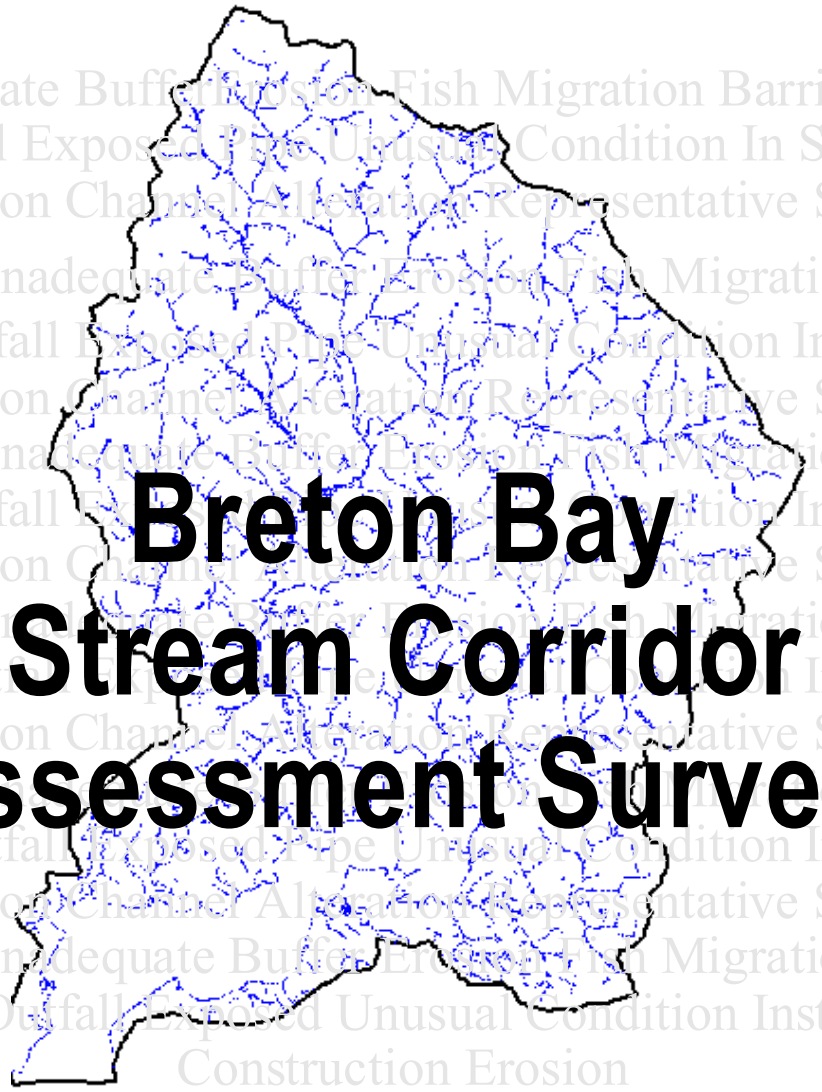

Breton Bay Stream Corridor Assessment Survey

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

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BRETON BAY STREAM CORRIDOR ASSESSMENT SURVEY

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PREPARED BY

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

January 2003

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SUMMARY

The Breton Bay watershed encompasses over 38,449 acres of land in St. Mary's County**.** In 1998, the Maryland Clean Water Action Plan identified the Breton Bay as one of the State's water bodies that did not meet water quality requirements. In 2002, the Maryland Department of Natural Resources and St. Mary's County formed a partnership to develop a Watershed Restoration Action Strategy for the Breton Bay Watershed. The first step in developing a Restoration Action Strategy for the Breton Bay Watershed is to conduct an initial assessment of the environmental conditions in the watershed. One of the tools that has been developed by the Watershed Restoration Division Maryland Department of Natural Resources is the Stream Corridor Assessment (SCA) survey.

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

There is approximately 196 miles of stream in the Breton Bay Watershed, of which about177 miles were surveyed. The open tidal area of the watershed was not part of the survey. The Breton Bay SCA survey was done between April and September 2002. During the survey, 375 potential environmental problems were identified. The most common environmental concern seen during the SCA survey was erosion, which was reported at 136 sites. Other potential environmental problems recorded during the survey include: 97 sites with inadequately vegetated stream buffers, 42 channel alteration sites, 34 fish migration barriers, 24 pipe outfalls sites, 24 trash dumping sites, 14 unusual condition sites, and 4 in/near stream construction sites.

At each site, data was collected about each problem, its location noted, and photographs taken to document existing conditions. To aid in prioritizing future restoration work, field crews rated all problem sites on a scale of 1 to 5 in three categories: 1) the severity of the problem; 2) how correctable the specific problem was; and 3) how accessible the site was. In addition, field teams also collected information on both in/near stream habitat conditions at 116 representative sites that were spaced at approximately ½ to 1 mile intervals along the stream.

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

ACKNOWLEDGEMENTS

Without the hard work and dedication of the Crew of the Maryland Conservation Corps, this survey would not have been possible. The crew chief during the survey was Dawn Letts. The crewmembers were Ryan Galligan, Allan Goodrich, Adam Smith, Damion Sommerville, Thomas Sommerville, and Hansel Taylor.

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INTRODUCTION

In 1998, Maryland's Clean Water Action Plan identified bodies of water that failed to meet water quality related requirements. One of the water bodies identified in the report was the Breton Bay. A map showing the location of the Breton Bay Watershed is presented in Figure 1. The watershed encompasses over 38,449 acres in St. Mary's County. In response to the findings of the Maryland Clean Water Action Plan, the Maryland Department of Natural Resources has formed a partnership with St. Mary's County to work together to assess and improve environmental conditions in the Breton Bay Watershed. The main goal of this partnership is to develop and implement a Watershed Restoration Action Strategy (WRAS) for the St. Mary's County portion of the Breton Bay Watershed

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

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

The Breton Bay Watershed encompasses 38,449 acres (60 square miles) and lies entirely within Maryland's Coastal Plain. There are over 196 miles of stream within the watershed**.** Approximately 14% of the watershed is in urban land use and includes the communities Leonardtown, and part of Hollywood (Watershed Profiles-Breton Bay, 2002). Figure 1 shows the geographic location of the watershed targeted in this survey. A digital orthophoto map of the Breton Bay watershed is shown in Figure 2. The map is based on aerial photographs taken in April 1993. Figure 3 shows the same watershed boundaries superimposed on a seven and ½ minute USGS topographic quadrangle map. Figure 4 shows the larger areas of the Breton Bay Watershed that could not be surveyed due to the owners not giving permission to access the streams on their properties.

As mentioned earlier the Maryland Department of Natural Resources is working with St. Mary's County to develop a Watershed Restoration Action Strategy (WRAS) of the Breton Bay Watershed. As part of this process, data collected during the SCA survey will be used to help

define present environmental conditions, as well as possible restoration opportunities in the watershed. This information combined with the watershed characterization, synoptic water quality survey and other local knowledge of the watershed, will be used to develop and Action Strategy for the Breton Bay Watershed. The Watershed Restoration Action Strategy in turn, will help guide future restoration efforts with the ultimate goals of restoring the areas natural resources and meeting State water quality standards.

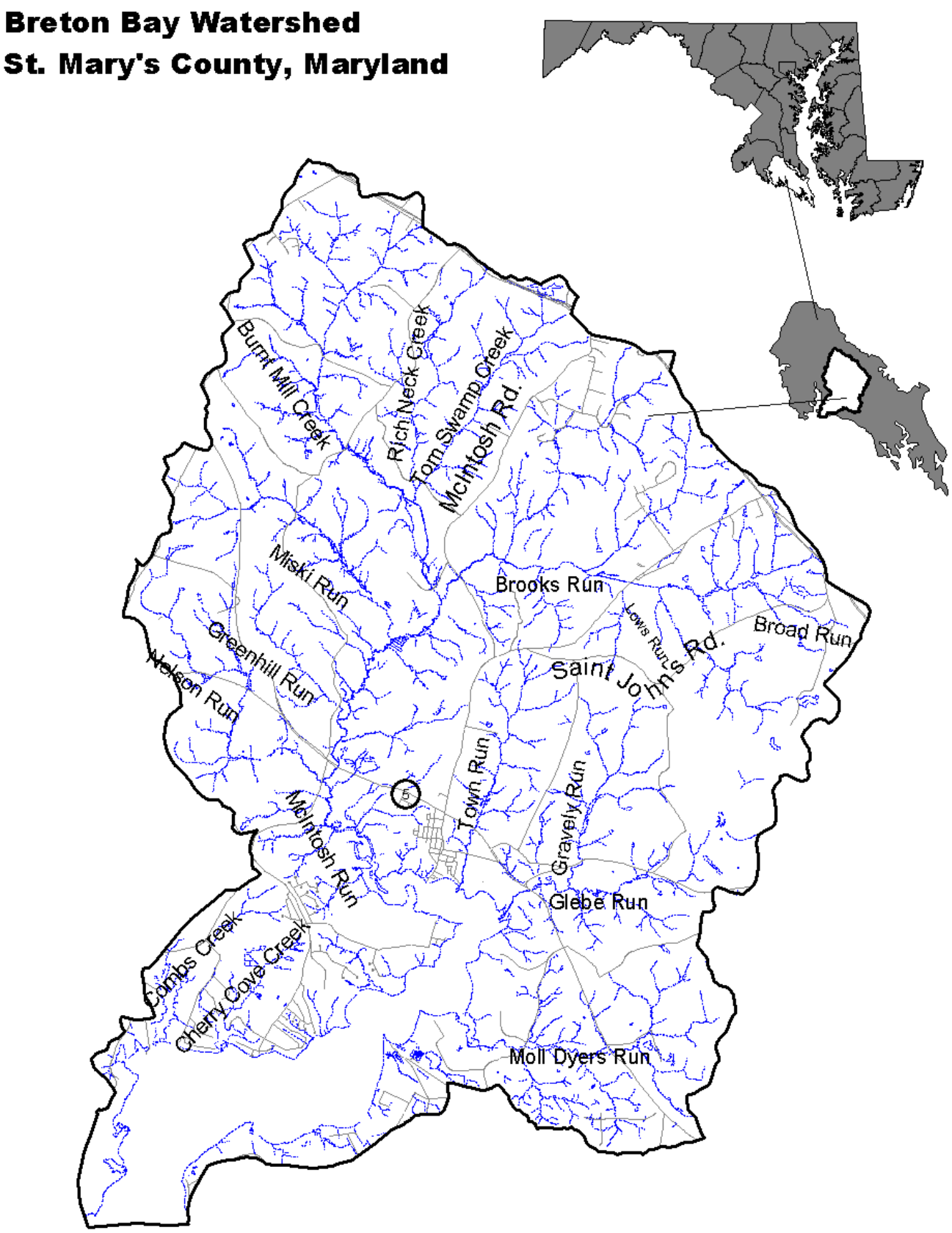

Figure 1: Map showing the location of Breton Bay Watershed

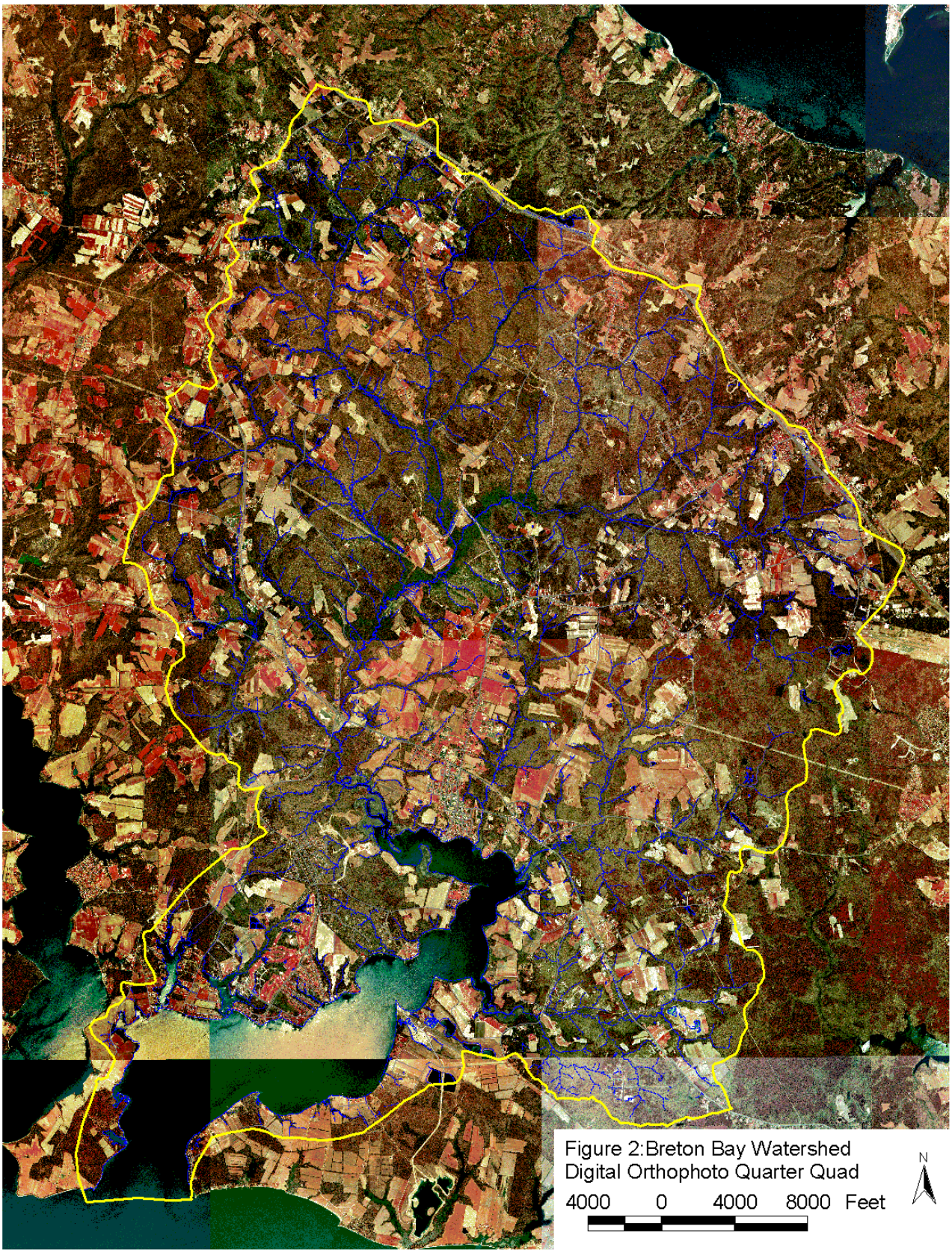
Figure 2:Breton Bay Watershed
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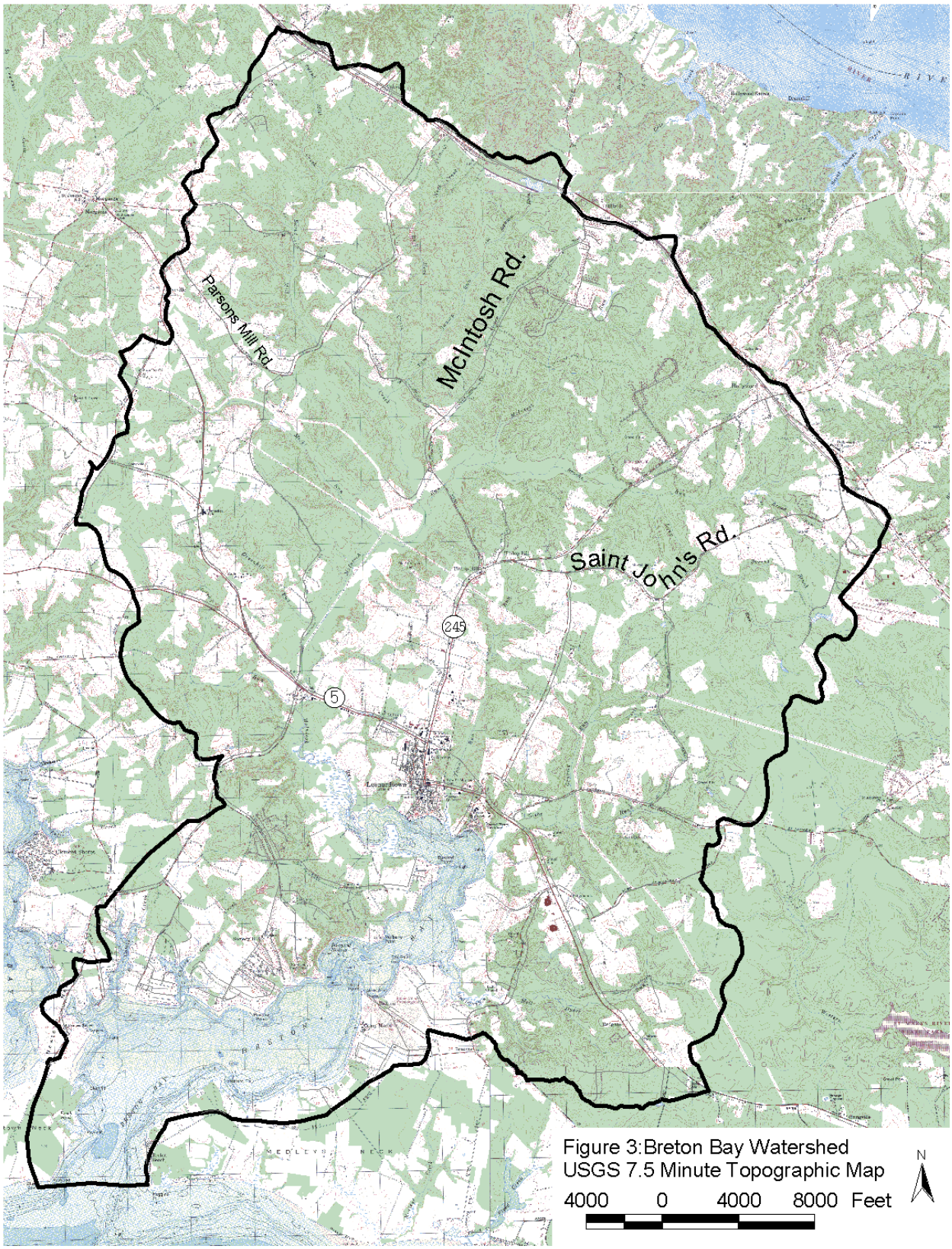

Figure 3:Breton Bay Watershed
USGS 7.5 Minute Topographic Map

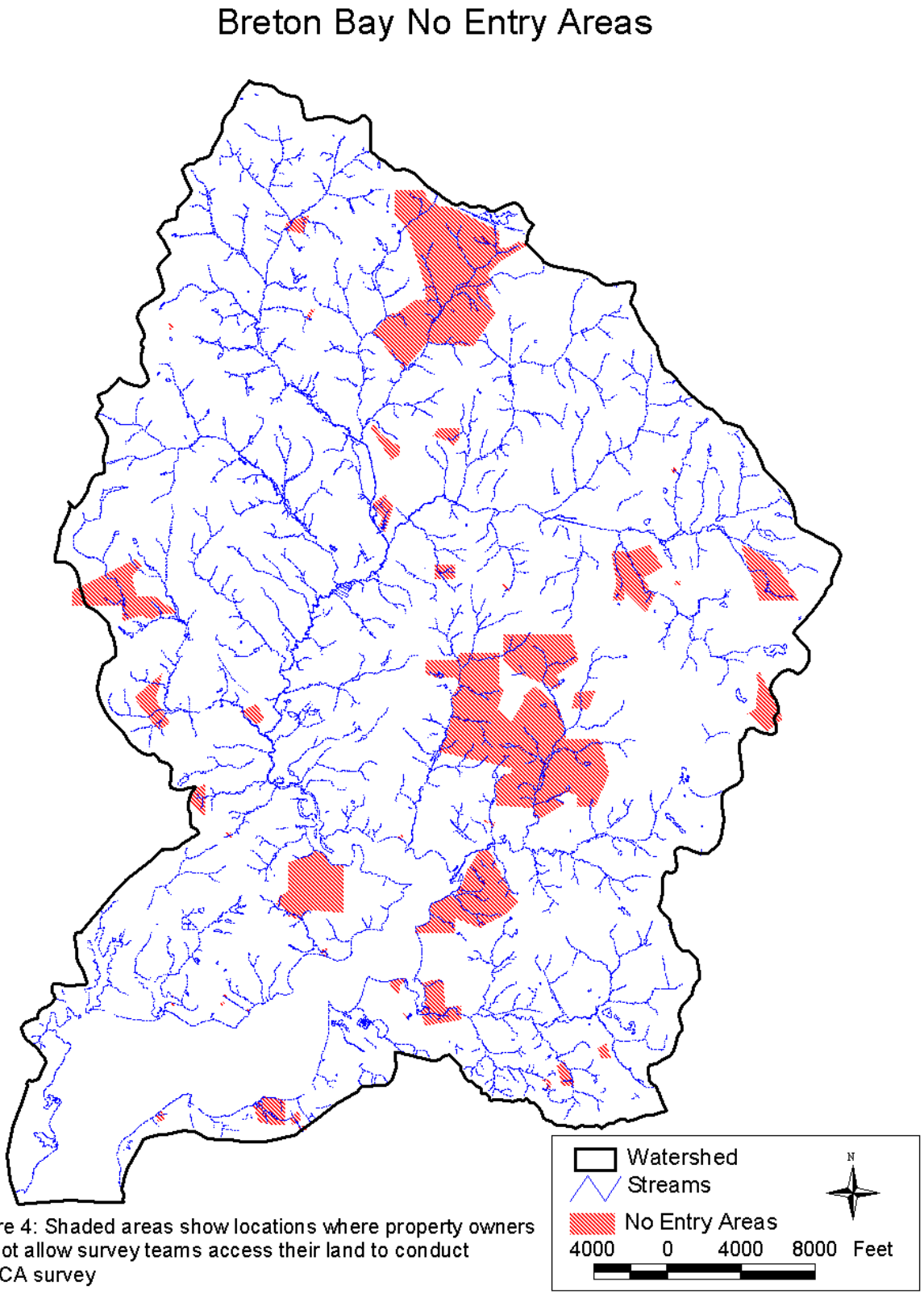

Figure 4: Shaded areas show locations where property owners did not allow survey teams access their land to conduct an SCA survey

METHODS

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

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

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

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

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

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

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

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

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

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

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

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

Prior to the start of the Breton Bay SCA Survey, the members of the MCC's Chesapeake Bay 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. Detail information on the procedures used in the Maryland SCA survey can be found in, "Stream Corridor Assessment Survey – Survey Protocols" (Yetman, 2001). A copy of the survey protocols can found on DNR's web site at http://www.dnr.state.md.us/streams/pubs/other.html . Copies of the protocols can also be

obtained by contacting the Watershed Restoration Division of the Maryland Department of Natural Resources in Annapolis, MD.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Following the completion of the survey, information from the field data sheets were entered into a Microsoft Access database and verified by the field teams. In addition, 614 photographs were taken during the survey were labeled and organized by site number in a binder so they can be easily worked with. The photographs were also digitized using a flat bed scanner and placed on a photo CD so they can be distributed to interested parties. Finally, all data collected during the survey was incorporated into an ArcView Geographical Information System (GIS). A final copy of the ArcView files were given to St. Mary's County for their use in developing a Watershed Action Strategy for the Breton Bay Watershed.

RESULTS

A total of 375 problem data sheets, and 116 representative data sheets, were filled out during the survey. Included in the problem data sheets were 136 erosion sites, 97 sites with inadequately vegetated stream buffers, 42 channel alterations, 34 fish migration barriers, 24 pipe outfall sites, 24 trash dumping sites, 14 unusual condition sites, and 4 in/near stream construction sites. Eight comment data sheets were also completed during the survey to provide additional information about specific problems.

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

Table 1. Summary of results from Breton Bay SCA Survey.

Potential Problems Identified	Number	Estimated Length	Very Severe	Severe	Moderate	Low Severity	Minor
Erosion Site	**136**	**115,390feet (21.8miles)**	5	20	65	32	14
Inadequate Buffers	**97**	**59,635 feet (11.3miles)**	12	4	33	18	30
Channel Alterations	**42**	**14,366 feet (2.7miles)**	-	3	11	7	21
Fish Barriers	**34**	**NA**	-	-	12	11	11
Pipe Outfalls	**24**	**NA**	-	1	8	-	15
Trash Dumping	**24**	**NA**	1	2	12	5	4
Unusual Conditions	**14**	**NA**	-	1	8	4	1
In/Near Stream Construction	**4**	**NA**	1	2	1	-	-
TOTAL	**375**		**19**	**33**	**150**	**77**	**96**
Comments	**8**						
Representative Sites	**116**						

Table 2. Summary of survey results by major stream segments

Stream Segment	Channel Alteration	Construction	Erosion	Fish Barrier	Inadequate Buffer	Pipe Outfall	Representative Sites	Trash Dumping	Unusual Conditions	Comments	Total
Breton Bay	2		9		13	2	6	3	1	1	37
Broad Run	1				1						2
Brooks Run	7		10	2	16	1	9	1			46
Burnt Mill Creek	2		16	6	4		12	2	2	2	46
Cherry Cove Creek	4		3		3	1	2		1		14
Combs Creek	1		4		3		5				13
Glebe Run	6	2	4		6	1	11	2			32
Gravely Run			2	1			4		1		8
Greenhill Run	1		2	1	3	1	4				12
Lows Run			1	1			3				5
McIntosh Run	5		34	6	18	4	19	9		1	96
Miski Run	5		6	3	5		9		1		29
Moll Dyers Run	2		16	4	9	5	13	4	6	1	60
Nelson Run	4	1	7	2	4		5	2	1		26
Rich Neck Creek			5	3	3		3		1	2	17
Tom Swamp Creek	1		5	2	3	1	4				16
Town Run	1	1	12	3	6	8	7	1		1	40

Erosion Sites

Erosion is a natural process and necessary to maintain good aquatic habitat in a stream. Too much erosion, however, can have the opposite effect, destabilizing stream banks, destroying in-stream habitat and causing significant sediment pollution problems downstream. Severe erosion problems occur when a stream's hydrology and/or sediment supply have been significantly altered. This often occurs when land use in a watershed changes. As a watershed becomes more urbanized, forest and agricultural fields are developed into residential housing complexes and commercial properties. As a result, the amount of impervious surface in a drainage basin increases, which then causes the amount of runoff entering a stream to also increase. In the Breton Bay watershed, 4.3**%** of the landscape surface is impervious (Watershed Profiles-Breton Bay, 2002). The stream channel will, over time, adjust to the new flows by eroding the streambed and banks to increase its size. This channel readjustment can extend over decades, during which time excessive amounts of sediment from unstable eroding stream banks can have very detrimental impacts on the stream's aquatic resources.

Unstable eroding streams are areas where the stream banks are almost vertical and the roots from the vegetation along the stream's banks are unable to hold the soil on the banks. Unstable eroding stream banks were reported at 136 sites during the survey (Figure 5a). The majority of the erosion sites showed moderate to minor erosion that extended over long distances. The lengths of stream segments that were recorded as having unstable banks varied from 20 feet in some areas, to other areas where up to 6,200 feet of stream were found to have an erosion problem (Appendix B). Overall, results indicate approximately 21.8 miles of unstable eroding banks in the Breton Bay watershed. Figure 5b shows the frequency of the severity rating given to erosion sites. Five sites received a very severe rating. One area of special note is an unnamed tributary to McIntosh Run. The unnamed tributary flows east to west and enters the lower portion of the stream near Route 5. Survey crews found a number of significant erosion problems along this unnamed tributary.

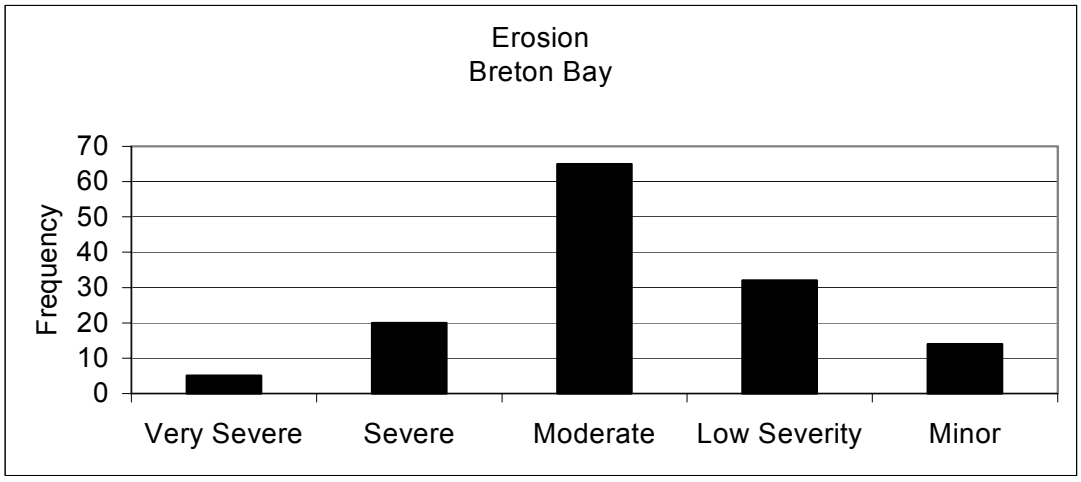

Figure 5b Histograph showing the frequency of severity ratings given to erosion sites during Breton Bay SCA survey.

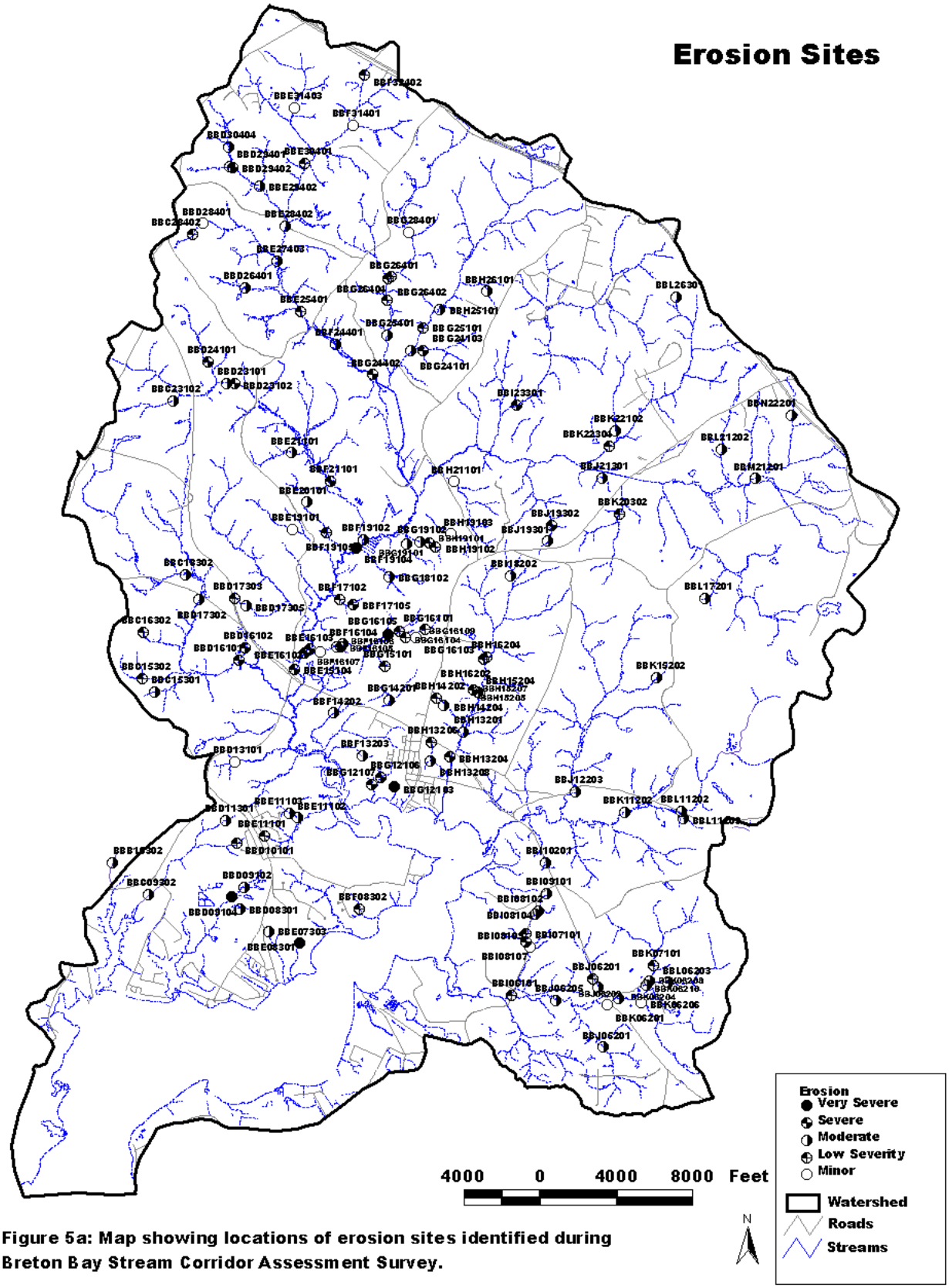

Figure 5a: Map showing locations of erosion sites identified during Breton Bay Stream Corridor Assessment Survey.

Inadequate Buffers

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

While there is no single minimum standard for how wide a stream buffer should be in Maryland, for the purposes of this study a buffer is generally considered inadequate if it is less than 50 feet wide, measured from the edge of the stream. Inadequate buffers were reported at 97 sites during the survey and their locations are shown in Figure 6a. The field crew provided a rough estimate of the length of the inadequate stream buffer at all sites (Appendix B). Based on the data that was collected, there are approximately 59,635 feet (11.3 miles) of inadequate buffer in the Breton Bay watershed. Field teams found inadequate buffers ranging in distance from 30 feet to 2,600 feet. This survey was done in a mostly rural area, with crop fields and pasture reported as the dominant adjacent land use at inadequate buffer sites, accompanied by a moderate amount of lawn. Most sites received a moderate to minor severity rating (Figure 6b). This would indicate that most of the stream reaches with inadequate buffers were not very long or some trees were already present at many of the sites.

Survey results indicate that there are several possible locations where forested buffers could be reestablished. Almost half of the most severe sites were where agriculture was the dominant land use. These areas may qualify for inclusion into the Maryland Conservation Reserve Program, which provides farmers with financial assistance to establish forested buffers along stream on their property.

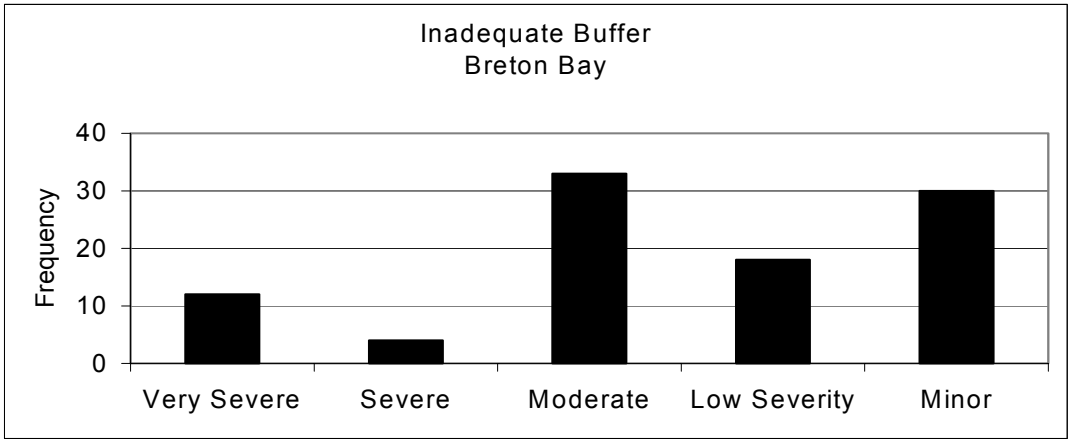

Figure 6b Histograph showing the frequency of severity ratings given to inadequate buffer sites during Breton Bay SCA survey.

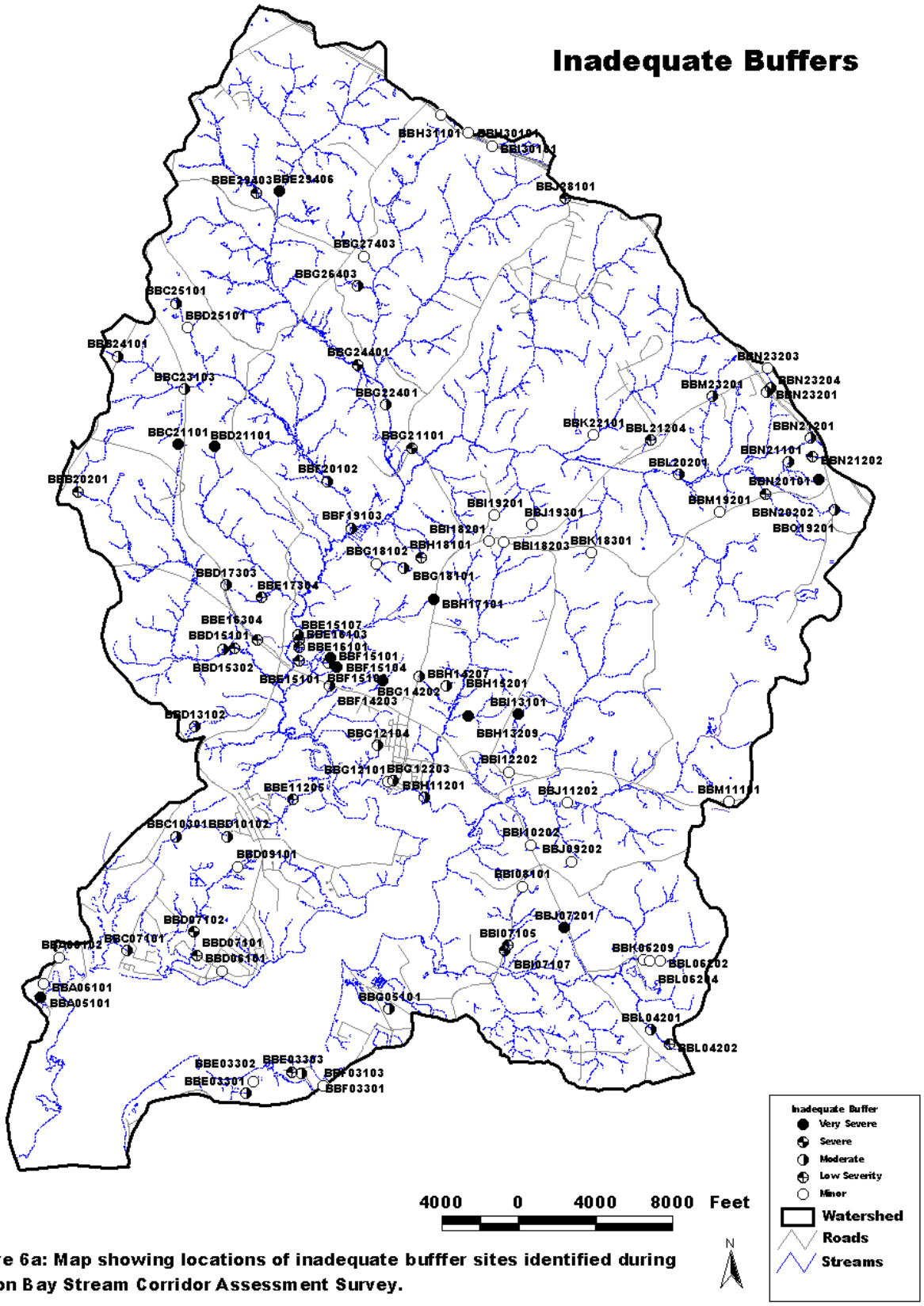

Figure 6a: Map showing locations of inadequate bufffer sites identified during Breton Bay Stream Corridor Assessment Survey.

Channel Alterations

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

Results of this survey indicate that the stream has been recognizably altered in 42 areas and their locations are shown in Figure 7a. The total length of stream affected by channelization was estimated to be 14,366 feet or about 2.7 miles. Sixteen sites were channelized with concrete, nine were earthen channels that had been straightened, and nine were reported to be armored with rip-rap. Only three sites received a severe rating. These sites were lined with rip-rap. Most of the sites were given a moderate to minor severity rating (Figure 7b).

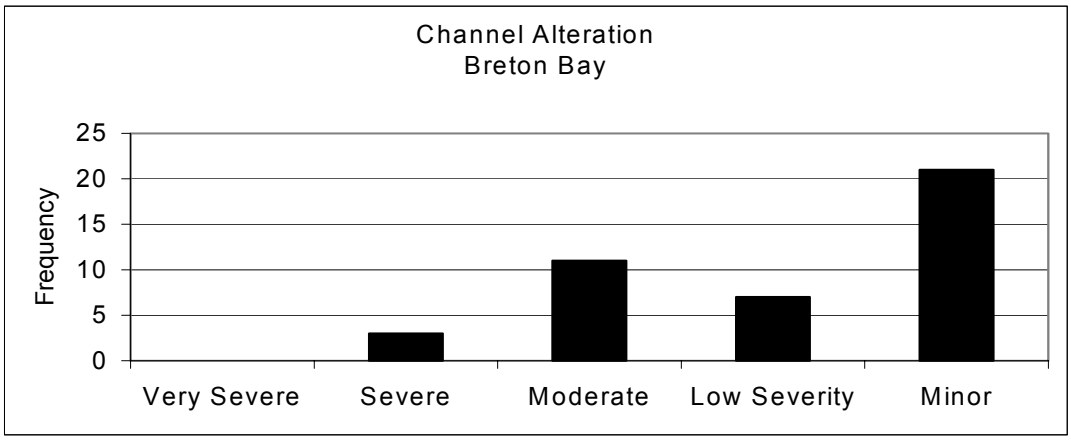

Figure 7b Histograph showing the frequency of severity ratings given to channel alteration sites during Breton Bay SCA survey.

Figure 7a: Map showing locations of channel alteration sites identified during Breton Bay Stream Corridor Assessment Survey.

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. A vertical drop of 6 inches may cause a fish passage problem for some resident fish species, while anadromous fish can usually move through water drops of up to 1 foot, providing there is sufficient flow and water depth. The second reason a structure may be a fish passage problem is because the water is too shallow. This can often occur in channelized stream sections or at road crossing where the water from a small stream has been spread over a large flat area and the water is not deep enough for fish to swim through. Finally, a structure may be a fish blockage if the water is moving too fast through it for fish to swim through. This can occur at road crossings where the culvert pipe has been placed at a steep angle and the water moving through the pipe has a velocity that is higher than a fish's swimming ability.

Thirty-four fish migration barriers were reported during the survey. The locations of fish migration blockages are shown in Figure 8a. The blockages were due to a number of reasons including road crossings (18), in-stream ponds (5), and natural falls (4). All of the sites were given moderate to minor severity ratings (Figure 8b).

One fish barrier, Site BBH12202, which isolates Town Run from Breton Bay, should be evaluated for a fish passage project. It is at the road crossing for Fenwick Street. The water level is too shallow for the fish to pass through. Barriers that isolate significant portions of the upper portion of a tributary, such as Site BBE28401, BBJ12202, BBL19301, which are also road crossings, should also be evaluated.

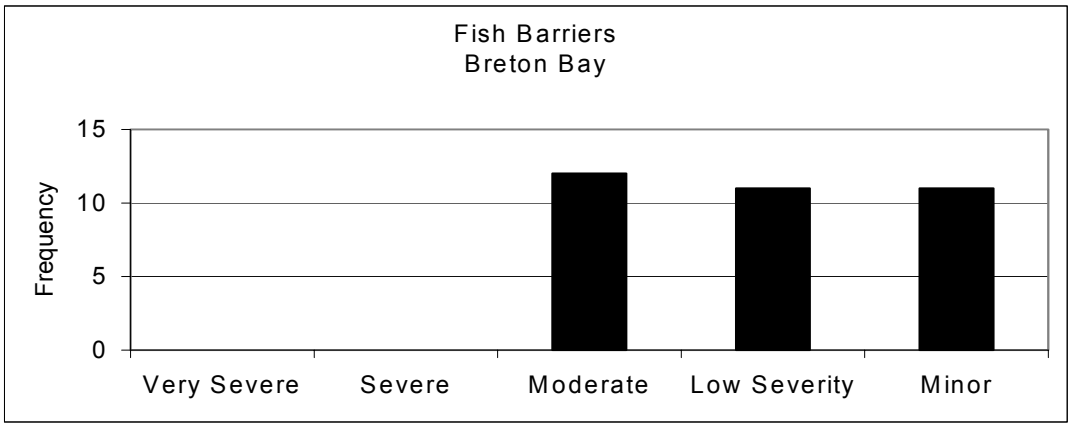

Figure 8b Histograph showing the frequency of severity ratings given to fish blockage sites during Breton Bay SCA survey.

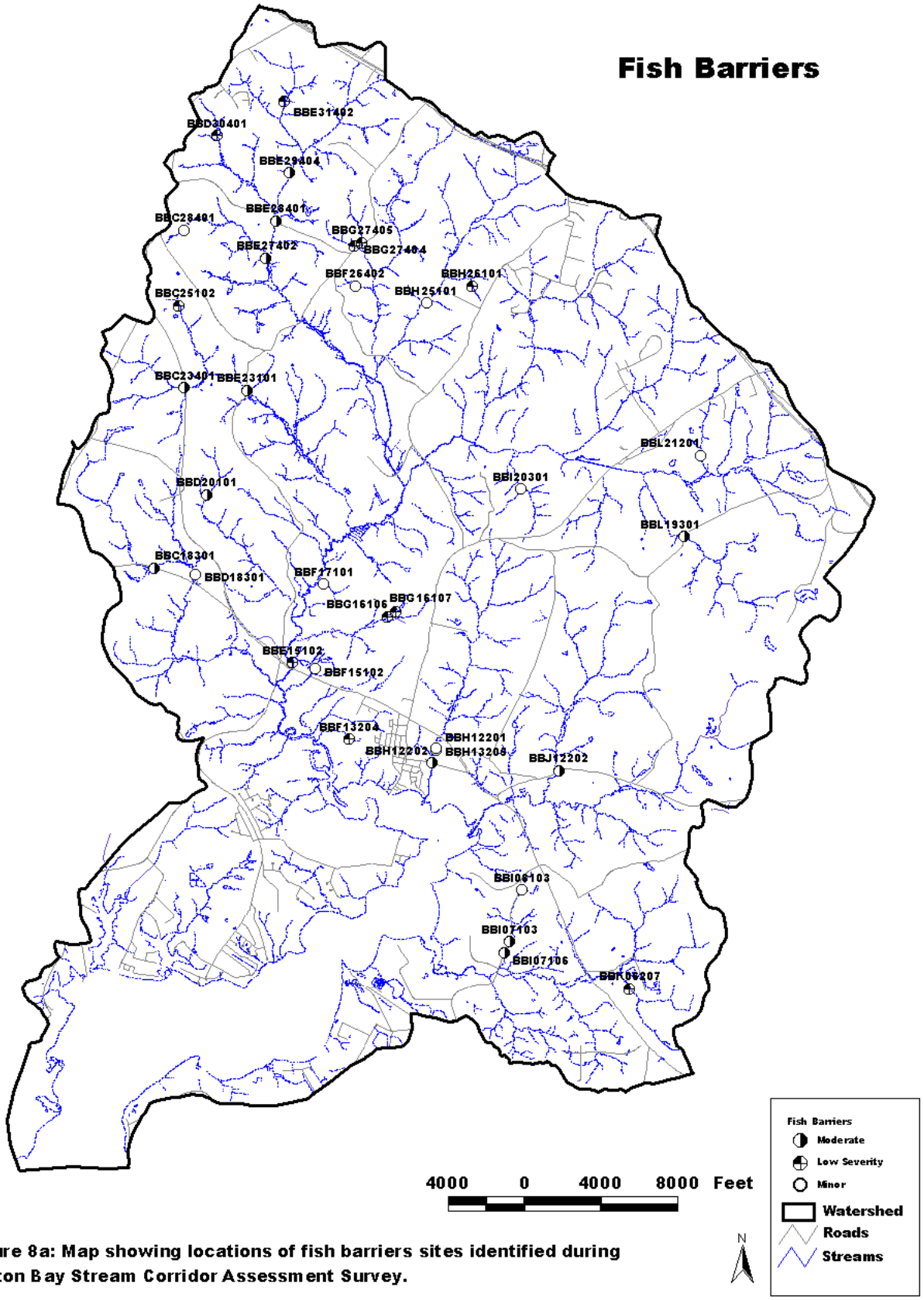

Figure 8a: Map showing locations of fish barriers sites identified during Breton Bay Stream Corridor Assessment Survey.

Pipe Outfalls

Pipe outfalls include any pipes or small man made channels that discharge into the stream through the stream corridor. Pipe outfalls are considered a potential environmental problem in the survey because they can carry uncontrolled runoff and pollutants such as oil, heavy metals and nutrients to a stream system. A total of 28 pipe outfalls were identified during the survey (Figure 6a). The locations of pipe outfalls are shown in Figure 9a. As expected, most of the pipe outfalls are located in the more urbanized portion of the watershed.

Thirty-three percent or 8 of the 24 outfall pipes observed during the survey were found to have some type of discharge coming out of them. Of these, only one was reported to have a discharge that had some coloration or smell associated with it (Appendix B). At Site BBI18204 the pipe discharge was reported to be brown with a sewage odor. No immediate follow up actions were taken as part of this study to determine the source of the color or smell coming from the pipe. The remaining discharges were recorded as clear with no odor. There weren't any estimates of the amount of fluid coming from the pipes.

Figure 9b shows the frequency of the severity rating given to pipe outfalls during the survey. Most of the pipe outfalls were given either a moderate to minor severity rating.

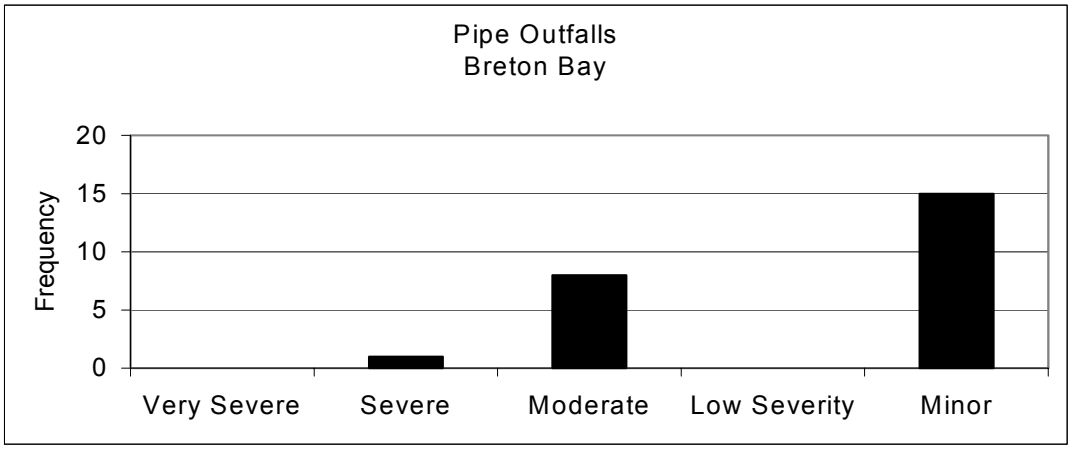

Figure 9b Histograph showing the frequency of severity ratings given to pipe outfall sites during Breton Bay SCA survey.

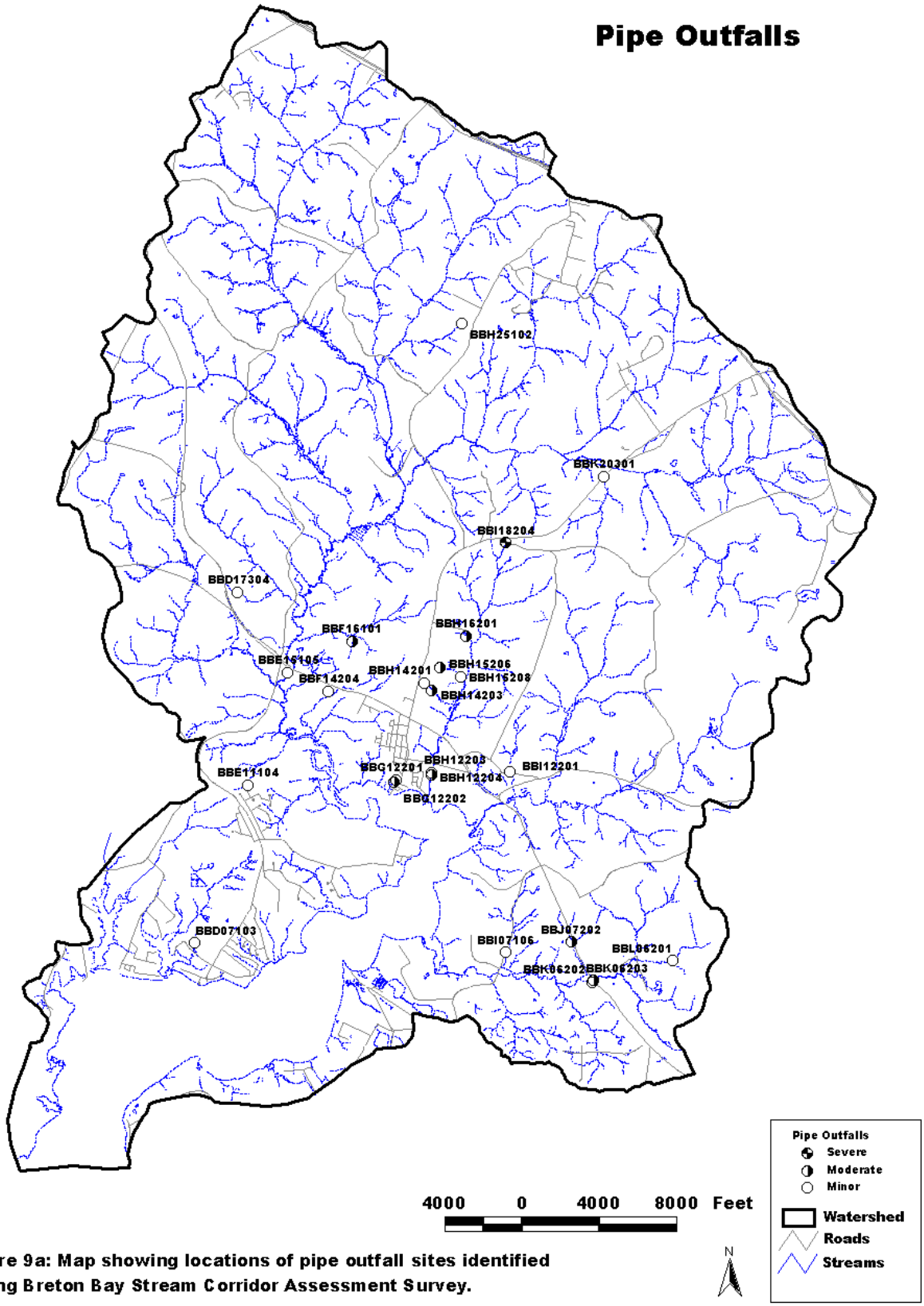

Figure 9a: Map showing locations of pipe outfall sites identified during Breton Bay Stream Corridor Assessment Survey.

Trash Dumping Sites

The trash dumping data sheets are used to record the location of places where large amounts of trash has been dumped inside the stream corridor or to note places where trash tends to accumulate. The field survey crew found twenty-four sites where there was excessive trash and their locations are shown in Figure 10a. One site was very severe. At site BBL08102 old cars were dumped near the stream. Two sites were reported as severe. The sites had mixed types of trash. The trash ranged from recyclables to appliances and engines. Two sites were recorded as having yard waste, eleven had residential waste, two were construction, two were industrial, and four were recorded as tires. These sites were given severity ratings ranging from moderate to minor (Figure 10b).

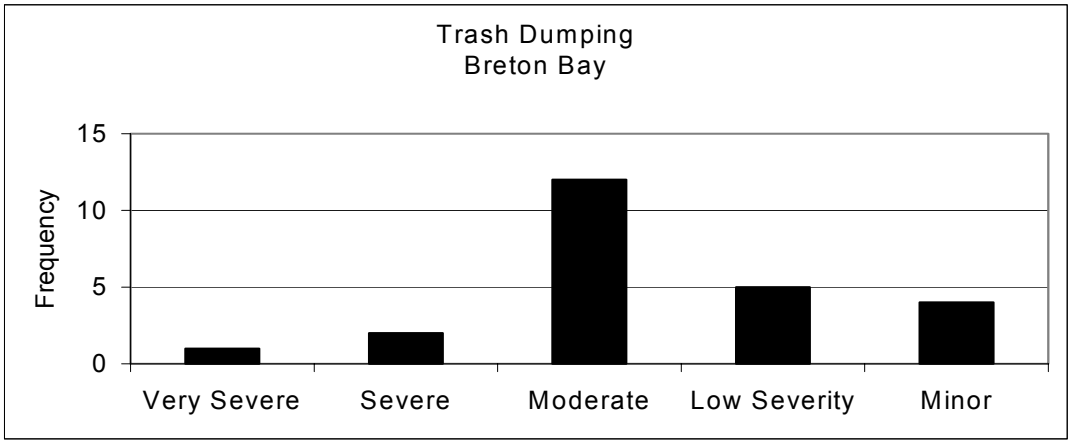

Figure 10b Histograph showing the frequency of severity ratings given to trash dumping sites during Breton Bay SCA survey.

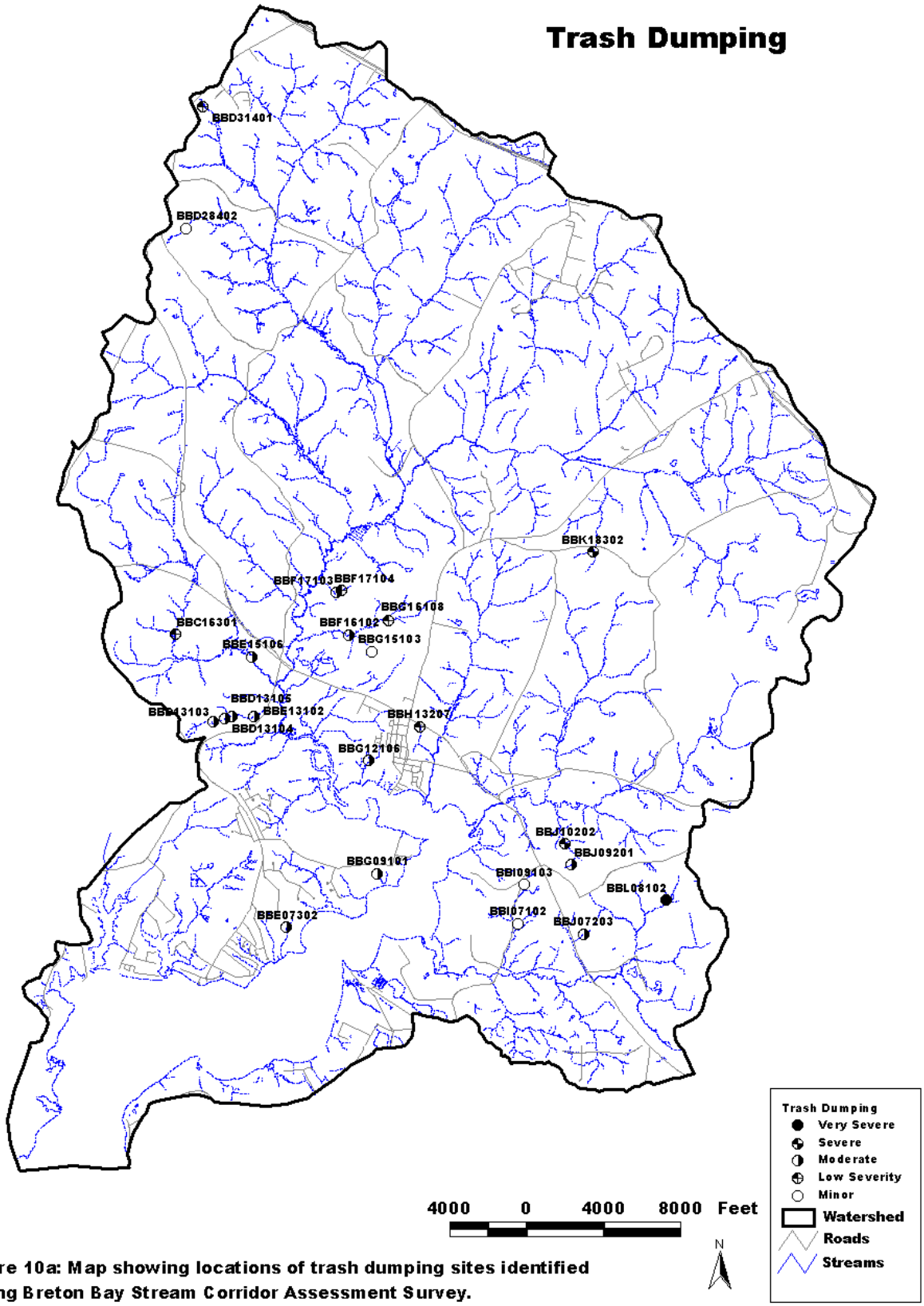

Figure 10a: Map showing locations of trash dumping sites identified during Breton Bay Stream Corridor Assessment Survey.

Unusual Conditions/Comments

The unusual condition/comment data sheets are used by survey teams to record the location of anything out of the ordinary seen during the survey or to provide some additional written comments on a specific problem. Fourteen unusual condition sites were found during the Breton Bay survey (Figure 11a). Only one site received a severe rating. At site BBI07103 a bridge is caving in across the stream at a driveway. Other unusual condition sites include BBC23401 where the concrete channel is falling apart and at site BBD17301 there is a major debris problem blocking the road crossing at Budds Creek Road. The majority of the unusual condition sites were where a red precipitate or "red flock" was observed in the water. Red flock can occur naturally and is an indication of elevated iron levels in the water. This is not unusual in Maryland coastal plain streams.

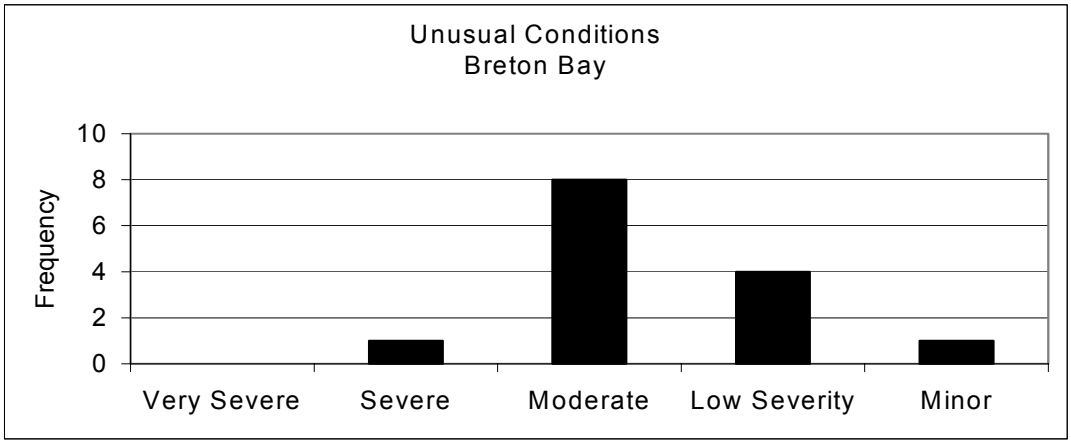

Figure 11b Histograph showing the frequency of severity ratings given to unusual condition sites during Breton Bay SCA survey.

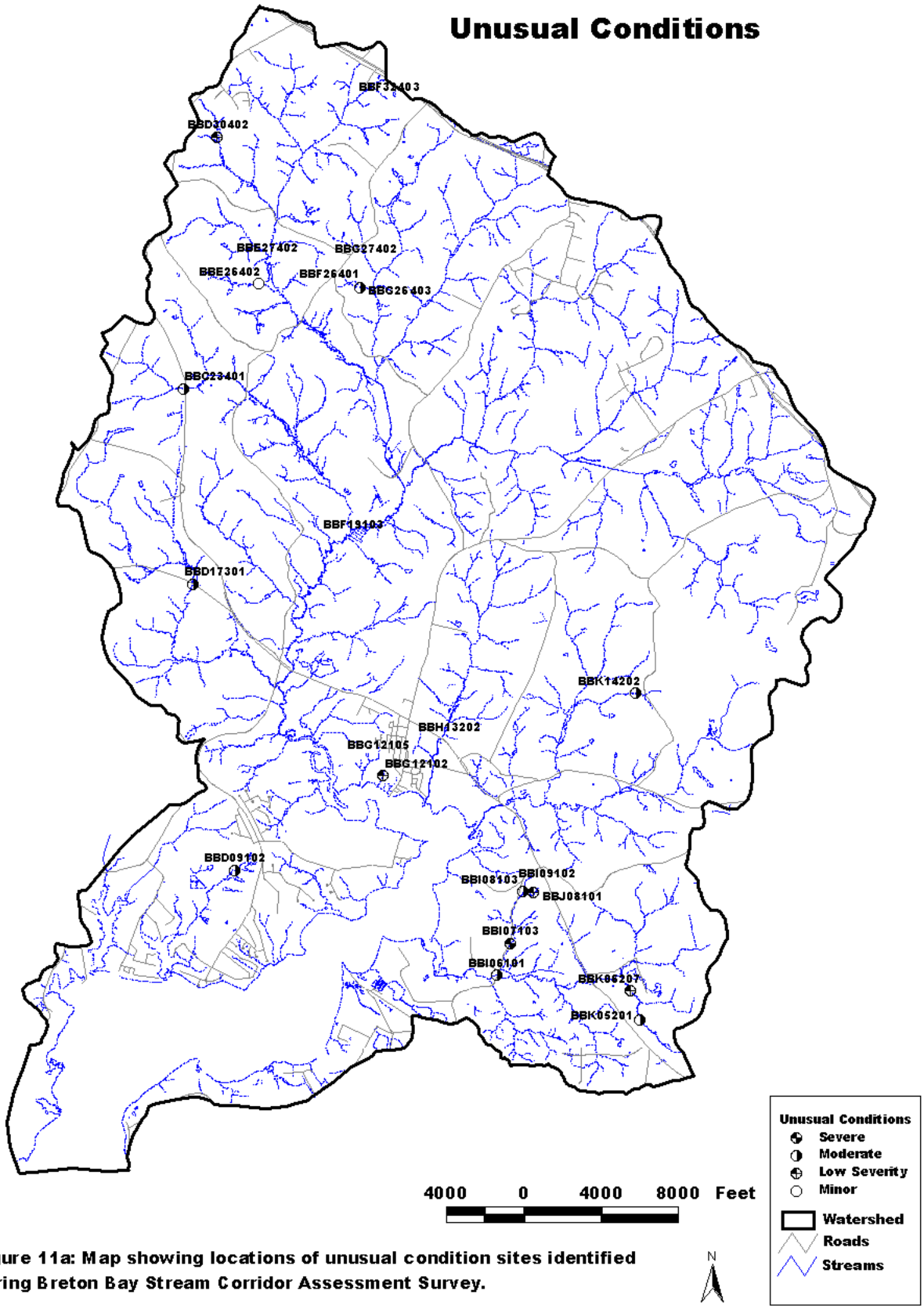

Figure 11a: Map showing locations of unusual condition sites identified during Breton Bay Stream Corridor Assessment Survey.

In/Near Stream Construction Sites

In/near stream construction data sheets are used to document the locations where major disturbances are occurring inside or near the stream corridor at the time of the survey. Survey teams report evidence of inadequate sediment control measures or if sediment pollution from the site has affected the stream In/near stream construction was reported at four sites during the survey (Figure 12). Site BBH13202 received a very severe rating. The tributary to Town Run was turned brown with sediment and created a small plume into Town Run. On a tributary to Glebe Run two sites, BBI10105 and BBI10106, received severe ratings. At these sites field crews did not see any sediment controls present. Field crews reported the apparent lack of proper sediment control to local officials. The crew was informed that follow up inspections were done and that the problems had been corrected.

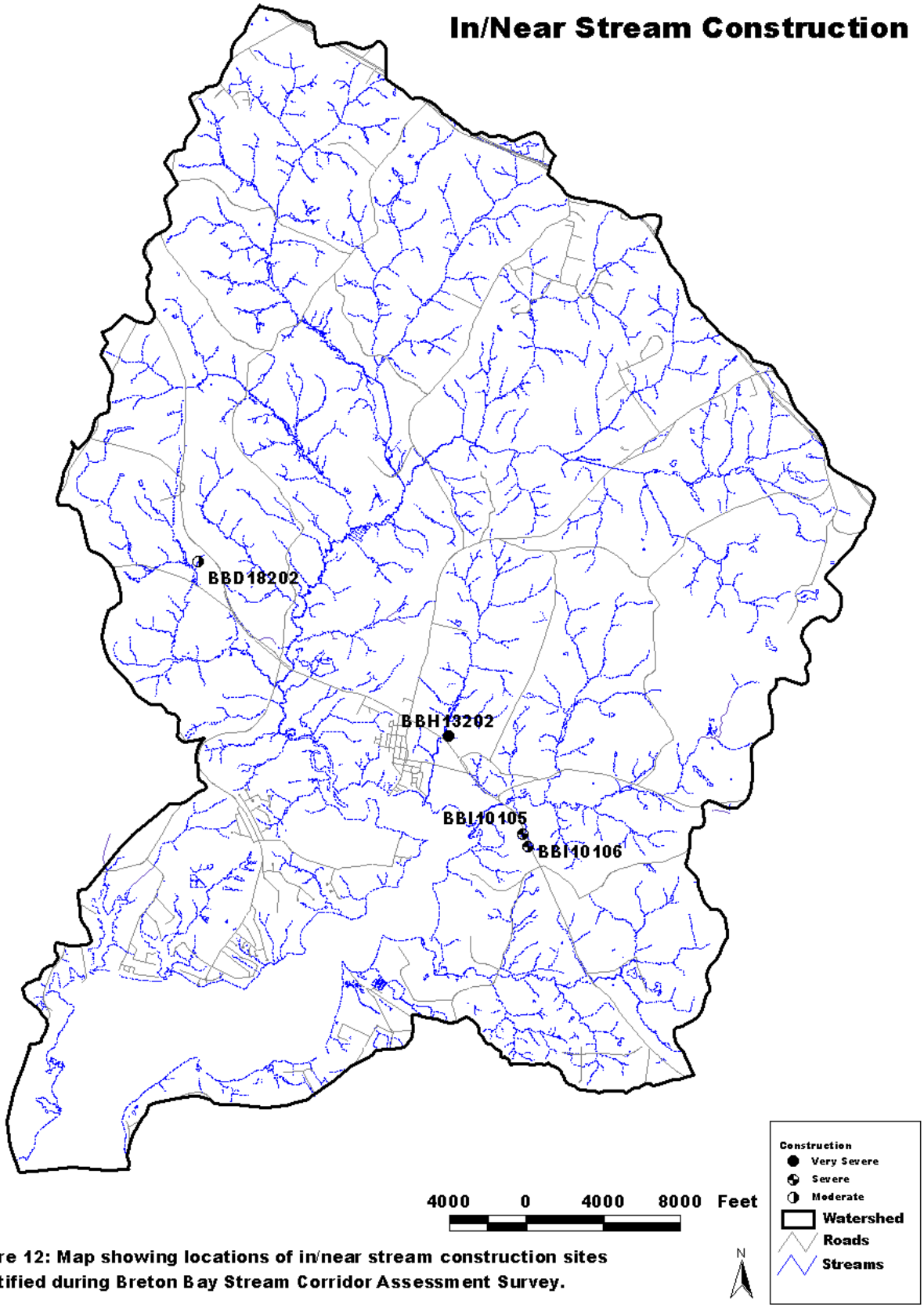

Figure 12: Map showing locations of in/near stream construction sites identified during Breton Bay Stream Corridor Assessment Survey.

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-Streams' Heartbeat Program and are based on the habitat assessment procedures outlined in EPA's rapid bioassessment protocols (Plafkin, et. al., 1989). At each representative site, data was collected on 10 separate parameters. Habitat parameters that were evaluated include:

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

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

Representative site evaluations were done at approximately ½ mile intervals along the stream. One hundred and sixteen representative data sheets were filled out during this survey. Locations of representative sites are shown in Figure 13 and the data is presented in Appendix B.

The Breton Bay Watershed lies in Maryland's coastal plain so it is not surprising that macroinvertebrate substrate was suboptimal or marginal in most cases. The bottom type is mostly gravel and sand. The embeddedness of the stream bottom is suboptimal to marginal. Erosion upstream of the areas can be the cause of the siltation. Channel alteration was optimal on nearly all the tributaries. This watershed is mainly in a rural area so there are few disturbances to the natural meandering stream. The bank condition was suboptimal. Erosion is prevalent throughout the watershed. Lastly, the riparian vegetation was mainly optimal to suboptimal. Most of the watershed is covered in mature forests.

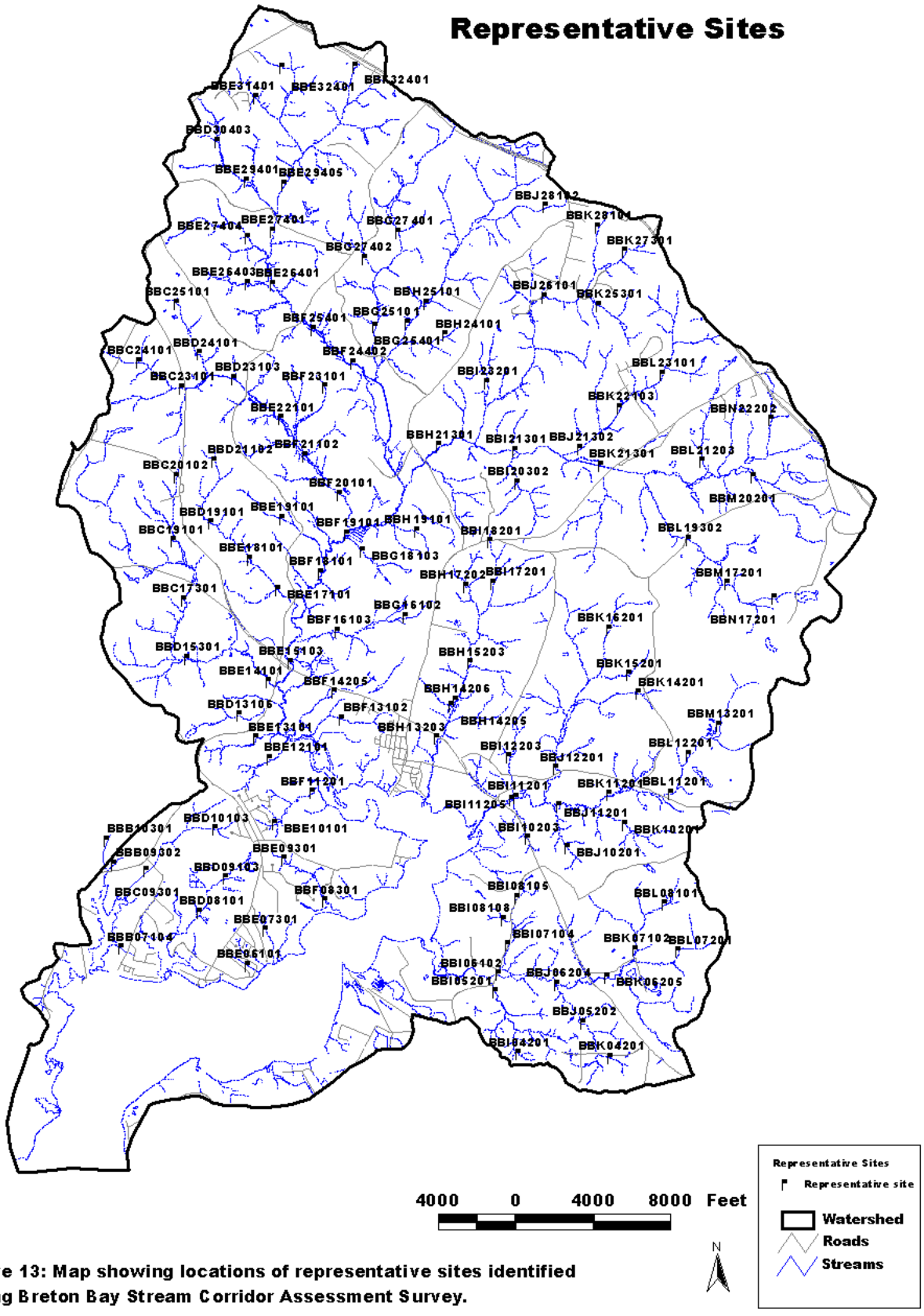

Figure 13: Map showing locations of representative sites identified during Breton Bay Stream Corridor Assessment Survey.

DISCUSSION

One of the main objectives of the Breton Bay Stream Corridor Assessment survey was to walk the stream network quickly in order to identify potential environmental problems in or along the edge of the stream. The survey was completed in the Spring/Summer 2002. There were 375 potential environmental problems identified. The most common environmental concern seen during the SCA survey was erosion, which was reported at 136 sites. Other potential environmental problems recorded during the survey include: 97 sites with inadequately vegetated stream buffers, 42 channel alterations, 34 fish migration barriers, 24 pipe outfalls sites, 24 trash dumping sites, 14 unusual condition sites, and 4 in/near stream construction sites.

Results of the Stream Corridor Assessment survey indicate that there are a number of stream segments that could be enhanced by restoration projects. As mentioned earlier, the Maryland Dept. of Natural Resources has formed a partnership with St. Mary's County to develop a Watershed Restoration Action Strategy (WRAS) for the Breton Bay 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 Breton Bay Watershed in the future.

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

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Appendix A

Listing of sites by site number

Appendix A- Breton Bay Watershed

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
BBA05101	Inadequate Buffer	1	3	3	65567.58864	426087.09083	Breton Bay
BBA06101	Inadequate Buffer	5	3	3	65791.42659	426126.38153	Breton Bay
BBA06102	Inadequate Buffer	5	3	1	66215.28994	426387.12893	Breton Bay
BBB07103	Channel Alteration	5	4	1	66340.30582	427422.97476	Combs Creek
BBB07104	Representative				66386.74029	427365.82465	Combs Creek
BBB09302	Representative				67722.62422	427251.52442	Combs Creek
BBB10301	Representative				68097.67185	427139.60544	Combs Creek
BBB10302	Erosion	3	3	3	68033.37797	427115.79289	Combs Creek
BBB20201	Inadequate Buffer	4	3	3	73611.58708	426675.22676	Nelson Run
BBB21201	Channel Alteration	5	3	2	74122.36623	427056.22752	Nelson Run
BBB24101	Inadequate Buffer	3	3	1	75766.62266	427314.59367	Miski Run
BBC07101	Inadequate Buffer	3	5	2	66322.16416	427462.66626	Combs Creek
BBC08101	Channel Alteration	5	4	2	67190.13153	427893.67338	Cherry Cove Creek
BBC09301	Representative				67610.48914	427767.16922	Combs Creek
BBC09302	Erosion	3	3	3	67532.89992	427682.83311	Combs Creek
BBC10301	Inadequate Buffer	3	3	2	68143.49334	428246.19830	Combs Creek
BBC15301	Erosion	3	2	3	70689.31928	427778.41403	Nelson Run
BBC15302	Erosion	4	3	2	70889.47698	427591.75011	Nelson Run
BBC16301	Trash Dumping	4	2	1	71368.45610	428224.62134	Nelson Run
BBC16302	Erosion	4	2	3	71612.58975	427596.22352	Nelson Run
BBC17301	Representative				71895.04034	428355.99371	Nelson Run
BBC18301	Fish Barrier	3	1	2	72404.10827	427880.86365	Nelson Run
BBC18302	Erosion	3	3	3	72493.87939	428256.36966	Nelson Run
BBC19101	Representative				72834.35277	428198.34687	Nelson Run
BBC20101	Channel Alteration	3	5	1	73883.14218	428265.12782	Nelson Run
BBC20102	Representative				73859.05724	428242.13766	Nelson Run
BBC21101	Inadequate Buffer	1	3	3	74354.98793	428273.33860	Nelson Run
BBC23101	Channel Alteration	5	5	1	75269.12065	428332.45616	Miski Run
BBC23101	Representative				75269.12065	428333.55093	Miski Run
BBC23102	Erosion	3	3	3	75197.96062	428062.04804	Miski Run
BBC23103	Channel Alteration	5	5	1	75258.17296	428371.86787	Miski Run
BBC23103	Inadequate Buffer	3	5	1	75247.22526	428372.96264	Miski Run
BBC23104	Channel Alteration	5	5	1	75072.06210	428352.16202	Miski Run
BBC23401	Fish Barrier	3	5	1	75269.12065	428354.35156	Miski Run
BBC23401	Unusual Condition	3	5	1	75269.12065	428356.54109	Miski Run
BBC24101	Representative				75675.28022	427655.88847	Miski Run
BBC25101	Inadequate Buffer	3	1	2	76614.59265	428242.68504	Miski Run
BBC25101	Representative				76613.49788	428242.68504	Miski Run
BBC25102	Channel Alteration	5	5	1	76571.89663	428285.38106	Miski Run
BBC25102	Fish Barrier	4	5	1	76572.99140	428285.38106	Miski Run
BBC28401	Fish Barrier	5	3	3	77771.76426	428365.29925	Burnt Mill Creek
BBC28402	Erosion	4	4	3	77779.42765	428368.58356	Burnt Mill Creek
BBD06101	Inadequate Buffer	5	1	1	65999.72036	428965.92674	Breton Bay
BBD07101	Channel Alteration	3	4	1	66251.51740	428566.33579	Cherry Cove Creek
BBD07101	Inadequate Buffer	4	3	2	66252.61217	428563.05148	Cherry Cove Creek
BBD07102	Channel Alteration	2	3	1	66622.64434	428518.16592	Cherry Cove Creek
BBD07102	Inadequate Buffer	2	3	1	66624.83388	428518.16592	Cherry Cove Creek
BBD07103	Pipe Outfall	5	1	2	66458.42888	428528.01885	Cherry Cove Creek
BBD08101	Representative				66952.17003	428610.12658	Cherry Cove Creek
BBD08301	Erosion	3	3	2	67318.91789	429110.43634	Cherry Cove Creek
BBD09101	Channel Alteration	3	5	1	67664.86512	429216.62901	Cherry Cove Creek

Appendix A- Breton Bay Watershed

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
BBD09101	Inadequate Buffer	5	3	3	67662.67558	429208.96562	Cherry Cove Creek
BBD09102	Erosion	3	5	4	67649.53834	429164.08006	Cherry Cove Creek
BBD09102	Unusual Condition	3	3	3	67646.25404	429158.60621	Cherry Cove Creek
BBD09103	Representative				67491.89150	429029.42338	Cherry Cove Creek
BBD09104	Erosion	1	5	3	67488.60719	428970.30582	Cherry Cove Creek
BBD10101	Erosion	4	3	1	68333.76943	429051.31878	Combs Creek
BBD10102	Inadequate Buffer	3	2	1	68142.18472	429055.69786	Combs Creek
BBD10103	Representative				68277.93617	428855.35500	Combs Creek
BBD11301	Erosion	3	3	3	68693.94867	428886.00855	Combs Creek
BBD13101	Erosion	5	2	2	69601.51277	429019.57046	McIntosh Run
BBD13102	Inadequate Buffer	3	1	1	69891.62675	428535.68224	McIntosh Run
BBD13103	Trash Dumping	3	2	3	69983.58741	428810.46944	McIntosh Run
BBD13104	Trash Dumping	3	2	3	70029.56774	428993.29598	McIntosh Run
BBD13105	Trash Dumping	3	3	5	70060.22129	429113.72065	McIntosh Run
BBD13106	Representative				70081.02192	429236.33486	McIntosh Run
BBD15101	Inadequate Buffer	4	5	1	71144.04333	429158.60621	Nelson Run
BBD15301	Representative				70983.11217	428413.06803	Nelson Run
BBD15302	Inadequate Buffer	3	3	1	71124.33747	428983.44306	Nelson Run
BBD16101	Erosion	2	2	1	71186.73934	429090.73049	Nelson Run
BBD16102	Erosion	2	2	1	71372.85020	429185.97546	Nelson Run
BBD16103	Channel Alteration	3	3	2	71610.41523	429142.18467	Nelson Run
BBD17301	Unusual Condition	3	2	1	72170.93733	428505.02868	Nelson Run
BBD17302	Erosion	3	2	3	72114.00931	428463.42743	Nelson Run
BBD17303	Erosion	4	2	1	72126.05177	429022.85477	Greenhill Run
BBD17303	Inadequate Buffer	3	3	1	72126.05177	429028.32861	Greenhill Run
BBD17304	Channel Alteration	5	3	1	72018.76434	429212.24993	Greenhill Run
BBD17304	Pipe Outfall	5	1	1	72023.14342	429206.77608	Greenhill Run
BBD17305	Erosion	3	2	1	72023.14342	429206.77608	Greenhill Run
BBD18201	Channel Alteration	5	3	1	72624.17200	428680.73923	Nelson Run
BBD18202	Construction	3			72509.22118	428584.39949	Nelson Run
BBD18301	Fish Barrier	5	3	3	72302.30970	428547.17732	Nelson Run
BBD19101	Representative				73116.67830	428797.47052	Greenhill Run
BBD20101	Fish Barrier	3	2	3	73566.76874	428721.24571	Greenhill Run
BBD21101	Inadequate Buffer	1	4	1	74318.87554	428844.95468	Greenhill Run
BBD21102	Representative				74103.20591	428850.42853	Greenhill Run
BBD23101	Erosion	3	2	3	75469.47853	428901.88271	Miski Run
BBD23102	Erosion	2	3	2	75456.34129	429017.92830	Miski Run
BBD23103	Representative				75414.74005	429158.05883	Miski Run
BBD24101	Erosion	2	1	4	75802.28853	428611.76873	Miski Run
BBD24101	Representative				75802.28853	428613.95827	Miski Run
BBD25101	Inadequate Buffer	5	1	3	76222.68011	428414.71018	Miski Run
BBD26401	Erosion	3	3	3	76951.79675	429181.04899	Burnt Mill Creek
BBD28401	Erosion	5	2	4	77952.41628	428534.04008	Burnt Mill Creek
BBD28402	Trash Dumping	5	1	4	77806.81191	428390.62525	Burnt Mill Creek
BBD29401	Erosion	3	3	4	78833.70591	428939.10488	Burnt Mill Creek
BBD29402	Erosion	2	3	4	78824.94776	428997.12768	Burnt Mill Creek
BBD30401	Fish Barrier	4	4	1	79279.27719	428890.93501	Burnt Mill Creek
BBD30402	Unusual Condition	4	4	3	79267.23473	428892.02978	Burnt Mill Creek
BBD30403	Representative				79177.46361	428900.78794	Burnt Mill Creek
BBD30404	Erosion	3	3	5	79138.05190	428921.58857	Burnt Mill Creek
BBD31401	Trash Dumping	4	4	4	79734.70140	428659.93860	Burnt Mill Creek

Appendix A- Breton Bay Watershed

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
BBE03301	Inadequate Buffer	3	1	1	64057.94417	429346.29005	Breton Bay
BBE03302	Inadequate Buffer	5	1	1	64241.86549	429457.95656	Breton Bay
BBE03303	Inadequate Buffer	4	1	1	64398.41756	430080.88054	Breton Bay
BBE06101	Representative				66107.35311	429381.32268	Breton Bay
BBE07301	Representative				66666.78044	429653.92034	Breton Bay
BBE07302	Trash Dumping	3	3	4	66711.66600	429981.25649	Breton Bay
BBE07303	Erosion	1	4	3	66765.30972	430028.33159	Breton Bay
BBE08301	Erosion	3	3	3	66956.89442	429548.82245	Breton Bay
BBE09301	Representative				67797.67757	429950.60294	Breton Bay
BBE10101	Representative				68363.67352	429800.61949	Breton Bay
BBE11101	Erosion	4	1	2	68451.25510	429487.51535	Breton Bay
BBE11102	Erosion	3	2	3	68727.13707	430006.43620	Breton Bay
BBE11103	Erosion	3	1	2	68797.20234	429866.30567	Breton Bay
BBE11104	Pipe Outfall	5	1	3	68969.08118	429360.52206	McIntosh Run
BBE11205	Inadequate Buffer	4	3	3	68726.04230	430102.77593	McIntosh Run
BBE12101	Representative				69396.04138	429719.60653	McIntosh Run
BBE13101	Representative				69720.09322	429500.65258	McIntosh Run
BBE13102	Trash Dumping	3	1	3	70064.94568	429457.95656	McIntosh Run
BBE14101	Representative				70614.52009	429705.37452	Nelson Run
BBE15101	Inadequate Buffer	4	1	1	70941.85624	430198.02090	McIntosh Run
BBE15102	Channel Alteration	5	4	1	70915.58177	430088.54393	McIntosh Run
BBE15102	Fish Barrier	4	1	1	70915.58177	430087.44916	McIntosh Run
BBE15103	Representative				70924.33992	430053.51130	McIntosh Run
BBE15104	Erosion	2	1	3	71039.29074	429952.79248	McIntosh Run
BBE15105	Pipe Outfall	5	1	2	70757.93492	430002.05712	McIntosh Run
BBE15106	Trash Dumping	3	2	2	71011.92150	429433.87163	Nelson Run
BBE15107	Inadequate Buffer	4	3	2	71152.05203	430192.54705	McIntosh Run
BBE16101	Inadequate Buffer	4	5	2	71270.28716	430192.54705	McIntosh Run
BBE16102	Erosion	2	1	2	71287.80347	430117.00794	McIntosh Run
BBE16103	Erosion	2	2	1	71350.20535	430184.88366	McIntosh Run
BBE16103	Inadequate Buffer	3	1	1	71349.11058	430181.59935	McIntosh Run
BBE16304	Channel Alteration	3	2	1	71273.57147	429530.21137	McIntosh Run
BBE16304	Inadequate Buffer	4	2	1	71273.57147	429532.40090	McIntosh Run
BBE17101	Representative				72055.23706	429850.97890	Greenhill Run
BBE17304	Inadequate Buffer	4	3	1	71924.95946	429603.56094	Greenhill Run
BBE18101	Representative				72547.88343	429409.78669	Greenhill Run
BBE19101	Erosion	5	3	3	73194.89234	429919.94939	McIntosh Run
BBE19101	Representative				73195.98711	429914.47554	McIntosh Run
BBE20101	Erosion	3	2	2	73619.66300	430138.90334	McIntosh Run
BBE21101	Erosion	3	3	2	74386.00181	429904.62261	Miski Run
BBE22101	Representative				74776.83461	429910.09646	Miski Run
BBE23101	Channel Alteration	5	3	2	75226.78497	429358.33252	Miski Run
BBE23101	Fish Barrier	3	5	1	75226.78497	429359.42729	Miski Run
BBE25401	Erosion	4	3	3	76586.48897	430048.03745	Burnt Mill Creek
BBE26401	Representative				76911.63558	429772.15548	Burnt Mill Creek
BBE26402	Unusual Condition	5	1	4	76933.53098	429553.20153	Burnt Mill Creek
BBE26403	Representative				76929.15190	429365.99591	Burnt Mill Creek
BBE27401	Representative				77749.13442	429774.34502	Burnt Mill Creek
BBE27402	Comment				77332.02716	429664.86804	Burnt Mill Creek
BBE27402	Fish Barrier	3	1	2	77329.83762	429664.86804	Burnt Mill Creek
BBE27403	Erosion	3	3	3	77362.68071	429685.66867	Burnt Mill Creek

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
BBE27404	Representative				77654.98423	429380.22791	Burnt Mill Creek
BBE28401	Fish Barrier	3	3	1	77921.01327	429819.23057	Burnt Mill Creek
BBE28402	Erosion	3	2	2	77912.25511	429812.66196	Burnt Mill Creek
BBE29401	Representative				78550.50587	429349.57436	Burnt Mill Creek
BBE29402	Erosion	3	3	4	78537.36863	429408.69192	Burnt Mill Creek
BBE29403	Inadequate Buffer	4	2	3	78367.67932	429518.16890	Burnt Mill Creek
BBE29404	Fish Barrier	3	2	3	78688.44685	430037.08975	Burnt Mill Creek
BBE29405	Representative				78495.76738	429952.79248	Burnt Mill Creek
BBE29406	Inadequate Buffer	1	3	3	78388.47995	429884.91676	Burnt Mill Creek
BBE30401	Erosion	4	3	4	78883.31587	430114.81840	Burnt Mill Creek
BBE31401	Representative				79876.27201	429501.74735	Burnt Mill Creek
BBE31402	Fish Barrier	4	3	2	79823.72306	429960.45587	Burnt Mill Creek
BBE31403	Erosion	5	3	4	79743.80487	429951.69771	Burnt Mill Creek
BBE32401	Representative				80361.25500	429927.61278	Burnt Mill Creek
BBF03103	Inadequate Buffer	5	2	1	64180.59978	430567.43651	Breton Bay
BBF03301	Inadequate Buffer	3	1	1	64372.18448	430232.43698	Breton Bay
BBF08301	Representative				67132.64581	430605.35095	Breton Bay
BBF08302	Erosion	4	3	3	67313.28282	430965.53019	Breton Bay
BBF11201	Representative				68853.62383	430397.34470	Breton Bay
BBF13102	Representative				70023.93267	430870.28522	McIntosh Run
BBF13203	Erosion	3	3	3	69691.12267	431000.56282	McIntosh Run
BBF13204	Fish Barrier	4	4	2	69699.88083	430983.04651	McIntosh Run
BBF14202	Erosion	3	3	4	70357.83744	430553.89677	McIntosh Run
BBF14203	Inadequate Buffer	3	3	2	70533.00060	430672.13190	McIntosh Run
BBF14204	Pipe Outfall	5	1	2	70459.65102	430642.57312	McIntosh Run
BBF14205	Representative				70446.51379	430748.76578	McIntosh Run
BBF15101	Inadequate Buffer	1	1	1	70822.01981	430794.74611	McIntosh Run
BBF15102	Fish Barrier	5	1	3	70813.26165	430448.79888	McIntosh Run
BBF15103	Inadequate Buffer	3	1	3	70910.69615	430653.52082	McIntosh Run
BBF15104	Inadequate Buffer	1	2	2	70972.00326	430691.83776	McIntosh Run
BBF15105	Channel Alteration	3	3	3	70692.83698	430341.51144	McIntosh Run
BBF16101	Pipe Outfall	3	3	4	71257.73816	431015.88960	McIntosh Run
BBF16102	Trash Dumping	3	3	4	71358.45697	430978.66743	McIntosh Run
BBF16103	Representative				71421.95362	430807.88335	McIntosh Run
BBF16104	Erosion	3	3	4	71429.61701	430701.69069	McIntosh Run
BBF16105	Erosion	2	3	4	71394.58437	430674.32144	McIntosh Run
BBF16106	Erosion	3	2	4	71388.01576	430605.35095	McIntosh Run
BBF16107	Erosion	5	2	3	71305.90803	430346.98529	McIntosh Run
BBF17101	Fish Barrier	5	1	3	72148.88072	430584.55032	McIntosh Run
BBF17102	Erosion	4	3	4	72106.18470	430648.04697	McIntosh Run
BBF17103	Trash Dumping	3	1	3	72009.84496	430769.56641	McIntosh Run
BBF17104	Trash Dumping	4	1	3	72042.68806	430852.76891	McIntosh Run
BBF17105	Erosion	2	2	3	72050.35144	430861.52707	McIntosh Run
BBF18101	Representative				72327.32819	430532.00138	McIntosh Run
BBF19101	Representative				72941.49400	430952.39295	McIntosh Run
BBF19102	Erosion	3	1	3	73035.64420	431014.79483	McIntosh Run
BBF19103	Comment				72949.15739	431041.06930	McIntosh Run
BBF19103	Inadequate Buffer	3	3	2	73032.35989	431022.45822	McIntosh Run
BBF19104	Erosion	1	4	3	72887.85029	430904.22309	McIntosh Run
BBF19105	Erosion	4	3	4	73148.40548	430442.23026	McIntosh Run
BBF20101	Representative				73578.64999	430837.44213	Miski Run

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
BBF20102	Inadequate Buffer	3	4	1	73775.70854	430646.95220	Miski Run
BBF21101	Erosion	2	3	2	73950.87170	430506.82167	Miski Run
BBF21102	Representative				74187.34196	430293.34158	Miski Run
BBF23101	Representative				75271.16399	430596.59279	Miski Run
BBF24401	Erosion	3	3	3	76071.44066	430587.83463	Burnt Mill Creek
BBF24402	Representative				75660.90202	431046.54315	Burnt Mill Creek
BBF25401	Representative				76199.52872	430425.80871	Burnt Mill Creek
BBF26401	Comment				76926.45582	430919.54986	Rich Neck Creek
BBF26402	Fish Barrier	5	3	2	76889.23365	431088.14440	Rich Neck Creek
BBF31401	Erosion	5	1	4	79478.05798	430860.95898	Burnt Mill Creek
BBF32401	Representative				80372.48485	431084.29201	Burnt Mill Creek
BBF32402	Erosion	4	1	4	80258.62880	431037.21691	Burnt Mill Creek
BBF32403	Channel Alteration	5	1	4	80244.39679	431019.70060	Burnt Mill Creek
BBF32403	Comment				80242.20725	431019.70060	Burnt Mill Creek
BBG04301	Channel Alteration	4	3	1	65045.04671	431432.91942	Breton Bay
BBG05101	Inadequate Buffer	3	3	1	65396.61504	431619.04383	Breton Bay
BBG09101	Trash Dumping	3	4	4	67562.62430	431414.41582	Breton Bay
BBG12101	Inadequate Buffer	5	2	2	69015.70085	431595.09800	Breton Bay
BBG12102	Unusual Condition	4	3	3	69139.78380	431512.37604	Breton Bay
BBG12103	Erosion	1	2	5	69196.38303	431509.11070	Breton Bay
BBG12104	Inadequate Buffer	3	1	2	69589.31235	431443.80389	Breton Bay
BBG12105	Channel Alteration	4	3	1	69469.58319	431441.62699	Breton Bay
BBG12105	Comment				69464.14096	431442.71544	Breton Bay
BBG12106	Erosion	2	5	5	69361.82695	431291.42133	Breton Bay
BBG12106	Trash Dumping	3	3	3	69357.47317	431289.24443	Breton Bay
BBG12107	Erosion	2	3	5	69248.62848	431145.56945	Breton Bay
BBG12201	Pipe Outfall	5	1	1	69055.97339	431714.82715	Breton Bay
BBG12202	Pipe Outfall	3	3	1	69018.96619	431688.70443	Breton Bay
BBG12203	Inadequate Buffer	3	2	1	69030.93911	431693.05822	Breton Bay
BBG14201	Erosion	3	4	4	70553.67627	431417.68116	McIntosh Run
BBG14202	Inadequate Buffer	1	3	1	70598.30259	431517.81827	McIntosh Run
BBG15101	Erosion	4	3	2	71088.10367	431356.72814	McIntosh Run
BBG15103	Trash Dumping	5	1	2	71089.19212	431343.66677	McIntosh Run
BBG15202	Channel Alteration	3	1	1	70771.36564	431657.13947	McIntosh Run
BBG16101	Erosion	4	3	2	71654.09604	431980.40819	McIntosh Run
BBG16102	Representative				71642.12313	431884.62486	McIntosh Run
BBG16103	Erosion	5	1	3	71535.45533	431844.35233	McIntosh Run
BBG16104	Erosion	4	2	2	71526.74776	431682.17375	McIntosh Run
BBG16105	Erosion	4	2	3	71632.32710	431582.03664	McIntosh Run
BBG16106	Fish Barrier	3	2	1	71639.94623	431590.74421	McIntosh Run
BBG16107	Fish Barrier	4	5	4	71730.28732	431733.33075	McIntosh Run
BBG16108	Trash Dumping	4	1	1	71587.70078	431598.36334	McIntosh Run
BBG16109	Erosion	1	4	4	71564.84340	431413.32737	McIntosh Run
BBG18101	Inadequate Buffer	3	2	1	72392.06301	431847.61767	McIntosh Run
BBG18102	Erosion	3	3	3	72466.07740	431424.21184	McIntosh Run
BBG18102	Inadequate Buffer	5	2	3	72464.98895	431426.38874	McIntosh Run
BBG18103	Representative				72677.23609	431194.54955	McIntosh Run
BBG19101	Erosion	3	2	3	72968.93985	431690.88132	McIntosh Run
BBG19102	Erosion	3	4	3	73001.59325	431904.21691	McIntosh Run
BBG20102	Channel Alteration	5	3	1	73393.43412	432025.03451	McIntosh Run
BBG21101	Inadequate Buffer	2	1	1	74310.99483	431980.40819	McIntosh Run

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
BBG22401	Inadequate Buffer	3	1	1	74992.36256	431576.59440	Burnt Mill Creek
BBG23401	Channel Alteration	3	2	4	75458.15691	431260.31142	Burnt Mill Creek
BBG24101	Erosion	3	2	3	75969.78784	431761.63037	Tom Swamp Creek
BBG24102	Channel Alteration	4	4	1	75773.86740	431540.67566	Tom Swamp Creek
BBG24103	Erosion	2	4	5	75974.14163	431947.75478	Tom Swamp Creek
BBG24401	Inadequate Buffer	2	3	3	75630.19242	431129.24274	Burnt Mill Creek
BBG24402	Erosion	2	3	2	75600.80435	431160.80770	Burnt Mill Creek
BBG25101	Erosion	4	3	4	76334.41754	431946.66633	Tom Swamp Creek
BBG25101	Representative				76290.87966	431916.18982	Tom Swamp Creek
BBG25401	Erosion	3	3	4	76221.21906	431389.38154	Rich Neck Creek
BBG25401	Representative				76239.72266	431395.91222	Rich Neck Creek
BBG26401	Erosion	4	4	5	77119.18772	431451.42301	Rich Neck Creek
BBG26402	Erosion	4	3	5	77094.15345	431406.79669	Rich Neck Creek
BBG26403	Inadequate Buffer	3	1	2	76885.17165	431125.97740	Rich Neck Creek
BBG26403	Unusual Condition	3	4	2	76872.11029	431155.36547	Rich Neck Creek
BBG26404	Erosion	4	2	2	76751.29268	431387.20465	Rich Neck Creek
BBG27401	Representative				77731.98330	431760.54192	Rich Neck Creek
BBG27402	Comment				77319.46195	431239.17588	Rich Neck Creek
BBG27402	Representative				77322.72729	431235.91054	Rich Neck Creek
BBG27403	Inadequate Buffer	5	1	3	77358.64603	431225.02607	Rich Neck Creek
BBG27404	Fish Barrier	4	4	1	77516.47083	431075.90885	Rich Neck Creek
BBG27405	Fish Barrier	4	4	1	77579.60074	431185.84198	Rich Neck Creek
BBG28401	Erosion	5	2	4	77811.43993	431727.88852	Rich Neck Creek
BBH11201	Inadequate Buffer	3	2	2	68765.55627	432171.22875	Town Run
BBH12201	Fish Barrier	5	2	3	69525.29217	432359.53006	Town Run
BBH12202	Fish Barrier	3	4	2	69321.75261	432296.40014	Town Run
BBH12203	Pipe Outfall	5	1	3	69170.45850	432264.83518	Town Run
BBH12204	Pipe Outfall	3	5	3	69138.89354	432263.74674	Town Run
BBH13201	Erosion	3	3	5	70068.42716	432552.18516	Town Run
BBH13202	Comment				69749.51223	432543.47758	Town Run
BBH13202	Construction	1			69749.51223	432542.38913	Town Run
BBH13203	Representative				69716.85882	432358.44161	Town Run
BBH13204	Erosion	2	3	4	69670.05561	432351.91093	Town Run
BBH13205	Fish Barrier	5	1	3	69554.68024	432358.44161	Town Run
BBH13206	Erosion	4	3	3	69901.89479	432079.79922	Town Run
BBH13207	Trash Dumping	4	2	3	69895.36411	432076.53388	Town Run
BBH13208	Erosion	3	2	4	69608.01414	432059.11873	Town Run
BBH13209	Inadequate Buffer	1	5	5	70043.39288	432856.95028	Town Run
BBH14201	Pipe Outfall	5	1	1	70593.05854	432153.81360	Town Run
BBH14202	Erosion	4	3	1	70593.05854	432157.07895	Town Run
BBH14203	Pipe Outfall	3	3	1	70474.41784	432268.10053	Town Run
BBH14204	Erosion	3	2	2	70473.32939	432273.54276	Town Run
BBH14205	Representative				70230.60574	432593.54614	Town Run
BBH14206	Representative				70322.03528	432664.29518	Town Run
BBH14207	Inadequate Buffer	3	3	2	70532.10552	432507.55883	Town Run
BBH15201	Channel Alteration	2	3	1	70682.31119	432084.15301	Town Run
BBH15201	Inadequate Buffer	3	3	1	70683.39963	432083.06456	Town Run
BBH15203	Representative				70911.97347	432887.42679	Town Run
BBH15204	Erosion	5	5	2	70675.78051	432809.05861	Town Run
BBH15205	Erosion	3	3	2	70681.22274	432774.22831	Town Run
BBH15206	Pipe Outfall	5	1	3	70694.28410	432732.86733	Town Run

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Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
BBH15207	Erosion	2	3	3	70710.61080	432718.71753	Town Run
BBH15208	Pipe Outfall	3	3	1	70839.04753	432400.89104	Town Run
BBH16201	Pipe Outfall	3	3	5	71341.90998	432814.50085	Town Run
BBH16202	Erosion	4	2	3	71200.41189	432881.98455	Town Run
BBH16204	Erosion	4	4	2	71233.06530	432921.16864	Town Run
BBH17101	Inadequate Buffer	1	3	2	71880.69118	432313.81529	McIntosh Run
BBH17202	Representative				72117.97259	432817.76619	Town Run
BBH18101	Inadequate Buffer	4	2	2	72567.50115	432112.45262	McIntosh Run
BBH19101	Erosion	4	1	3	72990.90698	432043.88047	McIntosh Run
BBH19101	Representative				72989.81853	432044.96892	McIntosh Run
BBH19102	Erosion	4	2	3	72925.60016	432138.57535	McIntosh Run
BBH19103	Erosion	5	2	3	73124.78594	432359.53006	McIntosh Run
BBH21101	Erosion	5	3	3	73941.12108	432417.21775	McIntosh Run
BBH21301	Representative				74344.93487	432400.89104	McIntosh Run
BBH24101	Representative				76102.77655	432498.85126	Tom Swamp Creek
BBH25101	Erosion	3	2	3	76619.78881	432208.23595	Tom Swamp Creek
BBH25101	Fish Barrier	5	2	3	76612.16968	432200.61682	Tom Swamp Creek
BBH25101	Representative				76612.16968	432201.70527	Tom Swamp Creek
BBH25102	Pipe Outfall	5	1	1	76284.54717	432742.66336	Tom Swamp Creek
BBH26101	Erosion	3	3	3	76896.25431	432925.52243	Tom Swamp Creek
BBH26101	Fish Barrier	4	3	2	76885.36984	432926.61088	Tom Swamp Creek
BBH30101	Inadequate Buffer	5	5	1	79332.19838	432867.83474	Tom Swamp Creek
BBH31101	Inadequate Buffer	5	1	1	79615.19456	432429.19066	Rich Neck Creek
BBI04201	Representative				64706.75650	433655.73101	Moll Dyers Run
BBI05201	Representative				65685.27023	433290.01287	Moll Dyers Run
BBI06101	Erosion	4	4	1	65977.30322	433309.27201	Moll Dyers Run
BBI06101	Unusual Condition	3	4	1	65977.30322	433308.17724	Moll Dyers Run
BBI06102	Representative				65968.54506	433338.83079	Moll Dyers Run
BBI07101	Erosion	5	2	3	66722.84140	433598.29122	Moll Dyers Run
BBI07102	Trash Dumping	5	1	3	66762.25311	433639.89247	Moll Dyers Run
BBI07103	Fish Barrier	3	3	1	66483.08683	433527.13118	Moll Dyers Run
BBI07103	Unusual Condition	2	2	1	66481.99206	433526.03641	Moll Dyers Run
BBI07104	Representative				66436.01174	433492.09855	Moll Dyers Run
BBI07105	Inadequate Buffer	4	1	1	66406.45295	433493.19332	Moll Dyers Run
BBI07106	Fish Barrier	3	3	1	66310.11322	433437.36007	Moll Dyers Run
BBI07106	Pipe Outfall	5	1	1	66309.01845	433436.26530	Moll Dyers Run
BBI07107	Inadequate Buffer	2	3	1	66323.25045	433445.02345	Moll Dyers Run
BBI08101	Inadequate Buffer	5	1	2	67343.57584	433726.37928	Moll Dyers Run
BBI08102	Erosion	3	3	2	67286.64782	433727.47404	Moll Dyers Run
BBI08103	Fish Barrier	5	3	1	67302.53049	433722.79465	Moll Dyers Run
BBI08103	Unusual Condition	3	3	1	67302.20222	433721.40143	Moll Dyers Run
BBI08104	Erosion	3	2	2	67237.38318	433679.30418	Moll Dyers Run
BBI08105	Representative				67185.84631	433629.92750	Moll Dyers Run
BBI08107	Erosion	2	4	2	66807.13867	433538.07888	Moll Dyers Run
BBI08108	Representative				66836.69746	433423.12806	Moll Dyers Run
BBI08109	Erosion	4	2	1	66922.08950	433526.03641	McIntosh Run
BBI09101	Erosion	3	1	2	67557.05594	433843.51964	Moll Dyers Run
BBI09102	Comment				67431.15742	433742.80082	Moll Dyers Run
BBI09103	Trash Dumping	5	1	2	67382.98755	433734.04266	Moll Dyers Run
BBI10105	Construction	2			68209.53870	433725.28451	Glebe Run
BBI10106	Construction	2			68007.00630	433812.86608	Glebe Run

Appendix A- Breton Bay Watershed

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
BBI10201	Erosion	3	3	2	68027.80692	433840.23533	Glebe Run
BBI10202	Inadequate Buffer	5	3	2	68011.38538	433850.08825	Glebe Run
BBI10203	Representative				68125.24143	433800.82362	Glebe Run
BBI10204	Channel Alteration	4	2	1	68154.80021	433783.30730	Glebe Run
BBI11201	Representative				68782.10327	433627.85000	Glebe Run
BBI11202	Channel Alteration	5	3	1	68685.76353	433422.03329	Glebe Run
BBI11204	Channel Alteration	2	5	5	68823.70452	433295.04000	Glebe Run
BBI11205	Representative				68740.50202	433555.59520	Glebe Run
BBI12201	Pipe Outfall	5	3	1	69178.40991	433508.52010	Glebe Run
BBI12202	Inadequate Buffer	5	2	1	69167.46221	433508.52010	Glebe Run
BBI12203	Representative				69419.25925	433510.70964	Glebe Run
BBI12205	Channel Alteration	3	3	1	69445.53373	433037.76911	Glebe Run
BBI12206	Channel Alteration	5	3	1	68961.64550	433523.84687	Glebe Run
BBI13101	Inadequate Buffer	1	2	4	70083.08885	433660.32602	Glebe Run
BBI17201	Representative				72164.82958	433248.06816	Town Run
BBI18201	Inadequate Buffer	5	5	1	72825.73383	433197.47777	Town Run
BBI18201	Representative				72817.12270	433199.63055	Town Run
BBI18202	Erosion	3	2	4	72473.75388	433290.04742	Town Run
BBI18203	Inadequate Buffer	5	2	2	72804.20600	433434.28385	Town Run
BBI18204	Pipe Outfall	2	2	1	72810.66435	433436.43663	Town Run
BBI19201	Inadequate Buffer	5	2	1	73241.22086	433285.74185	Brooks Run
BBI19202	Channel Alteration	5	3	1	72887.08813	433744.28454	Brooks Run
BBI20301	Fish Barrier	5	1	1	73655.63150	433699.07610	Brooks Run
BBI20302	Representative				73757.88867	433634.49263	Brooks Run
BBI21301	Representative				74274.55649	433602.20089	Brooks Run
BBI23201	Representative				75346.64220	433155.49851	McIntosh Run
BBI23301	Erosion	2	3	3	75134.59312	433390.15181	McIntosh Run
BBI30101	Inadequate Buffer	5	2	1	79112.61070	433240.39831	Tom Swamp Creek
BBJ05201	Erosion	3	3	4	65164.56452	434737.56671	Moll Dyers Run
BBJ05202	Representative				65194.70347	434684.82353	Moll Dyers Run
BBJ06201	Erosion	4	3	1	66229.11549	434573.95523	Moll Dyers Run
BBJ06202	Erosion	3	3	1	66093.49019	434651.45540	Moll Dyers Run
BBJ06204	Representative				65813.62846	434263.95454	Moll Dyers Run
BBJ06205	Erosion	3	3	4	65890.05224	433999.16229	McIntosh Run
BBJ07201	Channel Alteration	3	5	1	66685.50539	434390.96871	Moll Dyers Run
BBJ07201	Inadequate Buffer	1	4	1	66685.50539	434390.96871	Moll Dyers Run
BBJ07202	Pipe Outfall	3	2	1	66478.83826	434481.38558	Moll Dyers Run
BBJ07203	Trash Dumping	3	3	2	66596.16491	434679.44158	Moll Dyers Run
BBJ08101	Unusual Condition	4	2	3	67288.28451	433899.05790	Moll Dyers Run
BBJ08102	Channel Alteration	4	3	3	67301.20120	433910.89821	Moll Dyers Run
BBJ09201	Trash Dumping	3	2	3	67702.69515	434480.30919	Glebe Run
BBJ09202	Inadequate Buffer	5	3	3	67746.82719	434503.98980	Glebe Run
BBJ10201	Representative				67973.94575	434439.40632	Glebe Run
BBJ10202	Trash Dumping	2	5	5	68032.07088	434396.35067	Glebe Run
BBJ11201	Representative				68652.07225	434298.39907	Glebe Run
BBJ11202	Inadequate Buffer	5	3	2	68676.82925	434444.78828	Glebe Run
BBJ12201	Representative				69235.47633	434249.96146	Gravely Run
BBJ12202	Fish Barrier	3	3	2	69202.10820	434302.70463	Gravely Run
BBJ12203	Erosion	3	3	2	69134.29555	434296.24628	Gravely Run
BBJ19301	Erosion	3	1	1	73010.38054	433866.76616	Brooks Run
BBJ19301	Inadequate Buffer	5	1	1	73086.80432	433878.60647	Brooks Run

Appendix A- Breton Bay Watershed

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
BBJ19302	Erosion	2	3	3	73263.33249	433931.34964	Brooks Run
BBJ21301	Erosion	3	2	2	73996.35495	434706.35136	Brooks Run
BBJ21302	Representative				74304.20285	434628.85119	Brooks Run
BBJ26101	Representative				76708.86096	434061.59298	McIntosh Run
BBJ28101	Inadequate Buffer	4	1	2	78279.31584	434406.03819	Tom Swamp Creek
BBJ28102	Representative				78142.61415	434092.80833	Tom Swamp Creek
BBK04201	Representative				64652.18423	435115.52603	Moll Dyers Run
BBK05201	Unusual Condition	3	1	4	65271.10921	435585.90902	Moll Dyers Run
BBK06201	Erosion	5	3	2	65828.67989	434789.37948	Moll Dyers Run
BBK06202	Pipe Outfall	5	1	2	65840.52020	434817.36565	Moll Dyers Run
BBK06203	Pipe Outfall	3	3	2	65865.27720	434834.58791	Moll Dyers Run
BBK06204	Erosion	3	2	3	65923.40233	434969.13682	Moll Dyers Run
BBK06205	Representative				65929.86067	435071.39399	Moll Dyers Run
BBK06206	Erosion	5	1	3	65855.58968	435323.26955	Moll Dyers Run
BBK06207	Fish Barrier	4	1	2	65733.95746	435425.52672	Moll Dyers Run
BBK06207	Unusual Condition	4	1	2	65732.88107	435426.60311	Moll Dyers Run
BBK06208	Erosion	3	2	2	66189.27097	435453.51290	Moll Dyers Run
BBK06209	Inadequate Buffer	5	2	2	66177.43067	435640.80498	Moll Dyers Run
BBK06210	Erosion	3	3	3	66134.64595	435399.81226	Moll Dyers Run
BBK07101	Erosion	4	1	3	66433.61179	435513.79081	Moll Dyers Run
BBK07102	Representative				66361.49358	435506.25607	Moll Dyers Run
BBK10201	Representative				68343.12992	435351.25572	Glebe Run
BBK11201	Representative				68818.89486	435092.92182	Glebe Run
BBK11202	Erosion	3	2	4	68819.97125	435064.93564	Glebe Run
BBK14201	Representative				70429.17621	435558.99924	Gravely Run
BBK14202	Unusual Condition	3	3	3	70451.78043	435517.01998	Gravely Run
BBK15201	Representative				70726.26021	435405.07529	Gravely Run
BBK15202	Erosion	3	3	3	70914.62868	435567.61037	Gravely Run
BBK16201	Representative				71447.44236	435100.45656	Gravely Run
BBK18301	Inadequate Buffer	5	1	1	72645.46585	434822.74761	Brooks Run
BBK18302	Trash Dumping	2	4	2	72657.30616	434828.12956	Brooks Run
BBK20301	Pipe Outfall	5	1	1	73860.71161	435000.35217	Brooks Run
BBK20302	Erosion	4	1	2	73436.61344	434986.35908	Brooks Run
BBK21301	Representative				74039.39256	434959.44930	Brooks Run
BBK22101	Channel Alteration	5	5	1	74511.92833	434851.81017	Brooks Run
BBK22101	Inadequate Buffer	5	5	1	74515.15750	434853.96295	Brooks Run
BBK22102	Erosion	3	5	5	74733.66493	434914.24087	Brooks Run
BBK22103	Representative				74950.01958	435267.29720	Brooks Run
BBK22304	Erosion	4	3	3	74489.32411	434827.05317	Brooks Run
BBK25301	Representative				76575.37041	434934.69230	McIntosh Run
BBK27301	Representative				77427.87230	435352.33212	McIntosh Run
BBK28101	Representative				77818.60233	434916.39365	McIntosh Run
BBL04201	Inadequate Buffer	3	4	4	65065.57719	435770.44686	Moll Dyers Run
BBL04202	Inadequate Buffer	4	1	1	64836.30585	436061.07250	Moll Dyers Run
BBL06201	Pipe Outfall	5	1	1	66174.26021	436091.21146	Moll Dyers Run
BBL06202	Inadequate Buffer	5	2	2	66169.95464	435908.22494	Moll Dyers Run
BBL06203	Erosion	3	3	1	66169.95464	435737.07873	Moll Dyers Run
BBL06204	Inadequate Buffer	5	2	1	66168.87825	435747.84264	Moll Dyers Run
BBL07201	Representative				66333.56612	436195.62141	Moll Dyers Run
BBL08101	Representative				67083.81084	435973.88481	Moll Dyers Run
BBL08102	Trash Dumping	1	2	2	67133.32484	435996.48903	Moll Dyers Run

Appendix A- Breton Bay Watershed

Site	Problem	Severity	Correctability	Access	Northing	Easting	Stream
BBL11201	Representative				68845.86336	436076.14198	Glebe Run
BBL11202	Erosion	3	2	3	68829.71749	435948.05142	Glebe Run
BBL11203	Erosion	3	3	3	68714.54362	435977.11398	Glebe Run
BBL12201	Representative				69457.25360	436354.92732	Glebe Run
BBL17201	Erosion	3	3	4	72123.47480	436314.02445	Lows Run
BBL19301	Fish Barrier	3	2	1	72899.55291	436300.03137	Lows Run
BBL19302	Representative				72862.95561	436361.38567	Lows Run
BBL20201	Inadequate Buffer	3	3	2	73881.22175	436205.30894	Brooks Run
BBL21201	Fish Barrier	5	3	3	74195.52801	436561.59445	Brooks Run
BBL21202	Erosion	3	3	3	74439.86883	436563.74723	Brooks Run
BBL21203	Representative				74094.34723	436568.05280	Brooks Run
BBL21204	Inadequate Buffer	4	3	3	74428.02852	435771.52325	Brooks Run
BBL23101	Representative				75485.04476	435941.59307	Brooks Run
BBL26301	Erosion	3	3	3	76807.92964	435869.47486	Brooks Run
BBM11101	Channel Alteration	5	2	1	68526.58898	436983.08816	Glebe Run
BBM11101	Inadequate Buffer	5	2	1	68697.73519	437000.31042	Glebe Run
BBM13201	Representative				69921.59207	436846.38647	Glebe Run
BBM17201	Representative				72155.10397	436976.62981	Lows Run
BBM19201	Inadequate Buffer	5	3	1	73286.39121	436852.84481	Brooks Run
BBM19202	Channel Alteration	5	3	2	73284.23842	436853.92120	Brooks Run
BBM20201	Representative				73848.26745	437392.11684	Brooks Run
BBM21201	Erosion	3	3	4	73984.96915	437098.26202	Brooks Run
BBM23201	Inadequate Buffer	3	3	2	75127.02029	436737.67095	Brooks Run
BBN17201	Representative				71931.21459	437724.72175	Lows Run
BBN20101	Inadequate Buffer	1	4	3	73790.14232	438427.60525	Brooks Run
BBN20201	Channel Alteration	5	3	1	73572.71129	437589.09645	Brooks Run
BBN20202	Inadequate Buffer	4	3	2	73579.16963	437583.71449	Brooks Run
BBN20203	Channel Alteration	3	5	1	73525.35007	438255.38265	Broad Run
BBN21101	Inadequate Buffer	3	4	3	74082.92075	437956.14587	Brooks Run
BBN21201	Inadequate Buffer	3	3	3	74467.19244	438300.59108	Brooks Run
BBN21202	Inadequate Buffer	4	3	1	74164.72649	438332.88282	Brooks Run
BBN22201	Erosion	3	3	3	74972.01995	437652.60353	Brooks Run
BBN22202	Representative				74761.04726	437662.29105	Brooks Run
BBN22203	Channel Alteration	4	3	1	74601.74135	438263.99378	Brooks Run
BBN23201	Inadequate Buffer	3	3	1	75202.36768	437608.47149	Brooks Run
BBN23202	Channel Alteration	4	3	1	75205.59685	437608.47149	Brooks Run
BBN23203	Inadequate Buffer	5	3	1	75576.95184	437619.23540	Brooks Run
BBN23204	Channel Alteration	5	5	1	75262.64559	437675.20775	Brooks Run
BBN23204	Inadequate Buffer	3	3	2	75268.02755	437676.28414	Brooks Run
BBO19201	Inadequate Buffer	3	3	2	73329.10041	438687.06816	Broad Run

Appendix B

Listing of sites by problem category

Breton Bay- Erosion Sites

Problem	Site	Type	Possible Cause	Length(ft)	Height(ft)	Landuseright	Landuseleft	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion	BBD09104	Widening	Bend at slope	600	20	Forest	Forest	No		1	5	3
Erosion	BBE07303	Widening	Bend at slope	500	20	Shrubs/Trees	Shrubs/Trees	Yes	House	1	4	3
Erosion	BBF19104	Widening	Bend at slope	5000	4	Forest	Forest	No		1	4	3
Erosion	BBG12103	Unknown	Runoff	1000	10	Forest	Forest	No		1	2	5
Erosion	BBG16109	Widening	Bend at slope	2400	10	Forest	Forest	No		1	4	4
Erosion	BBD16101	Widening	Unknown	600	7	Forest	Forest	No		2	2	1
Erosion	BBD16102	Widening	Land use change	800	6	Forest	Forest	No		2	2	1
Erosion	BBD23102	Widening	Bend at slope	1000	6	Forest	Forest	No		2	3	2
Erosion	BBD24101	Widening	Bend at slope	600	4	Forest	Forest	No		2	1	4
Erosion	BBD29402	Downcutting	Unknown	2800	4	Forest	Forest	No		2	3	4
Erosion	BBE15104	Widening	Land use change	290	11	Paved	Lawn	Yes	Housing Development	2	1	3
Erosion	BBE16102	Widening	Unknown	200	13	Forest	Forest	No		2	1	2
Erosion	BBE16103	Widening	Bend at slope	600	8	Paved	Forest	Yes	Road on left	2	2	1
Erosion	BBF16105	Headcutting	Land use change	30	15	Forest	Forest	No		2	3	4
Erosion	BBF17105	Widening	Land use change	30	20	Forest	Forest	No		2	2	3
Erosion	BBF21101	Widening	Bend at slope	200	10	Forest	Forest	No		2	3	2
Erosion	BBG12106	Widening	Bend at slope	200	10	Shrubs/Trees	Shrubs/Trees	No		2	5	5
Erosion	BBG12107	Widening	Bend at slope	400	20	Forest	Forest	No		2	3	5
Erosion	BBG24103	Downcutting	Bend at slope	300	10	Forest	Forest	No		2	4	5
Erosion	BBG24402	Widening	Unknown	6200	5	Forest	Shrubs/Trees	No		2	3	2
Erosion	BBH13204	Widening	Unknown	1200	6	Forest	Forest	No		2	3	4
Erosion	BBH15207	Widening	Bend at slope	1100	8	Shrubs/Trees	Shrubs/Trees	No		2	3	3
Erosion	BBI08107	Widening	Bend at slope	2500	4	Forest	Paved	Yes	Medley's Neck Rd	2	4	2
Erosion	BBI23301	Widening	Bend at slope	1300	4	Forest	Forest	No		2	3	3
Erosion	BBJ19302	Widening	Bend at slope	2400	4	Forest	Forest	No		2	3	3
Erosion	BBB10302	Widening	Bend at slope	500	5	Shrubs/Trees	Shrubs/Trees	No		3	3	3
Erosion	BBC09302	Widening	Bend at slope	500	3	Shrubs/Trees	Shrubs/Trees	No		3	3	3
Erosion	BBC15301	Downcutting	Unknown	1300	4	Forest	Forest	No		3	2	3
Erosion	BBC18302	Widening	Bend at slope	300	4	Forest	Forest	No		3	3	3
Erosion	BBC23102	Widening	Land use change	200	5	Forest	Forest	Yes	Pt. Lookout Rd.	3	3	3
Erosion	BBD08301	Widening	Bend at slope	600	10	Shrubs/Trees	Shrubs/Trees	No		3	3	2
Erosion	BBD09102	Widening	Bend at slope	600	5	Forest	Forest	No		3	5	4
Erosion	BBD11301	Widening	Bend at slope	1100	5.5	Shrubs/Trees	Shrubs/Trees	No		3	3	3

Breton Bay- Erosion Sites

Problem	Site	Type	Possible Cause	Length(ft)	Height(ft)	Landuseright	Landuseleft	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion	BBD17302	Widening	Bend at slope	400	4	Forest	Forest	No		3	2	3
Erosion	BBD17305	Widening	Bend at slope	40	12	Forest	Forest	No		3	2	1
Erosion	BBD23101	Widening	Bend at slope	500	4	Pasture	Forest	No		3	2	3
Erosion	BBD26401	Widening	Bend at steep slope	900	5	Shrubs/Trees	Shrubs/Trees	No		3	3	3
Erosion	BBD29401	Widening	Bend at steep slope	1600	4	Forest	Forest	No		3	3	4
Erosion	BBD30404	Widening	Bend at steep slope	600	3	Forest	Forest	No		3	3	5
Erosion	BBE08301	Widening	Bend at slope	1800	12	Shrubs/Trees	Shrubs/Trees	Yes	House	3	3	3
Erosion	BBE11102	Widening	Land use change	400	4	Forest	Forest	No		3	2	3
Erosion	BBE11103	Widening	Land use change	300	6	Forest	Forest	No		3	1	2
Erosion	BBE20101	Widening	Land use change	200	6	Forest	Forest	No		3	2	2
Erosion	BBE21101	Widening	Bend at slope	700	4	Forest	Forest	No		3	3	2
Erosion	BBE27403	Downcutting	Unknown	3800	4	Forest	Forest	No		3	3	3
Erosion	BBE28402	Widening	Livestock	3800	3	Pasture	Pasture	No		3	2	2
Erosion	BBE29402	Downcutting	Unknown	2500	3	Forest	Forest	No		3	3	4
Erosion	BBF13203	Widening	Bend at slope	450	5	Shrubs/Trees	Shrubs/Trees	No		3	3	3
Erosion	BBF14202	Widening	Land use change	800	5	Shrubs/Trees	Shrubs/Trees	No		3	3	4
Erosion	BBF16104	Widening	Land use change	20	10	Forest	Forest	No		3	3	4
Erosion	BBF16106	Widening	Bend at slope	800	4.5	Forest	Forest	No		3	2	4
Erosion	BBF19102	Widening	Land use change	600	8	Field	Forest	No		3	1	3
Erosion	BBF24401	Widening	Unknown	800	3	Forest	Forest	No		3	3	3
Erosion	BBG14201	Unknown	Land use change	400	5	Forest	Forest	No		3	4	4
Erosion	BBG18102	Downcutting	Bend at slope	400	5	Forest	Forest	No		3	3	3
Erosion	BBG19101	Headcutting	Unknown	800	3	Forest	Forest	No		3	2	3
Erosion	BBG19102	Downcutting	Bend at slope	400	12	Forest	Forest	No		3	4	3
Erosion	BBG24101	Widening	Bend at slope	800	4	Forest	Forest	No		3	2	3
Erosion	BBG25401	Widening	Bend at steep slope	2000	5	Forest	Forest	No		3	3	4
Erosion	BBH13201	Widening	Bend at slope	200	5	Shrubs/Trees	Shrubs/Trees	No		3	3	5
Erosion	BBH13208	Widening	Bend at slope	900	5	Forest	Forest	No		3	2	4
Erosion	BBH14204	Downcutting	Below Channelization	1500	5	Shrubs/Trees	Shrubs/Trees	No		3	2	2
Erosion	BBH15205	Unknown	Channelization	450	4	Forest	Forest	No		3	3	2
Erosion	BBH25101	Downcutting	Bend at slope	150	6	Forest	Forest	No		3	2	3
Erosion	BBH26101	Downcutting	Bend at slope	400	5	Forest	Forest	No		3	3	3
Erosion	BBI08102	Downcutting	Land use change	600	4	Shrubs/Trees	Shrubs/Trees	No		3	3	2

Breton Bay- Erosion Sites

Problem	Site	Type	Possible Cause	Length(ft)	Height(ft)	Landuseright	Landuseleft	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion	BBI08104	Downcutting	Land use change	600	3	Shrubs/Trees	Lawn	Yes	Medley's Neck Rd	3	2	2
Erosion	BBI09101	Downcutting	Unknown	1200	3	Forest	Forest	No		3	1	2
Erosion	BBI10201	Widening	Below Road Crossing	1000	3	Shrubs/Trees	Shrubs/Trees	No		3	3	2
Erosion	BBI18202	Widening	Bend at slope	2000	4	Shrubs/Trees	Shrubs/Trees	No		3	2	4
Erosion	BBJ05201	Widening	Bend at slope	270	30	Shrubs/Trees	Shrubs/Trees	No		3	3	4
Erosion	BBJ06202	Widening	Bend at slope	300	8	Paved	Shrubs/Trees	Yes	Pt. Lookout Rd.	3	3	1
Erosion	BBJ06205	Widening	Bend at slope	50	25	Shrubs/Trees	Shrubs/Trees	No		3	3	4
Erosion	BBJ12203	Widening	Bend at slope	100	12	Shrubs/Trees	Shrubs/Trees	No		3	3	2
Erosion	BBJ19301	Widening	Bend at slope	400	3	Forest	Lawn	No		3	1	1
Erosion	BBJ21301	Widening	Bend at slope	400	8	Forest	Forest	No		3	2	2
Erosion	BBK06204	Widening	Bend at slope	800	5	Shrubs/Trees	Shrubs/Trees	No		3	2	3
Erosion	BBK06208	Widening	Bend at slope	600	5	Shrubs/Trees	Shrubs/Trees	No		3	2	2
Erosion	BBK06210	Widening	Bend at slope	800	4	Shrubs/Trees	Shrubs/Trees	No		3	3	3
Erosion	BBK11202	Widening	Bend at slope	2600	4	Shrubs/Trees	Shrubs/Trees	No		3	2	4
Erosion	BBK15202	Widening	Bend at slope	200	5.5	Shrubs/Trees	Shrubs/Trees	No		3	3	3
Erosion	BBK22102	Widening	Land use change	4200	4	Forest	Forest	No		3	5	5
Erosion	BBL06203	Widening	Bend at slope	200	4	Shrubs/Trees	Shrubs/Trees	Yes	Moll Dyer Rd.	3	3	1
Erosion	BBL11202	Widening	Bend at slope	1300	5	Shrubs/Trees	Shrubs/Trees	No		3	2	3
Erosion	BBL11203	Downcutting	Bend at slope	1700	6.5	Shrubs/Trees	Shrubs/Trees	No		3	3	3
Erosion	BBL17201	Widening	Bend at slope	500	4	Shrubs/Trees	Shrubs/Trees	No		3	3	4
Erosion	BBL21202	Widening	Land use change	500	5.5	Shrubs/Trees	Shrubs/Trees	No		3	3	3
Erosion	BBL26301	Widening	Bend at slope	1600	4	Forest	Forest	No		3	3	3
Erosion	BBM21201	Widening	Bend at slope	450	5	Shrubs/Trees	Shrubs/Trees	No		3	3	4
Erosion	BBN22201	Widening	Bend at slope	800	4.5	Lawn	Lawn	No		3	3	3
Erosion	BBC15302	Widening	Bend at slope	450	3	Forest	Forest	No		4	3	2
Erosion	BBC16302	Widening	Below Channelization	2400	3	Forest	Forest	No		4	2	3
Erosion	BBC28402	Downcutting	Unknown	300	10	Forest	Forest	No		4	4	3
Erosion	BBD10101	Widening	Bend at slope	500	3	Forest	Forest	No		4	3	1
Erosion	BBD17303	Widening	Below Channelization	800	4	Forest	Crop Field	No		4	2	1
Erosion	BBE11101	Widening	Land use change	200	5	Forest	Forest	No		4	1	2
Erosion	BBE25401	Widening	Bend at steep slope	800	2.5	Forest	Forest	No		4	3	3
Erosion	BBE30401	Widening	Unknown	1800	2	Forest	Forest	No		4	3	4
Erosion	BBF08302	Widening	Bend at slope	200	3.5	Shrubs/Trees	Shrubs/Trees	No		4	3	3

Breton Bay- Erosion Sites

Problem	Site	Type	Possible Cause	Length(ft)	Height(ft)	Landuseright	Landuseleft	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion	BBF17102	Widening	Unknown	800	2.5	Forest	Forest	No		4	3	4
Erosion	BBF19105	Downcutting	Bend at slope	300	3	Forest	Forest	No		4	3	4
Erosion	BBF32402	Widening	Unknown	1600	2	Forest	Forest	No		4	1	4
Erosion	BBG15101	Widening	Bend at slope	150	3	Forest	Forest	No		4	3	2
Erosion	BBG16101	Downcutting	Land use change	1800	5	Crop Field	Crop Field	No		4	3	2
Erosion	BBG16104	Widening	Bend at slope	400	4	Forest	Forest	No		4	2	2
Erosion	BBG16105	Widening	Unknown	400	2.5	Forest	Forest	No		4	2	3
Erosion	BBG25101	Widening	Unknown	600	2	Forest	Forest	No		4	3	4
Erosion	BBG26401	Widening	Bend at steep slope	300	4	Forest	Forest	No		4	4	5
Erosion	BBG26402	Widening	Unknown	2600	2	Forest	Forest	No		4	3	5
Erosion	BBG26404	Widening	Land use change	600	2	Forest	Forest	No		4	2	2
Erosion	BBH13206	Widening	Below Road Crossing	300	5	Forest	Forest	No		4	3	3
Erosion	BBH14202	Downcutting	Pipe Outfall	800	3	Lawn	Lawn	No		4	3	1
Erosion	BBH16202	Widening	Land use change	150	4	Crop Field	Forest	No		4	2	3
Erosion	BBH16204	Downcutting	Bend at slope	200	3	Forest	Forest	No		4	4	2
Erosion	BBH19101	Headcutting	Unknown	400	3.5	Forest	Forest	No		4	1	3
Erosion	BBH19102	Downcutting	Bend at slope	400	3	Forest	Forest	No		4	2	3
Erosion	BBI06101	Downcutting	Bend at slope	900	2	Forest	Forest	No		4	4	1
Erosion	BBI08109	Widening	Bend at slope	250	2	Forest	Paved	Yes	Medley's Neck Rd	4	2	1
Erosion	BBJ06201	Widening	Bend at slope	20	4.5	Paved	Shrubs/Trees	Yes	Pt. Lookout Rd.	4	3	1
Erosion	BBK07101	Widening	Unknown	20	12	Forest	Forest	No		4	1	3
Erosion	BBK20302	Widening	Bend at slope	40	16	Forest	Forest	No		4	1	2
Erosion	BBK22304	Widening	Bend at slope	20	4	Forest	Forest	No		4	3	3
Erosion	BBD13101	Widening	Land use change	20	9	Forest	Forest	No		5	2	2
Erosion	BBD28401	Widening	Unknown	300	2	Forest	Forest	No		5	2	4
Erosion	BBE19101	Downcutting	Bend at slope	500	1	Forest	Forest	No		5	3	3
Erosion	BBE31403	Widening	Unknown	1000	2	Forest	Forest	No		5	3	4
Erosion	BBF16107	Headcutting	Unknown	50	7	Forest	Forest	No		5	2	3
Erosion	BBF31401	Widening	Unknown	800	1	Forest	Forest	No		5	1	4
Erosion	BBG16103	Widening	Bend at slope	200	3	Forest	Forest	No		5	1	3
Erosion	BBG28401	Widening	Unknown	1400	1	Forest	Forest	No		5	2	4
Erosion	BBH15204	Downcutting	Land use change	30	3	Paved	Shrubs/Trees	No		5	5	2
Erosion	BBH19103	Widening	Bend at slope	60	4	Forest	Forest	No		5	2	3

Breton Bay- Erosion Sites

Problem	Site	Type	Possible Cause	Length(ft)	Height(ft)	Landuseright	Landuseleft	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion	BBH21101	Widening	Bend at slope	50	4	Shrubs/Trees	Shrubs/Trees	No		5	3	3
Erosion	BBI07101	Widening	Bend at slope	400	1	Forest	Forest	No		5	2	3
Erosion	BBK06201	Widening	Bend at slope	50	4	Shrubs/Trees	Shrubs/Trees	No		5	3	2
Erosion	BBK06206	Widening	Bend at slope	100	30	Shrubs/Trees	Shrubs/Trees	No		5	1	3

Breton Bay- Inadequate Buffer

Problem	Site	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	LandUseRight	LandUseLeft	Recently Buffer Established	Livestock	Severity	Correctability	Access	Wetland
Inadequate Buffer	BBA05101	Both	Both	0	0	2600	2600	Cropfield	Cropfield	No	No	1	3	3	1
Inadequate Buffer	BBC21101	Both	Both	0	0	800	800	Cropfield	Lawn	No	No	1	3	3	1
Inadequate Buffer	BBD21101	Both	Both	0	0	1350	1350	Gravel Pit	Gravel Pit	No	No	1	4	1	2
Inadequate Buffer	BBE29406	Both	Both	0	0	1500	1500	Pasture	Pasture	No	Cattle	1	3	3	3
Inadequate Buffer	BBF15101	Both	Both	0	0	800	800	Pasture	Pasture	No	Yes	1	1	1	2
Inadequate Buffer	BBF15104	Both	Both	0	0	1000	1000	Pasture	Pasture	No	Yes	1	2	2	1
Inadequate Buffer	BBG14202	Both	Both	0	0	2200	2200	Lawn	Lawn	Yes	No	1	3	1	3
Inadequate Buffer	BBH13209	Both	Both	0	0	2000	2000	Pasture	Pasture	No	Yes	1	5	5	2
Inadequate Buffer	BBH17101	Both	Both	0	0	2400	2400	Agriculture	Agriculture	No	No	1	3	2	1
Inadequate Buffer	BBI13101	Both	Both	0	0	1200	1200	Lawn	Lawn	No	No	1	2	4	1
Inadequate Buffer	BBJ07201	Both	Both	0	0	2500	2500	Lawn	Paved	No	No	1	4	1	3
Inadequate Buffer	BBN20101	Both	Both	0	0	2600	2600	Cropfield	Cropfield	No	No	1	4	3	2
Inadequate Buffer	BBD07102	Both	Both	0	0	900	300	Golf Course	Lawn	No	No	2	3	1	3
Inadequate Buffer	BBG21101	Both	Both	0	0	1400	1400	Paved	Forest	No	No	2	1	1	2
Inadequate Buffer	BBG24401	Both	Both	0	0	600	600	Shrubs/Trees	Shrubs/Trees	No	No	2	3	3	3
Inadequate Buffer	BBI07107	Right	Right		0		1500	Paved	Lawn	No	No	2	3	1	1
Inadequate Buffer	BBB24101	Both	Both	0	0	450	450	Shrubs/Trees	Shrubs/Trees	No	No	3	3	1	1
Inadequate Buffer	BBC07101	Both	Both	0	0	400	400	Cropfield	Cropfield	No	Yes	3	5	2	4
Inadequate Buffer	BBC10301	Both	Both	0	0	400	400	Cropfield	Cropfield	Yes	No	3	3	2	3
Inadequate Buffer	BBC23103	Right	Right		0		1800	Paved	Forest	No	No	3	5	1	3
Inadequate Buffer	BBC25101	Both	Both	0	0	450	450	Cropfield	Pasture	No	Yes	3	1	2	1
Inadequate Buffer	BBD10102	Both	Both	0	0	500	500	Lawn	Lawn	No	No	3	2	1	4
Inadequate Buffer	BBD13102	Both	Both	0	0	600	600	Forest	Cropfield	No	No	3	1	1	2
Inadequate Buffer	BBD15302	Left	Left	0		600		Forest	Cemetary	No	No	3	3	1	5
Inadequate Buffer	BBD17303	Right	Right		0		650	Forest	Cropfield	No	No	3	3	1	4
Inadequate Buffer	BBE03301	Both	Both	0	0	400	400	Cropfield	Cropfield	No	No	3	1	1	3
Inadequate Buffer	BBE16103	Right	Right		0		400	Paved	Forest	No	No	3	1	1	4
Inadequate Buffer	BBF03301	Right	Right		0		500	Pasture	Forest	No	No	3	1	1	3
Inadequate Buffer	BBF14203	Both	Left	0	0	500	500	Ball Field	Businesses	Yes	No	3	3	2	4
Inadequate Buffer	BBF15103	Both	Both	0	0	425	425	Pasture	Pasture	No	Yes	3	1	3	1
Inadequate Buffer	BBF19103	Right	Right		0		600	Shrubs/Trees	Shrubs/Trees	No	No	3	3	2	2
Inadequate Buffer	BBF20102	Both	Both	0	0	400	400	Power Lines	Power Lines	No	No	3	4	1	3
Inadequate Buffer	BBG05101	Both	Both	0	0	1000	1000	Pasture	Pasture	No	No	3	3	1	2

Breton Bay- Inadequate Buffer

Problem	Site	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	LandUseRight	LandUseLeft	Recently Buffer Established	Livestock	Severity	Correctability	Access	Wetland
Inadequate Buffer	BBG12104	Both	Both	0	0	400	400	Shrubs/Trees	Shrubs/Trees	No	No	3	1	2	2
Inadequate Buffer	BBG12203	Both	Both	0	0	400	400	Lawn	Lawn	No	No	3	2	1	4
Inadequate Buffer	BBG18101	Both	Both	0	0	600	600	Pasture	Pasture	No	No	3	2	1	2
Inadequate Buffer	BBG22401	Left	Left	0		400		Forest	Lawn	No	No	3	1	1	2
Inadequate Buffer	BBG26403	Left	Neither	0		1200		Forest	Pasture	No	Donkeys	3	1	2	2
Inadequate Buffer	BBH11201	Left	Both	0		800		Lawn	Marsh	No	No	3	2	2	1
Inadequate Buffer	BBH14207	Both	Both	0	0	500	500	Lawn	Lawn	Yes	No	3	3	2	4
Inadequate Buffer	BBH15201	Both	Both	0	0	1200	1200	Lawn	Shrubs/Trees	No	No	3	3	1	5
Inadequate Buffer	BBL04201	Both	Neither	0	0	400	400	Pasture	Shrubs/Trees	No	No	3	4	4	5
Inadequate Buffer	BBL20201	Both	Both	10	10	1800	1800	Shrubs/Trees	Shrubs/Trees	No	No	3	3	2	3
Inadequate Buffer	BBM23201	Both	Both	0	0	500	500	Lawn	Shrubs/Trees	Yes	No	3	3	2	3
Inadequate Buffer	BBN21101	Both	Both	0	0	600	600	Cropfield	Cropfield	No	No	3	4	3	2
Inadequate Buffer	BBN21201	Both	Both	0	0	700	700	Lawn	Lawn	No	No	3	3	3	3
Inadequate Buffer	BBN23201	Both	Both	0	0	700	700	Lawn	Paved	No	No	3	3	1	4
Inadequate Buffer	BBN23204	Both	Both	0	0	500	850	Shrubs/Trees	Shrubs/Trees	No	No	3	3	2	3
Inadequate Buffer	BBO19201	Both	Both	0	0	600	600	Shrubs/Trees	Shrubs/Trees	Yes	No	3	3	2	3
Inadequate Buffer	BBB20201	Both	Both	10	10	250	250	Shrubs/Trees	Shrubs/Trees	Yes	No	4	3	3	2
Inadequate Buffer	BBD07101	Both	Both	0	0	350	350	Paved	Lawn	No	No	4	3	2	3
Inadequate Buffer	BBD15101	Both	Both	0	0	350	350	Lawn	Lawn	No	No	4	5	1	1
Inadequate Buffer	BBE03303	Both	Both	0	0	600	600	Lawn	Lawn	No	No	4	1	1	4
Inadequate Buffer	BBE11205	Both	Both	20	20	100	100	Lawn	Lawn	No	Yes	4	3	3	2
Inadequate Buffer	BBE15101	Both	Both	0	0	250	250	Lawn	Lawn	No	No	4	1	1	1
Inadequate Buffer	BBE15107	Both	Both	0	0	300	300	Cropfield	Cropfield	No	No	4	3	2	1
Inadequate Buffer	BBE16101	Left	Left	10		400		Forest	Cropfield	No	No	4	5	2	3
Inadequate Buffer	BBE16304	Both	Both	0	0	2600	2600	Paved	Shrubs/Trees	No	No	4	2	1	4
Inadequate Buffer	BBE17304	Both	Both	0	0	300	300	Pasture	Pasture	No	No	4	3	1	3
Inadequate Buffer	BBE29403	Both	Neither	15	15	1000	1000	Shrubs/Trees	Shrubs/Trees	No	No	4	2	3	3
Inadequate Buffer	BBH18101	Both	Neither	15	25	900	400	Forest	Lawn	No	No	4	2	2	2
Inadequate Buffer	BBI07105	Both	Both	0	0	200	200	Lawn	Lawn	No	No	4	1	1	1
Inadequate Buffer	BBJ28101	Both	Both	0	0	300	300	Lawn	Lawn	No	No	4	1	2	1
Inadequate Buffer	BBL04202	Both	Both	0	0	200	200	Pasture	Pasture	No	No	4	1	1	4
Inadequate Buffer	BBL21204	Both	Both	10	10	200	200	Shrubs/Trees	Shrubs/Trees	Yes	No	4	3	3	3
Inadequate Buffer	BBN20202	Both	Both	0	0	200	200	Lawn	Shrubs/Trees	No	No	4	3	2	3

Breton Bay- Inadequate Buffer

Problem	Site	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	LandUseRight	LandUseLeft	Recently Buffer Established	Livestock	Severity	Correctability	Access	Wetland
Inadequate Buffer	BBN21202	Both	Both	0	0	500	500	Cropfield	Cropfield	No	No	4	3	1	3
Inadequate Buffer	BBA06101	Both	Both	0	0	100	100	Cropfield	Cropfield	No	No	5	3	3	1
Inadequate Buffer	BBA06102	Both	Both	0	0	50	50	Lawn	Dirt Road	No	No	5	3	1	1
Inadequate Buffer	BBD06101	Both	Both	0	0	150	150	Lawn	Lawn	No	No	5	1	1	2
Inadequate Buffer	BBD09101	Both	Both	40	40	600	800	Lawn	Golf Course	No	No	5	3	3	3
Inadequate Buffer	BBD25101	Both	Both	0	0	200	200	Forest	Cropfield	No	No	5	1	3	1
Inadequate Buffer	BBE03302	Both	Both	0	0	200	200	Cropfield	Cropfield	No	Yes	5	1	1	2
Inadequate Buffer	BBF03103	Left	Left	30		450		Forest	Lawn	Yes	No	5	2	1	2
Inadequate Buffer	BBG12101	Left	Left	0		150		Forest	Shrubs/Trees	No	No	5	2	2	3
Inadequate Buffer	BBG18102	Right	Right		15		1600	Cropfield	Forest	Yes	No	5	2	3	3
Inadequate Buffer	BBG27403	Left	Neither	0		50		Forest	Pasture	No	Cattle	5	1	3	5
Inadequate Buffer	BBH30101	Both	Both	0	0	400	400	Paved	Paved	No	No	5	5	1	3
Inadequate Buffer	BBH31101	Both	Both	0	0	1000	1000	Lawn	Paved	No	No	5	1	1	1
Inadequate Buffer	BBI08101	Both	Both	0	0	200	200	Lawn	Lawn	No	No	5	1	2	1
Inadequate Buffer	BBI10202	Left	Left	20		1000		Shrubs/Trees	Shrubs/Trees	Yes	No	5	3	2	3
Inadequate Buffer	BBI12202	Both	Both	15	15	50	50	Lawn	Lawn	Yes	No	5	2	1	2
Inadequate Buffer	BBI18201	Left	Left	0		200		Forest	Lawn	No	No	5	5	1	5
Inadequate Buffer	BBI18203	Both	Both	0	0	50	50	Shrubs/Trees	Shrubs/Trees	No	No	5	2	2	3
Inadequate Buffer	BBI19201	Both	Both	20	0	800	800	Lawn	Lawn	No	No	5	2	1	5
Inadequate Buffer	BBI30101	Both	Both	0	0	1100	1100	Paved	Paved	No	No	5	2	1	3
Inadequate Buffer	BBJ09202	Left	Left	20		50		Shrubs/Trees	Construction	Yes	No	5	3	3	4
Inadequate Buffer	BBJ11202	Both	Both	0	0	50	50	Lawn	Lawn	Yes	No	5	3	2	3
Inadequate Buffer	BBJ19301	Right	Neither		0		100	Lawn	Forest	No	No	5	1	1	5
Inadequate Buffer	BBK06209	Left	Neither	10		50		Shrubs/Trees	Shrubs/Trees	No	No	5	2	2	3
Inadequate Buffer	BBK18301	Left	Neither	25		200		Forest	Shrubs/Trees	No	No	5	1	1	1
Inadequate Buffer	BBK22101	Both	Neither	30	30	60	60	Paved	Paved	No	No	5	5	1	5
Inadequate Buffer	BBL06202	Right	Neither		20		60	Shrubs/Trees	Shrubs/Trees	No	No	5	2	2	2
Inadequate Buffer	BBL06204	Right	Neither		15		60	Shrubs/Trees	Shrubs/Trees	No	No	5	2	1	2
Inadequate Buffer	BBM11101	Both	Both	5	5	800	800	Lawn	Cropfield	No	No	5	2	1	4
Inadequate Buffer	BBM19201	Both	Both	0	0	30	30	Lawn	Lawn	Yes	No	5	3	1	3
Inadequate Buffer	BBN23203	Both	Both	0	0	200	200	Lawn	Lawn	Yes	No	5	3	1	3

Breton Bay- Channel Alteration

Problem	Site	Type	BottomWidth(in)	Length(ft)	Perennial Flow	Sedimentation	Veg in Channel	Road Crossing	LengthAbove(ft)	LengthBelow(ft)	Severity	Correctability	Access
Channel Alteration	BBD07102	Rip-Rap	60	900	Yes	Yes	Yes	No			2	3	1
Channel Alteration	BBH15201	Rip-Rap	24	700	No	No	No	No			2	3	1
Channel Alteration	BBI11204	Rip-Rap	12	800	No	No	Yes	Both	400	400	2	5	5
Channel Alteration	BBC20101	Concrete	48	200	No	Yes	Yes	Below		200	3	5	1
Channel Alteration	BBD07101	Earth Channel	120	200	No	Yes	Yes	Below		3	3	4	1
Channel Alteration	BBD09101	Concrete	204	120	No	No	No	No			3	5	1
Channel Alteration	BBD16103	Concrete	48	250	No	No	No	No			3	3	2
Channel Alteration	BBE16304	Concrete	36	60	Yes	No	No	No			3	2	1
Channel Alteration	BBF15105	Concrete	40	57	Yes	No	Yes	Below		57	3	3	3
Channel Alteration	BBG15202	Rip-Rap	60	1000	No	No	No	Both	200	100	3	1	1
Channel Alteration	BBG23401	Earth Channel	120	3000	Yes	Yes	No	No			3	2	4
Channel Alteration	BBI12205	Rip-Rap	7	175	No	Yes	Yes	Below		7	3	3	1
Channel Alteration	BBJ07201	Earth Channel	24	3000	Yes	No	No	No			3	5	1
Channel Alteration	BBN20203	Earth Channel	36	900	No	No	Yes	No			3	5	1
Channel Alteration	BBG04301	Rip-Rap	52	17	No	Yes	No	No			4	3	1
Channel Alteration	BBG12105	Concrete	48	150	No	No	No	No			4	3	1
Channel Alteration	BBG24102	Concrete	88	53	Yes	Yes	No	Below		7	4	4	1
Channel Alteration	BBI10204	Concrete	12	200	No	No	No	Below		2	4	2	1
Channel Alteration	BBJ08102	Rip-Rap	48	75	No	No	No	No			4	3	3
Channel Alteration	BBN22203	Rip-Rap	72	250	No	No	Yes	No			4	3	1
Channel Alteration	BBN23202	Earth Channel	23	500	Yes	No	Yes	Above	5		4	3	1
Channel Alteration	BBB07103	Concrete	48	25	No	No	No	Below		3	5	4	1
Channel Alteration	BBB21201	Metal Pipe	6	12	No	No	Yes	Both	3	4	5	3	2
Channel Alteration	BBC08101	Metal Pipe	60	120	No	No	No	Below		5	5	4	2
Channel Alteration	BBC23101	Concrete	120	77	No	No	No	Below		7	5	5	1
Channel Alteration	BBC23103	Concrete	144	50	Yes	Yes	Yes	Below		7	5	5	1
Channel Alteration	BBC23104	Concrete	72	100	Yes	Yes	Yes	Below		6	5	5	1
Channel Alteration	BBC25102	Metal Pipe	48	20	Yes	No	No	Below		3	5	5	1
Channel Alteration	BBD17304	Concrete	48	25	Yes	No	No	No			5	3	1
Channel Alteration	BBD18201	Concrete	10	120	No	No	No	Below		15	5	3	1
Channel Alteration	BBE15102	Metal Pipe	40	20	Yes	Yes	Yes	Below		20	5	4	1
Channel Alteration	BBE23101	Metal Pipe	72	50	No	No	No	Below		3	5	3	2
Channel Alteration	BBF32403	Rip-rap	72	20	No	No	Yes	No			5	1	4

Breton Bay- Channel Alteration

Problem	Site	Type	BottomWidth(in)	Length(ft)	Perennial Flow	Sedimentation	Veg in Channel	Road Crossing	LengthAbove(ft)	LengthBelow(ft)	Severity	Correctability	Access
Channel Alteration	BBG20102	Metal Pipe	24	110	No	No	No	Below		8	5	3	1
Channel Alteration	BBI11202	Concrete	92	160	Yes	Yes	No	Above	10		5	3	1
Channel Alteration	BBI12206	Metal Pipe	10	100	No	Yes	Yes	Both	5	7	5	3	1
Channel Alteration	BBI19202	Earth Channel	5	10	No	Yes	Yes	Below		2	5	3	1
Channel Alteration	BBK22101	Metal Pipe	36	30	Yes	Yes	Yes	Below		30	5	5	1
Channel Alteration	BBM11101	Concrete	6	10	No	Yes	Yes	Below		2	5	2	1
Channel Alteration	BBM19202	Earth Channel	5	100	No	No	Yes	Below		4	5	3	2
Channel Alteration	BBN20201	Earth Channel	12	100	Yes	Yes	Yes	Below		3	5	3	1
Channel Alteration	BBN23204	Earth Channel	72	500	No	No	Yes	No			5	5	1

Breton Bay- Fish Barriers

Problem	Site	Blockage	Type	Reason	Drop(In)	Depth(In)	Severity	Correctability	Access
Fish Barrier	BBC18301	Total	Road crossing	Too High	11		3	1	2
Fish Barrier	BBC23401	Total	Road crossing	Too high	12		3	5	1
Fish Barrier	BBD20101	Total	Instream Pond	Too High	18		3	2	3
Fish Barrier	BBE23101	Partial	Road crossing	Too Shallow		2	3	5	1
Fish Barrier	BBE27402	Partial	Instream Fence	Too high	24		3	1	2
Fish Barrier	BBE28401	Total	Road crossing	Too high	12		3	3	1
Fish Barrier	BBE29404	Total	Dam	Too high	36		3	2	3
Fish Barrier	BBH12202	Total	Road crossing	Too Shallow		1	3	4	2
Fish Barrier	BBI07103	Total	Road crossing	Too High	6		3	3	1
Fish Barrier	BBI07106	Total	Road crossing	Too High	24		3	3	1
Fish Barrier	BBJ12202	Total	Road crossing	Too Shallow		1	3	3	2
Fish Barrier	BBL19301	Total	Road crossing	Too High	8		3	2	1
Fish Barrier	BBC25102	Total	Road crossing	Too High	12		4	5	1
Fish Barrier	BBD30401	Total	Instream pond	Too high	30		4	4	1
Fish Barrier	BBE15102	Total	Road crossing	Too High	18		4	1	1
Fish Barrier	BBE31402	Total	Instream pond	Too high	36		4	3	2
Fish Barrier	BBF13204	Total	Road crossing	Too High	16		4	4	2
Fish Barrier	BBG16106	Total	Road crossing	Too High	12		4	2	1
Fish Barrier	BBG16107	Total	Instream Pond	Too High	24		4	5	4
Fish Barrier	BBG27404	Total	Road crossing	Too high	8		4	4	1
Fish Barrier	BBG27405	Total	Road crossing	Too high	36		4	4	1
Fish Barrier	BBH26101	Total	Natural Falls	Too High	56		4	3	2
Fish Barrier	BBK06207	Total	Road crossing	Too High	3		4	1	2
Fish Barrier	BBC28401	Total	Dirt Road Crossing	Too high	8		5	3	3
Fish Barrier	BBD18301	Temporary	Beaver Dam	Too High	36		5	3	3
Fish Barrier	BBF15102	Total	Pipe Crossing	Too Shallow		0	5	1	3
Fish Barrier	BBF17101	Temporary	Debris Dam	Too High	12		5	1	3
Fish Barrier	BBF26402	Total	Instream pond	Too high	180		5	3	2
Fish Barrier	BBH12201	Temporary	Natural Falls	Too High	6		5	2	3
Fish Barrier	BBH13205	Temporary	Natural Falls	Too High	6		5	1	3
Fish Barrier	BBH25101	Temporary	Debris Dam	Too High	8		5	2	3
Fish Barrier	BBI08103	Total	Road crossing	Too High	12		5	3	1
Fish Barrier	BBI20301	Total	Road crossing	Too High	38		5	1	1
Fish Barrier	BBL21201	Partial	Natural Falls	Too High	12		5	3	3

Breton Bay- Pipe Outfalls

Problem	Site	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	BBI18204	Stormwater	Corrugated Metal	stream	6		Yes	Brown	Sewage	2	2	1
Pipe Outfall	BBF16101	Stormwater	Corrugated Metal	Left Bank	18		Yes	Clear	None	3	3	4
Pipe Outfall	BBG12202	Stormwater	Smooth Metal	Right Bank	1		Yes	Orange	None	3	3	1
Pipe Outfall	BBH12204	Sewage Treatment	Concrete Channel	Right Bank		10	Yes	Clear	None	3	5	3
Pipe Outfall	BBH14203	Stormwater	Smooth Metal	stream	3		No			3	3	1
Pipe Outfall	BBH15208	Stormwater	Concrete Pipe	stream	36		Yes	Greenish	None	3	3	1
Pipe Outfall	BBH16201	Pond	Plastic	stream	24		Yes	Clear	None	3	3	5
Pipe Outfall	BBJ07202	Stormwater	Corrugated Metal	Left Bank	23		Yes	Clear	None	3	2	1
Pipe Outfall	BBK06203	Stormwater	Earth Channel	Right Bank		3	Yes	Clear	None	3	3	2
Pipe Outfall	BBD07103	Stormwater	Concrete Pipe	stream	24		No			5	1	2
Pipe Outfall	BBD17304	Stormwater	Corrugated Metal	Left Bank	36		No			5	1	1
Pipe Outfall	BBE11104	Stormwater	Corrugated Metal	bed	14		No			5	1	3
Pipe Outfall	BBE15105	Stormwater	Corrugated Metal	Right Bank	12		No			5	1	2
Pipe Outfall	BBF14204	Industrial	Plastic	Left Bank	6		No			5	1	2
Pipe Outfall	BBG12201	Stormwater	Concrete Pipe	Left Bank	24		No			5	1	1
Pipe Outfall	BBH12203	Unknown	Concrete Pipe	Right Bank	36		No			5	1	3
Pipe Outfall	BBH14201	Stormwater	Concrete Pipe	Left Bank	12		No			5	1	1
Pipe Outfall	BBH15206	Unknown	Concrete Pipe	Right Bank	9		No			5	1	3
Pipe Outfall	BBH25102	Stormwater	Corrugated Metal	stream	12		No			5	1	1
Pipe Outfall	BBI07106	Stormwater	Plastic	In stream	6		No			5	1	1
Pipe Outfall	BBI12201	Stormwater	Corrugated Metal	Left Bank	6		No			5	3	1
Pipe Outfall	BBK06202	Stormwater	Concrete Channel	Left Bank		3	No			5	1	2
Pipe Outfall	BBK20301	Stormwater	Concrete Channel	stream		36	No			5	1	1
Pipe Outfall	BBL06201	Unknown	Plastic		8		No			5	1	1

Breton Bay- Trash Dumping

Problem	Site	Type	Truckloads	Other measure	Extent	Volunteer Project?	Owner Type	Owner Name	Severity	Correctability	Access
Trash Dumping	BBL08102	Old Cars	6	Dump Trucks	Single Site	No	Private		1	2	2
Trash Dumping	BBJ10202	All Types	12		Large Area	Yes	Private		2	5	5
Trash Dumping	BBK18302	All Types	5	Dump Trucks	Large Area	No	Private		2	4	2
Trash Dumping	BBD13103	Residential	2		Single Site	No	Private		3	2	3
Trash Dumping	BBD13104	Residential	3		Single Site	No	Private		3	2	3
Trash Dumping	BBD13105	Residential	5		Large Area	Yes	Unknown		3	3	5
Trash Dumping	BBE07302	Tires	8		Single Site	No	Unknown		3	3	4
Trash Dumping	BBE13102	Residential	3		Single Site	No	Private		3	1	3
Trash Dumping	BBE15106	Industrial	1		Single Site	No	Private		3	2	2
Trash Dumping	BBF16102	Residential	5		Large Area	No	Private		3	3	4
Trash Dumping	BBF17103	Tires	1		Single Single	No	Private		3	1	3
Trash Dumping	BBG09101	Residential	3		Single Site	No	Private		3	4	4
Trash Dumping	BBG12106	Residential	2	Dump Trucks	Large Area	No	Private		3	3	3
Trash Dumping	BBJ07203	Yard Waste	10		Single Site	No	Private		3	3	2
Trash Dumping	BBJ09201	Industrial	3		Single Site	No	Private		3	2	3
Trash Dumping	BBC16301	Residential	3		Single Site	Yes	Private		4	2	1
Trash Dumping	BBD31401	Residential		200x250 sqft	Large Area	Yes	Private		4	4	4
Trash Dumping	BBF17104	Tires	2		Single Site	No	Private		4	1	3
Trash Dumping	BBG16108	Yard Waste	3		Single Site	Yes	Private		4	1	1
Trash Dumping	BBH13207	Construction	2		Single Site	No	Unknown		4	2	3
Trash Dumping	BBD28402	Tires	3		Single Single	Yes	Private		5	1	4
Trash Dumping	BBG15103	Construction	1		Single Site	Yes	Private		5	1	2
Trash Dumping	BBI07102	Residential	2		Single Site	Yes	Private		5	1	3
Trash Dumping	BBI09103	Residential	1		Single Site	Yes	Private		5	1	2

Unusual Condition/Comments-Breton Bay

Problem	Site	Describe	Description	Potential Cause	Severity	Correctability	Access
Unusual Condition	BBI07103		Bridge cave-in across stream	Erosion	2	2	1
Unusual Condition	BBC23401		Concrete Channel falling apart;	Erosion	3	5	1
Unusual Condition	BBD09102		Entire Stream is Reddish/Orange in color	Nearby elevated pond	3	3	3
Unusual Condition	BBD17301	Debris Problem	Major Debris Problem Blocking Entire Road Crossing	Debris	3	2	1
Unusual Condition	BBG26403	Red Flock	Run of stream	Farm pond outlet	3	4	2
Unusual Condition	BBI06101	Red Flock	Stream covered in red flock		3	4	1
Unusual Condition	BBI08103	Water Clarity/Color	Combination of car washing, laundry etc; Oyster shells dumped in stream		3	3	1
Unusual Condition	BBK05201	Algae	Green algae on bottom of water in several areas along the stream		3	1	4
Unusual Condition	BBK14202		Man-made pond with tractors and water pumps	Private pond?	3	3	3
Unusual Condition	BBD30402	Red Flock	Red flock; Sedimentation	Pond	4	4	3
Unusual Condition	BBG12102	Odor	Smelly, oily and rich greasy water is shiny, but no oil slicks are present	Bell Motor Comp.	4	3	3
Unusual Condition	BBJ08101		Large rocks dumped in stream	Below Pond	4	2	3
Unusual Condition	BBK06207	Scum	Orangish/gray foam on surface of water		4	1	2
Unusual Condition	BBE26402	Red Flock	Red Flock		5	1	4
Comment	BBE27402		Partial Fish blockage; smaller fish may be able to get through holes in fence	Instream fence made of stakes and plastic over entire width of stream			
Comment	BBF19103		Area not channelized as shown on map				

Unusual Condition/Comments-Breton Bay

Problem	Site	Describe	Description	Potential Cause	Severity	Correctability	Access
Comment	BBF26401		Cattle in stream				
Comment	BBF32403		Retaining wall and old pond behind it				
Comment	BBG12105		Boulder sized concrete chunks and silt fencing randomly dumped into dry stream bed				
Comment	BBG27402		Fresh water clams found all along dry stream bed				
Comment	BBH13202		There is a large pond filled with sediment which is flowing into stream. The pond wall is held together by wooden bracing boards.	Residential			
Comment	BBI09102		Failing left bank stablization				

Breton Bay- In/Near Stream Construction

Problem	Site	Type of Activity	Sediment Control	Why, if inadequate	Excess Sediment?	Length	Company	Location	Severity
Construction	BBH13202	Residential Development	Inadequate	There are no sediment control measures	Yes	700	Design Builders	Rose Hill Drive: Academy Hills Community	1
Construction	BBI10105	Residential Development	Inadequate	There are no sediment control measures	No	400	Hance	Route 5 and 244	2
Construction	BBI10106	Residential Development	Inadequate	There are no sediment control measures	Yes	400	Hance	Route 5 and 245	2
Construction	BBD18202	Residential Development	Adequate		Yes	200		0.25 miles south of Route 5	3

Breton Bay- Representative Sites

Problem	Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation
Breton Bay											
Representative	BBB07104	Marginal	Poor	Optimal	Optimal	Suboptimal	Poor	Poor	Optimal	Suboptimal	Optimal
Representative	BBB09302	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Dry	Dry	Suboptimal	Optimal	Optimal
Representative	BBB10301	Marginal	Suboptimal	Suboptimal	Optimal	Optimal	Dry	Dry	Optimal	Optimal	Optimal
Representative	BBC09301	Marginal	Suboptimal	Marginal	Suboptimal	Suboptimal	Dry	Dry	Suboptimal	Suboptimal	Suboptimal
Representative	BBC17301	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Marginal	Marginal	Optimal	Marginal	Suboptimal
Representative	BBC19101	Suboptimal	Poor	Optimal	Optimal	Suboptimal	Marginal	Suboptimal	Optimal	Optimal	Optimal
Average		**Marginal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Marginal**	**Optimal**	**Suboptimal**	**Optimal**
Brooks Run											
Representative	BBC20102	Suboptimal	Optimal	Poor	Poor	Optimal	Dry	Dry	Optimal	Optimal	Marginal
Representative	BBC23101	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Marginal	Suboptimal	Poor	Poor
Representative	BBC24101	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Marginal	Marginal	Marginal
Representative	BBC25101	Marginal	Marginal	Optimal	Optimal	Optimal	Dry	Dry	Optimal	Optimal	Optimal
Representative	BBD08101	Poor	Marginal	Suboptimal	Optimal	Poor	Dry	Dry	Optimal	Optimal	Optimal
Representative	BBD09103	Poor	Poor	Suboptimal	Optimal	Suboptimal	Poor	Poor	Optimal	Suboptimal	Optimal
Representative	BBD10103	Suboptimal	Suboptimal	Poor	Optimal	Optimal	Marginal	Marginal	Marginal	Suboptimal	Optimal
Representative	BBD13106	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Poor	Poor	Suboptimal	Marginal	Optimal
Representative	BBD15301	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Poor	Marginal	Marginal	Marginal	Optimal
Average		**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Suboptimal**
Burnt Mill Creek											
Representative	BBD19101	Marginal	Marginal	Suboptimal	Optimal	Optimal	Marginal	Marginal	Suboptimal	Suboptimal	Optimal
Representative	BBD21102	Marginal	Suboptimal	Marginal	Optimal	Optimal	Dry	Dry	Optimal	Suboptimal	Suboptimal
Representative	BBD23103	Optimal	Optimal	Optimal	Optimal	Suboptimal	Suboptimal	Marginal	Suboptimal	Marginal	Optimal
Representative	BBD24101	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Poor	Marginal	Marginal	Poor	Optimal
Representative	BBD30403	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Dry	Dry	Optimal	Suboptimal	Optimal
Representative	BBE06101	Marginal	Suboptimal	Marginal	Suboptimal	Suboptimal	Dry	Dry	Suboptimal	Suboptimal	Suboptimal
Representative	BBE07301	Suboptimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal
Representative	BBE09301	Suboptimal	Suboptimal	Marginal	Optimal	Optimal	Poor	Poor	Marginal	Optimal	Suboptimal
Representative	BBE10101	Marginal	Suboptimal	Optimal	Optimal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Optimal
Representative	BBE12101	Marginal	Poor	Optimal	Optimal	Suboptimal	Poor	Marginal	Optimal	Suboptimal	Optimal
Representative	BBE13101	Optimal	Suboptimal	Optimal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Marginal	Optimal
Representative	BBE14101	Optimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal	Suboptimal	Optimal
Average		**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Optimal**

Breton Bay- Representative Sites

Problem	Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation
Cherry Cove Creek											
Representative	BBE15103	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Optimal	Optimal
Representative	BBE17101	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal
Average		**Optimal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Optimal**	**Optimal**	**Optimal**	**Optimal**	**Optimal**
Combs Creek											
Representative	BBE18101	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Optimal
Representative	BBE19101	Marginal	Marginal	Optimal	Optimal	Optimal	Dry	Dry	Optimal	Optimal	Optimal
Representative	BBE22101	Suboptimal	Marginal	Suboptimal	Optimal	Marginal	Dry	Dry	Optimal	Marginal	Suboptimal
Representative	BBE26401	Poor	Poor	Suboptimal	Optimal	Poor	Dry	Dry	Suboptimal	Marginal	Optimal
Representative	BBE26403	Poor	Poor	Marginal	Optimal	Poor	Poor	Poor	Optimal	Optimal	Optimal
Average		**Marginal**	**Marginal**	**Suboptimal**	**Optimal**	**Marginal**	**Marginal**	**Marginal**	**Optimal**	**Suboptimal**	**Optimal**
Glebe Run											
Representative	BBE27401	Poor	Poor	Marginal	Optimal	Poor	Dry	Dry	Marginal	Poor	Marginal
Representative	BBE27404	Poor	Poor	Marginal	Optimal	Poor	Dry	Dry	Poor	Marginal	Optimal
Representative	BBE29401	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Marginal	Optimal
Representative	BBE29405	Poor	Poor	Optimal	Optimal	Suboptimal	Dry	Dry	Optimal	Suboptimal	Optimal
Representative	BBE31401	Poor	Optimal	Optimal	Optimal	Optimal	Poor	Suboptimal	Optimal	Optimal	Optimal
Representative	BBE32401	Poor	Marginal	Optimal	Optimal	Marginal	Marginal	Optimal	Optimal	Optimal	Optimal
Representative	BBF08301	Marginal	Marginal	Suboptimal	Optimal	Suboptimal	Poor	Suboptimal	Optimal	Suboptimal	Optimal
Representative	BBF11201	Marginal	Marginal	Marginal	Suboptimal	Suboptimal	Marginal	Marginal	Suboptimal	Suboptimal	Optimal
Representative	BBF13102	Suboptimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative	BBF14205	Poor	Suboptimal	Marginal	Optimal	Suboptimal	Marginal	Marginal	Marginal	Marginal	Suboptimal
Representative	BBF16103	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal
Average		**Marginal**	**Marginal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**
Gravely Run											
Representative	BBF18101	Optimal	Suboptimal	Optimal	Optimal	Marginal	Marginal	Suboptimal	Optimal	Suboptimal	Optimal
Representative	BBF19101	Optimal	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal
Representative	BBF20101	Poor	Suboptimal	Poor	Optimal	Optimal	Dry	Dry	Optimal	Optimal	Optimal
Representative	BBF21102	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Marginal	Suboptimal	Optimal	Optimal	Optimal
Representative	BBF23101	Suboptimal	Optimal	Optimal	Optimal	Optimal	Dry	Dry	Suboptimal	Suboptimal	Optimal
Average		**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Optimal**

Breton Bay- Representative Sites

Problem	Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation
Greenhill Run											
Representative	BBF24402	Poor	Poor	Marginal	Optimal	Poor	Poor	Poor	Marginal	Suboptimal	Optimal
Representative	BBF25401	Poor	Poor	Optimal	Optimal	Marginal	Poor	Poor	Suboptimal	Marginal	Optimal
Representative	BBF32401	Poor	Optimal	Optimal	Optimal	Optimal	Poor	Suboptimal	Optimal	Optimal	Optimal
Average		**Poor**	**Marginal**	**Suboptimal**	**Optimal**	**Marginal**	**Poor**	**Marginal**	**Suboptimal**	**Suboptimal**	**Optimal**
Lows Run											
Representative	BBG16102	Suboptimal	Suboptimal	Optimal	Optimal	Optimal	Marginal	Optimal	Optimal	Marginal	Marginal
Representative	BBG18103	Marginal	Marginal	Optimal	Optimal	Suboptimal	Poor	Marginal	Optimal	Optimal	Optimal
Representative	BBG25101	Poor	Suboptimal	Marginal	Optimal	Suboptimal	Dry	Dry	Optimal	Marginal	Optimal
Average		**Marginal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Suboptimal**
McIntosh Run											
Representative	BBG25401	Poor	Poor	Marginal	Optimal	Suboptimal	Poor	Poor	Optimal	Suboptimal	Optimal
Representative	BBG27401	Poor	Optimal	Suboptimal	Optimal	Suboptimal	Dry	Dry	Optimal	Optimal	Optimal
Representative	BBG27402	Poor	Poor	Poor	Suboptimal	Poor	Poor	Marginal	Optimal	Optimal	Optimal
Representative	BBH13203	Marginal	Poor	Suboptimal	Optimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Marginal	Suboptimal
Representative	BBH14205	Marginal	Marginal	Poor	Suboptimal	Suboptimal	Marginal	Suboptimal	Marginal	Marginal	Optimal
Representative	BBH14206	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal
Representative	BBH15203	Suboptimal	Optimal	Suboptimal	Optimal	Marginal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal
Representative	BBH17202	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Optimal	Suboptimal	Marginal	Suboptimal
Representative	BBH19101	Optimal	Marginal	Suboptimal	Optimal	Marginal	Dry	Dry	Optimal	Poor	Optimal
Representative	BBH21301	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal
Representative	BBH24101	Marginal	Marginal	Optimal	Suboptimal	Optimal	Dry	Dry	Optimal	Optimal	Optimal
Representative	BBH25101	Marginal	Marginal	Suboptimal	Marginal	Suboptimal	Dry	Dry	Optimal	Optimal	Optimal
Representative	BBI04201	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Marginal	Suboptimal	Optimal	Suboptimal	Optimal
Representative	BBI05201	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal
Representative	BBI06102	Optimal	Suboptimal	Optimal	Optimal	Marginal	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal
Representative	BBI07104	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Optimal	Optimal	Optimal	Marginal
Representative	BBI08105	Marginal	Marginal	Optimal	Optimal	Marginal	Marginal	Suboptimal	Suboptimal	Marginal	Marginal
Representative	BBI08108	Poor	Marginal	Optimal	Optimal	Optimal	Poor	Optimal	Optimal	Optimal	Optimal
Representative	BBI10203	Suboptimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Marginal	Optimal	Suboptimal	Marginal	Suboptimal
Average		**Marginal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Optimal**

Breton Bay- Representative Sites

Problem	Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation
Miski Run											
Representative	BBI11201	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative	BBI11205	Marginal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Optimal	Suboptimal	Optimal	Suboptimal
Representative	BBI12203	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative	BBI17201	Suboptimal	Suboptimal	Marginal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Optimal
Representative	BBI18201	Marginal	Suboptimal	Suboptimal	Optimal	Suboptimal	Dry	Dry	Suboptimal	Suboptimal	Optimal
Representative	BBI20302	Suboptimal	Optimal	Optimal	Optimal	Suboptimal	Dry	Dry	Poor	Marginal	Suboptimal
Representative	BBI21301	Suboptimal	Marginal	Optimal	Optimal	Optimal	Marginal	Optimal	Optimal	Optimal	Suboptimal
Representative	BBI23201	Marginal	Suboptimal	Marginal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Optimal
Representative	BBJ05202	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal
Average		**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Suboptimal**
Moll Dyers Run											
Representative	BBJ06204	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal
Representative	BBJ10201	Marginal	Suboptimal	Marginal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative	BBJ11201	Optimal	Optimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative	BBJ12201	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Optimal
Representative	BBJ21302	Marginal	Marginal	Suboptimal	Optimal	Optimal	Dry	Dry	Suboptimal	Marginal	Suboptimal
Representative	BBJ26101	Marginal	Suboptimal	Suboptimal	Optimal	Marginal	Dry	Dry	Suboptimal	Suboptimal	Optimal
Representative	BBJ28102	Suboptimal	Suboptimal	Marginal	Optimal	Optimal	Dry	Dry	Optimal	Optimal	Optimal
Representative	BBK04201	Suboptimal	Optimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative	BBK06205	Optimal	Optimal	Optimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Marginal	Optimal
Representative	BBK07102	Optimal	Optimal	Suboptimal	Optimal	Suboptimal	Marginal	Optimal	Optimal	Suboptimal	Optimal
Representative	BBK10201	Marginal	Suboptimal	Suboptimal	Optimal	Marginal	Marginal	Suboptimal	Optimal	Suboptimal	Suboptimal
Representative	BBK11201	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative	BBK14201	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Average		**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Suboptimal**
Nelson Run											
Representative	BBK15201	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Optimal	Marginal	Suboptimal
Representative	BBK16201	Suboptimal	Marginal	Marginal	Optimal	Marginal	Marginal	Suboptimal	Marginal	Optimal	Suboptimal
Representative	BBK21301	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Marginal	Optimal	Optimal	Suboptimal
Representative	BBK22103	Poor	Poor	Marginal	Optimal	Optimal	Dry	Dry	Optimal	Optimal	Optimal
Representative	BBK25301	Suboptimal	Suboptimal	Suboptimal	Poor	Marginal	Dry	Dry	Suboptimal	Suboptimal	Marginal
Average		**Suboptimal**	**Marginal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Suboptimal**

Breton Bay- Representative Sites

Problem	Site	Substrate	Embeddedness	Shelter for Fish	Channel Alteration	Sediment Deposition	Velocity/Depth	Flow	Vegetation	Bank Condition	Riparian Vegetation
Rich Neck Creek											
Representative	BBK27301	Poor	Poor	Marginal	Optimal	Suboptimal	Dry	Dry	Suboptimal	Optimal	Optimal
Representative	BBK28101	Poor	Poor	Optimal	Optimal	Optimal	Dry	Dry	Optimal	Marginal	Optimal
Representative	BBL07201	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Marginal	Optimal	Suboptimal	Suboptimal	Suboptimal
Average		**Marginal**	**Marginal**	**Suboptimal**	**Optimal**	**Optimal**	**Marginal**	**Optimal**	**Suboptimal**	**Suboptimal**	**Optimal**
Tom Swamp Creek											
Representative	BBL08101	Marginal	Marginal	Optimal	Optimal	Optimal	Marginal	Suboptimal	Optimal	Suboptimal	Optimal
Representative	BBL11201	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal
Representative	BBL12201	Suboptimal	Suboptimal	Marginal	Optimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Suboptimal
Representative	BBL19302	Optimal	Marginal	Optimal	Optimal	Suboptimal	Marginal	Suboptimal	Optimal	Suboptimal	Optimal
Average		**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Optimal**
Town Run											
Representative	BBL21203	Marginal	Suboptimal	Marginal	Optimal	Optimal	Marginal	Marginal	Suboptimal	Suboptimal	Optimal
Representative	BBL23101	Poor	Poor	Marginal	Optimal	Marginal	Poor	Marginal	Optimal	Optimal	Optimal
Representative	BBM13201	Suboptimal	Optimal	Suboptimal	Optimal	Marginal	Suboptimal	Suboptimal	Suboptimal	Suboptimal	Optimal
Representative	BBM17201	Suboptimal	Optimal	Optimal	Optimal	Optimal	Marginal	Optimal	Optimal	Optimal	Optimal
Representative	BBM20201	Suboptimal	Suboptimal	Suboptimal	Optimal	Suboptimal	Marginal	Optimal	Marginal	Suboptimal	Suboptimal
Representative	BBN17201	Marginal	Marginal	Marginal	Optimal	Optimal	Dry	Dry	Suboptimal	Optimal	Optimal
Representative	BBN22202	Suboptimal	Suboptimal	Suboptimal	Optimal	Optimal	Suboptimal	Optimal	Suboptimal	Suboptimal	Suboptimal
Average		**Marginal**	**Suboptimal**	**Suboptimal**	**Optimal**	**Suboptimal**	**Marginal**	**Suboptimal**	**Suboptimal**	**Suboptimal**	**Optimal**

Breton Bay- Representative Sites

Problem	Site	Channel Width	Total Stream width	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type
Breton Bay										
Representative	BBE06101									Silts
Representative	BBE07301	10	26	3	10		3	8		Gravel
Representative	BBE09301	13	15	3	5	0	3	5	4	Gravel
Representative	BBE10101	24	30	12	18	24	1	2	3.5	Gravel
Representative	BBF08301	17	23	10	15	12	10	13	12	Gravel
Representative	BBF11201	13	15	2	3	3	4	5	6	Silts
Brooks Run										
Representative	BBI20302									Gravel
Representative	BBI21301	96	156			36			27	Silts
Representative	BBJ21302									Silts
Representative	BBK21301	48	84	1	1	48	1	1	24	Gravel
Representative	BBK22103									Silts
Representative	BBL21203	6	30			12			15	Sand
Representative	BBL23101	12	72			12			6	Silts
Representative	BBM20201	10	13	5	10	11	7	8	10	Sand
Representative	BBN22202	15	17	7	10	11	4	8	9	Sand
Burnt Mill Creek										
Representative	BBD30403									Gravel
Representative	BBE26401									Gravel
Representative	BBE26403			8		26	1		5	Sand
Representative	BBE27401									Gravel
Representative	BBE27404									Gravel
Representative	BBE29401			12	24		0.25	1		Gravel
Representative	BBE29405									Silt
Representative	BBE31401				2			2		Sand
Representative	BBE32401	24	24	12	24		1	2		Silt
Representative	BBF24402					65			10	Sand
Representative	BBF25401				30			12		Gravel
Representative	BBF32401				12			2		Sand

Breton Bay- Representative Sites

Problem	Site	Channel Width	Total Stream width	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type
Cherry Cove Creek										
Representative	BBD08101									Silts
Representative	BBD09103	72	96	12	12	72	2	2.5	4.5	Silts
Combs Creek										
Representative	BBB07104	24	56			48			2	Silts
Representative	BBB09302									Sand
Representative	BBB10301									Gravel
Representative	BBC09301									Sand
Representative	BBD10103	24	24	4	12	24	2.5	0.5	4	Silts
Glebe Run										
Representative	BBI10203	12	30	12	8	12	11	6	4	Gravel
Representative	BBI11201	20	42	13	15	22	10	12	18	Sand
Representative	BBI11205	6	12	5	6	5	3	4	3	Gravel
Representative	BBI12203	8	15	2	12	10	5	10	16	Gravel
Representative	BBJ10201	20	57	7	10	19	4	12	13	Sand
Representative	BBJ11201	156	240	32	33	21	27	25	14	Gravel
Representative	BBK10201	10	48	5	7	10	7	5	8	Sand
Representative	BBK11201	20	46	10	20	10	14	17	10	Gravel
Representative	BBL11201	20	52	15	17	19	13	12	10	Gravel
Representative	BBL12201	40	77	24	20	40	24	20	44	Sand
Representative	BBM13201	13	20	10	9	7	8	7	4	Silts
Gravely Run										
Representative	BBJ12201	27	59	12	27	13	10	31	8	Gravel
Representative	BBK14201	10	15	5	7	3	4	4	4	Sand
Representative	BBK15201	17	36	5	15	20	7	10	18	Sand
Representative	BBK16201	48	96	12	24	48	2	3	36	Gravel
Representative	BBD19101	36	84	24	48	84	1	1.5	2.5	Silts

Breton Bay- Representative Sites

Problem	Site	Channel Width	Total Stream width	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type
Greenhill Run										
Representative	BBD21102									Sand
Representative	BBE17101	36	120	12	36	36	2	4	6	Gravel
Representative	BBE18101	72	120	72	72	66	12	24	48	Sand
Lows Run										
Representative	BBL19302	72	120	24	36	72	36	72	24	Silts
Representative	BBM17201	5	40			5			5	Silts
Representative	BBN17201									Silts
McIntosh Run										
Representative	BBD13106	24	48	6	12	24	1	3	8	Silts
Representative	BBE12101	12	24	5	6	8	1	2	4	Silts
Representative	BBE13101	36	60	24	24	36	12	36	30	Gravel
Representative	BBE15103	240	300	40	40	240	3	20	36	Cobble
Representative	BBE19101									Gravel
Representative	BBF13102	84	96	4	7	19	2	5	12	Sand
Representative	BBF14205	20	108	12	11	19	3	5	8	Gravel
Representative	BBF16103	84	144	72	12	144	36	24	12	Cobble
Representative	BBF18101	180	180	36	18	24	24	18	18	Gravel
Representative	BBF19101	180	300	36	144	18	24	24	32	Cobble
Representative	BBG16102	36	42	36	36		12	36		Gravel
Representative	BBG18103	24	144	6	24		1	1		Gravel
Representative	BBH19101									Gravel
Representative	BBH21301	72	240	12	36	72	6	12	18	Sand
Representative	BBI23201	16	36	1	3	5	3	2	4	Sand
Representative	BBJ26101									Sand
Representative	BBK25301									Sand
Representative	BBK27301									Sand
Representative	BBK28101									Silts

Breton Bay- Representative Sites

Problem	Site	Channel Width	Total Stream width	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type
Miski Run										
Representative	BBC23101	84	120	24	24	120	2	3	4	Gravel
Representative	BBC24101	10	60	5	8	10	7	8	10	Gravel
Representative	BBC25101									Gravel
Representative	BBD23103	120	240	4	48	144	1	3	12	Gravel
Representative	BBD24101	36	81	4	24	81	1	2	4.5	Gravel
Representative	BBE22101									Gravel
Representative	BBF20101									Silts
Representative	BBF21102	84	144	24	28	84	1	3	8	Gravel
Representative	BBF23101									Gravel
Moll Dyers Run										
Representative	BBI04201	13	48	9	10	13	7	11	12	Gravel
Representative	BBI05201	16	72	12	10	16	15	13	14	Sand
Representative	BBI06102	96	120	84	12	12	1	2	10	Gravel
Representative	BBI07104	42	66	24	42	42	3	6	10	Sand
Representative	BBI08105	36	66	42	18	36	12	24	36	Silts
Representative	BBI08108	36	36			36			6	Silts
Representative	BBJ05202	21	80	16	15	21	12	18	13	Gravel
Representative	BBJ06204	14	286	12	10	11	16	12	15	Gravel
Representative	BBK04201	20	42	17	12	15	14	9	13	Gravel
Representative	BBK06205	72	108	72	240	60	6	60	18	Gravel
Representative	BBK07102	48	240	36	42	48	24	36	12	Gravel
Representative	BBL07201	16	16	8	13	10	8	12	10	Gravel
Representative	BBL08101	48	96	12	24	48	6	24	48	Gravel
Nelson Run										
Representative	BBC17301	26	156	24	26	24	1	3	6	Gravel
Representative	BBC19101	36	120	2.5	120	120	1	2	3	Gravel
Representative	BBC20102									Sand
Representative	BBD15301	36	144		36	36		36	28	Cobble
Representative	BBE14101	84	180	48	66	84	24	48	96	Gravel

Breton Bay- Representative Sites

Problem	Site	Channel Width	Total Stream width	Width Riffle	Width Run	Width Pool	Depth Riffle	Depth Run	Depth Pool	Bottom Type
Rich Neck Creek										
Representative	BBG25401				60	50		8	12	Gravel
Representative	BBG27401									Sand
Representative	BBG27402			15	27	4	1	2	3	Gravel
Tom Swamp Creek										
Representative	BBG25101									Silts
Representative	BBH24101									Sand
Representative	BBH25101									Sand
Representative	BBJ28102									Silts
Town Run										
Representative	BBH13203	60	72	12	60	30	36	24	48	Gravel
Representative	BBH14205	6	72	2	4	6	2	2		Gravel
Representative	BBH14206	10	84	84	48	120	3	3	12	Sand
Representative	BBH15203	84	216	84	72	216	3	4	24	Gravel
Representative	BBH17202	22	39	18	32	15	8	27	10	Gravel
Representative	BBI17201	19	56	6	19	13	12	27	43	Sand
Representative	BBI18201									Sand