3	1	208000.28877	226564.03060	Potomac Hill Run
Exposed Pipe	GC192910	4	3	2	209224.54561	226734.48646	Mainstem 3
Fish Barrier	GC140323	4	4	4	207740.03924	225154.52750	Mill Run
Fish Barrier	GC141103	4	3	1	208484.01032	224218.32527	Michaels Run
Fish Barrier	GC141108	4	4	3	210345.05419	223442.92040	Mill Run
Fish Barrier	GC142102	4	3	1	210987.97322	223795.58958	Mill Run
Fish Barrier	GC151105	4	5	1	210536.26935	225405.87907	Butcher Run
Fish Barrier	GC170310	4	4	4	207357.97815	225553.95500	Mill Run
Inadequate Buffers	GC110302	4	2	1	203652.51997	223977.95581	Mainstem 3
Inadequate Buffers	GC120102	4	2	3	205636.29633	223755.40735	Mainstem 3
Inadequate Buffers	GC171301	4	4	1	206764.32658	225924.95111	Mill Run
Inadequate Buffers	GC181513	4	1	1	208335.23140	226688.85415	Moore Run
Inadequate Buffers	GC181701	4	4	2	208483.91123	226416.37474	Mainstem 3
Inadequate Buffers	GC181712	4	4	1	207977.88020	226700.96724	Potomac Hill Run
Inadequate Buffers	GC182702	4	5	1	208991.25018	226760.66359	Mainstem 3
Inadequate Buffers	GC183507	4	1	1	208508.42649	227393.28326	Moore Run
Inadequate Buffers	GC192701	4	4	1	209184.98877	226732.67869	Mainstem 3
Inadequate Buffers	GC251504	4	4	1	208623.12430	228354.18326	Moore Run
Pipe Outfall	GC110101	4	4	2	204375.43252	224235.92846	Mainstem 3
Pipe Outfall	GC110104	4	5	2	204197.17986	224132.32862	Mainstem 3
Pipe Outfall	GC120116	4	4	2	204582.63219	224187.17559	Mainstem 3
Pipe Outfall	GC251503	4	1	1	208617.48731	228438.31034	Moore Run
Trash Dumping	GC181507	4	1	1	226844.39904	208390.73109	Moore Run
Unusual Condition	GC132404	4	5	5	206855.56871	222621.39942	South Tributaries
Unusual Condition	GC183501	4	5	3	207742.75545	227207.65379	Potomac Hill Run
Unusual Condition	GC251101	4	3	1	208399.24418	228747.89396	Moore Run
Unusual Condtion	GC171302	4	4	4	225888.91209	206796.32508	Mill Run
Channel Alteration	GC110102	5	5	1	204465.32061	224230.59611	Mainstem 3
Channel Alteration	GC110108	5	5	2	203787.31726	223980.48222	Mainstem 3
Channel Alteration	GC120102	5	4	3	205601.04764	223811.30817	Mainstem 3
Channel Alteration	GC120112	5	4	2	204936.82643	224086.81670	Mainstem 3
Channel Alteration	GC130101	5	5	2	206432.92995	224329.05749	Mainstem 3
Channel Alteration	GC131101	5	4	2	206516.72394	225281.26187	Mainstem 3

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Channel Alteration	GC180317	5	5	2	207543.64279	225423.24168	Mill Run
Channel Alteration	GC181509	5	4	1	208369.24031	226761.30417	Moore Run
Channel Alteration	GC183505	5	2	1	208535.19642	227494.15721	Moore Run
Channel Alteration	GC183508	5	1	1	208519.09846	227357.26153	Moore Run
Channel Alteration	GC192701	5	5	1	209185.30643	226756.84602	Mainstem 3
Channel Alteration	GC250501	5	3	1	208525.29067	228117.42726	Moore Run
Channel Alteration	GC250503	5	2	1	208522.86910	228041.78915	Moore Run
Channel Alteration	GC251501	5	1	1	208622.51893	228489.22331	Moore Run
Erosion Site	GC141302	5	2	3	208809.79446	223918.07437	Mill Run
Erosion Site	GC141303	5	3	3	208662.42125	223999.12963	Mill Run
Erosion Site	GC142106	5	2	3	211510.97302	223781.78784	Mill Run
Erosion Site	GC142109	5	2	4	212033.13238	224193.60957	Mill Run
Erosion Site	GC171301	5	3	4	206780.65037	225912.94986	Mill Run
Erosion Site	GC242503	5	5	4	206358.53834	228321.39460	Potomac Hill Run
Erosion Site	GC340102	5	1	5	207453.70600	230145.75358	Moore Run
Exposed Pipe	GC170308	5	4	3	207299.99626	225557.95731	Mill Run
Exposed Pipe	GC195302	5	3	3	209792.96319	227487.42075	Mainstem 3
Exposed Pipe	GC195303	5	3	3	209774.09566	227476.10023	Mainstem 3
Fish Barrier	GC132402	5	5	5	206447.16093	222820.24014	South Tributaries
Fish Barrier	GC142107	5	1	4	211665.22287	224057.75073	Mill Run
Fish Barrier	GC191905	5	3	1	209857.77150	225758.05693	Butcher Run
Fish Barrier	GC192904	5	3	1	209310.32912	226505.35614	Butcher Run
Inadequate Buffers	GC170309	5	5	3	207345.41496	225554.78837	Mill Run
Inadequate Buffers	GC170315	5	3	1	207490.54450	225518.41131	Mill Run
Pipe Outfall	GC110103	5	2	1	204287.06795	224315.15186	Mainstem 3
Pipe Outfall	GC110107	5	5	1	203793.44520	224007.39941	Mainstem 3
Pipe Outfall	GC110301	5	2	1	203665.46893	223984.54650	Mainstem 3
Pipe Outfall	GC110303	5	3	1	204085.96239	224702.12772	Unnamed Trib. 7
Pipe Outfall	GC110305	5	2	1	204067.68006	224558.91618	Unnamed Trib. 7
Pipe Outfall	GC120102	5	2	2	205627.77172	223763.63509	Mainstem 3
Pipe Outfall	GC120109	5	1	2	205239.27233	223932.74658	Mainstem 3
Pipe Outfall	GC130103	5	4	2	206231.08841	224295.34601	Mainstem 3
Pipe Outfall	GC140324	5	4	2	207746.47075	225145.04881	Mill Run
Pipe Outfall	GC170305	5	3	1	207048.56098	225716.72556	Mill Run
Pipe Outfall	GC170312	5	4	4	207383.17927	225556.65653	Mill Run
Pipe Outfall	GC171604	5	4	3	226020.72560	206740.35579	Mill Run
Pipe Outfall	GC181512	5	1	1	208352.86828	226683.93707	Moore Run
Pipe Outfall	GC181603	5	4	3	207036.98293	226216.71904	Mainstem 3
Pipe Outfall	GC181709	5	2	3	207991.69578	226465.72662	Mainstem 3
Pipe Outfall	GC181715	5	5	1	207999.26389	226543.31359	Potomac Hill Run
Pipe Outfall	GC182701	5	1	2	209001.70054	226758.41327	Mainstem 3
Pipe Outfall	GC182705	5	1	1	208764.33185	226720.86944	Mainstem 3
Pipe Outfall	GC182706	5	1	1	208698.30863	226680.04173	Mainstem 3
Pipe Outfall	GC191902	5	3	1	210005.42951	225360.39738	Butcher Run
Pipe Outfall	GC191903	5	3	1	209983.04810	225391.66911	Butcher Run
Pipe Outfall	GC192701	5	5	1	209183.35250	226725.92317	Mainstem 3
Pipe Outfall	GC192905	5	3	1	209297.22869	226519.18793	Butcher Run
Pipe Outfall	GC192906	5	3	1	209273.51572	226578.78240	Butcher Run
Pipe Outfall	GC192907	5	3	1	209254.69935	226610.58969	Butcher Run
Pipe Outfall	GC192908	5	3	2	209220.74765	226694.95044	Butcher Run

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Problem	Survey/Site	Severity	Correctability	Access	Northing	Easting	Stream
Pipe Outfall	GC192909	5	3	2	209229.27120	226735.45983	Butcher Run
Pipe Outfall	GC192911	5	3	1	209288.40038	226778.32825	Mainstem 3
Pipe Outfall	GC195903	5	3	2	209465.25842	227159.30402	Mainstem 3
Pipe Outfall	GC250505	5	1	1	208541.13588	227615.97973	Moore Run
Pipe Outfall	GC250506	5	1	1	208533.91469	227644.16661	Moore Run
Pipe Outfall	GC260303	5	3	2	210007.81422	227624.85836	Mainstem 3
Trash Dumping	GC141115	5	4	4	223194.62272	210226.92917	Mill Run
Trash Dumping	GC150107	5	1	3	225339.59849	210214.96753	Butcher Run
Trash Dumping	GC183501	5	1	2	227207.33972	207743.50596	Potomac Hill Run
Comment	GC120114				204939.71695	224086.28915	Mainstem 3
Comment	GC131102				206697.87937	225001.47680	Mainstem 3
Comment	GC132402				206447.34491	222820.35325	South Tributaries
Comment	GC175102				206709.66923	226066.98513	Unnamed Trib. 6
Comment	GC181708				207999.34162	226455.68525	Mainstem 3
Comment	GC241501				206592.86175	228136.44122	Potomac Hill Run
Comment	GC242501				206103.58268	228506.34799	Potomac Hill Run
Comment	GC242504				206250.95590	228397.29181	Potomac Hill Run
Acid Mine Drainage	GC120111			2	205114.31045	223971.88293	Mainstem 3
Acid Mine Drainage	GC120113			2	204900.80016	224124.96577	Mainstem 3
Acid Mine Drainage	GC131106			2	206725.70882	224668.81272	Mainstem 3
Acid Mine Drainage	GC132403			5	206818.36423	222598.16581	South Tributaries
Acid Mine Drainage	GC142108			4	211965.84572	224181.51299	Mill Run
Acid Mine Drainage	GC150105			2	210322.38149	225364.89608	Butcher Run
Acid Mine Drainage	GC151104			2	210555.61702	225422.82410	Butcher Run
Acid Mine Drainage	GC170313			1	207429.41643	225554.47926	Mill Run
Acid Mine Drainage	GC171101			2	206601.63114	225469.27486	Mainstem 3
Acid Mine Drainage	GC180316			3	207532.24030	225442.88302	Mill Run
Acid Mine Drainage	GC181702			2	208416.52878	226406.10530	Mainstem 3
Acid Mine Drainage	GC181704			2	208212.95080	226935.83594	Mainstem 3
Acid Mine Drainage	GC181706			4	208123.50105	226415.95892	Mainstem 3
Acid Mine Drainage	GC181711			2	207955.88243	226800.31252	Potomac Hill Run
Acid Mine Drainage	GC183501			2	207741.50272	227209.65115	Potomac Hill Run
Comment	GC340101				207443.64214	230269.24363	Moore Run
Flood Prone Structures	GC120106			3	205665.77295	223788.56854	Mainstem 3
Flood Prone Structures	GC120109			3	205261.94329	223894.68437	Mainstem 3
Flood Prone Structures	GC130105			2	205976.75127	223841.62645	Mainstem 3
Flood Prone Structures	GC131104			2	206695.98074	224911.62767	Mainstem 3
Flood Prone Structures	GC140318			3	207564.64248	225365.76322	Mill Run
Flood Prone Structures	GC170311			3	207366.43654	225554.67691	Mill Run
Flood Prone Structures	GC171608			2	206572.71125	225678.98106	Mainstem 3
Flood Prone Structures	GC181503			1	208006.56529	226609.80514	Potomac Hill Run
Flood Prone Structures	GC181511			1	208331.99487	226705.47522	Moore Run
Flood Prone Structures	GC181515			3	208327.08027	226555.23147	Moore Run
Flood Prone Structures	GC181602			1	207646.79988	226409.72532	Mainstem 3
Flood Prone Structures	GC181713			2	207963.92267	226694.25859	Potomac Hill Run
Flood Prone Structures	GC182703			1	208830.31269	226746.20406	Mainstem 3
Flood Prone Structures	GC183501			2	207742.97656	227208.91424	Potomac Hill Run
Flood Prone Structures	GC183507			1	208508.73454	227393.06909	Moore Run
Flood Prone Structures	GC183510			1	208429.19849	226892.38040	Moore Run
Flood Prone Structures	GC195903			1	209464.00329	227156.74474	Mainstem 3

Appendix A - Lower Georges Creek Watershed

Problem	Survey/Site	Severity		Correctability	Access	Northing	Easting	Stream
Flood Prone Structures	GC250504				1	208505.59261	227894.36968	Moore Run
Flood Prone Structures	GC250507				1	208551.84185	227600.85705	Moore Run
Flood Prone Structures	GC259501				3	207652.15748	227859.38460	Potomac Hill Run
Representative Site	GC120108					205413.17272	223906.95627	Mainstem 3
Representative Site	GC120115					204610.63310	224198.22859	Mainstem 3
Representative Site	GC130103					206266.45799	224293.13541	Mainstem 3
Representative Site	GC131103					206714.47255	224920.94530	Mainstem 3
Representative Site	GC132401					206618.67996	222750.13788	South Tributaries
Representative Site	GC132406					206088.13640	223435.42332	South Tributaries
Representative Site	GC141105					208660.48462	223998.86196	Mill Run
Representative Site	GC141107					210110.41356	223300.96604	Mill Run
Representative Site	GC141112					208161.45838	223385.72237	Michaels Run
Representative Site	GC141113					208180.51332	222959.02703	Michaels Run
Representative Site	GC141114					210278.90781	223126.78992	Mill Run
Representative Site	GC142103					212836.58291	223048.49009	Mill Run
Representative Site	GC142104					210995.08405	222436.69920	Mill Run
Representative Site	GC142105					211275.19476	223704.51705	Mill Run
Representative Site	GC151101					211149.03705	224731.57552	Butcher Run
Representative Site	GC151102					210569.09382	224644.06465	Butcher Run
Representative Site	GC151103					210938.65034	225684.76685	Butcher Run
Representative Site	GC171607					206612.68827	225818.88866	Mainstem 3
Representative Site	GC181508					208388.91367	226816.17246	Moore Run
Representative Site	GC181601					207709.20813	226387.05304	Mainstem 3
Representative Site	GC181603					207571.94917	226363.77709	Mainstem 3
Representative Site	GC181703					208306.73191	226370.57715	Mainstem 3
Representative Site	GC181710					207935.34027	226432.76123	Mainstem 3
Representative Site	GC182704					208898.48506	226800.95470	Mainstem 3
Representative Site	GC183504					207843.46769	227099.28990	Potomac Hill Run
Representative Site	GC191904					209860.27875	225745.58904	Butcher Run
Representative Site	GC192701					209213.08475	226759.84051	Mainstem 3
Representative Site	GC192902					209520.59454	226286.26195	Butcher Run
Representative Site	GC195301					209859.28113	227507.31614	Mainstem 3
Representative Site	GC195902					209369.52712	226936.74510	Mainstem 3
Representative Site	GC250504					208504.79976	227892.45672	Moore Run
Representative Site	GC251505					208612.68315	228314.15885	Moore Run
Representative Site	GC259502					207580.26227	228092.22926	Potomac Hill Run
Representative Site	GC260301					210352.68285	227508.42636	Mainstem 3
Representative Site	GC340101					207443.64214	230269.24363	Moore Run
Representative Site	GC341101					206620.48517	229756.95488	Moore Run

Appendix B

Listing of sites by problem category

Appendix B - Upper Georges Creek Pipe Outfalls

Problem	Survey/Site	Outfall Type	Pipe Type	Location	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Pipe Outfall	GC552710	Sewage Overflow	Corrugated Metal	Left bank	6		Yes	Clear	Sewage	1	4	1	Sand Spring Run
Pipe Outfall	GC652705	Sewage Overflow	Concrete Pipe	Left bank	48		Yes	Dark Brown	Sewage	1	4	1	Mainstem 1
Pipe Outfall	GC541603	Stormwater	Plastic	Left bank	4		Yes	White	None	2	4	1	Winebrenner Run
Pipe Outfall	GC545609	Stormwater	Plastic	Left bank	18		Yes	Orange	None	2	5	1	Winebrenner Run
Pipe Outfall	GC552709	Stormwater	Earth Channel	Left bank		20	Yes		Oily	2	5	1	Sand Spring Run
Pipe Outfall	GC555516	Stormwater	Plastic	Left bank	8		Yes	Clear	Rotten Eggs	2	2	2	Winebrenner Run
Pipe Outfall	GC652708	Sewage Overflow	Corrugated Metal	Right bank	36		Yes	Clear	Sewage	2	4	3	Mainstem 1
Pipe Outfall	NR201222		Corrugated Metal	Left Bank	24	2	Yes	Yellow	None	2	5	1	Neff Run
Pipe Outfall	NR404108		Smooth Metal Pipe	Head of stream	36	3	Yes	Clear	Rotten eggs	2	3	4	Matthew's Run
Pipe Outfall	NR603226		Concrete Pipe	Left bank	12		Yes	Clear	None	2	4	1	Dan's Run
Pipe Outfall	GC413214	Unknown	Concrete Pipe	Right bank	6		Yes	Clear	None	3	3	2	Woodland Creek
Pipe Outfall	GC413217	Spring	Smooth Metal Pipe	Left bank	3		Yes	Clear	None	3	4	1	Woodland Creek
Pipe Outfall	GC423107	Unknown	Corrugated Metal	Center	4	3	Yes	Clear	None	3	1	2	Staub Run
Pipe Outfall	GC448501	Pumping Station	Plastic	Right bank	8		Yes	Clear	None	3	2	2	Winebrenner Run
Pipe Outfall	GC514505	Stormwater	Plastic	Left bank	4		Yes	Clear	None	3	5	1	Mainstem 1
Pipe Outfall	GC521506	Stormwater	Plastic	Right bank	4	12	Yes	Clear	None	3	4	1	Woodland Creek
Pipe Outfall	GC551502	Stormwater	Plastic	Left bank	8		Yes	Clear	None	3	4	1	Winebrenner Run
Pipe Outfall	GC577909	Water Treatment	Concrete Pipe	Left bank	36		Yes	Clear	None	3	3	3	Sand Spring Run
Pipe Outfall	NR100103	Drainage	Plastic	Left bank	4	2	Yes	Clear	None	3	2	1	Neff Run
Pipe Outfall	NR100104	Drainage	Smooth Metal Pipe	Left Bank	6	10	Yes	Clear	None	3	3	2	Neff Run
Pipe Outfall	NR100108	Drainage	Smooth Metal Pipe	Left bank	6	10	Yes	Clear	None	3	3	1	Neff Run
Pipe Outfall	NR100117		Plastic	Left bank	4	10	Yes	Clear	None	3	4	1	Neff Run
Pipe Outfall	NR201218		Corrugated Metal	Left bank	30	1	Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR201220		Plastic	Right bank	6	2	Yes	Clear	None	3	3	1	Neff Run
Pipe Outfall	NR202214		Plastic	Left bank	8	1	Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR212216		Plastic	Left bank	8		Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR301311	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR301314	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR301315	Stormwater	Concrete Pipe	Left bank	18		Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR302301	Stormwater	Concrete Pipe		36		Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR302302	Stormwater	Concrete Pipe		36		Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR302302	Stormwater	Concrete Pipe		36		Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR302303	Stormwater	Concrete Pipe		36		Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR302304	Stormwater	Plastic		8		Yes	Clear	None	3	1	1	Neff Run
Pipe Outfall	NR603225		Plastic		6		Yes	Clear	None	3	1	1	Dan's Run

Appendix B - Upper Georges Creek Pipe Outfalls

Problem	Survey/Site	Outfall Type	Pipe Type	Location	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Pipe Outfall	GC533501	Stormwater	Concrete Pipe	Left bank	12	10	No			4	5	1	Mainstem 1
Pipe Outfall	GC552708	Stormwater	Earth Channel	Left bank		15	No			4	3	1	Sand Spring Run
Pipe Outfall	GC553702	Stormwater	Earth Channel	Left bank		15	No			4	5	1	Sand Spring Run
Pipe Outfall	GC553704	Stormwater	Earth Channel	Right bank		20	No			4	5	1	Sand Spring Run
Pipe Outfall	NR100105		Plastic	Left bank	6	20	No			4	2	1	Neff Run
Pipe Outfall	NR100111		Plastic	Left bank	4	10	No			4	3	1	Neff Run
Pipe Outfall	NR100112	Stormwater	Plastic	Right bank	18	12	No			4	3	1	Neff Run
Pipe Outfall	NR100113		Plastic	Left bank	4	6	No			4	3	1	Neff Run
Pipe Outfall	NR100115		Plastic	Left bank	4	16	No			4	3	1	Neff Run
Pipe Outfall	NR100116		Plastic	Left bank	6	16	No			4	3	1	Neff Run
Pipe Outfall	NR100118	Stormwater	Concrete Pipe	Right bank	18	10	No			4	4	1	Neff Run
Pipe Outfall	NR100122		Plastic	Left bank	4	30	No			4	3	1	Neff Run
Pipe Outfall	GC514504	Stormwater	Plastic	Left bank	18		No			5	5	1	Mainstem 1
Pipe Outfall	GC514507	Stormwater	Smooth Metal Pipe	Right bank	22		No			5	3	2	Mainstem 1
Pipe Outfall	GC536602	Unknown	Plastic	Right bank	9		No			5	4	4	Mainstem 1
Pipe Outfall	GC542502	Stormwater	Corrugated Metal	Left bank	36		No			5	3	1	Winebrenner Run
Pipe Outfall	GC545612	Stormwater	Corrugated Metal	Left bank	36		No			5	5	2	Winebrenner Run
Pipe Outfall	GC545614	Unknown	Plastic	Left bank	6		No			5	3	2	Winebrenner Run
Pipe Outfall	GC551504	Stormwater	Corrugated Metal	Left bank	24		No			5	5	1	Winebrenner Run
Pipe Outfall	GC553701	Stormwater	Plastic	Left bank	4		No			5	5	1	Sand Spring Run
Pipe Outfall	GC555511	Stormwater	Plastic	Right bank	24		No			5	2	1	Winebrenner Run
Pipe Outfall	GC555512	Stormwater	Corrugated Metal	Left bank	24		No			5	2	1	Winebrenner Run
Pipe Outfall	GC555532	Stormwater	Corrugated Metal	Left bank	36		No			5	5	1	Winebrenner Run
Pipe Outfall	GC555533	Stormwater	Corrugated Metal	Left bank	24		No			5	5	1	Winebrenner Run
Pipe Outfall	GC564901	Stormwater	Corrugated Metal	Left bank	30		No			5	1	1	Sand Spring Run
Pipe Outfall	GC564905	Residential	Plastic	Right bank	6		No			5	1	2	Sand Spring Run
Pipe Outfall	GC564906	Stormwater	Plastic	Right bank	12		No			5	1	1	Sand Spring Run
Pipe Outfall	GC577903	Unknown	Plastic	Right bank	4		No			5	1	2	Sand Spring Run
Pipe Outfall	GC577907	Stormwater	Plastic	Left bank	18		No			5	1	2	Sand Spring Run
Pipe Outfall	GC577910	Water Treatment	Plastic	Left bank	18		No			5	1	3	Sand Spring Run
Pipe Outfall	GC610101	Stormwater	Plastic	Right bank	6		No			5	1	1	Mainstem 1
Pipe Outfall	GC610103	Stormwater	Plastic	Left bank	6		No			5	1	2	Mainstem 1
Pipe Outfall	GC671902	Stormwater	Corrugated Metal	Left bank	12		No			5	1	4	Sand Spring Run
Pipe Outfall	NR202215	Stormwater	Plastic	Left bank	18		No			5	1	1	Neff Run
Pipe Outfall	NR602212		Smooth Metal Pipe	Left bank	12		No			5	1	1	Dan's Run

Appendix B - Upper Georges Creek Pipe Outfalls

Problem	Survey/Site	Outfall Type	Pipe Type	Location	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Pipe Outfall	NR603221	Stormwater	Plastic	Right bank	12		No			5	1	1	Dan's Run
Pipe Outfall	NR603222		Plastic	Right bank	4	0	No			5	3	1	Dan's Run
Pipe Outfall	NR603223	Stormwater	Corrugated Metal	Left bank	12		No			5	1	1	Dan's Run
Pipe Outfall	NR603228		Plastic	Right bank	4	0	No			5	3	1	Dan's Run
Pipe Outfall	NR604233	Stormwater	Smooth Metal Pipe	Right bank	18		No			5	3	2	Neff Run

Appendix B - Middle Georges Creek Pipe Outfalls

Problem	Survey/Site	Outfall Type	Pipe Type	Location	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Pipe Outfall	GC382411	Sewage Overflow	Plastic	Left bank	4		Yes	Clear	Sewage	1	4	3	Hill Run
Pipe Outfall	GC382415	Sewage Overflow	Plastic	Left bank	3		Yes	Clear	Sewage	1	4	1	Hill Run
Pipe Outfall	GC514509	Sewage Overflow	Concrete Pipe	Left bank	36		Yes	Dark Brown	Sewage	1	4	1	Mainstem 2
Pipe Outfall	GC291406	Stream Drainage	Corrugated Metal	Left bank	12		Yes	milky	None	2	5	2	Laurel Run
Pipe Outfall	GC291410	Stormwater	Corrugated Metal	Left bank	12		Yes	milky	None	2	4	1	Laurel Run
Pipe Outfall	GC372403	Stormwater	Plastic	Left bank	6		Yes	Orange	Musky	2	2	3	Orr Run
Pipe Outfall	GC600105	Stormwater	Plastic	Left bank	10	2	Yes	Clear	Rotten Eggs	2	4	1	Elk Lick Run
Pipe Outfall	GC601102	Pumping Station	Plastic	Right bank	6	2	Yes	Orange	Rotten eggs	2	4	1	Elk Lick Run
Pipe Outfall	GC276307	Stormwater	Corrugated Metal	Left bank	36		Yes	Clear	None	3	3	2	Mainstem 2
Pipe Outfall	GC280906	Stormwater	Concrete Pipe	Right bank	36		Yes	Clear	None	3	5	1	Mainstem 2
Pipe Outfall	GC281422	Unknown	Plastic	Right bank	4		Yes	Clear	None	3	3	2	Laurel Run
Pipe Outfall	GC290007	Groundwater Drain	Smooth Metal Pipe	Left bank	8		Yes	Clear	None	3	3	1	Laurel Run
Pipe Outfall	GC370614	Stormwater	Plastic	Right bank	18		No			3	4	2	Jackson Run
Pipe Outfall	GC370621	Unknown	Plastic	Left bank	6		No			3	2	2	Jackson Run
Pipe Outfall	GC370636	Unknown	Unknown	Left bank	6		Yes	Clear	None	3	2	2	Jackson Run
Pipe Outfall	GC370638	Unknown	Plastic	Right bank	4		Yes	Clear	none	3	3	2	Jackson Run
Pipe Outfall	GC371606	Stormwater	Smooth Metal Pipe	Right bank	24		Yes	Clear	None	3	4	1	Jackson Run
Pipe Outfall	GC380641	Unknown	Smooth Metal Pipe	Right bank	12		Yes	Clear	none	3	4	1	Jackson Run
Pipe Outfall	GC380906	Unknown	Plastic	Right bank	36		Yes	Clear	None	3	5	2	Mainstem 2
Pipe Outfall	GC381904	Stormwater	Plastic	Left bank	36		Yes	Clear	None	3	3	2	Mainstem 2
Pipe Outfall	GC382301	Stormwater	Concrete Pipe	Left bank	24		Yes	Clear	None	3	2	1	Hill Run
Pipe Outfall	GC390911	Unknown	Plastic	Left bank	5		Yes	Clear	None	3	3	2	Mainstem 2
Pipe Outfall	GC397303	Unknown	Wood	Right bank	5		Yes	Clear	None	3	3	3	Mainstem 2
Pipe Outfall	GC511201	Unknown	Smooth Metal Pipe	Left bank	4	6	Yes	Clear	None	3	3	2	Squirrel Neck Run
Pipe Outfall	GC212501	Stormwater	Earth Channel	Right bank		1.5	No			4	3	1	Laurel Run
Pipe Outfall	GC212506	Stormwater	Earth Channel	Left bank		3	No			4	5	1	Laurel Run
Pipe Outfall	GC600107	Stormwater	Plastic	Left bank	6	1	Yes	Clear	None	4	4	1	Elk Lick Run
Pipe Outfall	GC600108	Stormwater	Smooth Metal Pipe	Left bank	6	2	Yes	Clear	None	4	3	1	Elk Lick Run
Pipe Outfall	GC190501	Stormwater	Plastic	Right bank	4		No			5	3	1	Laurel Run
Pipe Outfall	GC201503	Stormwater	Plastic	Left bank	4		No			5	4	1	Laurel Run
Pipe Outfall	GC280303	Stormwater	Corrugated Metal		12		No			5	2	1	Seldom Seen Run
Pipe Outfall	GC280306	Stormwater	Corrugated Metal	Right bank	12		No			5	2	1	Seldom Seen Run
Pipe Outfall	GC280307	Unknown	Plastic	Right bank	8		No			5	1	3	Seldom Seen Run
Pipe Outfall	GC280308	Unknown	Plastic	Right bank	4		No			5	2	2	Seldom Seen Run
Pipe Outfall	GC280309	Stormwater	Corrugated Metal	Left bank	12		No			5	2	2	Seldom Seen Run

Appendix B - Middle Georges Creek Pipe Outfalls

Problem	Survey/Site	Outfall Type	Pipe Type	Location	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Pipe Outfall	GC280902	Stormwater	Concrete Pipe	Right bank	24		No			5	1	5	Mainstem 2
Pipe Outfall	GC280903	Stormwater	Plastic	Right bank	12		No			5	1	5	Mainstem 2
Pipe Outfall	GC281302	Stormwater	Concrete Channel	Right bank	8		No			5	2	2	Seldom Seen Run
Pipe Outfall	GC281420	Stormwater	Concrete Pipe	Right bank	12		No			5	4	2	Laurel Run
Pipe Outfall	GC281423	Stormwater	Corrugated Metal		12		No			5	3	2	Laurel Run
Pipe Outfall	GC281429	Stormwater	Smooth Metal Pipe		4		No			5	4	2	Laurel Run
Pipe Outfall	GC281430	Stormwater	Corrugated Metal		20		No			5	4	2	Laurel Run
Pipe Outfall	GC281432	Unknown	Plastic		8		No			5	3	1	Laurel Run
Pipe Outfall	GC281434	Unknown	Plastic	Right bank	4		No			5	3	1	Laurel Run
Pipe Outfall	GC281435	Unknown	Plastic		4		No			5	5	1	Laurel Run
Pipe Outfall	GC290003	Stormwater	Plastic	Right bank	3		No			5	3	1	Laurel Run
Pipe Outfall	GC290006	Unknown	Smooth Metal Pipe	Left bank	3		No			5	1	1	Laurel Run
Pipe Outfall	GC290011	Groundwater Drain	Plastic	Right bank	4		No			5	3	1	Laurel Run
Pipe Outfall	GC290901	Stormwater	Plastic	Left bank	4		No			5	5	1	Laurel Run
Pipe Outfall	GC291407	Stream Drainage	Corrugated Metal	Left bank	12		Yes	Clear	None	5	4	1	Laurel Run
Pipe Outfall	GC291417	Stormwater	Concrete Pipe	Head of stream	12		No			5	1	1	Laurel Run
Pipe Outfall	GC300703	Sediment Pond	Smooth Metal Pipe	Left bank	3		No			5	1	1	Laurel Run
Pipe Outfall	GC370619	Stormwater	Plastic	Right bank	18		Yes	Clear	None	5	2	1	Jackson Run
Pipe Outfall	GC370624	Roof drain	Plastic	Left bank	4		No			5	2	2	Jackson Run
Pipe Outfall	GC370625	Roof Drain	Plastic	Left bank	4		No			5	2	2	Jackson Run
Pipe Outfall	GC370626	Roof Drain	Plastic	Left bank	4		No			5	1	1	Jackson Run
Pipe Outfall	GC370627	Roof Drain	Plastic	Left bank	4		No			5	3	2	Jackson Run
Pipe Outfall	GC370634	Stormwater	Corrugated Metal	Right bank	24		No			5	2	2	Jackson Run
Pipe Outfall	GC370635	Roof Drain	Plastic	Left bank	4		No			5	3	2	Jackson Run
Pipe Outfall	GC371609	Unknown	Plastic	Right bank	4		No			5	3	3	Jackson Run
Pipe Outfall	GC371610	Unknown	Plastic	Left bank	4		No			5	3	3	Jackson Run
Pipe Outfall	GC380436	Unknown	Plastic	Right bank	4		No			5	5	5	Laurel Run
Pipe Outfall	GC380439	Unknown	Plastic	Right bank	4		No			5	5	5	Laurel Run
Pipe Outfall	GC380440	Unknown	Plastic	Right bank	8		No			5	5	2	Laurel Run
Pipe Outfall	GC380645	Unknown	Plastic	Left bank	3		No			5	1	1	Jackson Run
Pipe Outfall	GC380647	Unknown	Plastic	Right bank	4		No			5	3	2	Jackson Run
Pipe Outfall	GC380648	Unknown	Plastic	Right bank	4		No			5	3	2	Jackson Run
Pipe Outfall	GC380902	Unknown	Concrete Channel	Left bank	12		No			5	1	2	Mainstem 2
Pipe Outfall	GC380903	Stormwater	Concrete Pipe	Right bank	36		No			5	1	5	Mainstem 2
Pipe Outfall	GC380905	Unknown	Plastic	Right bank	18		No			5	1	2	Mainstem 2

Appendix B - Middle Georges Creek Pipe Outfalls

Problem	Survey/Site	Outfall Type	Pipe Type	Location	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Pipe Outfall	GC381307	Unknown	Plastic	Left bank	4		No			5	2	3	Hill Run
Pipe Outfall	GC381310	Stormwater	Concrete Channel	Left bank	16		No			5	2	3	Hill Run
Pipe Outfall	GC381314	Stormwater	Plastic	Left bank	12		No			5	1	1	Hill Run
Pipe Outfall	GC381319	Stormwater	Concrete Channel		24		No			5	2	2	Hill Run
Pipe Outfall	GC381320	Stormwater	Corrugated Metal	Right bank	12		No			5	2	1	Hill Run
Pipe Outfall	GC381326	Unknown	Plastic	Right bank	6		No			5	2	1	Hill Run
Pipe Outfall	GC381328	Unknown	Plastic	Right bank	12		No			5	1	1	Hill Run
Pipe Outfall	GC381330	Unknown	Concrete Pipe	Right bank	3		No			5	2	1	Hill Run
Pipe Outfall	GC381902	Unknown	Plastic	Left bank	3		No			5	1	3	Mainstem 2
Pipe Outfall	GC381903	Stormwater	Plastic	Left bank	30		No			5	1	2	Mainstem 2
Pipe Outfall	GC381905	Unknown	Plastic	Left bank	3		No			5	1	2	Mainstem 2
Pipe Outfall	GC381908	Stormwater	Plastic	Right bank	6		No			5	1	2	Mainstem 2
Pipe Outfall	GC381909	Unknown	Plastic	Right bank	6		No			5	1	2	Mainstem 2
Pipe Outfall	GC381911	Stormwater	Concrete Pipe	Right bank	12		No			5	1	3	Mainstem 2
Pipe Outfall	GC381913	Stormwater	Concrete Pipe	Right bank	12		No			5	1	1	Mainstem 2
Pipe Outfall	GC382302	Unknown	Plastic	Left bank	36		No			5	2	1	Hill Run
Pipe Outfall	GC390907	Stormwater	Corrugated Metal	Left bank	24		No			5	1	2	Mainstem 2
Pipe Outfall	GC390908	Unknown	Smooth Metal Pipe	Left bank	24		No			5	3	2	Mainstem 2
Pipe Outfall	GC390909	Unknown	Plastic	Left bank	3		No			5	1	2	Mainstem 2
Pipe Outfall	GC390910	Unknown	Plastic	Left bank	5		No			5	1	2	Mainstem 2
Pipe Outfall	GC390912	Unknown	Plastic	Left bank	6		No			5	1	2	Mainstem 2
Pipe Outfall	GC390914	Unknown	Plastic	Left bank	2		No			5	1	2	Mainstem 2
Pipe Outfall	GC398301	Unknown	Smooth Metal Pipe	Right bank	12		No			5	3	1	Mainstem 2
Pipe Outfall	GC398302	Stormwater	Concrete Channel	Right bank	12		No			5	1	2	Mainstem 2
Pipe Outfall	GC398303	Stormwater	Concrete Channel	Right bank	12		No			5	2	1	Mainstem 2
Pipe Outfall	GC398305	Stormwater	Concrete Channel	Right bank	26		No			5	2	2	Mainstem 2
Pipe Outfall	GC490402	Stormwater	Concrete Pipe	Right bank	6		No			5	1	2	Hill Run
Pipe Outfall	GC502302	Stormwater	Smooth Metal Pipe	Left bank	36		No			5	2	1	Mainstem 2
Pipe Outfall	GC504304	Stormwater	Smooth Metal Pipe	Left bank	12		No			5	2	1	Mainstem 2
Pipe Outfall	GC601101	Pumping Station	Smooth Metal Pipe	Right bank	12		No			5	4	1	Elk Lick Run
Pipe Outfall	GC601106	Unknown	Plastic	Right bank	3		No			5	4	2	Elk Lick Run

Appendix B - Lower Georges Creek Pipe Outfalls

Problem	Survey/Site	Outfall Type	Pipe Type	Location	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Pipe Outfall	GC191909	Sewage Overflow	Plastic	Left bank	4		Yes	Dark brown	Sewage	1	3	2	Butcher Run
Pipe Outfall	GC192904	Sewage Overflow	Plastic	Right bank	36		No		Sewage	1	3	2	Butcher Run
Pipe Outfall	GC120104	Unknown	Smooth Metal Pipe	Right bank	12		Yes	Clear	Rotten eggs	2	4	3	Mainstem 3
Pipe Outfall	GC120113	Stormwater	Concrete Pipe	Left bank	36	5	Yes	orange	None	2	3	2	Mainstem 3
Pipe Outfall	GC183502	AM Drainage	Plastic	Head of stream	10		Yes	Orange	Rotten Eggs	2	2	2	Potomac Hill Run
Pipe Outfall	GC140320	Stormwater	Plastic	Left bank	6		Yes	Clear	None	3	3	2	Mill Run
Pipe Outfall	GC140321	Unknown	Concrete Pipe	Left bank	4		Yes	Clear	None	3	4	3	Mill Run
Pipe Outfall	GC141111	Stormwater	Plastic	Left bank	24	12	Yes	Clear	None	3	3	1	Michaels Run
Pipe Outfall	GC181713	Groundwater Drain	Plastic	Right bank	10		Yes	Clear	None	3	3	2	Potomac Hill Run
Pipe Outfall	GC191901	Stormwater	Smooth Metal Pipe	Head of stream	24		Yes	Clear	None	3	3	1	Butcher Run
Pipe Outfall	GC191911	Stormwater	Concrete Pipe	Left bank	12		Yes	Clear	None	3	3	1	Butcher Run
Pipe Outfall	GC195305	Unknown	Smooth Metal Pipe	Left bank	8		Yes	Clear	None	3	3	3	Mainstem 3
Pipe Outfall	GC195306	Unknown	Smooth Metal Pipe	Left bank	24		Yes	Clear	None	3	3	3	Mainstem 3
Pipe Outfall	GC110101	Stormwater	Concrete Channel	Right bank	36	3	No			4	4	2	Mainstem 3
Pipe Outfall	GC110104	Stormwater	Concrete Channel	Right bank	36	3	No			4	5	2	Mainstem 3
Pipe Outfall	GC120116	Stormwater	Concrete Channel	Right bank	36	3	No			4	4	2	Mainstem 3
Pipe Outfall	GC251503	Stormwater	Smooth Metal Pipe	Right bank	12		No			4	1	1	Moore Run
Pipe Outfall	GC110103	Stormwater	Corrugated Metal	Left bank	36		No			5	2	1	Mainstem 3
Pipe Outfall	GC110107	Stormwater	Smooth Metal Pipe		6		No			5	5	1	Mainstem 3
Pipe Outfall	GC110301	Stormwater	Concrete Pipe	Right bank	12		No			5	2	1	Mainstem 3
Pipe Outfall	GC110303	Stormwater	Concrete Pipe	Head of stream	36		No			5	3	1	Unnamed Trib. 7
Pipe Outfall	GC110305	Unknown	Concrete Pipe	Right bank	48		No			5	2	1	Unnamed Trib. 7
Pipe Outfall	GC120102	Stormwater	Smooth Metal Pipe	Right bank	24		No			5	2	2	Mainstem 3
Pipe Outfall	GC120109	Stormwater	Plastic	Right bank	6		No			5	1	2	Mainstem 3
Pipe Outfall	GC130103	Stormwater	Concrete Pipe	Left bank	30		No			5	4	2	Mainstem 3
Pipe Outfall	GC140324	Stormwater	Plastic	Right bank	4		No			5	4	2	Mill Run
Pipe Outfall	GC170305	Stormwater	Concrete Channel	Left bank	18		No			5	3	1	Mill Run
Pipe Outfall	GC170312	Unknown	Smooth Metal Pipe	Left bank	4		No			5	4	4	Mill Run
Pipe Outfall	GC171604	Stormwater	Concrete Pipe	Left bank	60		No			5	4	3	Mill Run
Pipe Outfall	GC181512	Unknown	Rubber	Right bank	2		No			5	1	1	Moore Run
Pipe Outfall	GC181603	Stormwater	Corrugated Metal	Right bank	24		No			5	4	3	Mainstem 3
Pipe Outfall	GC181709	Stormwater	Plastic	Right bank	18		No			5	2	3	Mainstem 3
Pipe Outfall	GC181715	Stormwater	Corrugated Metal	Left bank	30		No			5	5	1	Potomac Hill Run
Pipe Outfall	GC182701	Stormwater	Corrugated Metal	Right bank	30		No			5	1	2	Mainstem 3
Pipe Outfall	GC182705	Stormwater	Concrete Pipe	Left bank	24		No			5	1	1	Mainstem 3

Appendix B - Lower Georges Creek Pipe Outfalls

Problem	Survey/Site	Outfall Type	Pipe Type	Location	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Pipe Outfall	GC182706	Stormwater	Concrete Pipe	Right bank	12		No			5	1	1	Mainstem 3
Pipe Outfall	GC191902	Unknown	Smooth Metal Pipe	Left bank	8		No			5	3	1	Butcher Run
Pipe Outfall	GC191903	Stormwater	Plastic	Left bank	6		No			5	3	1	Butcher Run
Pipe Outfall	GC192701	Stormwater	Corrugated Metal	Right bank	12		No			5	5	1	Mainstem 3
Pipe Outfall	GC192905	Unknown	Plastic	Right bank	6		No			5	3	1	Butcher Run
Pipe Outfall	GC192906	Unknown	Plastic	Right bank	6		No			5	3	1	Butcher Run
Pipe Outfall	GC192907	Unknown	Plastic	Right bank	6		No			5	3	1	Butcher Run
Pipe Outfall	GC192908	Unknown	Plastic	Right bank	4		No			5	3	2	Butcher Run
Pipe Outfall	GC192909	Unknown	Plastic	Right bank	4		No			5	3	2	Butcher Run
Pipe Outfall	GC192911	Unknown	Smooth Metal Pipe	Left bank	12		No			5	3	1	Mainstem 3
Pipe Outfall	GC195903	Unknown	Plastic	Right bank	4		No			5	3	2	Mainstem 3
Pipe Outfall	GC250505	Unknown	Plastic	Right bank	6		No			5	1	1	Moore Run
Pipe Outfall	GC250506	Unknown	Plastic	Right bank	6		No			5	1	1	Moore Run
Pipe Outfall	GC260303	Stormwater	Corrugated Metal	Left bank	36		No			5	3	2	Mainstem 3

Appendix B - Upper Georges Creek Erosion Sites

Problem	Survey/Site	Type	Possible Cause	Length(ft)	Height(ft)	Land Use Right	Land Use Left	Infrastructure Threatened?	Describe	Severity	Correctability	Access	Stream
Erosion Site	GC533504	Widening	Below channelization	1000	5	Multiflora Rose	Lawn	Yes	House	1	3	2	Mainstem 1
Erosion Site	GC542501	Widening	Channelization	1000	5	Forest	Paved	Yes	I-68	1	4	1	Winebrenner Run
Erosion Site	GC320208	Widening	Bend at steep slope	40	14	Forest	Forest	No		2	5	5	Woodland Creek
Erosion Site	GC545615	Widening	Bend at steep slope	100	60	Forest	Forest	No		2	4	3	Winebrenner Run
Erosion Site	GC552707	Downcutting	Below channelization	600	12	Forest	Shrubs & small trees	No		2	5	2	Sand Spring Run
Erosion Site	GC555502	Widening	Unknown	150	10	Forest	Paved	Yes	Road; Filling culvert	2	3	2	Winebrenner Run
Erosion Site	GC555533	Widening	Below channelization	200	4	Forest	Paved	Yes	Road I-68	2	4	1	Winebrenner Run
Erosion Site	NR100121	Downcutting		800	15	Shrubs & small trees	Lawn	No		2	3	1	Neff Run
Erosion Site	GC548102	Widening	Bend at steep slope	300	7	Forest	Forest	No		3	3	3	Mainstem 1
Erosion Site	NR100125	Downcutting	Below channelization	100	20	Lawn	Lawn	No		3	3	1	Neff Run
Erosion Site	NR201220	Widening	Bend at steep slope	120	4	Forest	Shrubs & small trees	No		3	4	1	Neff Run
Erosion Site	NR202202	Widening	Bend at steep slope	225	2.5	Forest	Forest	No		3	4	4	Neff Run
Erosion Site	NR302306	Downcutting	Bend at steep slope	150	4.5	Forest	Forest	No		3	3	4	Neff Run
Erosion Site	NR402127	Widening	Natural			Forest	Forest	No		3	3	4	Matthew's Run
Erosion Site	NR402130	Downcutting	Bend at steep slope	30	5	Forest	Forest	No		3	3	5	Matthew's Run
Erosion Site	NR601204	Widening	Bend at steep slope	400	15	Forest	Forest	No		3	4	5	Dan's Run
Erosion Site	NR601206	Widening		30	10	Forest	Forest	No		3	2	4	Dan's Run
Erosion Site	NR603216	Widening	Bend at steep slope	300	25	Forest	Lawn	No		3	4	3	Dan's Run
Erosion Site	NR603217	Widening	Bend at steep slope	200	3	Forest	Forest	No		3	4	3	Dan's Run
Erosion Site	NR604230	Widening	Below channelization	200	4	Lawn	Lawn	No		3	3	2	Dan's Run
Erosion Site	NR701304	Widening	Bend at steep slope	20	4	Forest	Forest	No		3	3	5	Neff Run
Erosion Site	NR701305	Widening	Natural	10	4	Forest	Forest	No		3	3	5	Neff Run
Erosion Site	GC434604	Headcutting		150	7	Shrubs & small trees	Lawn	No		4	3	1	Winebrenner Run
Erosion Site	GC521502	Widening	Bend at steep slope	110	4	Forest	Forest	No		4	4	3	Woodland Creek
Erosion Site	GC521504	Widening	Unknown	500	4	Forest	Lawn	No		4	2	1	Woodland Creek
Erosion Site	GC526505	Widening	Land use change upstream	150	4	Powerline	Powerline	No		4	2	1	Woodland Creek
Erosion Site	GC545608	Widening	Land use change upstream	300	4	Shrubs & small trees	Lawn	No		4	3	2	Winebrenner Run
Erosion Site	GC552703	Downcutting	Unknown	200	5	Lawn	Shrubs & small trees	No		4	3	1	Sand Spring Run
Erosion Site	GC555508	Downcutting	Bend at steep slope	200	7	Forest	Forest	No		4	2	3	Winebrenner Run
Erosion Site	GC563805	Downcutting	Flooding	100	8	Shrubs & small trees	Shrubs & small trees	No		4	3	2	Sand Spring Run
Erosion Site	GC564904	Downcutting	Unknown	100	4	Lawn	Lawn			4	3	3	Sand Spring Run
Erosion Site	GC564907	Widening	Bend at steep slope	80	30	Forest	Forest			4	5	4	Sand Spring Run
Erosion Site	GC568803	Downcutting	Flooding	100	5	Lawn	Shrubs & small trees	No		4	3	1	Sand Spring Run
Erosion Site	GC577908	Widening	Bend at steep slope	50	20	Forest	Shrubs & small trees			4	4	4	Sand Spring Run
Erosion Site	NR100109	Downcutting		225	6	Lawn	Lawn	No		4	3	4	Neff Run
Erosion Site	NR100119	Downcutting		75	7		Lawn	No		4	2	1	Neff Run
Erosion Site	NR202203	Widening	Bend at steep slope	100	5	Forest	Forest	No		4	4	4	Neff Run
Erosion Site	NR202204	Widening	Bend at steep slope	100	8	Forest	Forest	No		4	4	5	Neff Run

Appendix B - Upper Georges Creek Erosion Sites

Problem	Survey/Site	Type	Possible Cause	Length(ft)	Height(ft)	Land Use Right	Land Use Left	Infrastructure Threatened?	Describe	Severity	Correctability	Access	Stream
Erosion Site	NR202206	Widening	Bend at steep slope	350	5	Forest	Forest	No		4	4	5	Neff Run
Erosion Site	NR202209	Widening	Bend at steep slope	120	4	Pasture	Forest	No		4	4	4	Neff Run
Erosion Site	NR402123	Downcutting	Bend at steep slope	25	10	Forest	Forest	No		4	3	5	Matthew's Run
Erosion Site	NR402129	Widening	Natural			Forest	Forest	No		4	3	4	Matthew's Run
Erosion Site	NR404106	Downcutting	Natural	75	19	Forest	Forest	No		4	4	4	Matthew's Run
Erosion Site	NR404117	Downcutting	Natural	75	6	Forest	Forest	No		4	3	4	Matthew's Run
Erosion Site	NR601210	Widening		300	2	Forest	Forest	No		4	4	4	Dan's Run
Erosion Site	NR701303	Widening	Natural	10	3	Forest	Forest	No		4	2	5	Neff Run
Erosion Site	NR701308	Widening	Natural	10	5	Forest	Forest	No		4	3	5	Neff Run
Erosion Site	GC320206	Widening	Bend at steep slope	20	3	Forest	Forest	No		5	5	5	Woodland Creek
Erosion Site	GC320207	Widening	Bend at steep slope	15	4	Forest	Forest	No		5	5	5	Woodland Creek
Erosion Site	GC423112	Widening	Bend at steep slope	50	10	Forest	Forest	No		5	3	2	Staub Run
Erosion Site	GC434602	Widening	Land use change upstream	250	2	Forest	Forest	No		5	4	3	Winebrenner Run
Erosion Site	GC448503	Widening	Below channelization	50	8	Forest	Forest	No		5	3	2	Winebrenner Run
Erosion Site	GC521505	Widening	Unknown	250	3	Forest	Lawn	No		5	2	1	Woodland Creek
Erosion Site	GC541603	Downcutting	Below road crossing	100	3	Forest	Forest	No		5	4	1	Winebrenner Run
Erosion Site	GC553705	Widening	Bend at steep slope	50	4	Lawn	Forest	Yes	Yard	5	3	1	Sand Spring Run
Erosion Site	GC564903	Widening	Bend at steep slope	40	5	Shrubs & small trees	Shrubs & small trees			5	3	3	Sand Spring Run
Erosion Site	NR404104	Widening	Bend at steep slope	50	20	Forest	Forest	No		5	5	4	Matthew's Run
Erosion Site	NR601205	Headcutting		20	5	Forest	Forest	No		5	2	4	Dan's Run

Appendix B - Middle Georges Creek Erosion Sites

Problem	Survey/Site	Type	Possible Cause	Length(ft)	Height(ft)	Land Use Right	Land Use Left	Infrastructure Threatened?	Describe	Severity	Correctability	Access	Stream
Erosion Site	GC309201	Headcutting	Natural	1500	6	Forest	Forest	No		1	5	4	Seldom Seen Run
Erosion Site	GC408203	Widening	Bend at steep slope	1400	5	Forest	Forest	No		1	5	4	Seldom Seen Run
Erosion Site	GC370407	Widening	Bend at steep slope	100	50	Forest	Forest	No		2	5	3	Orr Run
Erosion Site	GC380437	Widening	flooding	100	10	Paved	Paved	Yes	buildings, roads	2	5	4	Koontz Run
Erosion Site	GC382403	Headcutting	Below road crossing	50	5	Pasture	Paved	Yes	Road	2	3	2	Hill Run
Erosion Site	GC480407	Downcutting	Washed out road crossing	50	2	Forest	Forest	Yes	Road	2	4	2	Hill Run
Erosion Site	GC600102	Downcutting	Bend at steep slope	300	6	Lawn	Paved	No		2	3	1	Elk Lick Run
Erosion Site	GC200503	Widening	Below channelization	400	5	Lawn	Forest	No		3	3	1	Laurel Run
Erosion Site	GC200510	Widening	Unknown	600	4	Forest	Forest	No		3	4	1	Laurel Run
Erosion Site	GC276302	Widening	Unknown	200	6	Forest	Lawn	No		3	3	2	Mainstem 2
Erosion Site	GC281303	Downcutting	Unknown	400	7	Forest	Shrubs & small trees	No		3	3	3	Seldom Seen Run
Erosion Site	GC290011	Widening	Unknown	100	8	Paved	Forest	Yes	Parking lot; Storage	3	4	1	Koontz Run
Erosion Site	GC372405	Widening	Bend at steep slope	400	10	Lawn	Forest	No		3	4	3	Orr Run
Erosion Site	GC381308	Widening	Unknown	400	6	Lawn	Forest	No		3	3	4	Hill Run
Erosion Site	GC397304	Widening	Bend at steep slope	50	10	Shrubs & small trees	Shrubs & small trees	No		3	3	3	Mainstem 2
Erosion Site	GC601105	Downcutting	Below dam	300	5	Forest	Shrubs & small trees	No		3	4	2	Elk Lick Run
Erosion Site	GC200501	Widening	Natural	300	5	Forest	Forest	No		4	4	2	Laurel Run
Erosion Site	GC281304	Downcutting	Unknown	100	5	Forest	Shrubs & small trees	No		4	3	2	Seldom Seen Run
Erosion Site	GC360503	Widening	Bend at steep slope	100	9	Forest	Forest	No		4	2	5	Jackson Run
Erosion Site	GC381325	Widening	Unknown	200	8	Lawn	Paved	No		4	3	1	Hill Run
Erosion Site	GC382401	Widening	Bend at steep slope	300	2.5	Forest	Forest	No		4	4	3	Hill Run
Erosion Site	GC382402	Headcutting	Land use change upstream	100	8	Forest	Forest	No		4	4	3	Hill Run
Erosion Site	GC382404	Downcutting	Land use change upstream	500	3	Forest	Forest	No		4	4	3	Hill Run
Erosion Site	GC602101	Widening	Bend at steep slope	200	8	Forest	Paved	No		4	2	2	Elk Lick Run
Erosion Site	GC200508	Widening	Unknown	40	4	Paved	Lawn	No		5	3	1	Laurel Run
Erosion Site	GC201505	Widening	Below road crossing	60	4	Forest	Forest	No		5	3	1	Laurel Run
Erosion Site	GC212502	Widening	Below road crossing	70	3	Forest	Paved	No		5	3	1	Laurel Run
Erosion Site	GC212503	Widening	Bend at steep slope	80	3	Forest	Forest	No		5	3	2	Laurel Run
Erosion Site	GC212505	Widening	Bend at steep slope	30	3	Forest	Forest	No		5	3	1	Laurel Run
Erosion Site	GC212507	Headcutting	Below road crossing	20	2	Forest	Forest	No		5	3	2	Laurel Run
Erosion Site	GC290701	Widening	Below channelization	100	4	Paved	Forest	No		5	4	1	Koontz Run
Erosion Site	GC291405	Widening	Unknown	100	4	Shrubs & small trees	Shrubs & small trees	No		5	4	2	Koontz Run
Erosion Site	GC291409	Widening	Flooding	50	4	Forest	Paved	No		5	3	3	Koontz Run
Erosion Site	GC291411	Widening	Flooding	120	6	Shrubs & small trees	Forest	No		5	2	1	Koontz Run
Erosion Site	GC301105	Widening	Bend at steep slope	75	9	Forest	Forest	No		5	1	3	Koontz Run
Erosion Site	GC360501	Widening	Below debris jam	30	5	Forest	Forest	No		5	2	5	Jackson Run
Erosion Site	GC370403	Widening	Inadequate Buffer	20	1	Lawn	Paved	No		5	1	2	Orr Run
Erosion Site	GC370408	Widening	Bend at steep slope	200	3	Forest	Forest	No		5	2	3	Orr Run
Erosion Site	GC370618	Widening	Bend at steep slope	75	10	Lawn	Forest	No		5	3	2	Jackson Run
Erosion Site	GC371602	Widening	Below debris Jam	50	6	Forest	Forest	No		5	2	4	Jackson Run

Appendix B - Middle Georges Creek Erosion Sites

Problem	Survey/Site	Type	Possible Cause	Length(ft)	Height(ft)	Land Use Right	Land Use Left	Infrastructure Threatened?	Describe	Severity	Correctability	Access	Stream
Erosion Site	GC390907	Widening	Bend at steep slope	20	7	Forest	Lawn	No		5	3	2	Mainstem 2
Erosion Site	GC408201	Widening	Bend at steep slope	20	5	Forest	Forest	No		5	4	4	Seldom Seen Run
Erosion Site	GC408202	Widening	Bend at steep slope	50	10	Forest	Forest	No		5	5	4	Seldom Seen Run
Erosion Site	GC480403	Headcutting	Unknown	20	3	Forest	Forest	No		5	2	4	Hill Run
Erosion Site	GC603101	Downcutting	Bend at steep slope	150	2	Forest	Forest	No		5	1	5	Elk Lick Run

Appendix B - Lower Georges Creek Erosion Sites

Problem	Survey/Site	Type	Possible Cause	Length(ft)	Height(ft)	Land Use Right	Land Use Left	Infrastructure Threatened?	Describe	Severity	Correctability	Access	Stream
Erosion Site	GC181711	Downcutting	Land use change upstream	1600	7	Forest	Forest	Yes	House on right bank	1	5	2	Potomac Hill Run
Erosion Site	GC183503	Widening	Land use change upstream	1500	5	Forest	Forest	No		1	3	2	Potomac Hill Run
Erosion Site	GC183509	Widening	Unknown	1500	6	Paved	Forest	Yes	Road	1	4	1	Moore Run
Erosion Site	GC183510	Downcutting	Unknown	1600	10	Forest	Forest	No		1	5	4	Potomac Hill Run
Erosion Site	GC250502	Widening	Unknown	5000	5	Lawn	Paved	Yes	Road	1	4	1	Moore Run
Erosion Site	GC251504	Widening	Unknown	1000	10	Paved	Forest	Yes	Road	1	3	1	Moore Run
Erosion Site	GC252101	Downcutting	Bend at steep slope	1100	10	Forest	Forest	Yes	Mine Road	1	4	3	Moore Run
Erosion Site	GC253101	Downcutting	Bend at steep slope	2000	12	Forest	Forest	No		1	5	5	Moore Run
Erosion Site	GC279502	Widening	Unknown	2300	6	Forest	Forest	No		1	5	5	Potomac Hill Run
Erosion Site	GC110304	Widening	Unknown	600	10	Shrubs & small trees	Shrubs & small trees	No		2	3	1	Unnamed Trib. 7
Erosion Site	GC120112	Widening	Below Channelization	200	3	Lawn	Paved	Yes	Undercutting Gabion	2	3	2	Mainstem 3
Erosion Site	GC140328	Downcutting	Bend at steep slope	300	5	Forest	Paved	Yes	Road along left bank	2	4	2	Mill Run
Erosion Site	GC141110	Headcutting	below road crossing	150	25	Forest	Forest	Yes	Road	2	3	2	Michaels Run
Erosion Site	GC150106	Widening	Bend at steep slope	350	10	Pasture	Forest	Yes	House	2	2	2	Butcher Run
Erosion Site	GC170306	Downcutting	Natural	400	5	Shrubs & small trees	Paved	Yes	Road along left bank	2	4	2	Mill Run
Erosion Site	GC171101	Widening	Bend at steep slope	700	12	Lawn	Forest	No		2	4	2	Mainstem 3
Erosion Site	GC175101	Headcutting		40	12	Forest	Paved	No		2	4	1	Unnamed Trib. 6
Erosion Site	GC181513	Widening	Failed gabion	100	6	Lawn	Lawn	Yes	Gabion and house	2	3	1	Moore Run
Erosion Site	GC191910	Downcutting	Unknown	500	15	Forest	Shrubs & small trees			2	3	3	Butcher Run
Erosion Site	GC192903	Downcutting	Flooding	500	10	Lawn	Lawn			2	3	3	Butcher Run
Erosion Site	GC241505	Widening	Unknown	120	6	Forest	Forest	No		2	5	5	Potomac Hill Run
Erosion Site	GC242502	Widening	Below road crossing	2600	3	Forest	Forest	Yes	Road	2	5	5	Potomac Hill Run
Erosion Site	GC251503	Widening	Bend at steep slope	25	7	Paved	Forest	Yes	Road on Right	2	2	1	Moore Run
Erosion Site	GC130104	Widening	Bend at steep slope	800	10	Paved	Forest	No		3	4	2	Mainstem 3
Erosion Site	GC132402	Widening	Unknown	700	5	Forest	Forest	No		3	5	5	South Tributaries
Erosion Site	GC132405	Widening	Ending of old mine talings	500	10	Forest	Forest	No		3	5	5	South Tributaries
Erosion Site	GC140326	Widening	Bend at steep slope	500	7	Lawn	Forest	No		3	5	3	Mill Run
Erosion Site	GC141101	Widening	Bend at steep slope	100	20	Forest	Lawn	No		3	2	1	Mill Run
Erosion Site	GC141106	Headcutting	Land use change upstream	800	6	Shrubs and small trees	Shrubs & small trees	No		3	2	3	Mill Run
Erosion Site	GC150101	Widening	Land use change upstream	300	5	Pasture	Lawn	No		3	1	2	Butcher Run
Erosion Site	GC150109	Downcutting	Bend at steep slope	300	7	Forest	Forest	No		3	2	3	Butcher Run
Erosion Site	GC170314	Headcutting	Bend at steep slope	350	7	Shrubs & small trees	Forest	No		3	4	4	Mill Run
Erosion Site	GC171606	Widening	Bend at steep slope	300	8	Paved	Forest	No		3	4	2	Mainstem 3
Erosion Site	GC241501	Downcutting	Natural	1200	3	Forest	Forest	No		3	5	5	Potomac Hill Run
Erosion Site	GC241504	Widening	Land use change upstream	900	3	Forest	Forest	No		3	5	5	Potomac Hill Run
Erosion Site	GC241506	Widening	Unknown	600	5	Forest	Forest	No		3	5	5	Potomac Hill Run
Erosion Site	GC243101	Widening	Bend at steep slope	75	20	Forest	Forest	No		3	3	5	Moore Run
Erosion Site	GC120105	Widening	Below Channelization	250	7	Shrubs & small trees	Forest	No		4	2	2	Mainstem 3
Erosion Site	GC131105	Widening	Bend at steep slope	200	4.5	Shrubs & small trees	Forest	No		4	3	2	Mainstem 3
Erosion Site	GC141102	Downcutting	Bend at steep slope	600	3.5	Forest	Forest	No		4	3	2	Mill Run
Erosion Site	GC141104	Downcutting	Below road crossing	300	3.5	Forest	Forest	No		4	2	1	Michaels Run
Erosion Site	GC141109	Downcutting	bend at steep slope	150	5	Forest	Forest	No		4	2	2	Michaels Run
Erosion Site	GC142101	Downcutting	Natural	100	10	Forest	Forest	No		4	2	4	Mill Run

Appendix B - Lower Georges Creek Erosion Sites

Problem	Survey/Site	Type	Possible Cause	Length(ft)	Height(ft)	Land Use Right	Land Use Left	Infrastructure Threatened?	Describe	Severity	Correctability	Access	Stream
Erosion Site	GC150104	Widening	Bend at steep slope	250	10	Forest	Forest	No		4	2	3	Butcher Run
Erosion Site	GC191906	Widening	Flooding	175	6	Forest	Shrubs & small trees	No		4	3	3	Butcher Run
Erosion Site	GC241502	Downcutting	Below road crossing	100	6	Forest	Forest	No		4	5	4	Potomac Hill Run
Erosion Site	GC141302	Widening	Unknown	6	5	Forest	Shrubs & small trees	No		5	2	3	Mill Run
Erosion Site	GC141303	Widening	Unknown	30	6	Forest	Lawn	No		5	3	3	Mill Run
Erosion Site	GC142106	Downcutting	Bend at steep slope	100	6	Forest	Forest	No		5	2	3	Mill Run
Erosion Site	GC142109	Widening	Bend at steep slope	50	6	Forest	Forest	No		5	2	4	Mill Run
Erosion Site	GC171301	Downcutting	Bend at steep slope	100	3	Shrubs & small trees	Shrubs & small trees	No		5	3	4	Mill Run
Erosion Site	GC242503	Downcutting	Road runoff from side	60	7	Forest	Forest	No		5	5	4	Potomac Hill Run
Erosion Site	GC340102	Widening	Bend at steep slope	50	10	Forest	Forest	No		5	1	5	Moore Run

Appendix B - Upper Georges Creek Inadequate Buffers

Problem	Survey/Site	Sides	Unshaded	Width Left (ft)	Width Right (ft)	Length Left (ft)	Length Right (ft)	Land Use Right	Land Use Left	Recentlyestablished	Livestock	Severity	Correctability	Access	Wetland	Stream
Inadequate Buffers	GC413219	Both	Both	0	0	6000	6000	Shrubs & small trees	Shrubs & small trees	No		1	3	2	4	Woodland Creek
Inadequate Buffers	GC434606	Both	Both	0	0	1500	1500	Lawn	Lawn	No		1	2	2	4	Winebrenner Run
Inadequate Buffers	GC514503	Both	Both	0	0	1400	250	Lawn	Lawn	No		1	3	2	5	Mainstem 1
Inadequate Buffers	GC523502	Both	Both	0	0	2000	2000	Pasture	Pasture	Yes	Cattle	1	3	2	1	Mainstem 1
Inadequate Buffers	GC545602	Both	Both	0	0	1500	1500	Lawn	Lawn	No		1	3	2	4	Winebrenner Run
Inadequate Buffers	GC569901	Both	Both	0	0	1000	1000	Pasture	Pasture	Yes	Horses	1	3	3	2	Sand Spring Run
Inadequate Buffers	GC610102	Both	Both	0	0	2400	2400	Lawn	Lawn	No		1	1	2	3	Mainstem 1
Inadequate Buffers	NR100124	Both	Both	0	2	1100	1100	Lawn	Paved	No		1	4	1	5	Neff Run
Inadequate Buffers	GC512503	Left	Left	20		2300		Shrubs & small trees	Other	No		2	3	4	2	Mainstem 1
Inadequate Buffers	GC527502	Left	Left	0		1500		Railroad crossing	Other	No		2	3	3	4	Mainstem 1
Inadequate Buffers	NR100110	Both	Both	5	2	1200	600	Lawn	Lawn	No		2	3	1	5	Neff Run
Inadequate Buffers	NR201217	Left	Left	5		1300		Forest	Paved	No		2	3	1	4	Neff Run
Inadequate Buffers	NR202213	Both	Both	0	10	700	700	Shrubs & small trees	Lawn	No		2	2	1	4	Neff Run
Inadequate Buffers	GC523503	Both	Both	20	20	3400	2500	Pasture	Other	No		3	4	3	4	Mainstem 1
Inadequate Buffers	GC526505	Both	Both	0	0	150	700	Powerline	Other	No		3	5	1	3	Woodland Creek
Inadequate Buffers	GC541501	Both	Both	0	0	500	500	Lawn	Lawn	No		3	1	2	5	Winebrenner Run
Inadequate Buffers	GC555510	Both	Left	5	0	300	300	Lawn	Lawn	No		3	1	2	4	Winebrenner Run
Inadequate Buffers	GC564904	Both	Both	0	0	400	400	Lawn	Lawn	No		3	3	2	3	Sand Spring Run
Inadequate Buffers	NR603227	Both	Both	0	0	200	200	Lawn	Lawn	No		3	3	1	5	Dan's Run
Inadequate Buffers	NR604229	Both	Both	0	0	300	300	Lawn	Lawn	No		3	3	1	5	Dan's Run
Inadequate Buffers	NR604235	Both	Both	0	0	300	100	Lawn	Lawn	No		3	2	1	4	Neff Run
Inadequate Buffers	GC428117	Both	Neither	10	15	400	600	Other	Other	No		4	1	2	4	Staub Run
Inadequate Buffers	GC521505	Right	Right	35	15	100	250	Lawn	Forest	No		4	3	1	4	Woodland Creek
Inadequate Buffers	GC526502	Both	Neither	20	30	400	300	Paved	Lawn	No		4	3	1	5	Woodland Creek
Inadequate Buffers	GC533501	Both	Both	10	0	400	100	Lawn	Shrubs & small trees	No		4	2	1	4	Mainstem 1
Inadequate Buffers	GC534102	Both	Both	10	5	400	400	Lawn	Lawn	No		4	2	2	2	Mainstem 1
Inadequate Buffers	GC552703	Both	Neither	25	0	200	200	Lawn	Shrubs & small trees	No		4	2	1	5	Sand Spring Run
Inadequate Buffers	GC552709	Left	Left	10	20	500	100	Shrubs & small trees	Lawn	No		4	2	1	3	Sand Spring Run
Inadequate Buffers	GC552711	Both	Neither	25	30	600	600	Lawn	Lawn	No		4	3	1	4	Sand Spring Run
Inadequate Buffers	GC553705	Both	Neither	15	15	400	400	Lawn	Lawn	No		4	3	2	5	Sand Spring Run
Inadequate Buffers	GC577905	Both	Both	0	0	100	100	Paved	Shrubs & small trees	No		4	4	2	4	Sand Spring Run
Inadequate Buffers	GC577906	Left	Both	0		200		Forest	Lawn	No		4	3	3	3	Sand Spring Run
Inadequate Buffers	NR201219	Left	Neither	0		200		Forest		No		4	4	1	4	Neff Run
Inadequate Buffers	NR201221	Left	Neither	0		125		Forest		No		4	4	1	4	Neff Run
Inadequate Buffers	NR202212	Both	Neither	50	15	80	500	Pasture	Forest	No		4	3	3	5	Neff Run
Inadequate Buffers	NR302305	Right	Right		2		130	Shrubs & small trees	Forest	No		4	1	1	1	Neff Run
Inadequate Buffers	NR302309	Both	Both	0	0	150	150	Pasture	Pasture	No		4	2	2	2	Neff Run

Appendix B - Upper Georges Creek Inadequate Buffers

Problem	Survey/Site	Sides	Unshaded	Width Left (ft)	Width Right (ft)	Length Left (ft)	Length Right (ft)	Land Use Right	Land Use Left	Recentlyestablished	Livestock	Severity	Correctability	Access	Wetland	Stream
Inadequate Buffers	GC521504	Right	Neither		15		200	Lawn	Forest	No		5	2	1	5	Woodland Creek
Inadequate Buffers	GC533503	Right	Right		2		100	Lawn	Shrubs & small trees	No		5	2	1	5	Mainstem 1
Inadequate Buffers	GC533505	Left	Neither	10		100		Shrubs & small trees	Lawn	No		5	2	2	5	Mainstem 1
Inadequate Buffers	GC533619	Left	Neither	10		200		Forest	Lawn	No		5	3	2	5	Winebrenner Run
Inadequate Buffers	GC545611	Left	Left	5		900		Forest	Lawn	No		5	3	2	4	Winebrenner Run
Inadequate Buffers	GC545616	Left	Neither	10		800		Forest	Pasture	No		5	1	4	4	Winebrenner Run
Inadequate Buffers	GC545618	Left	Neither	10		800		Forest	Paved	No		5	4	1	4	Winebrenner Run
Inadequate Buffers	GC552701	Left	Left	15		800		Shrubs & small trees	Lawn	No		5	4	1	4	Sand Spring Run
Inadequate Buffers	GC555513	Both	Neither	0	0	50	50	Lawn	Lawn	No		5	1	2	4	Winebrenner Run
Inadequate Buffers	GC567808	Both	Neither	0	20	65	70	Shrubs & small trees	Lawn	No		5	2	1	5	Sand Spring Run
Inadequate Buffers	GC577902	Right	Right		10		100	Shrubs & small trees	Forest	No		5	1	3	3	Sand Spring Run
Inadequate Buffers	GC671901	Left	Neither	15		175		Forest	Lawn	No		5	3	3	2	Sand Spring Run
Inadequate Buffers	NR202205	Right	Neither		0		15	Pasture	Forest	No		5	1	3	4	Matthew's Run
Inadequate Buffers	NR202207	Right	Neither		10		200	Pasture	Forest	No		5	2	4	4	Neff Run
Inadequate Buffers	NR301312	Left	Neither	10		60		Forest	Paved	No		5	5	1	5	Neff Run
Inadequate Buffers	NR602213	Both	Both	5	5	100	100	Lawn	Lawn	No		5	2	1	5	Dan's Run

Appendix B - Middle Georges Creek Inadequate Buffers

Problem	Survey/Site	Sides	Unshaded	Width Left (ft)	Width Right (ft)	Length Left (ft)	Length Right (ft)	Land Use Right	Land Use Left	Recentlyestablished	Livestock	Severity	Correctability	Access	Wetland	Stream
Inadequate Buffers	GC276306	Both	Both	0	2	1500	3000	Paved	Shrubs & small trees	No		1	3	3	5	Mainstem 2
Inadequate Buffers	GC381907	Both	Both	5	0	6000	6000	Lawn	Shrubs & small trees	No		1	5	1	5	Mainstem 2
Inadequate Buffers	GC390901	Both	Both	0	0	2400	400	Shrubs & small trees	Lawn	No		1	4	3	3	Unnamed Trib. 4
Inadequate Buffers	GC502306	Both	Both	0	0	2800	2800	Shrubs & small trees	Lawn	No		1	3	3	5	Mainstem 2
Inadequate Buffers	GC511203	Both	Left	0	20	1000	1000	Paved	Lawn	Yes		1	3	1	5	Squirrel Neck Run
Inadequate Buffers	GC224102	Both	Both	10	10	1700	600	Pasture	Pasture	No		2	1	1	3	Koontz Run
Inadequate Buffers	GC276301	Right	Right		0		4000	Lawn	Forest	No		2	3	3	5	Mainstem 2
Inadequate Buffers	GC280302	Right	Neither		20		1600	Shrubs & small trees	Forest	No		2	2	2	3	Seldom Seen Run
Inadequate Buffers	GC291403	Right			0		1200	Paved	Shrubs & small trees	No		2	5	1	5	Koontz Run
Inadequate Buffers	GC291415	Both	Both	0	0	600	600	Paved	Shrubs & small trees	No		2	3	3	4	Koontz Run
Inadequate Buffers	GC381304	Left	Left	0		2400		Forest	Shrubs & small trees	No		2	3	2	3	Hill Run
Inadequate Buffers	GC397301	Right	Right		0		1200	Shrubs & small trees	Shrubs & small trees	No		2	3	2	4	Mainstem 2
Inadequate Buffers	GC398306	Right	Right		0		3600	Shrubs & small trees	Forest	No		2	3	3	5	Mainstem 2
Inadequate Buffers	GC502301	Left	Left	0		1800		Forest	Lawn	No		2	3	2	5	Mainstem 2
Inadequate Buffers	GC200506	Both	Both	15	15	1120	1400	Lawn	Lawn	No		3	5	1	5	Koontz Run
Inadequate Buffers	GC201501	Right	Neither	10	10	900	400	Pasture	Forest	No	Horses	3	4	1	5	Koontz Run
Inadequate Buffers	GC280310	Both	Both	0	20	600	600	Lawn	Lawn	No		3	2	3	3	Seldom Seen Run
Inadequate Buffers	GC281421	Left	Left	0		500		Paved	Forest	No		3	5	1	5	Koontz Run
Inadequate Buffers	GC290909	Right	Neither		10		900	Paved	Forest	No		3	5	1	5	Koontz Run
Inadequate Buffers	GC300701	Both	Both	0	0	100	100	Shrubs & small trees	Shrubs & small trees	No		3	4	1	5	Koontz Run
Inadequate Buffers	GC370403	Both	Left	0	20	400	400	Lawn	Paved	No		3	3	2	5	Orr Run
Inadequate Buffers	GC371611	Right	Right		0		800	Lawn	Forest	No		3	3	2	5	Jackson Run
Inadequate Buffers	GC372405	Left	Neither	10		1000		Forest	Lawn	No		3	2	3	5	Orr Run
Inadequate Buffers	GC382409	Left	Left	0		300		Pasture	Pasture	No	Cattle	3	3	3	4	Hill Run
Inadequate Buffers	GC210302	Right	Right		0		300	Shrubs & small trees	Shrubs & small trees	No		4	2	2	5	Koontz Run
Inadequate Buffers	GC281301	Right	Neither		0		400	Paved	Shrubs & small trees	No		4	3	3	3	Seldom Seen Run
Inadequate Buffers	GC290001	Right	Neither		0		250	Paved	Forest	No		4	2	1	5	Koontz Run
Inadequate Buffers	GC290005	Both	Neither	15	15	700	700	Shrubs & small trees	Shrubs & small trees	No		4	5	1	5	Koontz Run
Inadequate Buffers	GC290011	Right	Neither		0		300	Shrubs & small trees	Forest	No		4	5	1	5	Koontz Run
Inadequate Buffers	GC290904	Left	Neither	20		1400		Paved	Forest	No		4	5	1	5	Koontz Run
Inadequate Buffers	GC370401	Both	Neither	3	15	100	75	Lawn	Lawn	Yes		4	1	2	5	Jackson Run
Inadequate Buffers	GC371605	Both	Neither	5	5	400	400	Paved	Lawn	No		4	3	2	5	Jackson Run
Inadequate Buffers	GC371607	Left	Left	0		100		Forest	Lawn	No		4	2	2	4	Jackson Run
Inadequate Buffers	GC380644	Both	Both	10	10	410	410	Lawn	Shrubs & small trees	No		4	3	2	4	Jackson Run
Inadequate Buffers	GC382414	Left	Left	0		500		Forest	Lawn	No		4	3	2	3	Hill Run
Inadequate Buffers	GC492401	Both	Neither	25	50	200	150	Paved	Lawn	No		4	3	2	2	Hill Run
Inadequate Buffers	GC601107	Right	Right		10		4600	Forest	Paved	No		4	5	1	5	Elk Lick Run

Appendix B - Middle Georges Creek Inadequate Buffers

Problem	Survey/Site	Sides	Unshaded	Width Left (ft)	Width Right (ft)	Length Left (ft)	Length Right (ft)	Land Use Right	Land Use Left	Recentlyestablished	Livestock	Severity	Correctability	Access	Wetland	Stream
Inadequate Buffers	GC605101	Right	Neither		20		6000	Forest	Paved	No		4	5	1	4	Elk Lick Run
Inadequate Buffers	GC190502	Both	Neither	20	20	300	300	Lawn	Lawn	No		5	4	1	5	Koontz Run
Inadequate Buffers	GC200503	Left	Neither	20		500		Forest	Lawn	No		5	4	1	5	Koontz Run
Inadequate Buffers	GC212501	Right	No		30		100	Paved	Forest	No		5	3	1	4	Koontz Run
Inadequate Buffers	GC290702	Right	Neither		12		700	Paved	Forest	No		5	5	1	5	Koontz Run
Inadequate Buffers	GC382404	Left	Left	10		500		Forest	Pasture	No		5	3	2	4	Hill Run
Inadequate Buffers	GC382407	Right	Neither		20		300	Pasture	Forest	No	Goats	5	3	3	5	Hill Run
Inadequate Buffers	GC382410	Left	Neither	20		400		Forest	Lawn	No		5	3	2	5	Hill Run
Inadequate Buffers	GC480401	Right	Right		20		100	Lawn	Forest	No		5	1	1	2	Hill Run
Inadequate Buffers	GC490401	Right	Neither		30		50	Other	Forest	No		5	2	1	1	Hill Run
Inadequate Buffers	GC490403	Left	Neither	15		350		Forest	Paved	No		5	2	1	1	Hill Run

Appendix B - Lower Georges Creek Inadequate Buffers

Problem	Survey/Site	Sides	Unshaded	Width Left (ft)	Width Right (ft)	Length Left (ft)	Length Right (ft)	Land Use Right	Land Use Left	Recentlyestablished		Livestock	Severity	Correctability	Access	Wetland	Stream
Inadequate Buffers	GC171606	Both	Both	0	30	1500	1500	Railroad	Paved	No		1	5	3	5		Mainstem 3
Inadequate Buffers	GC191912	Both	Both	0	0	3300	1000	Lawn	Paved	No		1	3	1	4		Butcher Run
Inadequate Buffers	GC110309	Both	Neither	0	0	500	1000	Lawn	Paved	No		2	3	2	5		Unnamed Trib. 7
Inadequate Buffers	GC120107	Left	Left	10	0	7450		Shrubs & small trees	Lawn	No		2	5	2	5		Mainstem 3
Inadequate Buffers	GC130102	Left	Left	0	0	3300		Forest	Paved	No		2	5	2	5		Mainstem 3
Inadequate Buffers	GC171101	Left	Left	0		2200		Forest	Lawn	No		2	2	2	5		Mainstem 3
Inadequate Buffers	GC181510	Right	Right		0		1500	Paved	Forest	No		2	4	1	5		Moore Run
Inadequate Buffers	GC181602	Both	Left	0	20	3200	3200	Railroad	Lawn	No		2	4	2	5		Mainstem 3
Inadequate Buffers	GC183510	Right	Right		0		1000	Lawn	Forest	No		2	2	1	5		Moore Run
Inadequate Buffers	GC191902	Left	Left	0		2400		Paved	Shrubs & small trees	No		2	3	2	3		Butcher Run
Inadequate Buffers	GC195901	Both	Neither	0	10	1200	600	Shrubs & small trees	Lawn	No		2	3	1	4		Mainstem 3
Inadequate Buffers	GC250503	Left	Neither	0		2000		Forest	Paved	No		2	4	1	5		Moore Run
Inadequate Buffers	GC260302	Both	Both	0	2	400	3400	Shrubs & small trees	Lawn	No		2	3	3	5		Mainstem 3
Inadequate Buffers	GC140319	Both	Both	0	10	300	650	Lawn	Lawn	No		3	3	1	5		Mill Run
Inadequate Buffers	GC141301	Right	Neither		0		900	Shrubs & small trees	Forest	No		3	3	3	5		Mill Run
Inadequate Buffers	GC183506	Both	Both	0	0	600	200	Lawn	Paved	No		3	5	1	5		Moore Run
Inadequate Buffers	GC110302	Right	Right		0		250	Multiflora rose	Lawn	No		4	2	1	5		Mainstem 3
Inadequate Buffers	GC120102	Right	Right		0		200	Railroad crossing	Shrubs & small trees	No		4	2	3	5		Mainstem 3
Inadequate Buffers	GC171301	Both	Left	45	0	150	150	Lawn	Paved	No		4	4	1	4		Mill Run
Inadequate Buffers	GC181513	Both	Both	0	0	100	100	Lawn	Lawn	No		4	1	1	5		Moore Run
Inadequate Buffers	GC181701	Both	Both	20	22	1900	2200	Lawn	Lawn	No		4	4	2	5		Mainstem 3
Inadequate Buffers	GC181712	Right	Neither	5	15	240	960	Paved	Paved	No		4	4	1	5		Potomac Hill
Inadequate Buffers	GC182702	Both	Both	10	25	2400	2400	Lawn	Lawn	No		4	5	1	5		Mainstem 3
Inadequate Buffers	GC183507	Left	Left	0		100		Forest	Lawn	No		4	1	1	5		Moore Run
Inadequate Buffers	GC192701	Both	Both	10	15	500	500	Lawn	Shrubs & small trees	No		4	4	1	5		Mainstem 3
Inadequate Buffers	GC251504	Right	Neither		0		200	Paved	Forest	No		4	4	1	5		Moore Run
Inadequate Buffers	GC170309	Left	Left	10		425		Forest	Lawn	No		5	5	3	5		Mill Run
Inadequate Buffers	GC170315	Right	Both	0	25		150	Paved	Forest	No		5	3	1	5		Mill Run

Appendix B - Upper Georges Creek Channel Alterations

Problem	Survey/Site	Type	Bottom Width (in)	Length (ft)	Perennial Flow	Sedimentation	Veg in Channel	Road Crossing	Length Above (ft)	Length Below (ft)	Severity	Correctability	Access	Stream
Channel Alteration	GC542501	Concrete	120	1500	No	Yes	No	Along	1500		1	4	1	Winebrenner Run
Channel Alteration	GC567809	Pipe	240	21000	Yes	Yes	No	Both		21000	1	5	2	Sand Spring Run
Channel Alteration	GC320210	Gabion	60	200	No	No	No	No			2	5	2	Woodland Creek
Channel Alteration	GC413218	Rip-rap	84	6000	Yes	No	No	No			2	4	1	Woodland Creek
Channel Alteration	NR100123	Concrete	300	1000		Yes	Yes	No			2	5	1	Neff Run
Channel Alteration	NR302310	Rip-rap		200		No	No	Below		200	2	3	1	Neff Run
Channel Alteration	GC514505	Concrete/Rip-rap/earth channel	120	500	Yes	No	Yes	Above	500		3	3	3	Neff Run
Channel Alteration	GC539102	Rip-rap	144	300	Yes	No	No	No			3	4	2	Vale Run
Channel Alteration	GC577905	Rip-rap	240	200	Yes	No	No	Above	220		3	4	1	Sand Spring Run
Channel Alteration	NR100101	Gabion	300	150		No	No	No			3	4	1	Neff Run
Channel Alteration	NR201218	Rip-rap	360	80		No	No	No			3	5	3	Neff Run
Channel Alteration	NR201219	Gabion	480	120		Yes	Yes	No			3	3	3	Neff Run
Channel Alteration	NR401135	Concrete		50		No	No	Both	15	50	3	4	1	Matthews Run
Channel Alteration	NR603227	Gabion		75		Yes	Yes	No			3	4	1	Dan's Run
Channel Alteration	NR604229	Gabion		100		No	No	No			3	5	1	Dan's Run
Channel Alteration	GC423113	Concrete	100	60	Yes	No	Yes	No			4	4	3	Staub Run
Channel Alteration	GC428501	Rip-rap	120	3200	Yes	No	No	No			4	4	3	Staub Run
Channel Alteration	GC512501	Rip-rap	120	2500	Yes	No	No	No			4	4	3	Mainstem 1
Channel Alteration	GC555501	Concrete	156	4000	No	Yes	Yes	Along			4	5	1	Winebrenner Run
Channel Alteration	GC555516	Rip-rap	180	75	Yes	Yes	No	No			4	2	2	Winebrenner Run
Channel Alteration	GC652702	Rip-rap	240	60	Yes	No	No	No			4	5	2	Sand Spring Run
Channel Alteration	NR201220	Gabion	640	40		Yes	Yes	Below		40	4	5	1	Neff Run
Channel Alteration	NR201221	Gabion	665	100		No	No	No			4	4	1	Neff Run
Channel Alteration	NR201222	Gabion		130		No	No	No			4	5	1	Neff Run
Channel Alteration	NR603224	Concrete		200		No	No	No			4	1	1	Dan's Run
Channel Alteration	NR701310	Rip-rap		25		No	No	Below		25	4	4	1	Neff Run
Channel Alteration	GC412213	Concrete	84	15	Yes	No	No	Below		15	5	3	2	Woodland Creek
Channel Alteration	GC414221	Comcrete	84	50	Yes	No	Yes	Both	10	10	5	3	1	Woodland Creek
Channel Alteration	GC423114	Metal	120	30	Yes	No	No	No			5	2	3	Staub Run
Channel Alteration	GC428118	Earth channel	120	3000	Yes	No	Yes	No			5	5	3	Staub Run
Channel Alteration	GC448502	Road Crossing	120	20	Yes	No	No	Below		10	5	1	2	Winebrenner Run
Channel Alteration	GC527501	Rip-rap	120	150	Yes	No	Yes	Below		150	5	5	1	Mainstem 1

Appendix B - Upper Georges Creek Channel Alterations

Problem	Survey/Site	Type	Bottom Width (in)	Length (ft)	Perennial Flow	Sedimentation	Veg in Channel	Road Crossing	Length Above (ft)	Length Below (ft)	Severity	Correctability	Access	Stream
Channel Alteration	GC533501	Gabion/Rip-rap	120	90	Yes	No	No	Both	20	20	5	5	1	Mainstem 1
Channel Alteration	GC548103	Rip-rap	60	100	Yes	No	No	Below		100	5	5	2	Mainstem 1
Channel Alteration	GC551501	Earth channel	120	500	Yes	Yes	No	Along			5	5	1	Winebrenner Run
Channel Alteration	GC551502	Concrete	120	300	No	Yes	No	Along			5	5	1	Winebrenner Run
Channel Alteration	GC551503	Concrete	144	500	No	Yes	No	Along			5	5	1	Winebrenner Run
Channel Alteration	GC551505	Earth channel	144	500	No	No	No	Along			5	5	1	Winebrenner Run
Channel Alteration	GC552709	Earth channel	156	300	Yes	Yes	No	Above	300		5	5	1	Sand Spring Run
Channel Alteration	GC555510	Rip-rap	156	500	Yes	No	No	No			5	1	2	Winebrenner Run
Channel Alteration	GC555513	Concrete	170	50	No	Yes	Yes	Below		10	5	2	1	Winebrenner Run
Channel Alteration	GC555531	Concrete	180	1500	No	No	Yes	Along			5	5	1	Winebrenner Run
Channel Alteration	NR100120	Concrete	300	100		No	No	No			5	4	1	Neff Run
Channel Alteration	NR603222			100		No	No	No			5	1	1	Dan's Run
Channel Alteration	NR603223			400		No	No	No			5	1	1	Dan's Run

Appendix B - Middle Georges Creek Channel Alterations

Problem	Survey/Site	Type	Bottom Width (in)	Length (ft)	Perennial Flow	Sedimentation	Veg in Channel	Road Crossing	Length Above (ft)	Length Below (ft)	Severity	Correctability	Access	Stream
Channel Alteration	GC600104	Gabion/Rip-rap	112	1300	Yes	No	No	No			2	4	1	Elk Lick Run
Channel Alteration	GC370619	Gabion	60	200	Yes	No	No	No			3	2	1	Jackson Run
Channel Alteration	GC370622	Gabion	60	450	Yes	No	No	No			3	1	1	Jackson Run
Channel Alteration	GC370633	Concrete	60	200	Yes	No	No	No			3	2	2	Jackson Run
Channel Alteration	GC370638	Concrete	72	200	Yes	No	No	No			3	4	2	Jackson Run
Channel Alteration	GC371611	Rip-rap	72	300	Yes	No	No	Both	50	250	3	2	3	Jackson Run
Channel Alteration	GC380642	Gabion	72	30	Yes	No	No	Both	15	15	3	4	2	Jackson Run
Channel Alteration	GC201502	Rip-rap	36	500	Yes	No	No	Both	180	320	4	4	1	Laurel Run
Channel Alteration	GC276308	Gabion	36	200	Yes	No	No	No			4	4	1	Mainstem 2
Channel Alteration	GC370404	Concrete	60	100	Yes	No	No	No			4	5	1	Orr Run
Channel Alteration	GC370632	Gabion	60	150	Yes	No	No	No			4	2	2	Jackson Run
Channel Alteration	GC370634	Rip-rap	64	200	Yes	No	No	Below		200	4	2	1	Jackson Run
Channel Alteration	GC380644	Earth channel	72	1100	Yes	No	No	No			4	3	2	Jackson Run
Channel Alteration	GC381313	Gabion	75	200	Yes	Yes	No	No			4	3	1	Hill Run
Channel Alteration	GC511202	Rip-rap	120	2000	Yes	Yes	Yes	No			4	3	1	Squirrel Neck Run
Channel Alteration	GC511203	Gabio/Rip-rap	120	1000	Yes	Yes	Yes	No			4	3	1	Squirrel Neck Run
Channel Alteration	GC200509	Rip-rap	36	60	Yes	No	No	No			5	3	1	Laurel Run
Channel Alteration	GC281421	Concrete	36	100	Yes	No	No	No			5	5	1	Koontz Run
Channel Alteration	GC281424	bridge	40	10	Yes	No	No	Both	50	50	5	5	1	Koontz Run
Channel Alteration	GC281428	Concrete	48	30	Yes	No	No	Below		40	5	5	1	Koontz Run
Channel Alteration	GC281433	Concrete	48	100	Yes	No	No	Above	20		5	5	1	Koontz Run
Channel Alteration	GC281434	bridge	48	10	Yes	No	No	Above	50		5	5	1	Koontz Run
Channel Alteration	GC281435	bridge	48	100	Yes	No	No	Both	50	40	5	5	1	Koontz Run
Channel Alteration	GC290907	Gabion	48	90	Yes	No	No	No			5	5	1	Koontz Run
Channel Alteration	GC290908	Concrete	48	60	Yes	No	No	Below		60	5	5	1	Koontz Run
Channel Alteration	GC291403	Concrete	48	40	Yes	No	No	No			5	5	1	Koontz Run
Channel Alteration	GC291408	Concrete	48	20	Yes	No	No	No			5	5	1	Koontz Run
Channel Alteration	GC291414	Concrete	60	60	Yes	No	No	Both	10	80	5	5	5	Koontz Run
Channel Alteration	GC370401	Gabion	60	20	Yes	No	No	Both	10	10	5	5	1	Jackson Run
Channel Alteration	GC372405	Rip-rap	72	100	Yes	Yes	No	No			5	2	3	Orr Run
Channel Alteration	GC380436	Concrete	72	300	Yes	No	No	Both	150	150	5	5	1	Koontz Run
Channel Alteration	GC380438	Concrete	72	50	Yes	No	No	No			5	5	2	Koontz Run

Appendix B - Middle Georges Creek Channel Alterations

Problem	Survey/Site	Type	Bottom Width (in)	Length (ft)	Perennial Flow	Sedimentation	Veg in Channel	Road Crossing	Length Above (ft)	Length Below (ft)	Severity	Correctability	Access	Stream
Channel Alteration	GC380440	Concrete	72	50	Yes	No	No	No			5	5	5	Koontz Run
Channel Alteration	GC380441	Concrete	72	700	Yes	No	No	Both	350	350	5	5	3	Koontz Run
Channel Alteration	GC381318	Gabion	80	50	Yes	Yes	No	No			5	3	2	Hill Run
Channel Alteration	GC381323	Gabion	80	50	Yes	No	No	No			5	3	1	Hill Run
Channel Alteration	GC381327	Gabion	80	50	Yes	No	No	No			5	2	1	Hill Run
Channel Alteration	GC502305	Earth Channel	120	4	Yes	No	No	No			5	3	3	Mainstem 2
Channel Alteration	GC600101	Gabion	112	12	Yes	No	No	Both	6	6	5	4	1	Elk Lick Run
Channel Alteration	GC601108	Gabion	72	12	Yes	No	No	Both	6	6	5	4	1	Elk Lick Run

Appendix B - Lower Georges Creek Channel Alterations

Problem	Survey/Site	Type	Bottom Width (in)	Length (ft)	Perennial Flow	Sedimentation	Veg in Channel	Road Crossing	Length Above (ft)	Length Below (ft)	Severity	Correctability	Access	Stream
Channel Alteration	GC110104	Concrete	6	2500	Yes	Yes	No	No			3	5	2	Mainstem 3
Channel Alteration	GC140325	Rip-rap	24	85	Yes	Yes	No	No			3	4	2	Mill Run
Channel Alteration	GC140327	Rip-rap	24	100	Yes	Yes	Yes	No			3	4	2	Mill Run
Channel Alteration	GC181513	Gabion	24	200	Yes	No	No	Above	100		3	2	1	Moore Run
Channel Alteration	GC181514	Concrete	25	100	Yes	Yes	No	Both	10	10	3	5	1	Moore Run
Channel Alteration	GC182702	Concrete	30	1200	Yes	Yes	Yes	No			3	5	1	Mainstem 3
Channel Alteration	GC182707	Rip-rap	30	900	Yes	Yes	Yes	No			3	5	1	Mainstem 3
Channel Alteration	GC110103	Concrete	5	400	Yes	No	No	Below		400	4	5	1	Mainstem 3
Channel Alteration	GC120101	Concrete	13	300	Yes	Yes	No	Above	200		4	4	2	Mainstem 3
Channel Alteration	GC130102	Gabion	24	600	Yes	Yes	No	No			4	5	1	Mainstem 3
Channel Alteration	GC181701	Rip-rap	30	1900	Yes	Yes	Yes	No			4	4	2	Mainstem 3
Channel Alteration	GC181716	Earth channel	30	400	Yes	Yes	Yes	Below		400	4	3	2	Potomac Hill Run
Channel Alteration	GC110102	Rip-rap	2	100	Yes	No	No	No			5	5	1	Mainstem 3
Channel Alteration	GC110108	Concrete	10	200	No	No	Yes	No			5	5	2	Mainstem 3
Channel Alteration	GC120102	Rip-Rap	15	200	Yes	Yes	No	No			5	4	3	Mainstem 3
Channel Alteration	GC120112	Rip-rap	20	400	Yes	Yes	No	No			5	4	2	Mainstem 3
Channel Alteration	GC130101	Concrete	20	30	Yes	Yes	No	No			5	5	2	Mainstem 3
Channel Alteration	GC131101	Rip-rap	24	75	Yes	No	No	No			5	4	2	Mainstem 3
Channel Alteration	GC180317	Gabion	24	12	Yes	No	No	Both	6.5	6.5	5	5	2	Mill Run
Channel Alteration	GC181509	Metal	24	10	Yes	Yes	No	Below		10	5	4	1	Moore Run
Channel Alteration	GC183505	Gabion	35	20	Yes	Yes	No	Below		20	5	2	1	Moore Run
Channel Alteration	GC183508	Concrete	36	10	Yes	Yes	No	Below		10	5	1	1	Moore Run
Channel Alteration	GC192701	Rip-rap	36	500	Yes	Yes	Yes	No			5	5	1	Mainstem 3
Channel Alteration	GC250501	Road Crossing	36	20	Yes	No	No	Below		20	5	3	1	Moore Run
Channel Alteration	GC250503	Rip-rap	36	100	Yes	Yes	No	Below		100	5	2	1	Moore Run
Channel Alteration	GC251501	Metal Pipe	36	15	Yes	No	No	Below		15	5	1	1	Moore Run

Appendix B - Upper Georges Creek Fish Barriers

Problem	Survey/Site	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access	Stream
Fish Barrier	NR202201	Total	Road crossing	Too High	12		1	5	1	Matthew's Run
Fish Barrier	NR604233	Total	Road crossing	Too High	18		1	4	1	Neff Run
Fish Barrier	GC413217	Total	Dam	Too High	96		2	5	1	Woodland Creek
Fish Barrier	GC423111	Total	Dam	Too High	36		2	4	1	Staub Run
Fish Barrier	NR100107	Total	Pipe	Too Shallow		1	2	4	1	Neff Run
Fish Barrier	NR202208	Total	Debris site	Too High	24		2	1	1	Neff Run
Fish Barrier	NR401136	Total	Road crossing	Too High	12		2	4	1	Matthew's Run
Fish Barrier	NR601206	Total	Debris site	Too Shallow		0	2	4	4	Dan's Run
Fish Barrier	NR601207	Total	Debris site	Too Shallow		0	2	4	4	Dan's Run
Fish Barrier	NR601209	Total	Debris site	Too Shallow		0	2	4	4	Dan's Run
Fish Barrier	NR701310	Total	Road crossing	Too High	24		2	3	1	Neff Run
Fish Barrier	GC320209	Total	Instream pond	Too High	36		3	5	2	Woodland Creek
Fish Barrier	GC423108	Total	Dam	Too High	18		3	4	2	Staub Run
Fish Barrier	GC430102	Total	Debris dam	Too High	24		3	4	4	Staub Run
Fish Barrier	GC434601	Total	Road crossing	Too High	24		3	4	3	Winebrenner Run
Fish Barrier	GC434605	Total	Road crossing	Too High	24		3	4	1	Winebrenner Run
Fish Barrier	NR602215	Total	Debris site	Too High	12		3	4	4	Dan's Run
Fish Barrier	GC320204	Temporary	Natural falls	Too High	36		4	4	5	Woodland Creek
Fish Barrier	GC320205	Temporary	Natural falls	Too High	36		4	4	5	Woodland Creek
Fish Barrier	GC320211	Total	Channelized	Too High	36		4	3	2	Woodland Creek
Fish Barrier	GC541603	Total	Road crossing	Too High	36		4	4	1	Winebrenner Run
Fish Barrier	GC545601	Total	Road crossing	Too High	24		4	4	2	Winebrenner Run
Fish Barrier	GC545604	Total	Road crossing	Too High	24		4	4	1	Winebrenner Run
Fish Barrier	GC545605	Total	Road crossing	Too Shallow		0.5	4	5	1	Winebrenner Run
Fish Barrier	GC545608	Total	Road crossing	Too High	48		4	4	1	Winebrenner Run
Fish Barrier	GC545610	Total	Road crossing	Too High	12		4	4	1	Winebrenner Run
Fish Barrier	GC569801	Total	Log weir	Too High	36		4	3	2	Sand Spring Run
Fish Barrier	NR402126	Temporary	Natural falls	Too High	60		4	4	4	Matthew's Run
Fish Barrier	NR403119	Temporary	Natural falls	Too High	36		4	4	4	Matthew's Run
Fish Barrier	NR403120	Total	Dam	Too High	24		4	2	4	Matthew's Run
Fish Barrier	NR404102	Temporary	Natural falls	Too High	72		4	3	5	Matthew's Run
Fish Barrier	NR404103	Temporary	Natural falls	Too High	48		4	4	5	Matthew's Run
Fish Barrier	NR404105	Temporary	Natural falls	Too High	48		4	4	4	Matthew's Run
Fish Barrier	NR404106	Temporary	Natural falls	Too High	8		4	4	4	Matthew's Run
Fish Barrier	NR404108	Temporary	Natural falls	Too High	36		4	3	4	Matthew's Run
Fish Barrier	NR404109	Temporary	Natural falls	Too High	48		4	3	4	Matthew's Run

Appendix B - Upper Georges Creek Fish Barriers

Problem	Survey/Site	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access	Stream
Fish Barrier	NR404111	Temporary	Natural falls	Too High	60		4	4	4	Matthew's Run
Fish Barrier	NR404112	Temporary	Natural falls	Too High	72		4	4	4	Matthew's Run
Fish Barrier	NR404113	Temporary	Natural falls	Too High	42		4	4	4	Matthew's Run
Fish Barrier	NR404115	Temporary	Natural falls	Too High	36		4	2	4	Matthew's Run
Fish Barrier	NR404116	Temporary	Natural falls	Too High	36		4	3	4	Matthew's Run
Fish Barrier	GC320202	Temporary	Road crossing	Too High	12		5	4	1	Woodland Creek
Fish Barrier	GC320203	Temporary	Debris dam	Too High	20		5	3	3	Woodland Creek
Fish Barrier	GC423105	Partial	Debris dam	Too High	9		5	1	2	Staub Run
Fish Barrier	GC545614	Total	Road crossing	Too High	6		5	4	2	Winebrenner Run

Appendix B - Middle Georges Creek Fish Barriers

Problem	Survey/Site	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access	Stream
Fish Barrier	GC601103	Total	Dam	Too High	84		1	5	1	Elk Lick Run
Fish Barrier	GC224103	Total	Dam	Too High	24		2	2	1	Laurel Run
Fish Barrier	GC371605	Total	Dam	Too High	100		2	5	1	Jackson Run
Fish Barrier	GC281426	Total	Road crossing	Too High	24		3	2	1	Koontz Run
Fish Barrier	GC290908	Total	Pipe crossing	Too High	36		3	4	1	Koontz Run
Fish Barrier	GC291414	Total	Road crossing	Too High	24		3	3	1	Koontz Run
Fish Barrier	GC300701	Total	Dam	Too High	290		3	5	1	Koontz Run
Fish Barrier	GC370401	Total	Channelized	Too High/Too Shallow	30	1	3	5	1	Jackson Run
Fish Barrier	GC370404	Total	Road crossing	Too High/Too Shallow	48	1	3	5	1	Orr Run
Fish Barrier	GC370619	Total	Road crossing	Too High	24		3	2	1	Jackson Run
Fish Barrier	GC370620	Total	Road crossing	Too High	36		3	2	2	Jackson Run
Fish Barrier	GC381331	Total	Railroad crossing	Too High	60		3	2	1	Hill Run
Fish Barrier	GC382406	Total	Road crossing	Too High	8		3	3	2	Hill Run
Fish Barrier	GC480404	Total	Road crossing	Too Shallow		0	3	4	2	Hill Run
Fish Barrier	GC190502	Temporary	Natural falls	Too Higjh	60		4	5	1	Laurel Run
Fish Barrier	GC211204	Temporary	Natural falls	Too High	72		4	3	5	Laurel Run
Fish Barrier	GC223203	Temporary	Natural falls	Too High	36		4	3	5	Laurel Run
Fish Barrier	GC224104	Temporary	Natural falls	Too High	48		4	3	2	Laurel Run
Fish Barrier	GC301102	Total	Instream pond	Too High	180		4	5	2	Koontz Run
Fish Barrier	GC361504	Partial	Natural falls	Too High	36		4	2	5	Jackson Run
Fish Barrier	GC370405	Total	Dam	Too High	72		4	3	2	Orr Run
Fish Barrier	GC381305	Total	Road crossing	Too High	72		4	3	3	Hill Run
Fish Barrier	GC382407	Total	Dam	Too High	12		4	2	3	Hill Run
Fish Barrier	GC210301	Temporary	Natural falls	Too High	24		5	3	2	Laurel Run
Fish Barrier	GC280305	Total	Road crossing	Too High	24		5	2	2	Seldom Seen Run
Fish Barrier	GC282303	Temporary	Natural falls	Too High	240		5	4	5	Seldom Seen Run
Fish Barrier	GC290008	Temporary	Natural falls	Too High	36		5	3	1	Koontz Run
Fish Barrier	GC290011	Temporary	Natural falls	Too Shallow		1	5	3	3	Koontz Run
Fish Barrier	GC290901	Temporary	Natural falls	Too High	20		5	3	3	Koontz Run
Fish Barrier	GC361503	Temporary	Natural falls	Too High	14		5	1	5	Jackson Run
Fish Barrier	GC372401	Temporary	Natural falls	Too High	24		5	1	2	Orr Run
Fish Barrier	GC380439	Temporary	Natural falls	Too High	24		5	5	5	Koontz Run
Fish Barrier	GC380440	Temporary	Natural falls	Too High	24		5	5	5	Koontz Run
Fish Barrier	GC381301	Temporary	Natural falls	Too High	12		5	2	2	Hill Run
Fish Barrier	GC381311	Total	Log wier	Too High	24		5	2	1	Hill Run
Fish Barrier	GC381312	Total	Road crossing	Too High	36		5	5	1	Hill Run

Appendix B - Middle Georges Creek Fish Barriers

Problem	Survey/Site	Blockage	Type	Reason	Drop(In)		Depth(In)	Severity	Correctability	Access	Stream
Fish Barrier	GC381321	Temporary	Natural falls	Too High	12		5	2	1		Hill Run
Fish Barrier	GC381322	Total	Pipe crossing	Too High	36		5	3	1		Hill Run
Fish Barrier	GC381330	Temporary	Natural falls	Too High	24		5	2	1		Hill Run
Fish Barrier	GC602102	Partial	Natural falls	Too High	30		5	3	2		Elk Lick Run
Fish Barrier	GC602103	Total	Natural falls	Too High	30		5	4	3		Elk Lick Run

Appendix B - Lower Georges Creek Fish Barriers

Problem	Survey/Site	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access	Stream
Fish Barrier	GC182706	Total	Dam	Too High	48		1	5	1	Mainstem 3
Fish Barrier	GC141110	Total	Natural falls	Too High	360		2	5	2	Michaels Run
Fish Barrier	GC191907	Total	Dam	Too High	18		2	3	3	Butcher Run
Fish Barrier	GC195304	Total	Pipe crossing	Too High	12		2	2	2	Mainstem 3
Fish Barrier	GC171605	Total	Road crossing	Too High	48		3	5	3	Mainstem 3
Fish Barrier	GC181705	Total	Road crossing	Too High	48		3	5	3	Mainstem 3
Fish Barrier	GC140323	Total	Debris dam	Too High	30		4	4	4	Mill Run
Fish Barrier	GC141103	Total	Road crossing	Too High	36		4	3	1	Michaels Run
Fish Barrier	GC141108	Temporary	Natural falls	Too High	72		4	4	3	Mill Run
Fish Barrier	GC142102	Total	Road crossing	Too High	24		4	3	1	Mill Run
Fish Barrier	GC151105	Total	Road crossing	Too High	36		4	5	1	Butcher Run
Fish Barrier	GC170310	Temporary	Natural falls	Too High	25		4	4	4	Mill Run
Fish Barrier	GC132402	Temporary	Natural falls	Too High	24		5	5	5	South Tributaries
Fish Barrier	GC142107	Temporary	Natural falls	Too High	48		5	1	4	Mill Run
Fish Barrier	GC191905	Temporary	Natural falls	Too High	36		5	3	1	Butcher Run
Fish Barrier	GC192904	Temporary	Natural falls	Too High	8		5	3	1	Butcher Run

Appendix B - Upper Georges Creek Flood Prone Structures

Problem	Survey/Site	Type of Structure	Describe Structure	Location	Distance from top of stream bank (ft)	Flood proofing?	Describe	Flood wall?	Access	Stream
Flood Prone Structures	GC434603	Garage	Brick garage	Left	20	No		no	1	Winebrenner Run
Flood Prone Structures	GC514505	Business/House/Shed	1 Motel, 2 houses, 1 shed	Left	20	No		No	1	Mainstem 1
Flood Prone Structures	GC533503	House	1 House	Right	10	No		No	1	Mainstem 1
Flood Prone Structures	GC533619	Houses	2 Houses	Both	40	No		no	1	Winebrenner Run
Flood Prone Structures	GC541602	Houses/Shed	3 Houses, 2 brick sheds	Right	5	No		no	2	Winebrenner Run
Flood Prone Structures	GC545601	House/Shed/Pool	House,,white shed, swimming pool	Right	5	No		no	2	Winebrenner Run
Flood Prone Structures	GC545603	Houses/Garage	6 Houses, white garage	Left	15	No		no	2	Winebrenner Run
Flood Prone Structures	GC545610	House/Shed	4 Houses, shed	Both	30	No		no	2	Winebrenner Run
Flood Prone Structures	GC545614	Homes	Several white mobile homes	Right	20	No		no	1	Winebrenner Run
Flood Prone Structures	GC610102	House/Shed	11 Houses, 4 Sheds	Left	10	No		No	1	Mainstem 1
Flood Prone Structures	NR604232	Shed	Old wood shed	Left	20	No		No	2	Neff Run
Flood Prone Structures	NR604234	House	White 2-story	Left	40	No		No	1	Neff Run
Flood Prone Structures	NR604235	Barn	Unpainted wood	Right	25	No		No	2	Neff Run

Appendix B - Middle Georges Creek Flood Prone Structures

Problem	Survey/Site	Type of Structure	Describe Structure	Location	Distance from top of stream bank	Flood proofing?	Describe	Flood wall?	Access	Stream
Flood Prone Structures	GC190501	Shed	1 Shed	Right	2	No		No	1	Laurel Run
Flood Prone Structures	GC190503	House/Shed	1 House, 1 Shed	Right	10	No		No	1	Laurel Run
Flood Prone Structures	GC190504	Shed	1 Shed	Left	10	No		No	2	Laurel Run
Flood Prone Structures	GC200506	Shed	1 Shed, 1 Dog House	Right	8	No		No	1	Laurel Run
Flood Prone Structures	GC201503	House/Shed	1 House, 1 Shed	Left	20	No		No	1	Laurel Run
Flood Prone Structures	GC201506	Shed	3 Sheds	Right	5	No		No	1	Laurel Run
Flood Prone Structures	GC275301	House	1 House	Right	5	Yes	Stone wall	Yes	2	Mainstem 2
Flood Prone Structures	GC276303	House	3 Houses	Right	8	No		No	2	Mainstem 2
Flood Prone Structures	GC276305	House/Shed	7 Houses, 4 Sheds	Right	20	No		No	2	Mainstem 2
Flood Prone Structures	GC280304	Shed	1 Shed	Right	4	No		No	2	Seldom Seen Run
Flood Prone Structures	GC280901	Shed	Red Shed	Left	5	No		no	2	Mainstem 2
Flood Prone Structures	GC281431	3 Sheds	Wood,metal	Right	30	No		no	1	Koontz Run
Flood Prone Structures	GC291412	Tool Shed	Metal Shed	Right	5	No		no	1	Koontz Run
Flood Prone Structures	GC291419	Shed	Wood Siding, Metal Roofing	Right	20	No		no	1	Koontz Run
Flood Prone Structures	GC370402	Shed	2 Sheds	Right	10	No		no	2	Orr Run
Flood Prone Structures	GC370613	House	Blue House	Right	30	No		no	2	Jackson Run
Flood Prone Structures	GC370614	Trailer	White House Trailer	Right	15	No		no	2	Jackson Run
Flood Prone Structures	GC370615	House	Cream House	Right	20	No		no	2	Jackson Run
Flood Prone Structures	GC370616	House	White single story House	Right	25	No		no	2	Jackson Run
Flood Prone Structures	GC370617	House	White House	Right	25	No		no	2	Jackson Run
Flood Prone Structures	GC370623	House	Yellow House	Left	20	No		no	2	Jackson Run
Flood Prone Structures	GC370626	House	blue House	Right	40	No		no	2	Jackson Run
Flood Prone Structures	GC370627	Houses	3 (White, Blue)	Right	40	No		no	1	Jackson Run
Flood Prone Structures	GC370628	House	White	Left	30	Unknown		no	1	Jackson Run
Flood Prone Structures	GC370629	House/Shed	House-Blue, Shed-White	Left	30	Unknown		yes	1	Jackson Run
Flood Prone Structures	GC370630	House	Unpainted House	Left	30	No		no	2	Jackson Run
Flood Prone Structures	GC370631	Houses	3 Houses and Shed	Right	20	No		no	2	Jackson Run
Flood Prone Structures	GC370632	House	2 Story White	Left	10	No		no	2	Jackson Run
Flood Prone Structures	GC370633	Houses	5 Houses, Nursing Home, Shed	Right	20	No		no	2	Jackson Run
Flood Prone Structures	GC370634	Houses	2 Houses, Shed	Right	10	No		no	1	Jackson Run
Flood Prone Structures	GC370638	Houses	6 Houses, Shed	both	0-50	No		no	2	Jackson Run
Flood Prone Structures	GC371612	Shed	Shed	Right	5	No		no	2	Jackson Run
Flood Prone Structures	GC372404	House	1 House/1 Garage	Left	10	No		No	3	Orr Run

Appendix B - Middle Georges Creek Flood Prone Structures

Problem	Survey/Site	Type of Structure	Describe Structure	Location	Distance from top of stream bank	Flood proofing?	Describe	Flood wall?	Access	Stream
Flood Prone Structures	GC380640	Business	5 Businesses	Over	0	No		no	1	Jackson Run
Flood Prone Structures	GC380641	Business	Deck	Left	0	No		no	1	Jackson Run
Flood Prone Structures	GC380642	Business	Cement Block Connection Between 2 Buildings	Over	0	No		no	2	Mainstem 2
Flood Prone Structures	GC380645	House	1 Gray Dilapidated Building	Over	0	No		no	1	Jackson Run
Flood Prone Structures	GC380648	Houses	8 Houses	Over	0-50	No		no	1	Jackson Run
Flood Prone Structures	GC380901	Business	Warehouses	Right	1	No		no	2	Mainstem 2
Flood Prone Structures	GC381316	Shed	1 Shed	Left	10	No		No	2	Hill Run
Flood Prone Structures	GC381324	Shed	1 Shed	Right	5	No		No	1	Hill Run
Flood Prone Structures	GC381906	Houses	6 Houses	Left	10	No		no	2	Mainstem 2
Flood Prone Structures	GC381912	Reach	29 Houses/Garages	Right	25	No		Yes	2	Mainstem 2
Flood Prone Structures	GC382406	House/Barn	3 Houses, 1 Barn	Left	40	No		No	2	Hill Run
Flood Prone Structures	GC382407	Shed	1 Goat Shed	Left	20	No		No	3	Hill Run
Flood Prone Structures	GC382409	Shed	1 Shed	Left	30	No		No	2	Hill Run
Flood Prone Structures	GC382410	Shed	1 Shed	Left	30	No		No	2	Hill Run
Flood Prone Structures	GC382414	House	1 House	Left	40	No		No	2	Hill Run
Flood Prone Structures	GC390903	Houses	House, Shed, Garage	Left	25	No		no	2	Mainstem 2
Flood Prone Structures	GC390906	reach	4 Houses, Garage, Gas Station	Left	20	No		no	2	Mainstem 2
Flood Prone Structures	GC390913	Reach of Homes	10 Homes	Left	25	No		no	2	Mainstem 2
Flood Prone Structures	GC398307	School	1 School	Right	50	No		No	1	Mainstem 2
Flood Prone Structures	GC398308	Shed	2 Sheds	Right	20	No		No	2	Mainstem 2
Flood Prone Structures	GC492401	House	1 House	Left	5	No		No	1	Hill Run
Flood Prone Structures	GC502304	Shed	1 Shed	Left	10	No		No	3	Mainstem 2
Flood Prone Structures	GC511203	House/Shed	1 House, 1 Shed	Left	20	No		Yes	1	Squirrel Neck Run
Flood Prone Structures	GC511204	House/Shed	1 House, 1 Shed	Right	15	No		Yes	1	Squirrel Neck Run
Flood Prone Structures	GC600106	House/Shed/Business	10 Sheds, 2 Trailers, 2 Houses	Left	20	No		No	2	Elk Lick Run

Appendix B - Lower Georges Creek Flood Prone Structures

Problem	Survey/Site	Type of Structure	Describe Structure	Location	Distance from top of stream bank	Flood proofing?	Describe	Flood wall?	Access	Stream
Flood Prone Structures	GC120106	Business	Junkyard	Left	10	No		No	3	Mainstem 3
Flood Prone Structures	GC120109	Houses	5 Houses	Right	20	No		No	3	Mainstem 3
Flood Prone Structures	GC130105	House/Business/Shed	4 Houses, 1 business, 2 Sheds	Left	40	No		No	2	Mainstem 3
Flood Prone Structures	GC131104	Business	2 wareHouses	Left	30	No		No	2	Mainstem 3
Flood Prone Structures	GC140318	House	1 House	Right	3	Yes	Concrete wall	Yes	3	Mill Run
Flood Prone Structures	GC170311	House	1 House, 2 Dog Houses	Left	100	No		No	3	Mill Run
Flood Prone Structures	GC171608	House	White House	Left	15	No		no	2	Mainstem 3
Flood Prone Structures	GC181503	House	Brick House	Right	40	No		no	1	Potomac Hill Run
Flood Prone Structures	GC181511	House	2 Houses	Right	15	Yes	failing gabion baskets	no	1	Moore Run
Flood Prone Structures	GC181515	Shed	Shed 20 ft From Creek	Left	20	No		no	3	Moore Run
Flood Prone Structures	GC181602	House	White House	Left	40	No		no	1	Mainstem 3
Flood Prone Structures	GC181713	House	White House	Right	0	No		no	2	Potomac Hill Run
Flood Prone Structures	GC182703	Garage	Blue	Right	10	No		no	1	Mainstem 3
Flood Prone Structures	GC183501	House/Shed	1 House, 1 Shed	Right	30	No		No	2	Potomac Hill Run
Flood Prone Structures	GC183507	House	House 10 ft From Creek	Left	10	No		no	1	Moore Run
Flood Prone Structures	GC183510	Houses	8 Houses	Right	50	No		no	1	Moore Run
Flood Prone Structures	GC195903	House	White, Small	Left	20	No		no	1	Mainstem 3
Flood Prone Structures	GC250504	House	House	Right	20	No		no	1	Moore Run
Flood Prone Structures	GC250507	House	House	Right	20	No		no	1	Moore Run
Flood Prone Structures	GC259501	Shed	1 Concrete Shed	Right	20	No		No	3	Potomac Hill Run

Appendix B - Upper Georges Creek Exposed Pipes

Problem	Survey/Site	Location of Pipe	Type	Diameter(in)	Length(ft)	Purpose	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Exposed Pipe	GC552701	Exposed across bottom	Corrugated Metal	6	30	Sewage	Yes	Gray	Sewage	1	2	1	Sand Spring Run
Exposed Pipe	GC423109	Exposed across bottom	Terra cotta	6	6	Unknown	Yes	Clear	None	2	3	2	Staub Run
Exposed Pipe	GC569904	Exposed across bottom	Concrete	8	20	Sewage	No			2	5	3	Sand Spring Run
Exposed Pipe	GC652703	Exposed across bottom	Smooth Metal	10	20	Water Supply	No			2	1	1	Sand Spring Run
Exposed Pipe	NR201221	Exposed across bottom	Plastic	10	15	Active Sewage	No			2	5	1	Neff Run
Exposed Pipe	GC514502	Exposed under road crossing	Smooth Metal	2	25	Unknown	No			3	1	1	Mainstem 1
Exposed Pipe	GC555507	Exposed across bottom	Smooth Metal	6	10	Unknown	No			3	2	2	Winebrenner Run
Exposed Pipe	GC555509	Above Stream	Smooth Metal	2	25	Water Supply	No			3	1	2	Winebrenner Run
Exposed Pipe	GC555513	Exposed across bottom	Smooth Metal	6	10	Water Supply	No			3	2	1	Winebrenner Run
Exposed Pipe	GC555514	Exposed across bottom	Plastic	6	10	Unknown	No			3	1	1	Winebrenner Run
Exposed Pipe	GC652702	Exposed across bottom	Concrete	30	50	Sewage	No			3	4	2	Sand Spring Run
Exposed Pipe	NR601206		Smooth Metal	8	20	Unknown	No			3	4	3	Dan's Run
Exposed Pipe	GC526501	Exposed across bottom	Smooth Metal	6	12	Unknown	No			4	3	2	Woodland Creek
Exposed Pipe	GC536504	Above stream	Plastic	8	30	Unknown	No			4	4	2	Mainstem 1
Exposed Pipe	GC541502	Above Stream	Smooth Metal	10	12	Water Supply	No			4	3	1	Winebrenner Run
Exposed Pipe	GC652709	Exposed manhole	Concrete	36	4	Sewage	No			4	4	1	Mainstem 1
Exposed Pipe	NR100105	Exposed along stream bank	Concrete	8	4	Sewage	No			4	4	2	Neff Run
Exposed Pipe	NR100107	Exposed across bottom			10	Sewage	No			4	4	1	Neff Run
Exposed Pipe	NR604229		Smooth Metal	3	10	Unknown	No			4	2	1	Dan's Run
Exposed Pipe	GC526503	Exposed across bottom	Smooth Metal	2	15	Water Supply	No			5	1	1	Woodland Creek
Exposed Pipe	GC652706	Exposed across bottom	Smooth Metal	10	4	Unknown	No			5	5	4	Mainstem 1
Exposed Pipe	GC652708	Exposed across bottom	Concrete	12	10	Unknown	No			5	5	3	Mainstem 1
Exposed Pipe	NR401134	Exposed across bottom	Smooth Metal	2	25	Water	No			5	2	2	Matthew's Run
Exposed Pipe	NR604233		Smooth Metal	3	0	Gas	No			5	1	1	Neff Run

Appendix B - Middle Georges Creek Exposed Pipes

Problem	Survey/Site	Location of Pipe	Type	Diameter(in)	Length(ft)	Purpose	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Exposed Pipe	GC290002	Exposed across bottom	Smooth Metal	8	3	Water Supply	No			3	3	1	Koontz Run
Exposed Pipe	GC290908	Exposed along stream	Smooth Metal	8	30	Water Supply	No			3	4	1	Koontz Run
Exposed Pipe	GC301103	Exposed along stream	Plastic	6	0	Water Supply	No			3	2	2	Koontz Run
Exposed Pipe	GC380646	Above Stream	Plastic	2	20	Unknown	No			3	3	1	Mainstem 2
Exposed Pipe	GC381319	Exposed across bottom	Smooth Metal	2	10	Unknown	No			3	3	1	Hill Run
Exposed Pipe	GC381910	Exposed manhole	Concrete	36	5	Sewage	No			3	4	2	Mainstem 2
Exposed Pipe	GC397302	Exposed across bottom	Smooth Metal	12	6	Unknown	No			3	5	3	Mainstem 2
Exposed Pipe	GC281425	Exposed manhole	Smooth Metal	36	1	Water Supply	No			4	4	1	Koontz Run
Exposed Pipe	GC290010	Exposed across bottom	Smooth Metal	4	20	Water Supply	No			4	3	1	Koontz Run
Exposed Pipe	GC290906	Exposed along stream	Smooth Metal	8	20	Water Supply	No			5	3	1	Koontz Run
Exposed Pipe	GC370401	Above Stream	Plastic	6	20	Gas	No			5	2	1	Koontz Run
Exposed Pipe	GC381322	Exposed across bottom	Smooth Metal	12	20	Unknown	No			5	4	1	Hill Run
Exposed Pipe	GC381329	Exposed across bottom	Smooth Metal	4	35	Unknown	No			5	2	1	Hill Run
Exposed Pipe	GC504302	Exposed across bottom	Smooth Metal	12	2	Unknown	No			5	4	1	Mainstem 2
Exposed Pipe	GC504303	Above Stream	Smooth Metal	2	30	Gas	No			5	4	1	Mainstem 2

Appendix B - Lower Georges Creek Exposed Pipes

Problem	Survey/Site	Location of Pipe	Type	Diameter(in)	Length(ft)	Purpose	Discharge	Color	Odor	Severity	Correctability	Access	Stream
Exposed Pipe	GC120110	Exposed along stream bank	Smooth Metal	8	5	Sewage	Yes	None	Sewage	1	3	2	Mainstem 3
Exposed Pipe	GC251502	Exposed across bottom	Smooth Metal	10	12	Unknown	Yes	White		1	3	2	Moore Run
Exposed Pipe	GC150102	Above Stream	Smooth Metal	6	15	Unknown	No			2	1	2	Butcher Run
Exposed Pipe	GC279501	Exposed across bottom	Smooth Metal	6	25	Unknown	No			2	4	3	Potomac Hill
Exposed Pipe	GC110103	Exposed along stream bank	Plastic	8	15	Gas	No			3	3	1	Mainstem 3
Exposed Pipe	GC110307	Above Stream	Smooth Metal	8	30	Unknown	No			3	1	1	Unnamed Trib. 7
Exposed Pipe	GC110308	Above Stream	Plastic	8	30	Unknown	No			3	1	1	Unnamed Trib. 7
Exposed Pipe	GC150108	Above Stream	Smooth Metal	6	35	Unknown	No			3	4	3	Butcher Run
Exposed Pipe	GC191907	Exposed across bottom	Plastic	1	15	Unknown	No			3	3	1	Butcher Run
Exposed Pipe	GC150103	Above Stream	Smooth Metal	6	50	Water Supply	No			4	1	3	Butcher Run
Exposed Pipe	GC181714	Above Stream	Smooth Metal	3	40	Gas	No			4	3	1	Potomac Hill
Exposed Pipe	GC192910	Above Stream	Smooth Metal	24	20	Water Supply	No			4	3	2	Mainstem 3
Exposed Pipe	GC170308	Exposed along stream bank	Smooth Metal	4	8	Unknown	No			5	4	3	Mill Run
Exposed Pipe	GC195302	Exposed across bottom	Smooth Metal	18	15	Unknown	No			5	3	3	Mainstem 3
Exposed Pipe	GC195303	Exposed across bottom	Concrete	24	5	Unknown	No			5	3	3	Mainstem 3

Appendix B - Upper Georges Creek Unusual Conditions/Comments

Type of Problem	Survey/Site	Type	Description	Potential Cause	Severity	Correctability	Access	Stream
Unusual Condition	GC536601		Large Lake not on map; stream channel is dry near lake;bed of stream is higher than lake level; Georges Creek is dry channel		1	5	4	Mainstem 1
Unusual Condition	GC545617		Stream channel had dried up;no surface flow	Erosion upstream and low grade inarea cause depositional area, bed unconsolidated	2	5	3	Winebrenner Run
Unusual Condition	GC652703		Stream flow completely disappears at 652702. Dry gravel channel 200' . Dry channel With a few small pools 1000' to end of surveyed area	Leak into sewer crossing at 652702 or pervious substrate	2	5	1	Sand Spring Run
Unusual Condition	GC652706		No flow only standing water above 652705 PO. Dry channel below 652705 PO	Deep Mine Infiltration?	2	5	5	Mainstem 1
Unusual Condition	GC652710		Channel is dry above sewer outfall 652708 PO		2	5	5	Mainstem 1
Unusual Condition	GC545607		Stream piped under several front yards piped piped 300 ft.		3	4	1	Winebrenner Run
Unusual Condition	GC545610		Stream in lower section appears to be losing flow; Flow in adjacent ditch is very strong and AMD		3	5	3	Winebrenner Run
Unusual Condition	GC552705		5 Large stone wiers; Erosion around ends will continue to fail		3	3	2	Sand Spring Run
Unusual Condition	NR100101		Stream undercutting gabion baskets.	The stream	3	4	1	Neff Run
Unusual Condition	NR302310		Entire stream channel filled with small rip-rap from channelized section-water running through rock.	Improper channel stablilzation	3	3	1	Neff Run
Unusual Condition	GC428501		Rip-rap on bank w/ step pools meandering down. Channel gradually looses base flow and dries up	Old mining operation	4	5	4	Woodland Creek
Unusual Condition	GC652704		Gravel road- Low with no flow		4	2	1	Mainstem 1
Unusual Condition	NR302301	Scum	Green scum	Excessive nutrients (downgrade from landfill)?	4	3	1	Neff Run
Unusual Condition	NR302302	Scum	Green scum	Maybe excessive nutrients	4	3	1	Neff Run

Appendix B - Upper Georges Creek Unusual Conditions/Comments

Type of Problem	Survey/Site	Type	Description	Potential Cause	Severity	Correctability	Access	Stream
Unusual Condition	NR404107		Stream goes underground at point on map. Looks to be piped under old road. Starts again on other side.	Road crossing?	4	5	4	Neff Run
Unusual Condition	GC533502		ATV, Ford, Tire, Bank stabilization		5	3	1	Mainstem 1
Unusual Condition	GC552706		Vegetation appears to be Japanese knotweed, from here and upstream 300' Multiflora rose from here to Lower Consol Rd.		5	5	1	Sand Spring Run
Unusual Condition	NR201218		Vegetation cut around powerline		5	3	2	Neff Run
Comment	GC521501		Water flow is back in stream	Staub is adding ground water and valley flattens out				Woodland Creek
Comment	GC523501		Change from large flood plain to pasture; very nice E channel above fence, good gravel, upstream, silt in pasture					Mainstem 1
Comment	GC533620		Dry Channel					Winebrenner Run
Comment	GC536502		Pond on unnamed tributary below Winebrenner; pond surface 6ft below Georges Creek water level	Mine ops				Mainstem 1
Comment	GC536503		Road Crossing Unnamed trb below Winebrenner, rt side of Georges Creek	Mine ops				Mainstem 1
Comment	GC536504		Road crossing mainstem Georges Creek	Mine ops				Mainstem 1
Comment	GC536602		Confluence of Winebrenner and Georges Creek both are dry channels					Mainstem 1
Comment	GC541603		Series of 6 pipes creating fish blockage	Steep stream grade				Winebrenner Run
Comment	GC542501		Failed culvert for 1000 ft. broken and scouring underneath causing moderate to severe erosion impacting I-68	I-68 and high gradient				Winebrenner Run
Comment	GC545612	Acid Mine Drainage	Stream bright orange from AMD upstream	AMD				Winebrenner Run

Appendix B - Upper Georges Creek Unusual Conditions/Comments

Type of Problem	Survey/Site	Type	Description	Potential Cause	Severity	Correctability	Access	Stream
Comment	GC551501		Headwaters of Winebrenner Run Channelized along I-68 channel goes under truck stop after sed. trap pond	I-68				Winebrenner Run
Comment	GC551505		WineBrenner redirected to sand spring pond across I-68	I-68				Winebrenner Run
Comment	GC552704		Trib is dry swale; good forest buffer in regeneration on banks, obvious storm flow discharge w/ minor sediment bar at mouth					Sand Spring Run
Comment	GC555534		Failed corrugated metal pipe starting to make water scour under I-68	Channelized upstream extreme grade				Winebrenner Run

Appendix B - Middle Georges Creek Unusual Conditions/Comments

Type of Problem	Survey/Site	Type	Description	Potential Cause	Severity	Correctability	Access	Stream
Unusual Condition	GC382403		Culvert Pipe is burried and sediment is building up on upstream side of farm road, road is being washed out	Clogged culvert pipe	1	3	2	Hill Run
Unusual Condition	GC390902	Scum	White foam on water, gray algae on rocks for about 2 miles	Sewage	1	4	3	Mainstem 2
Unusual Condition	GC371605		No flow after dam. Stream below dam completely dry.	Dam	2	2	1	Jackson Run
Unusual Condition	GC514508		Flood wall erosion at toe. 15' steep slope w/ buildings at top		2	2	3	Mainstem 2
Unusual Condition	GC290903	Scum	Scum on bottom/ Acidity, sewage, bacteria	AMD?	3	5	1	Koontz Run
Unusual Condition	GC291402		Steep slope, debris, black shale rock from deep mining	Unknown	3	5	3	Koontz Run
Unusual Condition	GC300702		Appaent Water Withdraw	Water supply	3	3	1	Koontz Run
Unusual Condition	GC380640	Piped stream	Stream Piped under 2 buildings and a deck		3	5	1	Jackson Run
Unusual Condition	GC380643	Piped Stream	Piped stream for approximately 200 feet		3	4	2	Jackson Run
Unusual Condition	GC381309		Red dump truck w/ the name P.C. Nolan dumping spoil into the stream		3	1	2	Hill Run

Appendix B - Middle Georges Creek Unusual Conditions/Comments

Type of Problem	Survey/Site	Type	Description	Potential Cause	Severity	Correctability	Access	Stream
Unusual Condition	GC480407		Stream disappears underground. Stream disappears stream dry all the way to confluence	Unknown	4	5	2	Hill Run
Unusual Condition	GC514506	Algae	Algae on rocks below Neff Run	Neff Run	4	3	3	Mainstem 2
Unusual Condition	GC601101	Water Color/Clarity	Acid Mine Drainage coming from pump house	Pump station	4	4	1	Elk Lick Run
Comment	GC200507		Tributary on on right bank channelized and inadequately buffered	Homeowner yard improvements	5	4	1	Laurel Run
Unusual Condition	GC290902		Erosion/inadequate buffer on county road		5	5	1	Koontz Run
Unusual Condition	GC511205		Stream coming from underground cave.		5	5	1	Mainstem 2
Comment	GC200504		Left & Right tribs are dried up. Left trib is collecting some road runoff but no other significant problems					Laurel Run
Comment	GC200505		Series of man made pools and rock check dams	Residents were manipulating debris from upstream erosion site				Laurel Run
Comment	GC201504		Bank erosion, Debris dam, outhouse, old bank armoring					Laurel Run
Comment	GC212506		Perfect Rosgen A stream	Good Base flow				Laurel Run

Appendix B - Middle Georges Creek Unusual Conditions/Comments

Type of Problem	Survey/Site	Type	Description	Potential Cause	Severity	Correctability	Access	Stream
Comment	GC223202		Trees uprooted from the stream runniong underneath the roots					Laurel Run
Comment	GC276308		The gabion is along railroad tracks and used as flood proofing					Mainstem 2
Comment	GC280601		Stream restoration site recent construction					Jackson Run
Comment	GC300701		Public Water supply Reservoir (fishs blockage)					Koontz Run
Comment	GC381323		Erosion control					Hill Run
Comment	GC381327		Erosion control					Hill Run
Comment	GC408204		Silt fence on the right side of stream					Squirrel Neck Run
Comment	GC480404		Stream disappears underground at several locations. Moving under debris flows					Hill Run
Comment	GC502305		The channel alteration is along the left bank protecting a railroad					Mainstem 2

Appendix B - Lower Georges Creek Unusual Conditions/Comments

Type of Problem	Survey/Site	Type	Description	Potential Cause	Severity	Correctability	Access	Stream
Unusual Condition	GC181707	Color/clarity	Major AMD impact in stream channel (right side)	AMD	1	5	4	Mainstem 3
Unusual Condition	GC191908	Sewage	Out of left bank	Leak from pipe	1	4	2	Butcher Run
Unusual Condition	GC191909	Sewage	On left bank; pipe outfall discharging sewage; looks like from blue house	Sewage overflow	1	3	2	Butcher Run
Unusual Condition	GC251502	Color/clarity	Stream normal until EP then very white	Leakage from Exposed Pipe?	1	3	2	Moore Run
Unusual Condition	GC110310		The stream has been piped		3	5	1	Mainstem 3
Unusual Condition	GC120103	Algae	White bacteria and algae	Unknown	3	4	2	Mainstem 3
Unusual Condition	GC170304	Color/Clarity	Bubbles in cloudy water	Unknown	3	3	2	Mill Run
Unusual Condition	GC181513	Failed Gabions	Failed Gabions	IB:ES	3	5	1	Moore Run
Unusual Condition	GC183503	AMD	All life including Algae dead below AMD	AMD	3	3	2	Potomac Hill Run
Unusual Condition	GC191912	Algae	Excessive Algae	Extra nutrients	3	5	1	Butcher Run

Appendix B - Lower Georges Creek Unusual Conditions/Comments

Type of Problem	Survey/Site	Type	Description	Potential Cause	Severity	Correctability	Access	Stream
Unusual Condition	GC192901		Used Cat litter dumped in stream in several areas	House on the other side of drive way bridge is possible cause	3	1	1	Butcher Run
Unusual Condition	GC132404	Algae	Stream green w/ fimimentuos algae	Unknown	4	5	5	South Tributaries
Unusual Condition	GC171302	Other	Red discharge from rocks on cliff	Possible acids mine drainage	4	4	4	Mill Run
Unusual Condition	GC183501		White precipitate, seep starts at confluence af two streams seeping in from button of stream bed	Acid mine drainage	4	5	3	Potomac Hill Run
Unusual Condition	GC251101		Excessive Sediment in stream coming from road crossing		4	3	1	Moore Run
Comment	GC120114		Pump station outfall	Pump station				Mainstem 3
Comment	GC131102		Materials left from flood event	Flood				Mainstem 3
Comment	GC132402		Multiple natural falls on stream	Steep slope, A1 stream type				South Tributaries
Comment	GC175102		Tributary is dry					Unnamed Trib. 6
Comment	GC181708	Color/clarity	Amd running into mainstem from trib on left side					Mainstem 3

Appendix B - Lower Georges Creek Unusual Conditions/Comments

Type of Problem	Survey/Site	Type	Description	Potential Cause	Severity	Correctability	Access	Stream
Comment	GC241501		Stream is too small and too steep to use normal habitat sheet: Marginal invertabrate habitat forest less than 30 years old					Potomac Hill Run
Comment	GC242501		Channel is stable with a trickle of water and no habitat to be seen					Potomac Hill Run
Comment	GC242504		Trib is 3ft wide 3ft deep small puddles of water moderate erosion and no instream habitat					Potomac Hill Run
Comment	GC340101		Stream was walked after a heavy Rain: Well above average flows					Moore Run

Appendix B - Upper Georges Creek Acid Mine Drainage

Problem	Survey/Site	Location	Size&Flow	Impact	Access	Stream
Acid Mine Drainage	GC413215	Right Bank	Slow flow from pipe	6ft wide Flow draining to about 12 ft from pipe	2	Woodland Creek
Acid Mine Drainage	GC423110	North side of stream	2ft flow 2in deep	No visible impact	1	Staub Run
Acid Mine Drainage	GC514501	Left bank	No visible flow	Staining on rocks	4	Mainstem 1
Acid Mine Drainage	GC541601	Along road on small tributary	Very small <0.1cfs	Ditch along road has white participate in it	1	Winebrenner Run
Acid Mine Drainage	GC545609	Drain pipe under Old Mountain Rd	Flow approximately 1 cfs ditch is bright red	Mainsteam yellow	2	Winebrenner Run
Acid Mine Drainage	GC555515	Winebrenner Run right bank	Comes from under ground right bank, orange	Flows through out the rest of wine brenner	2	Winebrenner Run
Acid Mine Drainage	GC555516	Channelized trib to right bank Winebrenner	75 ft channelized trib, orange flow	Flows throughout the rest of Wine Brennan	2	Winebrenner Run
Acid Mine Drainage	GC577901	From under Sand Pit? Road	Entire stream 2 feet across flow of stream	Entire stream turned yellow/orange	2	Sand Spring Run
Acid Mine Drainage	GC577904	Left bank	1 foot wide	Yellow deposits down stream	2	Sand Spring Run
Acid Mine Drainage	NR100102	Ditch on the left side of trib about 20ft up	Small, covers a few rocks extends a few feet	White scum floating on surface and settling in bottom as fine particles	1	Neff Run
Acid Mine Drainage	NR301317	Right of stream	Big section of stream covered by yellow boy (bright orange) deposits	Bright orange deposits	2	Neff Run
Acid Mine Drainage	NR401132	Middle of stream	Entire stream red	Makes stream red	3	Mattew's Run
Acid Mine Drainage	NR402130	Middle of stream	15-20' x 1' wide	None apparent	5	Mattew's Run
Acid Mine Drainage	NR601202	Below Logging Rd.	Strong flow from spring	None apparent	2	Dan's Run
Acid Mine Drainage	NR603226	Discharge from pipe	Small flow	White deposit underneath	1	Dan's Run

Appendix B - Middle Georges Creek Acid Mine Drainages

Problem	Survey/Site	Location	Size&Flow	Impact	Access	Stream
Acid Mine Drainage	GC200505	Laurel Run	3 GPM's from plastic hose	Slight orange stain goes out 30ft	1	Laurel Run
Acid Mine Drainage	GC221108	Seep from bank	2ft radius streamflow	Trickle into stream	5	Laurel Run
Acid Mine Drainage	GC290004	Right bank 8 in. pipe	> 1 gpm, orange	Yellow boy staining stream bed , many brook trout above seep	1	Koontz Run
Acid Mine Drainage	GC290009	Left bank 50' above road bridge	Small, orange seep almost no flow	Very little change in stream bed color	1	Koontz Run
Acid Mine Drainage	GC290010	20' below road bridge, seepage appears on both sides of channel	Staining on rocks	Staining on bedrock extends beyond MAP 290	3	Koontz Run
Acid Mine Drainage	GC290905	Seep on side of stream	1 foot wide seepage	Appearance of white aluminum precipiates	1	Koontz Run
Acid Mine Drainage	GC291406	Stream	White, milky color seeping out of bank near PO	Whole stream turned white	3	Koontz Run
Acid Mine Drainage	GC370405	Dam on Orr Run	6ft x 15ft dam w/ amd stains	Acid mine stains on dam	2	Orr Run
Acid Mine Drainage	GC370406	Trib along left bank	50ft long 3ft wide	White stains along whole trib	2	Orr Run
Acid Mine Drainage	GC372403	Pipe on left bank	10ft long 2ft wide	Amd coming out of pipe and flowing downstream	3	Orr Run
Acid Mine Drainage	GC381302	Right Bank	2ft wide and slow seepage	No visible impact	3	Hill Run
Acid Mine Drainage	GC381306	Right Bank	20ft x 100ft	Some staining of rocks	3	Hill Run
Acid Mine Drainage	GC390901	From tributary	Width and flow of tributary	Middle of main stream orange (yellow boy) deposits for 300 ft.	3	Mainstem 2
Acid Mine Drainage	GC390905	From tributary	Tributary 2 feet wide	2 feet wide yellow boy in mainsteam bottom	3	Mainstem 2
Acid Mine Drainage	GC511201	Left bank	20ft x 6ft puddle coming from pipe		2	Squirrel Neck Run
Acid Mine Drainage	GC511205	In stream	1ft wide 2in deep 150ft long		1	Mainstem 2
Acid Mine Drainage	GC514509	Right bank	Slow seep		1	Mainstem 2

Appendix B - Lower Georges Creek Acid Mine Drainages

Problem	Survey/Site	Location	Size&Flow	Impact	Access	Stream
Acid Mine Drainage	GC120111	Trib from Right Bank	4 ft Wide		2	Mainstem 3
Acid Mine Drainage	GC120113	Pipe on Left Bank	30ft x 5ft channel draining from pipe	Flowing down GC for 20ft	2	Mainstem 3
Acid Mine Drainage	GC131106	Trib along left bank	Whole trib w/ amd		2	Mainstem 3
Acid Mine Drainage	GC132403	Headwaters	Seep	White precipitate seen over entire length of stream	5	South Tributaries
Acid Mine Drainage	GC142108	Right bank	10ft x 3ft pool of standing water		4	Mill Run
Acid Mine Drainage	GC150105	Left bank	30ft x 1ft flow	Seep out of the side of a hill and running into tributary	2	Butcher Run
Acid Mine Drainage	GC151104	Left bank	50ft flow	Seepsd out ofhill runs down tributary for 50 ft	2	Butcher Run
Acid Mine Drainage	GC170313	Left Bank	2 in flow from bank	Coloration along water flow on bank; not affecting stream too much	1	Mill Run
Acid Mine Drainage	GC171101	Right bank	Seep out of erosion site	Flowing into stream	2	Mainstem 3
Acid Mine Drainage	GC180316	Right bank	Large amount in water	Turning everything orange, causing cloudiness downstream	3	Mill Run
Acid Mine Drainage	GC181702	Right Bank,Flow comes down hill,runs into RR tracks then into main branch	Varies	Pools of standing AMD adjacent to right bank/ flowing AMD on other side of RR tracks	2	Mainstem 3
Acid Mine Drainage	GC181704	Right bank/shore of mainstem	White, small/low flow	White "stuff"extend downstream for 50 ft.	2	Mainstem 3
Acid Mine Drainage	GC181706	Right Bank adjacent to mainstem (McDonalds Mine?)	Similar to others, seeping through RR tracks	White, orange, yellow, green stuff entering mainstem (large impact on coloration of stream)	4	Mainstem 3
Acid Mine Drainage	GC181711	AMD in stream	Totally in small trib to main stem	Total system	2	Potomac Hill Run
Acid Mine Drainage	GC183501	Trib off left bank	Major seep coming freom man- made rockpit	Channel 5 ft.wide flowing for 200 yards	2	Potomac Hill Run

Additional Acid Mine Drainage (Bureau of Mines)

STRM_SGMNT	PH_STANDAR	SAMPLE_LAB	FIELD_PH	LAB_PH	FLOW_GPM	FE_MG_L	FE_LOAD	MN_MG_L	MN_LOAD	SUS_SOLIDS	SUS_SOLIDS	ACID_MG_L	ACID_LOAD
Woodland Creek	Meets pH standards	WOOD-1	8.72	7.82		0.28	0.00	0.03	0.00	2.00	0.00	0.00	0.00
Winebrenner Run	Does not meet pH standards	Wine-3	3.70	3.39	213.00	17.10	43.76	13.50	34.55	37.00	94.69	247.20	632.65
Winebrenner Run	Does not meet pH standards	POS AMD M	3.18	3.44	5.00	15.40	0.93	36.30	2.18	10.00	0.60	880.00	52.87
Winebrenner Run	Meets pH standards	Wine-1	7.70	6.96		1.14	0.00	0.19	0.00	12.00	0.00	11.20	0.00
Winebrenner Run	Meets pH standards	Wine-2	8.20	7.48		0.38	0.00	0.12	0.00	2.00	0.00	0.00	0.00
Staub Run	Meets pH standards	Stuab	7.90	7.45		0.18	0.00	0.03	0.00	2.00	0.00	0.00	0.00
Squirrel Neck Run	Meets pH standards	SqN-1	7.90	8.16	53.00	0.15	0.10	0.25	0.16	2.00	1.27	0.00	0.00
Orr Run	Meets pH standards	OrrRun-1	7.20	7.32	144.00	0.14	0.24	0.03	0.05	2.00	3.46	0.00	0.00
Orr Run	Meets pH standards	OrrRun-2	7.30	7.33	114.00	0.46	0.63	0.03	0.04	7.00	9.59	0.00	0.00
Neff Run	Meets pH standards	NfR-1	8.00	7.68	86.00	0.07	0.07	0.34	0.35	2.00	2.07	0.00	0.00
Neff Run	Meets pH standards	MAT-3		7.00		1.00		1.00	0.00	3.00		4.00	
Neff Run	Meets pH standards	MAT-2		7.00		0.00		0.00	0.00	9.00		0.00	
Neff Run	Meets pH standards	MAT-1		7.00		0.00		0.00	0.00	15.00		0.00	
Moores Run	Meets pH standards	MoRn-3	7.20	6.95	619.00	0.14	1.04	1.98	14.73	4.00	29.75	0.00	0.00
Moores Run	Meets pH standards	MoRn-1	7.60	7.50	352.00	0.03	0.13	0.07	0.30	2.00	8.46	0.00	0.00
Moores Run	Does not meet pH standards	MORn-2	4.80	4.72		0.17	0.00	7.30	0.00	2.00	0.00	57.00	0.00
Mill Run	Meets pH standards	Mil-30	5.70			0.59	0.00	2.50	0.00	13.00	0.00	0.00	0.00
Mill Run	Meets pH standards	Mil-40	6.40	7.29	10861.00	0.45	58.72	0.05	6.52	11.00	1435.49	0.00	0.00
Mill Run	Does not meet pH standards	Mil-60		3.13		99.40	0.00	4.10	0.00	22.00	0.00	553.80	0.00
Mill Run	Meets pH standards	Mil-50	7.90	7.08	12365.00	0.52	77.26	1.20	178.28	7.00	1039.99	0.00	0.00
Mill Run	Does not meet pH standards	mil-80	3.70	3.44		11.50	0.00	5.30	0.00	14.00	0.00	250.80	0.00
Mill Run	Meets pH standards	Mil-70	7.80	7.22	16397.00	1.20	236.42	1.15	226.57	8.00	1576.13	0.00	0.00
Mill Run	Meets pH standards	MIL-90	7.60	7.19	10866.00	0.11	14.36	0.03	3.92	4.00	522.24	0.00	0.00
Mill Run	Meets pH standards	Mill-100	7.41	7.16	10068.00	0.08	9.68	0.03	3.63	7.00	846.79	0.00	0.00
Mill Run	Meets pH standards	Mil-110	6.80	7.48	18.00	0.03	0.01	0.03	0.01	2.00	0.43	0.00	0.00
Mill Run	Meets pH standards	Mil-180	7.40	7.30	10807.00	0.04	5.19	0.03	3.90	16.00	2077.60	0.00	0.00
Mill Run	Meets pH standards	MRL-1	6.36	6.86		0.42	0.00	0.03	0.00	2.00	0.00	12.40	0.00
Mill Run	Meets pH standards	MRRT-1	7.14	7.33		0.19	0.00	0.03	0.00	23.00	0.00	0.00	0.00
Laurel Run	Meets pH standards	LR/GC-1	7.10	7.06	2776.00	0.03	1.00	0.03	1.00	2.00	66.71	0.00	0.00
Koontz Run	Meets pH standards	KR-2	7.10	6.91	1203.00	0.22	3.18	0.21	3.04	5.00	72.27	0.00	0.00
Koontz Run	Meets pH standards	KR-1	7.10	6.92	1284.00	0.13	2.01	0.03	0.46	2.00	30.86	0.00	0.00
Klondike Stream	Meets pH standards	Klon-1	7.10	7.68		0.06	0.00	0.24	0.00	2.00	0.00	0.00	0.00
Jackson Run	Meets pH standards	Jack Run-6	7.50	7.57	17.00	0.07	0.01	0.03	0.01	19.00	3.88	0.00	0.00
Jackson Run	Meets pH standards	Jack Run-5	7.40	7.28	38.00	0.08	0.04	0.11	0.05	7.00	3.20	0.00	0.00
Jackson Run	Meets pH standards	LONRES.	7.00	6.95		0.14	0.00	0.03	0.00	2.00	0.00	0.00	0.00
Jackson Run	Meets pH standards	Jack Run-2		7.54		0.03	0.00	0.03	0.00	2.00	0.00	0.00	0.00

* For additional information, contact Maryland Department of the Environment's Bureau of Mines.

Additional Acid Mine Drainage (Bureau of Mines)

SAMPLE_LAB	ALKA_MG_L	ALKA_LOAD	AL_MG_L	AL_LOAD	CA_MG_L	CA_LOAD	SP_COND	MG_MG_L	MG_LOAD	DS_MG_L	DS_LOAD	SULFATE_MG	SULFATE_LO	ZINC_MG_L
WOOD-1	47.90	0.00	0.10	0.00	16.10	0.00	111.00	5.90	0.00	73.00	0.00	3.10	0.00	0.03
Wine-3	0.00	0.00	10.99	28.13	39.30	100.58	862.00	22.00	56.30	532.00	1361.53	325.60	833.30	1.66
POS AMD M	0.00	0.00	77.20	4.64	94.20	5.66	3300.00	83.80	5.03	2393.00	143.76	1689.60	101.51	0.03
Wine-1	16.60	0.00	0.10	0.00	18.30	0.00	162.00	6.50	0.00	92.00	0.00	44.20	0.00	0.03
Wine-2	31.80	0.00	0.10	0.00	17.10	0.00	288.00	6.30	0.00	126.00	0.00	23.10	0.00	0.03
Stuab	18.20	0.00	0.10	0.00	4.77	0.00	54.00	3.50	0.00	37.00	0.00	4.70	0.00	0.03
SqN-1	186.40	118.70	0.10	0.06	66.60	42.41	371.00	12.50	7.96	245.00	156.02	19.10	12.16	0.03
OrrRun-1	39.60	68.52	1.00	1.73	16.20	28.03	102.00	3.80	6.57	59.00	102.08	4.00	6.92	0.03
OrrRun-2	39.60	54.24	0.10	0.14	21.70	29.72	169.00	4.90	6.71	108.00	147.93	25.30	34.65	0.03
NfR-1	57.60	59.52	0.10	0.10	56.30	58.18	434.00	17.20	17.77	242.00	250.06	110.70	114.39	0.03
MAT-3	9.00		0.00		42.00		354.00	14.00		256.00		106.00		0.00
MAT-2	26.00		0.00		16.00		209.00	6.00		121.00		30.00		0.00
MAT-1	40.00		0.00		21.00		294.00	6.00		186.00		34.00		0.00
MoRn-3	27.20	202.30	0.14	1.04	150.40	1118.60	1220.00	49.20	365.93	847.00	6299.57	467.20	3474.80	0.14
MoRn-1	44.00	186.09	0.10	0.42	73.80	312.13	345.00	14.90	63.02	243.00	1027.75	117.80	498.22	0.03
MORn-2	2.80	0.00	6.30	0.00	97.50	0.00	945.00	51.90	0.00	738.00	0.00	387.30	0.00	0.72
Mil-30	20.60	0.00	0.36	0.00	29.70	0.00	298.00	9.70	0.00	212.00	0.00	105.00	0.00	0.30
Mil-40	19.80	2583.88	0.10	13.05	29.30	3823.62	297.00	7.30	952.64	203.00	26491.26	106.80	13937.27	0.03
Mil-60	0.00	0.00	44.30	0.00	227.30	0.00	3410.00	55.60	0.00	2191.00	0.00	1526.70	0.00	0.60
Mil-50	21.00	3119.97	0.10	14.86	26.20	3892.53	281.00	9.50	1411.41	198.00	29416.85	97.90	14545.00	0.03
mil-80	0.00	0.00	24.99	0.00	129.40	0.00	3620.00	93.90	0.00	2467.00	0.00	159.80	0.00	0.10
Mil-70	23.40	4610.17	0.10	19.70	30.30	5969.58	268.00	8.90	1753.44	180.00	35462.85	66.40	13081.85	
MIL-90	21.80	2846.18	0.10	13.06	20.90	2728.68	260.00	5.80	757.24	185.00	24153.40	84.40	11019.17	0.03
Mill-100	20.50	2479.90	0.10	12.10	13.60	1645.20	270.00	5.40	653.24	150.00	18145.60	101.50	12278.52	0.03
Mil-110	65.00	14.06	0.10	0.02	237.70	51.41	2560.00	109.10	23.60	1758.00	380.21	1140.70	246.71	0.03
Mil-180	17.80	2311.33	0.10	12.98	16.30	2116.55	208.00	5.80	753.13	146.00	18958.10	53.90	6998.91	0.03
MRL-1	8.20	0.00	0.10	0.00	3.24	0.00	59.00	4.60	0.00	33.00	0.00	6.40	0.00	0.03
MRRT-1	10.40	0.00	0.10	0.00	4.25	0.00	79.00	6.10	0.00	43.00	0.00	6.40	0.00	0.03
LR/GC-1	11.40	380.24	0.10	3.34	22.00	733.80	109.00	5.60	186.79	78.00	2601.66	26.20	873.89	0.03
KR-2	16.40	237.05	0.27	3.90	24.50	354.13	242.00	8.80	127.20	147.00	2124.81	69.80	1008.92	0.05
KR-1	13.20	203.65	0.10	1.54	9.60	148.11	54.00	2.40	37.03	42.00	647.96	4.90	75.60	0.03
Klon-1	92.80	0.00	0.10	0.00	43.30	0.00	289.00	15.50	0.00	178.00	0.00	46.70	0.00	0.03
Jack Run-6	52.20	10.66	0.10	0.02	23.40	4.78	107.00	5.50	1.12	73.00	14.91	6.60	1.35	0.03
Jack Run-5	18.20	8.31	0.10	0.05	40.10	18.31	52.00	5.70	2.60	38.00	17.35	4.10	1.87	0.03
LONRES.	18.90	0.00	0.10	0.00	10.80	0.00	62.00	1.50	0.00	48.00	0.00	4.90	0.00	0.03
Jack Run-2	36.00	0.00	0.10	0.00	33.70	0.00	172.00	4.50	0.00	101.00	0.00	20.90	0.00	0.03

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Additional Acid Mine Drainage (Bureau of Mines)

STRM_SGMNT	PH_STANDAR	SAMPLE_LAB	FIELD_PH	LAB_PH	FLOW_GPM	FE_MG_L	FE_LOAD	MN_MG_L	MN_LOAD	SUS_SOLIDS	SUS_SOLIDS	ACID_MG_L	ACID_LOAD
Jackson Run	Meets pH standards	P-3		7.62		0.03	0.00	0.03	0.00	2.00	0.00	0.00	0.00
Jackson Run	Meets pH standards	P-4	7.30	7.66		0.38	0.00	0.06	0.00	2.00	0.00	0.00	0.00
Jackson Run	Does not meet pH standards	Jack Run-3											
Jackson Run	Meets pH standards	P-7		7.72		0.36	0.00	0.12	0.00	2.00	0.00	0.00	0.00
Jackson Run	Meets pH standards	Jack Run-1	7.40	7.14	970.00	0.16	1.86	0.70	8.16	3.00	34.96	0.00	0.00
Jackson Run	Meets pH standards	POsAMD-2		7.69		1.07	0.00	0.21	0.00	2.00	0.00	0.00	0.00
Jackson Run	Does not meet pH standards	PosAMD-3		6.03		0.09	0.00	2.72	0.00	9.00	0.00	13.80	0.00
Jackson Run	Meets pH standards	Jack Run-4		7.60		0.03	0.00	0.64	0.00	2.00	0.00	0.00	0.00
Jackson Run	Does not meet pH standards	Pos AMD-1	4.00	4.12		0.73	0.00	6.10	0.00	2.00	0.00	155.40	0.00
Hill Run	Meets pH standards	Hill Rn-1	6.80	6.87	5.00	1.37	0.08	0.64	0.04	36.00	2.16	0.00	0.00
Hill Run	Meets pH standards	Hill Rn-2	7.80	7.63	9.00	0.65	0.07	0.22	0.02	6.00	0.65	0.00	0.00
Hill Run	Meets pH standards	Hill Rn-3	7.60	7.58	239.00	0.08	0.23	0.20	0.57	2.00	5.74	0.00	0.00
Georges Creek	Meets pH standards	Geo-480	7.70	7.84	11510.00	0.67	92.66	0.53	73.30	9.00	1244.67	0.00	0.00
Georges Creek	Does not meet pH standards	GCUntrib	6.50	4.76		4.47	0.00	12.00	0.00	27.00	0.00	63.40	0.00
Georges Creek	Meets pH standards	GCTRIB-5	7.60	7.44		0.32	0.00	0.42	0.00	53.00	0.00	0.00	0.00
Georges Creek	Meets pH standards	Geo-450	7.50	7.51	14248.00	1.32	225.98	0.65	111.28	9.00	1540.75	0.00	0.00
Georges Creek	Meets pH standards	Geo-445	7.90	7.66	14729.00	1.17	207.06	0.43	76.10	9.00	1592.77	0.00	0.00
Georges Creek	Meets pH standards	Geo-420	7.10	7.38	7545.00	1.74	157.74	0.30	27.20	7.00	634.59	0.00	0.00
Georges Creek	Does not meet pH standards	GC trib-6	6.30	6.12	155.00	0.07	0.13	7.60	14.15	8.00	14.90	6.20	11.55
Georges Creek	Meets pH standards	Geo-400	6.30	6.66	8144.00	5.49	537.21	0.13	12.72	24.00	2348.47	0.00	0.00
Georges Creek	Meets pH standards	Geo-380	7.60	7.89	8175.00	0.03	2.95	0.14	13.75	3.00	294.68	0.00	0.00
Georges Creek	Meets pH standards	Geo-360	8.20	8.00	6809.00	0.03	2.45	0.37	30.27	2.00	163.63	0.00	0.00
Georges Creek	Meets pH standards	Geo-340	7.50	7.86	3549.00	0.15	6.40	1.18	50.32	7.00	298.50	0.00	0.00
Georges Creek	Meets pH standards	Geo-320	7.90	7.76	4265.00	1.17	59.96	1.47	75.33	26.00	1332.38	0.00	0.00
Georges Creek	Meets pH standards	GCTRIB-3		7.86	40.00	1.00	0.48	0.46	0.22	2.00	0.96	0.00	0.00
Georges Creek	Meets pH standards	Geo-280	7.50	7.49	1600.00	0.08	1.54	2.67	51.33	16.00	307.59	0.00	0.00
Georges Creek	Meets pH standards	Geo-235	7.50	7.45	991.00	0.03	0.36	1.71	20.36	4.00	47.63	0.00	0.00
Georges Creek	Does not meet pH standards	GcTRIb-4	3.10	3.13	41.00	14.20	7.00	17.10	8.42	16.00	7.88	364.40	179.51
Georges Creek	Meets pH standards	Geo-250	6.50	6.94	793.00	1.32	12.58	2.56	24.39	10.00	95.28	0.00	0.00
Georges Creek	Meets pH standards	GCTRIB-2	7.50	7.26	135.00	1.03	1.67	2.20	3.57	31.00	50.28	0.00	0.00
Georges Creek	Meets pH standards	GCTRIB-1	7.70	7.81		0.03	0.00	0.23	0.00	2.00	0.00	0.00	0.00
Georges Creek	Meets pH standards	Geo-200	7.50	7.05	10.00	1.58	0.19	0.65	0.08	9.00	1.08	0.00	0.00
Georges Creek	Meets pH standards	Geo-220	8.20	7.79	489.00	0.03	0.18	0.03	0.18	4.00	23.50	0.00	0.00
ElkLick Run	Meets pH standards	EKR-1	7.20	7.68	140.00	0.11	0.19	0.25	0.42	2.00	3.36	0.00	0.00
Butcher Run	Meets pH standards	BR-1	8.40	8.07	135.00	0.29	0.47	0.03	0.05	2.00	3.24	0.00	0.00
Butcher Run	Meets pH standards	BTR-1	8.20	8.13		0.67	0.00	0.15	0.00	68.00	0.00	0.00	0.00

* For additional information, contact Maryland Department of the Environment's Bureau of Mines.

Additional Acid Mine Drainage (Bureau of Mines)

SAMPLE_LAB	ALKA_MG_L	ALKA_LOAD	AL_MG_L	AL_LOAD	CA_MG_L	CA_LOAD	SP_COND	MG_MG_L	MG_LOAD	DS_MG_L	DS_LOAD	SULFATE_MG	SULFATE_LO	ZINC_MG_L
P-3	42.90	0.00	0.10	0.00	73.90	0.00	1240.00	19.20	0.00	870.00	0.00	431.70	0.00	0.03
P-4	33.70	0.00	0.10	0.00	40.20	0.00	203.00	5.80	0.00	120.00	0.00	35.20	0.00	0.03
Jack Run-3														
P-7	60.60	0.00	0.10	0.00	85.40	0.00	563.00	24.50	0.00	377.00	0.00	194.20	0.00	0.03
Jack Run-1	30.80	358.97	0.40	4.66	27.00	314.68	286.00	9.40	109.56	178.00	2074.57	81.30	947.54	0.14
POsAMD-2	150.40	0.00	0.10	0.00	69.20	0.00	337.00	11.60	0.00	205.00	0.00	21.80	0.00	0.03
PosAMD-3	6.20	0.00	3.53	0.00	101.20	0.00	926.00	34.30	0.00	636.00	0.00	236.20	0.00	0.47
Jack Run-4	48.80	0.00	0.10	0.00	70.70	0.00	454.00	16.70	0.00	308.00	0.00	172.00	0.00	0.03
Pos AMD-1	0.00	0.00	11.36	0.00	148.00	0.00	1850.00	68.40	0.00	1267.00	0.00	787.20	0.00	0.75
Hill Rn-1	30.80	1.85	0.10	0.01	43.10	2.59	97.00	7.50	0.45	50.00	3.00	5.40	0.32	0.03
Hill Rn-2	54.40	5.88	0.10	0.01	47.10	5.09	138.00	7.40	0.80	72.00	7.79	0.50	0.05	0.03
Hill Rn-3	61.80	177.47	0.10	0.29	59.20	170.00	288.00	10.20	29.29	156.00	447.98	30.70	88.16	0.03
Geo-480	60.60	8380.79	0.10	13.83	21.70	3001.04	1510.00	22.90	3167.00	1085.00	150052.02	586.80	81152.56	0.04
GCUntrib	3.60	0.00	4.37	0.00	342.60	0.00	3620.00	135.40	0.00	2594.00	0.00	1572.90	0.00	0.37
GCTRIB-5	62.40	0.00	0.10	0.00	110.70	0.00	648.00	25.30	0.00	489.00	0.00	156.20	0.00	0.03
Geo-450	58.30	9980.66	0.10	17.12	155.60	26637.92	1410.00	61.50	10528.48	990.00	169482.90	494.00	84570.26	0.07
Geo-445	68.60	12140.43	0.10	17.70	151.40	26793.90	1390.00	59.10	10459.18	964.00	170603.16	466.20	82505.39	0.06
Geo-420	60.60	5493.75	0.10	9.07	151.60	13743.43	1300.00	63.20	5729.45	990.00	89749.33	484.80	43949.98	0.06
GC trib-6	6.50	12.11	0.09	0.17	236.60	440.64	2940.00	156.90	292.21	2098.00	3907.27	1338.30	2492.42	0.23
Geo-400	41.20	4031.55	1.37	134.06	155.60	15225.94	1650.00	63.60	6223.46	1131.00	110671.85	512.60	50159.49	0.06
Geo-380	87.40	8584.91	0.10	9.82	137.20	13476.55	1220.00	57.80	5677.44	899.00	88304.79	456.90	44879.26	0.06
Geo-360	79.20	6479.56	0.10	8.18	0.03	2.45	1240.00	21.00	1718.06	825.00	67495.38	354.90	29035.29	0.03
Geo-340	69.80	2976.45	0.10	4.26	123.40	5262.09	1220.00	48.80	2080.95	805.00	34327.22	354.90	15133.83	0.08
Geo-320	68.50	3510.32	0.61	31.26	119.00	6098.22	1061.00	45.00	2306.05	745.00	38177.91	308.50	15809.24	0.10
GCTRIB-3	143.80	69.11	0.10	0.05	140.70	67.62	932.00	42.20	20.28	629.00	302.31	173.90	83.58	0.03
Geo-280	58.20	1118.87	0.10	1.92	249.20	4790.76	1480.00	72.00	1384.17	978.00	18801.64	466.20	8962.50	0.08
Geo-235	49.40	588.22	0.10	1.19	13.60	161.94	806.00	29.00	345.31	559.00	6656.14	225.00	2679.12	0.06
GcTRIb-4	0.00	0.00	28.00	13.79	107.60	53.01	2920.00	141.10	69.51	2239.00	1103.00	1569.10	772.99	1.94
Geo-250	24.60	234.39	0.74	7.05	86.90	828.00	868.00	35.60	339.20	640.00	6098.04	299.20	2850.83	0.14
GCTRIB-2	70.70	114.68	0.10	0.16	203.00	329.28	1480.00	56.60	91.81	1038.00	1683.71	467.20	757.83	0.08
GCTRIB-1	198.30	0.00	0.10	0.00	130.50	0.00	1040.00	17.20	0.00	631.00	0.00	5.10	0.00	0.03
Geo-200	82.60	9.92	0.10	0.01	78.20	9.40	887.00	16.90	2.03	525.00	63.08	67.20	8.07	0.04
Geo-220	62.90	369.57	0.10	0.59	77.40	454.76	648.00	21.70	127.50	460.00	2702.74	141.50	831.38	0.03
EKR-1	40.30	67.79	0.10	0.17	19.90	33.47	101.00	4.70	7.91	65.00	109.34	0.50	0.84	0.03
BR-1	6.80	11.03	0.10	0.16	119.00	193.03	1067.00	52.00	84.35	792.00	1284.68	387.30	628.23	0.03
BTR-1	151.30	0.00	0.10	0.00	269.00	0.00	1780.00	41.40	0.00	1161.00	0.00	597.90	0.00	0.03

* For additional information, contact Maryland Department of the Environment's Bureau of Mines.

Appendix B - Upper Georges Creek Trash Dumpings

Problem	Survey/Site	Type	Truckloads	Extent	Possible volunteer project?	Owner Type	Owner Name	Severity	Correctability	Access	Stream
Trash Dumping	GC533505	Industrial	5	Single Site	Yes	Unknown		3	1	2	Mainstem 1
Trash Dumping	GC534101	Residential/Tires	5	Single Site	Yes	Private		4	2	3	Mainstem 1
Trash Dumping	GC569802	Residential/Tires	1	Large Area	Yes	Private		4	2	1	Sand Spring Run
Trash Dumping	GC610104	Industrial	1 Acre Junkyard	Large Area	No	Private		5	5	2	Mainstem 1
Trash Dumping	NR302307	Residential	2	Single Site	Yes	Private		5	3	4	Neff Run

Appendix B - Middle Georges Creek Trash Dumpings

Problem	Survey/Site	Type	Truckloads	Extent	Possible volunteer project?	Owner Type	Owner Name	Severity	Correctability	Access	Stream
Trash Dumping	GC381303	Unknown	40	Large Area	No	Unknown		2	4	3	Jackson Run
Trash Dumping	GC290904	Residential	7	Single site	Yes	Public	County Road	3	2	1	Koontz Run
Trash Dumping	GC370409	Residential	5	Large Area	Yes	Private		3	1	3	Orr Run
Trash Dumping	GC381309	Industrial	10	Single Site	No	Unknown		3	3	2	Jackson Run
Trash Dumping	GC291401	Residential	3	Single Site	No	Unknown		4	1	1	Koontz Run
Trash Dumping	GC370403	Residential/Tires	4	Large Area	Yes	Private		4	2	2	Orr Run
Trash Dumping	GC382413	Residential	3	Single Site	Yes	Unknown		4	2	3	Jackson Run
Trash Dumping	GC398309	Industrial	3	Large Area	Yes	Private		4	2	2	Mainstem 2
Trash Dumping	GC600103	Residential/Tires	5	Single Site	Yes	Private		4	2	1	Elk Lick Run
Trash Dumping	GC281427	Residential	2	Single Site	Yes	Private		5	2	1	Koontz Run
Trash Dumping	GC290011	Yard Waste	1	Single Site	Yes	Unknown		5	1	1	Koontz Run
Trash Dumping	GC290701	Yard Waste	2	Single Site	Yes	Public	County Road	5	1	1	Koontz Run
Trash Dumping	GC291413	Residential	1	Large Area	Yes	Private		5	2	1	Koontz Run
Trash Dumping	GC300701	Residential	1	Single Site	Yes	Unknown		5	1	1	Koontz Run
Trash Dumping	GC370402	Residential	2	Single Site	Yes	Private		5	1	2	Orr Run
Trash Dumping	GC381901	Residential	1	Single Site	Yes	Private		5	2	2	Mainstem 2
Trash Dumping	GC382402	Residential	1	Single Site	Yes	Unknown		5	1	2	Jackson Run
Trash Dumping	GC601104	Industrial	2	Single Site	Yes	Public	Gilmore Reservoir	5	1	1	Elk Lick Run

Appendix B - Lower Georges Creek Trash Dumpings

Problem	Survey/Site	Type	Truckloads	Extent	Possible volunteer project?	Owner Type	Owner Name	Severity	Correctability	Access	Stream
Trash Dumping	GC181602	Residential	5	Single Site	No	Private		3	1	2	Mainstem 3
Trash Dumping	GC181507	Yard waste	3	Single Site	Yes	Private		4	1	1	Moore Run
Trash Dumping	GC141115	Industrial	7ft x 30ft	Single Site	No	Public	Savage State Forest	5	4	4	Mill Run
Trash Dumping	GC150107	Residential	1	Single Site	Yes	Public	Savage State Forest	5	1	3	Butcher Run
Trash Dumping	GC183501	Residential	2	Single Site	Yes	Private		5	1	2	Potomac Hill Run

Appendix B - Upper Georges Creek Debris Problems

Problem	Survey/Site	Length	Type of material	Recent problem	Vegetation?	Ponding or flow diversion	Pond length	Pond width	Pond depth	Erosion problem	Severity	Correctability	Access	Stream
Debris Problem	GC430103	200	Woody Debris & Silts	Yes	No	Yes	5	10	1	Yes	2	3	2	Stuab Run
Debris Problem	GC652707	10	Woody Debris	Unknown	No	Yes	10	25	1	Yes	2	1	3	Mainstem 1
Debris Problem	NR601205	40	Boulder	No	No	Yes	3	5	1	Yes	2	1	4	Dan's Run
Debris Problem	NR701308	20	Woody Debris	No	No	Yes	10	3	5	Yes	2	2	5	Neff Run
Debris Problem	GC423104	100	Woody Debris	Yes	No	No				Yes	3	4	4	Stuab Run
Debris Problem	GC552707	40	Woody Debris	Yes	No	No				Yes	3	1	3	Sand Spring Run
Debris Problem	NR601206	150	Boulder	No	No	No				Yes	3	4	4	Dan's Run
Debris Problem	NR701305	25	Woody Debris	Yes	No	Yes				Yes	3	3	5	Neff Run
Debris Problem	GC428115	15	Woody Debris/Metal Pipe	No	No	No				No	4	1	1	Stuab Run
Debris Problem	NR202205		Cobble,Boulder	No	No	No				No	4	4	3	Matthews Run
Debris Problem	NR601207	30	Cobble	No	No	No				No	4	2	4	Dan's Run
Debris Problem	NR601209	40	Boulder	No	No	No				No	4	4	4	Dan's Run
Debris Problem	NR602215	40	Boulder	No	No	No				No	4	4	4	Dan's Run
Debris Problem	NR701306	10	Woody Debris	Yes	No	No				No	4	3	5	Neff Run
Debris Problem	NR701310	25	Woody Debris	Yes	No	No				No	4	1	1	Neff Run
Debris Problem	NR402124	50	Woody Debris	No	Grasses	No				No	5	2	5	Matthews Run

Appendix B - Middle Georges Creek Debris Problems

Problem	Survey/Site	Length	Type of material	Recent problem	Vegetation?	Ponding or flow diversion	Pond length	Pond width	Pond depth	Erosion problem	Severity	Correctability	Access	Stream
Debris Problem	GC360501	20	Woody Debris	Unknown	No	Yes	50	50	1	Yes	1	2	5	Jackson Run
Debris Problem	GC220111	40	Woody Debris	No	No	Yes				Yes	3	2	5	Laurel Run
Debris Problem	GC361501	200	Woody Debris	No	Grasses	No				Yes	3	2	4	Jackson Run
Debris Problem	GC371602	75	Woody Debris	No	Scrub Shrub	No				Yes	3	2	4	Jackson Run
Debris Problem	GC282301	400	Woody Debris	No	No	No				No	4	4	5	Seldom Seen Run
Debris Problem	GC371601	250	Boulder	No	Scrub Shrub	No				No	4	4	5	Jackson Run
Debris Problem	GC372402	10	Woody Debris	Yes	No	No				No	4	1	3	Orr Run
Debris Problem	GC390904	20	Woody Debris	Yes	No	No				No	4	1	3	Mainstem 2
Debris Problem	GC480405	50	Cobble	No	Small Trees	No				No	5	4	4	Hill Run

Appendix B - Upper Georges Creek In/Near Stream Construction

Problem	Survey/Site	Type of Activity	Sediment Control	Why, if inadequate?	Excess Sediment?	Length (ft)	Company	Location	Severity	Stream
In/Near Stream Construction	GC545613	Residential development	Inadequate	No silt fencing	No				4	Winebrenner Run

Appendix B - Middle Georges Creek In/Near Stream Construction

Problem	Survey/Site	Type of Activity	Sediment Control	Why, if inadequate?	Excess Sediment?	Length (ft)	Company	Location	Severity	Stream
In/Near Stream Construction	GC280907	Retaining wall repair	Inadequate	No silt fence;bare soil	Yes	200			3	Mainstem 2
In/Near Stream Construction	GC280904	Stream restoration	Adequate		No	500			4	Mainstem 2

Appendix B - Lower Georges Creek In/Near Stream Construction

Problem	Survey/Site	Type of Activity	Sediment Control	Why, if inadequate?	Excess Sediment?	Length (ft)	Company	Location	Severity	Stream
In/Near Stream Construction	GC182703	Bank stabilization	Inadequate		Yes	1200	Carl Belt Co.	Town of Barton MainStem	1	Mainstem 3
In/Near Stream Construction	GC110306	Residential excavation	Inadequate	No sediment control	Yes	30		Ross st & Baughton St	3	Unnamed Trib.7

Appendix B - Upper Georges Creek Representative Sites A

Problem	Survey/Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation	Stream
Representative Site	GC320201	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Woodland Creek
Representative Site	GC320212	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Woodland Creek
Representative Site	GC413220	Poor	Marginal	Optimal	Poor	Marginal	Marginal	Marginal	Poor	Poor	Poor	Woodland Creek
Representative Site	GC414222	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Woodland Creek
Representative Site	GC423106	Optimal	Optimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Staub Run
Representative Site	GC428116	Optimal	Optimal	Optimal	Marginal	Optimal	Suboptimal	Suboptimal	Marginal	Marginal	Suboptimal	Staub Run
Representative Site	GC428501	Optimal	Optimal	Suboptimal	Suboptimal	Optimal	Marginal	Marginal	Optimal	Optimal	Optimal	Staub Run
Representative Site	GC430101	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Marginal	Optimal	Optimal	Optimal	Optimal	Staub Run
Representative Site	GC434602	Marginal	Marginal	Marginal	Suboptimal	Marginal	Marginal	Suboptimal	Suboptimal	Marginal	Suboptimal	Winebrenner Run
Representative Site	GC434607	Suboptimal	Marginal	Marginal	Marginal	Suboptimal	Marginal	Marginal	Optimal	Suboptimal	Optimal	Winebrenner Run
Representative Site	GC512504	Optimal	Suboptimal	Marginal	Marginal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Marginal	Mainstem 1
Representative Site	GC521503	Optimal	Suboptimal	Suboptimal	Marginal	Optimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal	Mainstem 1
Representative Site	GC523501	Marginal	Poor	Marginal	Optimal	Suboptimal	Poor	Optimal	Suboptimal	Suboptimal	Suboptimal	Mainstem 1
Representative Site	GC526504	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Mainstem 1
Representative Site	GC533620								Suboptimal	Suboptimal	Suboptimal	Winebrenner Run
Representative Site	GC536501	Marginal	Marginal	Marginal	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Mainstem 1
Representative Site	GC539101	Poor	Optimal	Optimal	Optimal	Optimal	Poor	Optimal	Optimal	Optimal	Optimal	Vale Run
Representative Site	GC541501	Optimal	Marginal	Marginal	Poor	Marginal	Optimal	Suboptimal	Marginal	Suboptimal	Optimal	Winebrenner Run
Representative Site	GC542502	Marginal	Poor	Marginal	Poor	Poor	Poor	Poor	Optimal	Poor	Optimal	Winebrenner Run
Representative Site	GC545608	Marginal	Marginal	Marginal	Marginal	Suboptimal	Marginal	Marginal	Marginal	Marginal	Marginal	Winebrenner Run
Representative Site	GC545614	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Winebrenner Run
Representative Site	GC548101	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Mainstem 1
Representative Site	GC551503	Poor	Poor	Poor	Marginal	Poor	Poor	Poor	Optimal	Poor	Optimal	Winebrenner Run
Representative Site	GC552702	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Suboptimal	Sand Spring Run
Representative Site	GC552707	Optimal	Suboptimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Marginal	Marginal	Marginal	Sand Spring Run
Representative Site	GC553703	Optimal	Suboptimal	Marginal	Suboptimal	Poor	Poor	Marginal	Marginal	Marginal	Suboptimal	Sand Spring Run
Representative Site	GC555501								Optimal	Poor	Optimal	Winebrenner Run
Representative Site	GC563806	Suboptimal	Marginal	Poor	Suboptimal	Suboptimal	Poor	Suboptimal	Suboptimal	Suboptimal	Optimal	Sand Spring Run
Representative Site	GC564902	Optimal	Optimal	Optimal	Suboptimal	Suboptimal	Marginal	Suboptimal	Optimal	Suboptimal	Optimal	Sand Spring Run
Representative Site	GC564908	Optimal	Marginal	Optimal	Optimal	Optimal	Optimal	Optimal	Suboptimal	Suboptimal	Optimal	Sand Spring Run
Representative Site	GC567807	Suboptimal	Marginal	Poor	Poor	Marginal	Poor	Poor	Marginal	Marginal	Marginal	Sand Spring Run
Representative Site	GC567810	Poor	Poor	Poor	Marginal	Poor	Poor	Poor	Marginal	Marginal	Suboptimal	Sand Spring Run
Representative Site	GC568804	Marginal	Poor	Poor	Optimal	Marginal	Poor	Marginal	Optimal	Marginal	Optimal	Sand Spring Run
Representative Site	GC569902	Optimal	Poor	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Poor	Sand Spring Run
Representative Site	GC569903	Optimal	Marginal	Optimal	Optimal	Marginal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Sand Spring Run
Representative Site	GC577907	Poor	Poor	Suboptimal	Suboptimal	Suboptimal	Marginal	Optimal	Optimal	Optimal	Marginal	Sand Spring Run
Representative Site	GC645101	Optimal	Optimal	Optimal	Optimal	Marginal	Suboptimal	Marginal	Optimal	Optimal	Optimal	Vale Run

Appendix B - Upper Georges Creek Representative Sites A

Problem	Survey/Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation	Stream
Representative Site	GC652701	Marginal	Suboptimal	Poor	Suboptimal	Marginal	Poor	Marginal	Suboptimal	Optimal	Optimal	Sand Spring Run
Representative Site	GC652703								Optimal	Suboptimal	Suboptimal	Sand Spring Run
Representative Site	NR100114	Optimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Poor	Neff Run
Representative Site	NR100126	Optimal	Optimal	Marginal	Poor	Optimal	Suboptimal	Optimal	Poor	Poor	Poor	Neff Run
Representative Site	NR201219	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Neff Run
Representative Site	NR202208	Optimal	Suboptimal	Marginal	Optimal	Marginal	Suboptimal	Marginal	Optimal	Suboptimal	Marginal	Neff Run
Representative Site	NR301313	Optimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Neff Run
Representative Site	NR301318	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Neff Run
Representative Site	NR302308	Suboptimal	Marginal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Neff Run
Representative Site	NR401131	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Matthews Run
Representative Site	NR401133	Marginal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Matthews Run
Representative Site	NR402128	Suboptimal	Marginal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Matthews Run
Representative Site	NR403118	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Matthews Run
Representative Site	NR403121	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Matthews Run
Representative Site	NR403122	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Matthews Run
Representative Site	NR404101	Marginal	Poor	Suboptimal	Optimal	Optimal	Poor	Poor	Optimal	Suboptimal	Optimal	Matthews Run
Representative Site	NR404110	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Matthews Run
Representative Site	NR404114	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Matthews Run
Representative Site	NR501301	Suboptimal	Marginal	Suboptimal	Optimal	Marginal	Poor	Poor	Optimal	Optimal	Optimal	Matthews Run
Representative Site	NR501302	Marginal	Marginal	Suboptimal	Optimal	Marginal	Poor	Poor	Optimal	Optimal	Optimal	Matthews Run
Representative Site	NR601201	Suboptimal	Marginal	Poor	Suboptimal	Marginal	Poor	Poor	Optimal	Suboptimal	Optimal	Dan's Run
Representative Site	NR601203	Optimal	Optimal	Poor	Optimal	Optimal	Marginal	Suboptimal	Optimal	Suboptimal	Optimal	Dan's Run
Representative Site	NR601205	Marginal	Marginal	Poor	Optimal	Marginal	Marginal	Poor	Optimal	Marginal	Optimal	Dan's Run
Representative Site	NR601208	Optimal	Optimal	Marginal	Optimal	Suboptimal	Marginal	Suboptimal	Optimal	Suboptimal	Optimal	Dan's Run
Representative Site	NR602211	Optimal	Suboptimal	Marginal	Optimal	Optimal	Marginal	Suboptimal	Optimal	Marginal	Optimal	Dan's Run
Representative Site	NR602214	Optimal	Suboptimal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Dan's Run
Representative Site	NR603216	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Suboptimal	Optimal	Suboptimal	Optimal	Dan's Run
Representative Site	NR603219	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal	Dan's Run
Representative Site	NR604231	Optimal	Poor	Marginal	Marginal	Suboptimal	Suboptimal	Suboptimal	Marginal	Marginal	Marginal	Dan's Run
Representative Site	NR604235	Marginal	Marginal	Poor	Suboptimal	Optimal	Marginal	Optimal	Marginal	Optimal	Marginal	Dan's Run
Representative Site	NR701302	Optimal	Suboptimal	Suboptimal	Optimal	Marginal	Marginal	Marginal	Suboptimal	Optimal	Optimal	Neff Run
Representative Site	NR701307	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Neff Run
Representative Site	NR701309	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Optimal	Optimal	Optimal	Neff Run

Appendix B - Upper Georges Creek Representative Sites B

Problem	Survey/Site	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type	Stream
Representative Site	GC320201	60	36	72	6	6	12	Gravel	Woodland Creek
Representative Site	GC320212	46	36	60	6	8	11		Woodland Creek
Representative Site	GC413220	46	46		12	12		Boulder	Woodland Creek
Representative Site	GC414222	48	48	60	6	90	12	Gravel	Woodland Creek
Representative Site	GC423106	12	48	24	4	6	10		Staub Run
Representative Site	GC428116	24	48	40	4	8	15	Gravel	Staub Run
Representative Site	GC428501	4		7	3		1	Gravel	Staub Run
Representative Site	GC430101	6	18	24	3	5	9	Gravel	Staub Run
Representative Site	GC434602	24	36	36	1	1	6	Cobble	Winebrenner Run
Representative Site	GC434607	8	8	10	1	1	2	Cobble	Winebrenner Run
Representative Site	GC512504	120	42	96	4	18	30		Mainstem 1
Representative Site	GC521503	12	7	10	3	5	18	Gravel	Mainstem 1
Representative Site	GC523501		120			16		Silts	Mainstem 1
Representative Site	GC526504	72	72	96	3	5	10	Cobble	Mainstem 1
Representative Site	GC533620							Boulder	Winebrenner Run
Representative Site	GC536501	180	72		6	12		Gravel	Mainstem 1
Representative Site	GC539101			72			12	Sands	Vale Run
Representative Site	GC541501	48	24	72	1	2	8	Cobble	Winebrenner Run
Representative Site	GC542502							concrete	Winebrenner Run
Representative Site	GC545608	12	12	24	1	2	4	Gravel	Winebrenner Run
Representative Site	GC545614	36	36	48	3	4	6	Cobble	Winebrenner Run
Representative Site	GC548101	144	48	180	8	12	36	Cobble	Mainstem 1
Representative Site	GC551503							concrete	Winebrenner Run
Representative Site	GC552702	168		96	5		18	Cobble	Sand Spring Run
Representative Site	GC552707	122			3			Gravel	Sand Spring Run
Representative Site	GC553703	36			4			Cobble	Sand Spring Run
Representative Site	GC555501							concrete	Winebrenner Run
Representative Site	GC563806	50	5	30	0.5	1.5	1.5	Cobble	Sand Spring Run
Representative Site	GC564902	24	12	36	1	3	6	Cobble	Sand Spring Run
Representative Site	GC564908	24	36	30	2	6	12	Boulder	Sand Spring Run
Representative Site	GC567807	4		3	5		2	Cobble	Sand Spring Run
Representative Site	GC567810		11	10		0.5	1	Cobble	Sand Spring Run
Representative Site	GC568804	40		56	0.5		4	Cobble	Sand Spring Run
Representative Site	GC569902	120	60	24	1	6	12	Cobble	Sand Spring Run
Representative Site	GC569903	180	36	50	1	4	12	Boulder	Sand Spring Run
Representative Site	GC577907	12	24	24	1	3	6	Sand	Sand Spring Run
Representative Site	GC645101	48	24	36	2	6	9	Cobble	Vale Run

Appendix B - Upper Georges Creek Representative Sites B

Problem	Survey/Site	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type	Stream
Representative Site	GC652701	24	72		3	5		Cobble	Sand Spring Run
Representative Site	GC652703							Gravel	Sand Spring Run
Representative Site	NR100114	184	84	120	4	12	24	Cobble	Neff Run
Representative Site	NR100126	120	120	156	8	14	24	Cobble	Neff Run
Representative Site	NR201219	108	108	108	10	20	36	Cobble	Neff Run
Representative Site	NR202208	216	240		6	10		Cobble	Neff Run
Representative Site	NR301313	128	128	128	6	6	6	Cobble	Neff Run
Representative Site	NR301318	72	72	84	7	7	12	Cobble	Neff Run
Representative Site	NR302308	60	84	96	2	10	12	Gravel	Neff Run
Representative Site	NR401131	24	24	60	2	6	12	Boulder	Matthews Run
Representative Site	NR401133	60	72	72	3	5	12	Boulder	Matthews Run
Representative Site	NR402128	24	24	60	3	4	6	Boulder	Matthews Run
Representative Site	NR403118	36	48	84	1	5	1	Boulder	Matthews Run
Representative Site	NR403121	24	18	48	5	1	1	Boulder	Matthews Run
Representative Site	NR403122	24	24	60	1	1	2	Boulder	Matthews Run
Representative Site	NR404101			12			2	Bedrock	Matthews Run
Representative Site	NR404110	18	18	60	1	1	1	Bedrock	Matthews Run
Representative Site	NR404114	12	18	30	2	4	6	Boulder	Matthews Run
Representative Site	NR501301	3	6		0.1	0.5		Gravel	Matthews Run
Representative Site	NR501302							Gravel	Matthews Run
Representative Site	NR601201	4						Cobble	Dan's Run
Representative Site	NR601203	1		2	0.1	0.1	0.3	Gravel	Dan's Run
Representative Site	NR601205	0.75	0.5	1.5	0.1	0.1	0.5	Cobble	Dan's Run
Representative Site	NR601208	1.5	1.5	3	0.2	0.2	0.5	Boulder	Dan's Run
Representative Site	NR602211	1	1	3	0.2	0.2	0.5	Cobble	Dan's Run
Representative Site	NR602214	2	2	4	0.3	0.3	0.6	Boulder	Dan's Run
Representative Site	NR603216	4	4	5	0.2	0.2	0.7	Boulder	Dan's Run
Representative Site	NR603219	4	4	5	0.2	0.2	1	Boulder	Dan's Run
Representative Site	NR604231	3	3	5	0.2	0.2	1	Boulder	Dan's Run
Representative Site	NR604235	0.5	0.5	1	0.1	0.1	0.2	Gravel	Dan's Run
Representative Site	NR701302	12	48	48	1	6	10	Gravel	Neff Run
Representative Site	NR701307	6	12	48	1	4	12	Cobble	Neff Run
Representative Site	NR701309	12	24	36	1	4	6	Cobble	Neff Run

Appendix B - Middle Georges Creek Representative Sites A

Problem	Survey/Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation	Stream
Representative Site	GC210112	Suboptimal	Marginal	Marginal	Suboptimal	Marginal	Marginal	Marginal	Optimal	Suboptimal	Optimal	Laurel Run
Representative Site	GC210113	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Laurel Run
Representative Site	GC210201	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Laurel Run
Representative Site	GC211205	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Laurel Run
Representative Site	GC211207	Optimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Laurel Run
Representative Site	GC212504	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Laurel Run
Representative Site	GC220110	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Laurel Run
Representative Site	GC221105	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Laurel Run
Representative Site	GC221106	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Suboptimal	Optimal	Optimal	Optimal	Laurel Run
Representative Site	GC221107	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Optimal	Optimal	Optimal	Laurel Run
Representative Site	GC221109	Suboptimal	Suboptimal	Marginal	Optimal	Marginal	Marginal	Marginal	Optimal	Suboptimal	Optimal	Laurel Run
Representative Site	GC222206	Optimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Laurel Run
Representative Site	GC223201	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Optimal	Suboptimal	Laurel Run
Representative Site	GC224101	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Optimal	Suboptimal	Optimal	Suboptimal	Laurel Run
Representative Site	GC241503	Suboptimal	Marginal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Laurel Run
Representative Site	GC276302	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Mainstem 2
Representative Site	GC276304	Suboptimal	Suboptimal	Marginal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Marginal	Mainstem 2
Representative Site	GC280301	Poor	Poor	Suboptimal	Optimal	Suboptimal	Marginal	Marginal	Suboptimal	Marginal	Suboptimal	Seldom Seen Run
Representative Site	GC280905	Optimal	Poor	Poor	Marginal	Marginal	Marginal	Marginal	Poor	Poor	Poor	Mainstem 2
Representative Site	GC281434	Suboptimal	Marginal	Poor	Marginal	Marginal	Suboptimal	Suboptimal	Marginal	Optimal	Poor	Koontz Run
Representative Site	GC282302	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Seldom Seen Run
Representative Site	GC290003	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Koontz Run
Representative Site	GC290702	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Koontz Run
Representative Site	GC291404	Suboptimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Koontz Run
Representative Site	GC291416	Marginal	Marginal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Poor	Koontz Run
Representative Site	GC300702	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Koontz Run
Representative Site	GC301101	Optimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Koontz Run
Representative Site	GC301104	Optimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Koontz Run
Representative Site	GC301107	Optimal	Marginal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Koontz Run
Representative Site	GC301701	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Koontz Run
Representative Site	GC302101	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Koontz Run
Representative Site	GC302102	Optimal	Marginal	Optimal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal	Koontz Run
Representative Site	GC302103	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Koontz Run
Representative Site	GC350501	Optimal	Marginal	Optimal	Optimal	Marginal	Suboptimal	Marginal	Optimal	Optimal	Optimal	Jackson Run
Representative Site	GC351501	Optimal	Suboptimal	Suboptimal	Optimal	Marginal	Suboptimal	Marginal	Optimal	Suboptimal	Optimal	Jackson Run
Representative Site	GC360502	Optimal	Marginal	Suboptimal	Optimal	Marginal	Poor	Poor	Optimal	Suboptimal	Optimal	Jackson Run
Representative Site	GC360504	Optimal	Optimal	Optimal	Optimal	Marginal	Poor	Poor	Optimal	Optimal	Optimal	Jackson Run

Appendix B - Middle Georges Creek Representative Sites A

Problem	Survey/Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation	Stream
Representative Site	GC361502	Optimal	Optimal	Optimal	Optimal	Suboptimal	Poor	Poor	Optimal	Suboptimal	Optimal	Jackson Run
Representative Site	GC362501	Optimal	Marginal	Optimal	Optimal	Poor	Marginal	Poor	Optimal	Optimal	Optimal	Jackson Run
Representative Site	GC370410	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Marginal	Optimal	Optimal	Optimal	Orr Run
Representative Site	GC370615	Suboptimal	Suboptimal	Poor	Suboptimal	Suboptimal	Poor	Marginal	Suboptimal	Suboptimal	Suboptimal	Jackson Run
Representative Site	GC371603	Optimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Jackson Run
Representative Site	GC371604	Optimal	Optimal	Marginal	Optimal	Optimal	Marginal	Optimal	Optimal	Optimal	Optimal	Jackson Run
Representative Site	GC371608	Suboptimal	Suboptimal	Poor	Suboptimal	Optimal	Marginal	Poor	Suboptimal	Suboptimal	Suboptimal	Jackson Run
Representative Site	GC372407	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Marginal	Optimal	Optimal	Optimal	Orr Run
Representative Site	GC380639	Suboptimal	Suboptimal	Poor	Marginal	Optimal	Marginal	Suboptimal	Poor	Optimal	Poor	Jackson Run
Representative Site	GC380648	Optimal	Optimal	Suboptimal	Marginal	Optimal	Suboptimal	Optimal	Marginal	Optimal	Marginal	Jackson Run
Representative Site	GC380904	Optimal	Marginal	Marginal	Suboptimal	Marginal	Marginal	Marginal	Poor	Suboptimal	Poor	Mainstem 2
Representative Site	GC381315	Suboptimal	Poor	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Marginal	Marginal	Hill Run
Representative Site	GC381914	Poor	Poor	Marginal	Marginal	Optimal	Optimal	Suboptimal	Optimal	Suboptimal	Poor	Mainstem 2
Representative Site	GC382405	Suboptimal	Suboptimal	Marginal	Optimal	Suboptimal	Marginal	Optimal	Optimal	Marginal	Suboptimal	Hill Run
Representative Site	GC382407	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Hill Run
Representative Site	GC382408	Marginal	Marginal	Marginal	Optimal	Suboptimal	Poor	Optimal	Optimal	Optimal	Optimal	Hill Run
Representative Site	GC382414	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Hill Run
Representative Site	GC390902	Optimal	Poor	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Poor	Mainstem 2
Representative Site	GC390914	Optimal	Poor	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Suboptimal	Marginal	Mainstem 2
Representative Site	GC398304	Optimal	Suboptimal	Marginal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Marginal	Mainstem 2
Representative Site	GC408202	Optimal	Optimal	Optimal	Optimal	Marginal	Poor	Poor	Suboptimal	Suboptimal	Optimal	Squirrel Neck Run
Representative Site	GC480402	Optimal	Suboptimal	Marginal	Optimal	Optimal	Marginal	Optimal	Optimal	Optimal	Optimal	Hill Run
Representative Site	GC480406	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Marginal	Optimal	Optimal	Optimal	Optimal	Hill Run
Representative Site	GC490404								Optimal	Optimal	Optimal	Hill Run
Representative Site	GC492402	Optimal	Optimal	Suboptimal	Optimal	Optimal	Marginal	Optimal	Optimal	Suboptimal	Suboptimal	Hill Run
Representative Site	GC502303	Optimal	Poor	Marginal	Optimal	Suboptimal	Suboptimal	Marginal	Optimal	Optimal	Marginal	Mainstem 2
Representative Site	GC504301	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Marginal	Poor	Mainstem 2
Representative Site	GC511206	Marginal	Suboptimal	Marginal	Optimal	Optimal	Poor	Marginal	Optimal	Optimal	Optimal	Mainstem 2
Representative Site	GC511301	Suboptimal	Marginal	Poor	Suboptimal	Suboptimal	Marginal	Optimal	Optimal	Suboptimal	Poor	Mainstem 2
Representative Site	GC600109	Optimal	Optimal	Marginal	Poor	Suboptimal	Poor	Suboptimal	Marginal	Marginal	Poor	Elk Lick Run
Representative Site	GC603102	Optimal	Optimal	Optimal	Optimal	Marginal	Optimal	Optimal	Optimal	Optimal	Optimal	Elk Lick Run
Representative Site	GC605102	Optimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Elk Lick Run

Appendix B - Middle Georges Creek Representative Sites B

Problem	Survey/Site	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type	Stream
Representative Site	GC210112	5	8	6	1	2	4	Gravel	Laurel Run
Representative Site	GC210113	24	48	42	5	9	14		Laurel Run
Representative Site	GC210201	60	36	48	5	8	12		Laurel Run
Representative Site	GC211205	35	18	48	12	10	18		Laurel Run
Representative Site	GC211207	36	20	48	15	12	20		Laurel Run
Representative Site	GC212504	72		15	6		10	Gravel	Laurel Run
Representative Site	GC220110	21	50	44	3	8	15		Laurel Run
Representative Site	GC221105	12	44	44	4	8	14		Laurel Run
Representative Site	GC221106	2	4	18	1	2	4		Laurel Run
Representative Site	GC221107	4	24	21	2	4	6		Laurel Run
Representative Site	GC221109	2	6	24	1	2	4		Laurel Run
Representative Site	GC222206	36	24	48	12	8	18	Boulder	Laurel Run
Representative Site	GC223201	24	12	24	3	4	5		Laurel Run
Representative Site	GC224101	13	36	24	2	3	6		Laurel Run
Representative Site	GC241503	12	36	72	3	4	12	Gravel	Laurel Run
Representative Site	GC276302	240	240	60	8	12	24		Mainstem 2
Representative Site	GC276304	144	144	48	12	18	24	Cobble	Mainstem 2
Representative Site	GC280301	8	12	12	1	12	4	Boulder	Seldom Seen Run
Representative Site	GC280905	240	120		2	4		Cobble	Mainstem 2
Representative Site	GC281434	168		48	3		8	Boulder	Koontz Run
Representative Site	GC282302	24	12	48	1	1	6	Boulder	Seldom Seen Run
Representative Site	GC290003	10		10	3		24	Boulder	Koontz Run
Representative Site	GC290702	110		150	2		8	Cobble	Koontz Run
Representative Site	GC291404	18	288	84	3	48	96	Cobble	Koontz Run
Representative Site	GC291416	60		84	3		12	Gravel	Koontz Run
Representative Site	GC300702	120		144	2		6	Cobble	Koontz Run
Representative Site	GC301101	72	96	120	4	6	12	Cobble	Koontz Run
Representative Site	GC301104	72	36	60	5	7	12	Cobble	Koontz Run
Representative Site	GC301107	96	72	48	4	7	12	Gravel	Koontz Run
Representative Site	GC301701	48		72	2		7	Cobble	Koontz Run
Representative Site	GC302101	36	18	48	6	8	12	Cobble	Koontz Run
Representative Site	GC302102	84	42	84	4	6	15	Cobble	Koontz Run
Representative Site	GC302103	52	48	58	3	3	10	Cobble	Koontz Run
Representative Site	GC350501	10	6	48	1	1	14	Boulder	Jackson Run
Representative Site	GC351501	10	6	14	1	1	5	Cobble	Jackson Run
Representative Site	GC360502			36			8	Boulder	Jackson Run
Representative Site	GC360504			18			8	Boulder	Jackson Run

Appendix B - Middle Georges Creek Representative Sites B

Problem	Survey/Site	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type	Stream
Representative Site	GC361502	3	1	10	0.5	1	1	Gravel	Jackson Run
Representative Site	GC362501	12	8	24	1	1	5	Boulder	Jackson Run
Representative Site	GC370410	12	6	36	1	1	8	Gravel	Orr Run
Representative Site	GC370615	4	4	12	2	2	9	Boulder	Jackson Run
Representative Site	GC371603	36		84	3		5	Boulder	Jackson Run
Representative Site	GC371604	24	24	48	2	4	6	Boulder	Jackson Run
Representative Site	GC371608	3	3	12	1	1	4	Boulder	Jackson Run
Representative Site	GC372407	8	4	72	1	3	5	Boulder	Orr Run
Representative Site	GC380639	182	182	182	3	3	4	Bedrock	Jackson Run
Representative Site	GC380648	96	108	120	6	6	12	Cobble	Jackson Run
Representative Site	GC380904	240	160		2	4		Boulder	Mainstem 2
Representative Site	GC381315	24	48	36	2	6	12	Boulder	Hill Run
Representative Site	GC381914	240	100	200	2	5	12	Bedrock	Mainstem 2
Representative Site	GC382405	12	18	24	1	2	5	Boulder	Hill Run
Representative Site	GC382407	36	36	72	3	3	12	Boulder	Hill Run
Representative Site	GC382408	2	2	9	1	1	1	Cobble	Hill Run
Representative Site	GC382414	36	36	60	3	3	9	Boulder	Hill Run
Representative Site	GC390902	60	36	60	3	6	14	Boulder	Mainstem 2
Representative Site	GC390914	120	48	180	3	6	18	Boulder	Mainstem 2
Representative Site	GC398304	180	180	48	8	18	24	Cobble	Mainstem 2
Representative Site	GC408202			12			3	Gravel	Squirrel Neck Run
Representative Site	GC480402	6	6	12	1	1	3	Boulder	Hill Run
Representative Site	GC480406	9	6	12	1	2	3	Cobble	Hill Run
Representative Site	GC490404								Hill Run
Representative Site	GC492402	12	24	36	2	1	6	Cobble	Hill Run
Representative Site	GC502303	180	240	48	8	4	12	Cobble	Mainstem 2
Representative Site	GC504301	240	120	5	15	8	36		Mainstem 2
Representative Site	GC511206		6	12		1	2	3	Mainstem 2
Representative Site	GC511301	120	144		8	13		Cobble	Mainstem 2
Representative Site	GC600109	72	72		5	8		Boulder	Elk Lick Run
Representative Site	GC603102	36	24	42	3	5	24	Boulder	Elk Lick Run
Representative Site	GC605102	72	30	96	5	18	24	Boulder	Elk Lick Run

Appendix B - Lower Georges Creek Representative Sites A

Problem	Survey/Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation	Stream
Representative Site	GC120108	Suboptimal	Marginal	Poor	Optimal	Suboptimal	Optimal	Suboptimal	Marginal	Marginal	Marginal	Mainstem 3
Representative Site	GC120115	Suboptimal	Marginal	Poor	Marginal	Suboptimal	Optimal	Marginal	Poor	Suboptimal	Marginal	Mainstem 3
Representative Site	GC130103	Marginal	Marginal	Poor	Suboptimal	Marginal	Optimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Mainstem 3
Representative Site	GC131103	Poor	Marginal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Suboptimal	Marginal	Mainstem 3
Representative Site	GC132401	Suboptimal	Marginal	Marginal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	South Tributaries
Representative Site	GC132406	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	South Tributaries
Representative Site	GC141105	Optimal	Marginal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Mill Run
Representative Site	GC141107	Optimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Mill Run
Representative Site	GC141112	Optimal	Marginal	Optimal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Michaels Run
Representative Site	GC141113	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Marginal	Optimal	Suboptimal	Optimal	Michaels Run
Representative Site	GC141114	Optimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Mill Run
Representative Site	GC142103	Poor	Marginal	Optimal	Optimal	Suboptimal	Poor	Poor	Optimal	Optimal	Optimal	Mill Run
Representative Site	GC142104	Optimal	Suboptimal	Optimal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Mill Run
Representative Site	GC142105	Optimal	Suboptimal	Optimal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal	Mill Run
Representative Site	GC151101	Optimal	Suboptimal	Optimal	Optimal	Marginal	Marginal	Suboptimal	Optimal	Marginal	Optimal	Butcher Run
Representative Site	GC151102	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Marginal	Marginal	Optimal	Suboptimal	Optimal	Butcher Run
Representative Site	GC151103	Optimal	Optimal	Optimal	Suboptimal	Poor	Marginal	Suboptimal	Optimal	Suboptimal	Optimal	Butcher Run
Representative Site	GC171607	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Mainstem 3
Representative Site	GC181508	Suboptimal	Marginal	Optimal	Marginal	Marginal	Optimal	Suboptimal	Optimal	Marginal	Optimal	Moores Run
Representative Site	GC181601	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Optimal	Suboptimal	Suboptimal	Mainstem 3
Representative Site	GC181603	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Mainstem 3
Representative Site	GC181703	Poor	Poor	Marginal	Marginal	Poor	Optimal	Marginal	Marginal	Marginal	Suboptimal	Mainstem 3
Representative Site	GC181710	Marginal	Poor	Poor	Suboptimal	Poor	Marginal	Marginal	Marginal	Marginal	Suboptimal	Mainstem 3
Representative Site	GC182704	Marginal	Poor	Marginal	Poor	Poor	Marginal	Marginal	Poor	Poor	Poor	Mainstem 3
Representative Site	GC183504	Poor	Optimal	Marginal	Optimal	Marginal	Optimal	Marginal	Marginal	Poor	Optimal	Potomac Hill Run
Representative Site	GC191904	Optimal	Poor	Marginal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Butcher Run
Representative Site	GC192701	Marginal	Poor	Marginal	Poor	Poor	Marginal	Marginal	Poor	Marginal	Poor	Mainstem 3
Representative Site	GC192902	Optimal	Poor	Poor	Marginal	Poor	Marginal	Poor	Marginal	Marginal	Poor	Butcher Run
Representative Site	GC195301	Marginal	Suboptimal	Marginal	Suboptimal	Marginal	Marginal	Marginal	Marginal	Marginal	Poor	Mainstem 3
Representative Site	GC195902	Optimal	Poor	Marginal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Mainstem 3
Representative Site	GC250504	Suboptimal	Marginal	Marginal	Marginal	Marginal	Optimal	Suboptimal	Suboptimal	Marginal	Optimal	Moores Run
Representative Site	GC251505	Optimal	Marginal	Optimal	Optimal	Poor	Suboptimal	Suboptimal	Optimal	Marginal	Optimal	Moores Run
Representative Site	GC259502	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Marginal	Optimal	Potomac Hill Run
Representative Site	GC260301	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Marginal	Poor	Mainstem 3
Representative Site	GC340101	Optimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal	Moore Run
Representative Site	GC341101	Optimal	Optimal	Optimal	Optimal	Marginal	Optimal	Optimal	Optimal	Optimal	Optimal	Moore Run

Appendix B - Lower Georges Creek Representative Sites B

Problem	Survey/Site	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type	Stream
Representative Site	GC120108	180	36	240	4	12	36	Cobble	Mainstem 3
Representative Site	GC120115	240	120	360	24	12	48	Cobble	Mainstem 3
Representative Site	GC130103	144	84	120	8	18	12	Cobble	Mainstem 3
Representative Site	GC131103	240	120	360	12	18	30	Bedrock	Mainstem 3
Representative Site	GC132401	36	36	70	2	6	12	Bedrock	South Tributaries
Representative Site	GC132406	24	24	96	6	6	24	Gravel	South Tributaries
Representative Site	GC141105	72	48	84	6	18	24	Cobble	Mill Run
Representative Site	GC141107	60	36	18	4	6	6	Boulder	Mill Run
Representative Site	GC141112	48	36	84	2	1	12	Cobble	Michaels Run
Representative Site	GC141113	84	66	36	1	1	8	Bedrock	Michaels Run
Representative Site	GC141114	12	8	24	1	2	4	Boulder	Mill Run
Representative Site	GC142103		7			1		Silts	Mill Run
Representative Site	GC142104	48	36	60	2	4	8	Boulder	Mill Run
Representative Site	GC142105	36	24	48	2	3.5	8	Boulder	Mill Run
Representative Site	GC151101	36		36	1		4	Boulder	Butcher Run
Representative Site	GC151102	12	18	24	2	1	6	Boulder	Butcher Run
Representative Site	GC151103	6		18	1		6	Cobble	Butcher Run
Representative Site	GC171607	300	360	360	8	10	15	Boulder	Mainstem 3
Representative Site	GC181508	36	36	48	2	5	8	Boulder	Moores Run
Representative Site	GC181601	60	120	240	10	15	24	Boulder	Mainstem 3
Representative Site	GC181603	240	240	300	12	24	48	Boulder	Mainstem 3
Representative Site	GC181703	216	216	240	12	13	24	Cobble	Mainstem 3
Representative Site	GC181710	50			14			Cobble	Mainstem 3
Representative Site	GC182704	261	264		7	11		Cobble	Mainstem 3
Representative Site	GC183504	8	10	36	1	12	9	Bedrock	Potomac Hill Run
Representative Site	GC191904	24	8	36	2	2.5	6	Cobble	Butcher Run
Representative Site	GC192701	240		360	6		19	Cobble	Mainstem 3
Representative Site	GC192902	48	36	6	1	3	36	Cobble	Butcher Run
Representative Site	GC195301	24	15	24	8	12	24	Cobble	Mainstem 3
Representative Site	GC195902	60	240	48	5	6	12	Boulder	Mainstem 3
Representative Site	GC250504	24	10	36	2	3	8	Cobble	Moores Run
Representative Site	GC251505	60	36	72	2	4	12	Boulder	Moores Run
Representative Site	GC259502	24	24	36	3	3	12	Boulder	Potomac Hill Run
Representative Site	GC260301	48	84	84	24	36	36	Cobble	Mainstem 3
Representative Site	GC340101	42	24	36	4	8	10	Boulder	Moore Run
Representative Site	GC341101	84	48	120	8	12	24	Boulder	Moore Run