

The pages in this document were taken from the "Corsica River Watershed Restoration Action Strategy: Final Report" published in September 2004. The entire document can be found at [http://dnrweb.dnr.state.md.us/download/bays/cr\\_strategy.pdf](http://dnrweb.dnr.state.md.us/download/bays/cr_strategy.pdf).

# Corsica River Watershed Restoration Action Strategy: Final Report

## **Excerpt Showing an Example of Stream Sampling Documentation**

**September 2004**

# Current Conditions Assessment Methods

Several specific assessment protocols went into the developing the current conditions of the Corsica River Watershed:

## Stream Corridor Assessment (SCA)

The Stream Corridor Assessment is one of the most valuable tools delivered by DNR to help assess the current environmental condition of each stream contributing to the tidal waters of the Corsica. Fortunately the 100 miles of allowable assessment allocated under the grant to the Corsica WRAS more than covered the total stream reaches in the entire watershed. Thus the SCA provided a total stream reach assessment which gives the Corsica River WRAS a broader coverage and every stream received hands-on field scrutiny. The Maryland Conservation Corps team, trained by Maryland DNR staff, executed the SCA protocol which sought to identify the following potential impairments, classify the degree of severity and rate the level of correction needed of each identified problem:

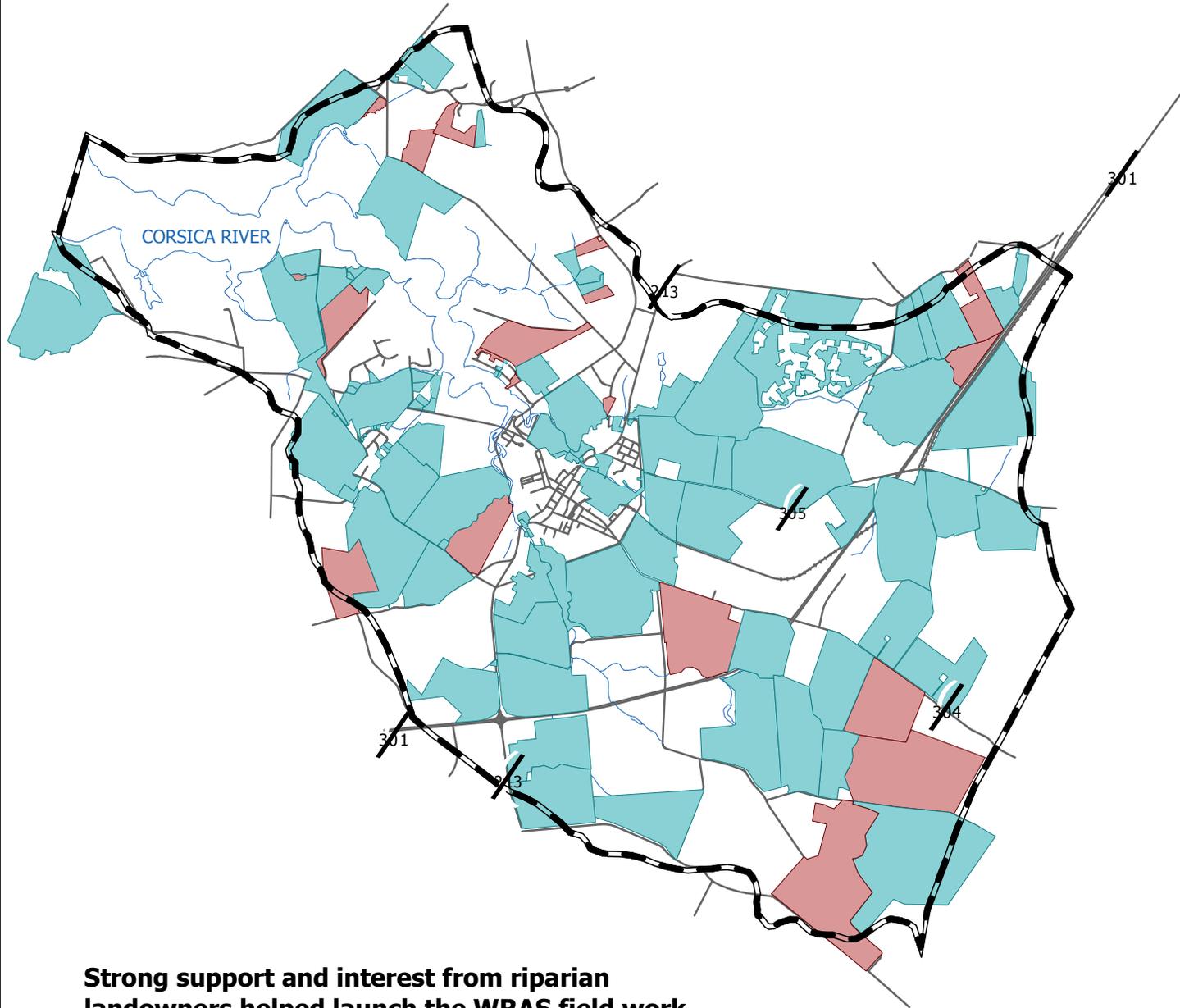
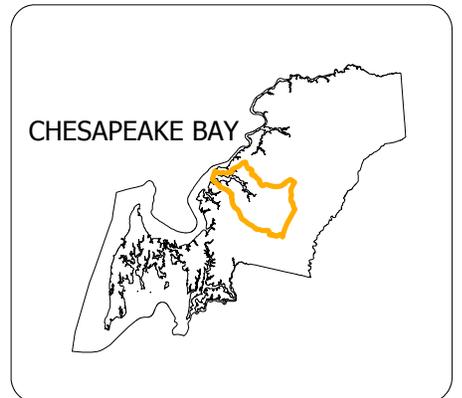
- Altered Shorelines
- Channel alterations
- Exposed pipes
- Erosion sites
- Fish barriers
- Inadequate stream buffers (riparian)
- Construction in or near stream
- Pipe outfalls
- Trash dumping sites
- Other unusual conditions observed (e.g., odors, scum, excessive algae, water color/clarity, red flock, sewage discharge, oil, and the like)

Prior to the launch of the on-site SCA work, the Town notified every landowner in the watershed adjacent to an intermittent or perennial stream and adjacent to the tidal waters of the Corsica River. Permission and Response cards were mailed, the results were compiled in a spreadsheet and individual parcels were mapped and color coded so that the DNR field chief would have a visual log of willing landowners to contact prior to his visits. This process was very successful and the overall response was such that, where permission was not granted, the landowner on the opposite side of the stream invariably granted permission so that virtually all stream reaches had right-of-entry access and permission.

# CORSICA RIVER WRAS

## Figure 3 RIGHT OF ENTRY MAP

QUEEN ANNE'S COUNTY  
MARYLAND



### Responses

- Entry granted
- Entry not granted
- No response or right of entry not required
- Streams
- Roads
- Watershed Boundary



**Strong support and interest from riparian landowners helped launch the WRAS field work**

## Synoptic Surveys

The capacity of streams to support a diversity of aquatic life depends on the quality and availability of habitat as well as the physical and chemical characteristics of its water quality. A nutrient synoptic survey was conducted during April 2003 in the Corsica River Watershed as part of the Corsica WRAS. Fifty-one (51) Baseflow grab sample sites were established throughout the watershed distributed to reach each of the 12-digit Sub-watersheds. Water quality sampling, benthic macroinvertebrate sampling, and fish sampling occurred in April using established DNR sampling protocols and complete details of the synoptic survey may be found at the Maryland DNR website.

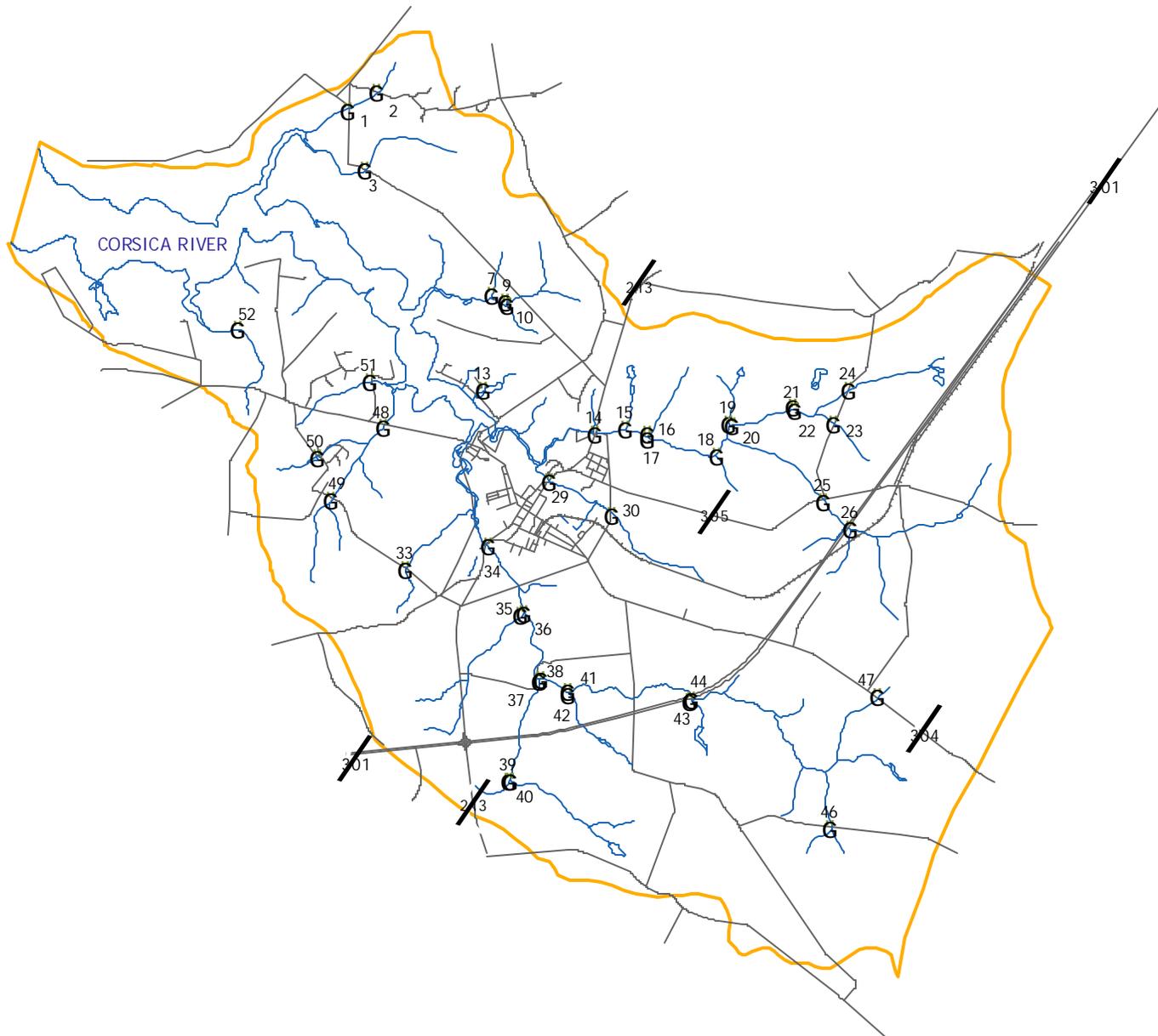
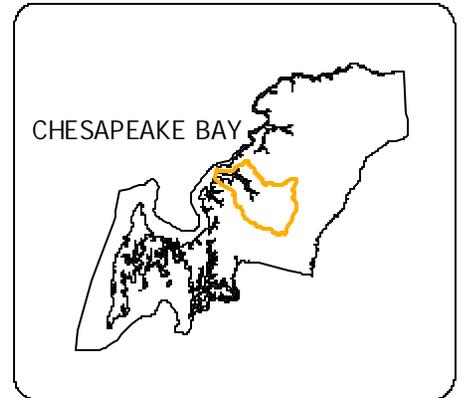
Nutrient synoptic sampling was scheduled for early spring to coincide with the period of maximum nitrogen concentrations in the free-flowing fresh water streams. The major proportion of nitrogen compounds are carried dissolved in the groundwater rather than in surface run-off. The higher nitrogen concentrations in the late winter and early spring reflect the higher proportion of nitrogen-rich shallow groundwater present in the base flow at this time of year. Nitrogen concentrations are reduced in summer as the proportion of shallow groundwater is reduced through plant uptake, and replaced by deeper groundwater that may have lower nitrate concentrations, or has been denitrified through interaction with anoxic conditions in the soils below the streambed. Point sources can also contribute to in-stream nitrate concentrations.

Orthophosphate is generally transported bound to suspended sediments in the water column. In-stream orthophosphate concentrations can also be produced through mobilization of sediment bound phosphorous in anoxic water column and/or sediment conditions, sediment in surface run-off from areas having had surface applied phosphorous, groundwater from phosphorous saturated soils, and point source discharges.

# CORSICA RIVER WRAS

## Figure 5 SYNOPTIC NUTRIENT SAMPLE SITES

QUEEN ANNE'S COUNTY  
MARYLAND



- G Synoptic Site
- Streams
- Roads
- Watershed Boundary



**Table 3**  
**Synoptic Nutrient Sample Site Locations**

SITE_#	LOCATION	SAMPLE			
		TYPE	LATITUDE	LONGITUDE	NOTES
1	North Fork Emory Cr. at Spaniards Neck Rd.	N,F	39.09555	76.09426	
2	North Fork Emory Cr. at Coon Box Rd.	N	39.98060	76.09003	
3	South Fork Emory Cr. at Spaniards Neck Rd.	N,B,F	39.88150	76.09132	
7	UT to Corsica at Spaniards Neck Rd.	N	39.07470	76.07041	perched culvert
9	UT to Corsica at Spaniards Neck Rd.	N	39.07118	76.07005	perched culvert
10	UT to Corsica at Spaniards Neck Rd.	N	39.07118	76.07005	
13	UT to Corsica at Quail Run Dr.	N			
14	Three Bridges Branch at Rt 213	N,B	39.05419	76.05343	
15	UT to Three Bridges Br. at confluence	N	39.05459	76.04919	
16	UT to Three Bridges Br.at confluence	N	39.05401	76.04707	
17	Three Bridges Br.	N	39.05401	76.04707	
18	UT to Three Bridges Br.at confluence	N	39.05260	76.03207	
19	UT to Three Bridges Br.at confluence	N	39.05440	76.03250	
20	UT to Three Bridges Br. at confluence	N	39.05436	76.03280	
21	UT to Three Bridges Br. at confluence	N	39.05679	76.02257	
22	UT to Three Bridges Br. at confluence	N	39.05679	76.02257	
23	UT to Three Bridges Br. at Tanyard Rd.	N			
24	UT to Three Bridges Br. at Tanyard Rd.	N			
25	Three Bridges Br. at Rt 300	N			
26	Three Bridges Br. at Rt 301	N	39.04175	76.01283	
28	Grays Cr. at Rt 213	N			
29	Grays Cr. behind detention center	N	39.04336	76.05263	perched culvert
32	UT to Millstream Br. at Hibernia Rd.	N			
33	Millstream Br. above Rt 213	N	39.38380	76.70500	
34	UT to Millstream Br at confluence	N			
35	Millstream Br. at confluence	N,B,F			
36	UT to Millstream Br. at Taylor Mill Rd.	N			
37	Millstream Br. at Taylor Mill Rd	N			
39	UT to Millstream Br. at Rt 301	N	39.01500	76.06726	
40	UT to Millstream Br. at confluence	N			
41	Millstream Br at confluence	N			
42	UT to Millstream Br at Rt 301	N			

<b>SITE_#</b>	<b>LOCATION</b>	<b>SAMPLE TYPE</b>	<b>LATITUDE</b>	<b>LONGITUDE</b>	<b>NOTES</b>
43	Millstream Br. at Rt 301	N,B,F			
45	Millstream Br. at Little Eagle Rd.	N			
46	Millstream Br. at Rt 304	N			
47	UT to Corsica at Rt 304	N,F			
48	UT to Corsica at Hibernia Rd.	N			perched culvert
49	UT to UT at Brownsville Rd.	N			perched culvert
50	Earle Cr at Fort Point Rd.	N			perched culvert
51	UT to Tilghman Cove	N	39.05765	76.11498	

\*N = nutrients

F = Fish

B = benthic

## Water Chemistry Sampling

Sampling sites were selected and pinpointed in the GIS base. The contributing drainage areas (used to calculate nutrient yields per unit area) were determined from a digitized watershed map using ArcView® software. Synoptic water chemistry samples were collected in early spring throughout the watershed. Sampling was halted for a minimum of 24 hours after rainfall events totaling more than 0.25 inches. Grab samples of whole water (500 ml) were collected just below the water surface at mid-stream and filtered using a 0.45 micron pore size (Gelman GF/C) filter. The samples were stored on ice and frozen on the day of collection. Filtered samples were analyzed by the Nutrient Analytical Services Laboratory at the University of Maryland's Chesapeake Biological Laboratory (CBL) for dissolved inorganic nitrogen ( $\text{NO}_3$ ,  $\text{NO}_2$ ), and dissolved inorganic phosphorous ( $\text{PO}_4$ ). All analyses were conducted in accordance with U.S. Environmental Protection Agency (EPA) protocols. Stream discharge measurements were taken at the time of all chemistry samples. Water temperature, dissolved oxygen, pH, and conductivity were measured in the field with a Hydrolab Surveyor II® at selected sites at the time of water quality collections. Watershed areas used to calculate nutrient yields were determined from a digitized watershed map using ArcView® software.

Where sites are nested in a watershed, the mapped concentration data for the downstream site is shown only for the area between the sites. Yield calculations for a downstream site are based on the entire area upstream of the site, but are mapped showing just the area between sites. The downstream sites therefore illustrate the cumulative impact from all upstream activities. This is particularly important in the Corsica River Watershed in light of the fact that the upstream areas in Subwatersheds 0396 and 0397 flow to confluence with the tidal Corsica within the Town of Centreville.

# III. Corsica River Management Strategy

## Results of the Stream Corridor Assessment and Synoptic Survey

### Overall Watershed Conditions

#### Stream Corridor Assessment/ Synoptic Survey

It is the intent of the Town and its WRAS partners that the WRAS be presented in a simple and comprehensible manner. The results of the Stream Corridor Assessment (SCA) and associated ranking of impairment severity may be seen on the following Tables and Figures. These are included to demonstrate how these data can be particularized for study and for future restoration implementation plans and grant applications. Each of these assessment tools may be further studied by merging the orthophoto layer with the exact location of the impairment under study. Add to this the database result for the applicable landowner, photos taken in the field of the impairment, soils layers, accessibility from streets or granted right-of-way, etc.

**Severity, correctability, and access ratings** have been provided on all Figure 9 plates and all Table 3 impairment rankings. To help prioritize future restoration work, all problem sites are evaluated and scored by field crews on a scale of one to five for three separate areas: problem severity, correctability and accessibility. These scores are subjective and based on the field crew's evaluation at the time of the survey. While the Maryland Conservation Corps (MCC) members receive a week of training on how to do the survey, the overall experience of individual Corps members is usually limited. Often they do not have the background to provide a definitive evaluation of the severity or correctability of a particular problem. The rating should therefore be viewed as the field team's opinion of the worst problem within a specific problem category and which problems they believed would be the easiest to correct. The scores provide a starting point for more detailed follow-up evaluations by individuals that are more experienced dealing with specific problem categories. This is initially done by reviewing the data and photographs collected by the field teams and can involve follow-up field visits as well. As additional information about a specific problem site is obtained, the site's severity, correctability, and/or accessibility ratings can change. While the criteria for rating problem severity, correctability, and access can vary among different problem categories, the general guidelines used by survey teams to assign these values are as follows:

#### Severity Rating

The severity rating is a rating on how bad a specific problem is relative to other problems in the same problem category. It is used to answer questions such as, where do the field crews believe the worst erosion problems were, or where was the largest section of stream with an inadequate buffer. In general, the scoring is based on the overall impression of the survey team of the severity of the problem.

**Rating of 1 is for the most severe problems** that appear to have direct and wide-reaching impact on the streams aquatic resources.

**Rating of 3 is for moderately severe problems** that appear to be having some adverse impacts at a specific site.

**Rating of 5 is for minor problems** that do not appear to be having a significant impact on the stream and aquatic resources.

## Correctability Rating

Correctability ratings provide a relative measure on how easily the field teams believe it would be to correct a specific problem. The correctability rating can be helpful in determining which problems to initially examine when developing a restoration plan for a drainage basin. One restoration strategy would be to 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 engineering efforts.

**Rating of 1 is for minor problems** that could be corrected quickly and easily using hand labor, with a minimum amount of planning.

**Rating of 3 is for moderate size problems** that may require a small piece of equipment, such as a backhoe, and some planning to correct.

**Rating of 5 is for major restoration problems** that would require a large expensive effort to correct. These projects would usually require heavy equipment, significant amount of funding (\$100,000.00 or more), and construction could take a month or more.

## Accessibility Rating

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

**Rating of 1 is for a site that is easily accessible by both car or on foot.** Examples would include a problem in an open area inside a public park where there is sufficient room to park near the site. If heavy equipment was needed, it could easily access the site using existing roads or trails.

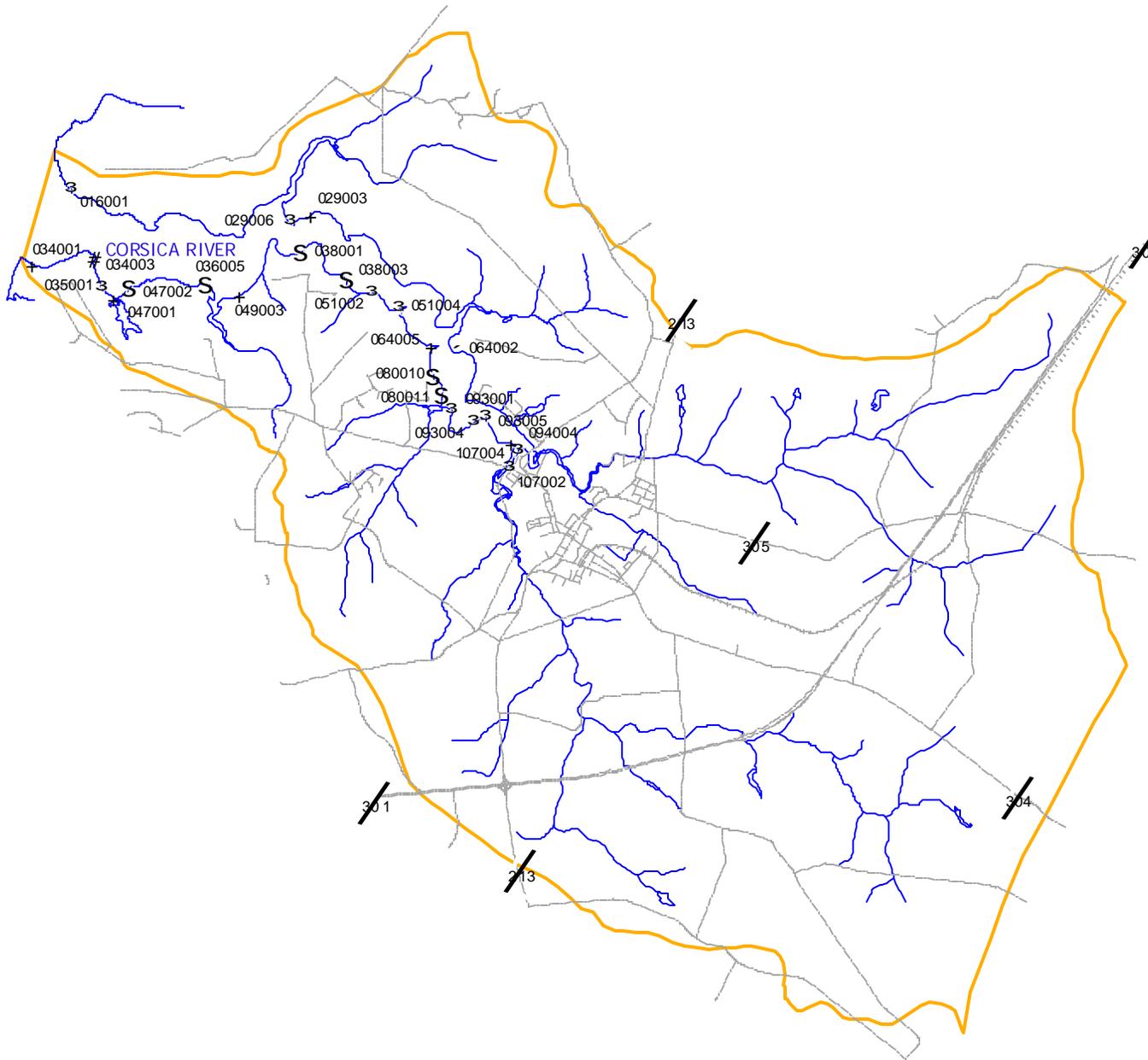
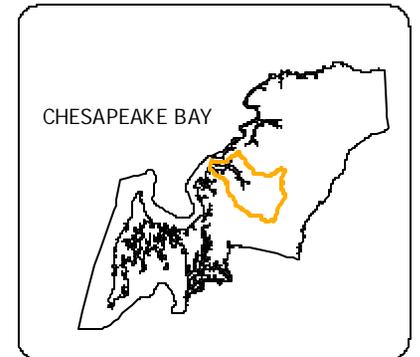
**Rating of 3 is for sites that are easily accessible by foot but not easily accessible by a vehicle.** Examples would include a stream section that could be reached by crossing a large field or a site that was accessible only by 4-wheel drive vehicles.

**Rating of 5 is for sites that are difficult to reach both on foot and by a vehicle.** Examples would include a site on private land where there are no roads or trails nearby. To reach the site it would be necessary to hike over a mile. If equipment were needed to do the restoration work, an access road would need to be built over a long distance through rough terrain.

**CORSICA RIVER WATERSHED  
SCA SURVEY RESULTS**

**Figure 9a  
ALTERED SHORELINES**

QUEEN ANNE'S COUNTY  
MARYLAND



**Altered Shorelines**

- # Very Severe
- Severe
- 3 Moderate
- + Low Severity
- S Minor

Roads  
 Streams  
 Watershed Boundary

N

1      0      1 Miles

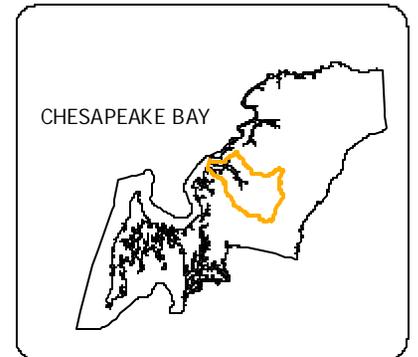
Table 3a - Altered Shorelines

Problem	Site	Date	Photo	Survey	Type	Length (ft)	Land Use A	Land Use B	Severity	Correctability	Access
Altered Shore	034003	10/6/2003	181-18	CR	Groin & broken con	2500	Crop field	Open wate	1	3	3
Altered Shore	064002	10/6/2003		CR	Wood bulkhead	825	Lawn	Open wate	2	2	2
Altered Shore	016001	10/6/2003	172-17	CR	Rip-rap	1700		Open wate	3	2	3
Altered Shore	029006	10/6/2003		CR	Rip-rap	730	Single home	Phramites	3	3	3
Altered Shore	035001	10/6/2003	200	CR	Wood bulkhead	275	Lawn	Open wate	3	3	2
Altered Shore	051002	10/6/2003	274-27	CR	Mix of bulkhead &	530	Residential	Open wate	3	3	2
Altered Shore	051004	10/6/2003	281	CR	Wood bulkhead	440	Residential	Open wate	3	4	3
Altered Shore	093001	10/6/2003	307	CR	Wood bulkhead	400	Lawn	Open wate	3	3	2
Altered Shore	093004	10/6/2003	313	CR	Mix of bulkhead &	130	Single home	Open wate	3	3	2
Altered Shore	093005	10/6/2003	314	CR	Rip-rap	490	Single home	Open wate	3	3	2
Altered Shore	107002	10/6/2003		CR	Mix of bulkhead &	700	Boat landing	Open wate	3	3	1
Altered Shore	107004	10/6/2003		CR	Mix of bulkhead &	410	Marsh emergent	Open wate	3	3	1
Altered Shore	029003	10/6/2003		CR	Rip-rap	550	Single home	Beach	4	2	3
Altered Shore	034001	10/6/2003	180	CR	Rip-rap	600	Crop field	Open wate	4	3	2
Altered Shore	047001	10/6/2003		CR	Rip-rap	545	Lawn	Open wate	4	3	3
Altered Shore	049003	10/6/2003	217	CR	Rip-rap	640			4	3	2
Altered Shore	064005	10/6/2003	289	CR	Rip-rap & gravel	205	Residential	Open wate	4	3	2
Altered Shore	094004	10/6/2003		CR	Rip-rap	420	Single home	Open wate	4	3	2
Altered Shore	036005	10/6/2003		CR	Rip-rap	260	Lawn	Beach	5	2	2
Altered Shore	038001	10/6/2003	255	CR	Wood bulkhead	50	Lawn	Beach	5	2	2
Altered Shore	038003	10/6/2003	219	CR	Wood bulkhead	115	Residential	Open wate	5	3	2
Altered Shore	047002	10/6/2003		CR	Rip-rap	190	Shrubs & small	Open wate	5	3	3
Altered Shore	080010	10/6/2003		CR	Rip-rap	150	Residential	Open wate	5	1	2
Altered Shore	080011	10/6/2003	303	CR	Rip-rap	200	Residential	Open wate	5	2	2

**CORSICA RIVER WATERSHED  
SCA SURVEY RESULTS**

**Figure 9b  
CHANNEL ALTERATIONS**

QUEEN ANNE'S COUNTY  
MARYLAND



**Channel Alterations**

- # Very Severe
- Severe
- 3 Moderate
- + Low Severity
- S Minor
- Roads
- Streams
- Watershed Boundary

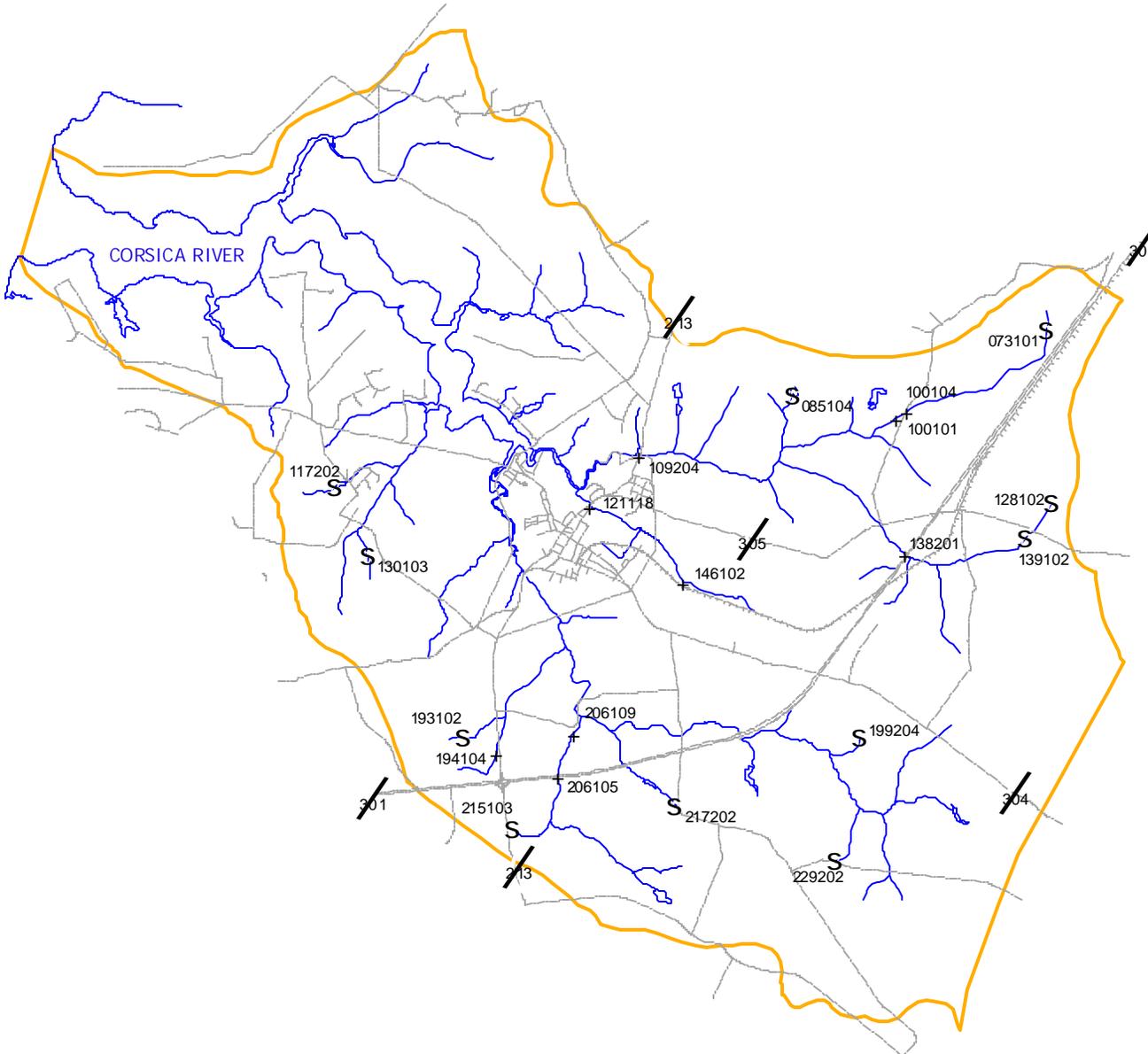


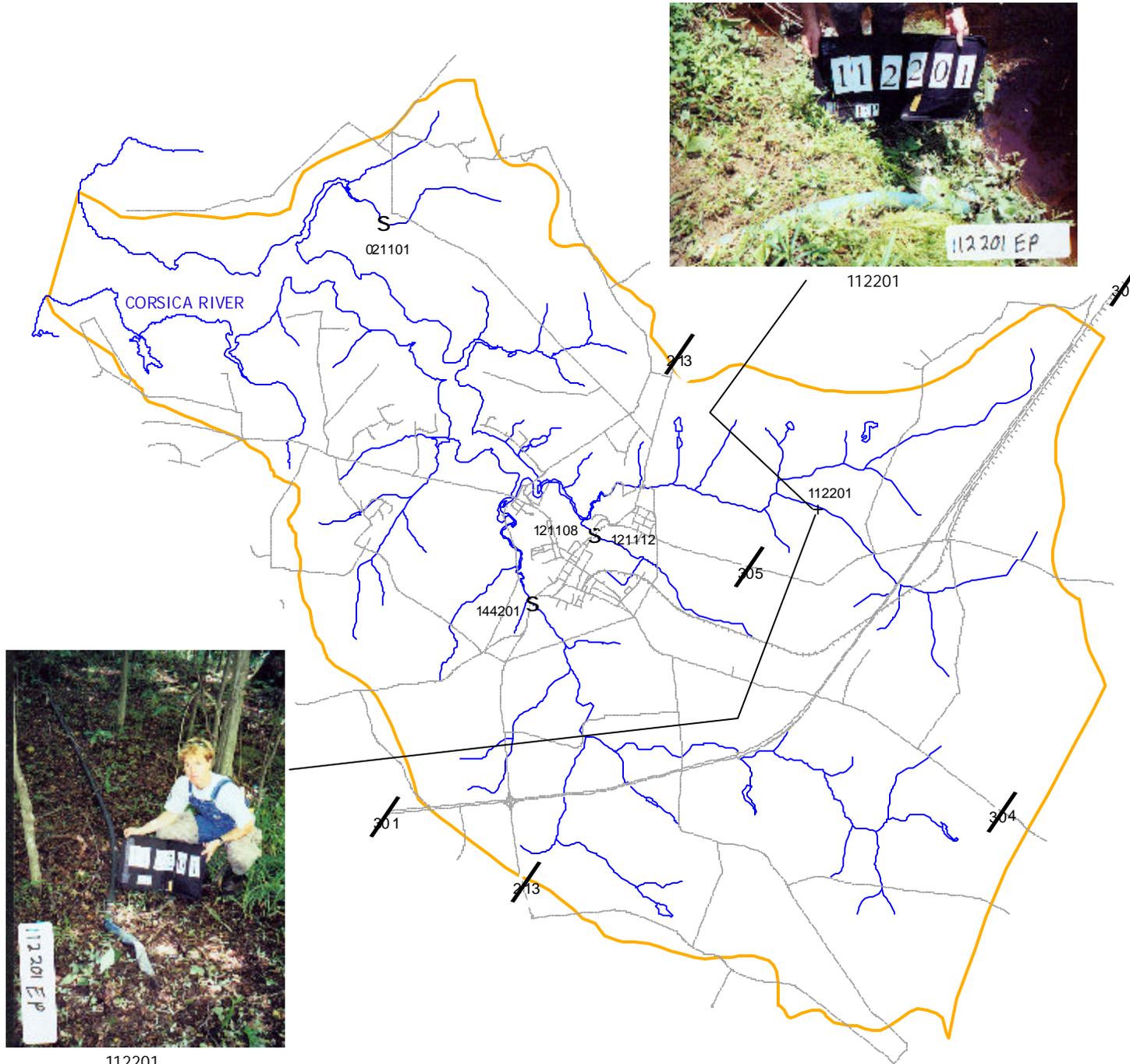
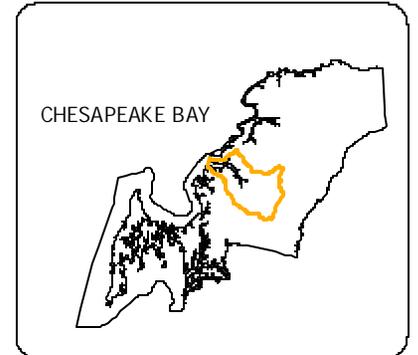
Table 3b - Channel Alterations

Problem	Site	Date	Type	Bottom Width (ft)	Length (ft)	Sedimentation	Veg in Channel	Road Crossing	Length Above (ft)	Length Below (ft)	Severity	Correctability	Access
Channel Alteration	100101	06/09/2003	Corrugated Pipe	10	20	Yes	No	Both	8	8	4	2	2
Channel Alteration	100104	06/09/2003	Rip-rap	5	100	No	Yes	Below	0	40	4	4	2
Channel Alteration	109204	06/03/2003	Concrete	2	30	No	No	Both	3	3	4	5	1
Channel Alteration	121118	05/28/2003	Concrete	2	100	Yes	Yes	Above	75	0	4	5	1
Channel Alteration	138201	06/09/2003	Concrete	8	170	Yes	No	Both	15	15	4	4	1
Channel Alteration	146102	06/03/2003	Rip-rap	3	300	Yes	No	No	0	0	4	4	2
Channel Alteration	194104	06/17/2003	Gabion	3	30	No	No	No	0	0	4	3	2
Channel Alteration	206105	06/12/2003	Concrete	12	150	Yes	Yes	Both	15	15	4	5	2
Channel Alteration	206109	06/12/2003	Metal Pipe	6	30	No	No	Both	5	5	4	4	2
Channel Alteration	073101	06/25/2003	Earth Channel	2	800	Yes	Yes	Below	0	8	5	2	2
Channel Alteration	085104	05/12/2003	Earth Channel	1.5	700	Yes	Yes	No	0	0	5	2	3
Channel Alteration	117202	06/24/2003	Earth Channel	1.5	600	Yes	No	No	0	0	5	4	2
Channel Alteration	128102	06/11/2003	Earth Channel	2	500	No	Yes	No	0	0	5	3	2
Channel Alteration	130103	06/24/2003	Earth Channel	3	5	No	Yes	No	0	0	5	2	2
Channel Alteration	139102	06/11/2003	Earth Channel	3	250	Yes	No	No	0	0	5	3	2
Channel Alteration	193102	06/17/2003	Earth Channel	3	700	Yes	Yes	No	0	0	5	4	2
Channel Alteration	199204	06/11/2003	Earth Channel	1.5	600	Yes	Yes	No	0	0	5	3	3
Channel Alteration	215103	06/12/2003	Earth Channel	2	300	Yes	No	No	0	0	5	3	2
Channel Alteration	217202	06/17/2003	Earth Channel	1.5	800	Yes	Yes	No	0	0	5	2	1
Channel Alteration	229202	06/11/2003	Earth Channel	2	0	Yes	Yes	No	0	0	5	2	1

**CORSICA RIVER WATERSHED  
SCA SURVEY RESULTS**

**Figure 9c  
EXPOSED PIPES**

QUEEN ANNE'S COUNTY  
MARYLAND



**Exposed Pipes**

- # Very Severe
- Severe
- 3 Moderate
- + Low Severity
- S Minor

- Roads
- Streams
- Watershed Boundary



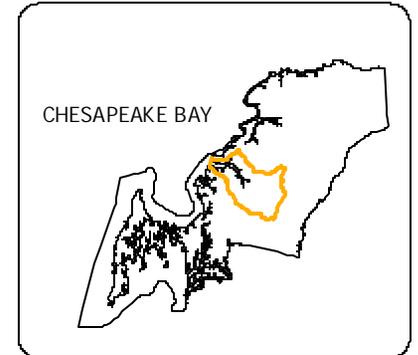
Table 3c - Exposed Pipes

Problem	Site	Date	Location of Pipe	Type	Diameter(in)	Length(ft)	Purpose	Discharge	Color	Odor	Severity	Correctability	Access
Exposed Pipe	021101	06/24/2003	Exposed Across Bottom of Stream	Metal	3	8	Unknown	No			5	2	1
Exposed Pipe	112201	06/09/2003	Exposed Along Stream Bank	Plastic	2	300	Unknown	No			4	2	1
Exposed Pipe	121112	05/28/2003	Exposed Along Stream Bank	Metal	6	15	Unknown	No			5	5	1
Exposed Pipe	144201	06/12/2003	Exposed Along Bottom of Bridge	Metal	8	30	Unknown	No			5	2	1

**CORSICA RIVER WATERSHED  
SCA SURVEY RESULTS**

**Figure 9d  
EROSION SITES**

QUEEN ANNE'S COUNTY  
MARYLAND



**Erosion Sites**

- # Very Severe
- Severe
- 3 Moderate
- + Low Severity
- S Minor

 Roads  
 Streams  
 Watershed Boundary

N



1 0 1 Miles




021103



160102



138202



Table 3d - Erosion Sites

Problem	Site	Date	Type	Possible Cause	Length(ft)	Height(ft)	Landuseight	Landuseleft	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion Site	021103	06/25/2003	Widening	Natural	1037	4	Forest	Forest	No		1	2	2
Erosion Site	138202	06/09/2003	Widening	Below Channelization	7230	4	Forest	Forest	No		1	5	4
Erosion Site	160102	06/03/2003	Widening	Below Road Crossing	3430	4	Crop Field	Forest	No		1	4	2
Erosion Site	061101	06/24/2003	Widening	Bend at Steep Slope	4380	1	Forest	Forest	No		2	2	4
Erosion Site	066203	07/07/2003	Downcutting	Bend at Steep Slope	1000	1.5	Forest	Forest	No		2	2	4
Erosion Site	091203	06/24/2003	Downcutting	Bend at Steep Slope	3200	1	Forest	Forest	No		2	2	2
Erosion Site	098104	05/12/2003	Widening	Bend at Steep Slope	1720	2	Forest	Forest	No		2	3	4
Erosion Site	109102	05/27/2003	Widening	Land Use Change Upstream	1720	3	Forest	Forest	No		2	4	3
Erosion Site	109203	06/03/2003	Widening	Bend at Steep Slope	1480	2	Forest	Forest	No		2	3	2
Erosion Site	110101	05/27/2003	Widening	Bend at Steep Slope	1390	1	Forest	Forest	No		2	2	3
Erosion Site	110201	06/03/2003	Widening	Bend at Steep Slope	3080	2	Forest	Forest	No		2	3	4
Erosion Site	118101	06/24/2003	Widening	Natural	2060	2.5	Lawn	Forest	No		2	2	2
Erosion Site	124201	06/09/2003	Widening	Bend at Steep Slope	2280	2	Forest	Forest	No		2	4	3
Erosion Site	138101	06/11/2003	Widening	Bend at Steep Slope	1725	3	Crop Field	Crop Field	No		2	3	3
Erosion Site	143202	06/17/2003	Widening	Below Road Crossing	4600	3	Forest	Forest	No		2	5	1
Erosion Site	146103	06/03/2003	Widening	Bend at Steep Slope	3060	2	Forest	Forest	No		2	3	4
Erosion Site	149201	06/09/2003	Widening	Land Use Change Upstream	1715	1	Forest	Forest	No		2	2	4
Erosion Site	156203	06/17/2003	Widening	Below Road Crossing	1630	2	Pasture	Pasture	No		2	2	2
Erosion Site	195201	06/17/2003	Widening	Below Road Crossing	1000	1	Forest	Forest	No		2	3	3
Erosion Site	195205	06/17/2003	Widening	Below Road Crossing	3700	1	Forest	Forest	No		2	3	4
Erosion Site	054102	07/01/2003	Widening	Bend at Steep Slope	470	4	Crop Field	Crop Field	No		3	2	3
Erosion Site	054103	07/01/2003	Widening	Bend at Steep Slope	300	4	Crop Field	Crop Field	No		3	3	3
Erosion Site	054104	07/01/2003	Widening	Bend at Steep Slope	475	4	Crop Field	Crop Field	No		3	3	3
Erosion Site	066202	07/01/2003	Downcutting	Bend at Steep Slope	700	4	Forest	Forest	No		3	3	3
Erosion Site	133101	06/03/2003	Widening	Bend at Steep Slope	375	5	Forest	Forest	No		3	4	2
Erosion Site	134105	06/03/2003	Widening	Bend at Steep Slope	570	4	Forest	Forest	No		3	4	2
Erosion Site	150101	06/11/2003	Widening	Bend at Steep Slope	480	4	Crop Field	Crop Field	No		3	3	3
Erosion Site	005102	06/25/2003	Widening	Bend at Steep Slope	900	3	Forest	Forest	No		4	2	2

Table 3d - Erosion Sites

Problem	Site	Date	Type	Possible Cause	Length(ft)	Height(ft)	Landuseight	Landuseleft	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion Site	005104	06/25/2003	Widening	Bend at Steep Slope	100	6	Forest	Forest	No		4	2	2
Erosion Site	021102	06/25/2003	Widening	Bend at Steep Slope	15	5	Forest	Forest	No		4	2	2
Erosion Site	053201	07/01/2003	Downcutting	Below Road Crossing	620	2	Crop Field	Forest	No		4	2	3
Erosion Site	054106	07/01/2003	Widening	Bend at Steep Slope	260	5	Crop Field	Crop Field	No		4	3	3
Erosion Site	085105	05/12/2003	Widening	Unknown	400	3	Crop Field	Crop Field	No		4	3	3
Erosion Site	096212	06/03/2003	Widening	Bend at Steep Slope	770	3	Forest	Forest	No		4	3	3
Erosion Site	099101	06/09/2003	Widening	Bend at Steep Slope	75	12	Crop Field	Forest	No		4	3	2
Erosion Site	099103	06/09/2003	Widening	Bend at Steep Slope	50	5	Crop Field	Forest	No		4	2	2
Erosion Site	099105	06/09/2003	Widening	Bend at Steep Slope	20	4	Crop Field	Forest	No		4	1	2
Erosion Site	099106	06/25/2003	Widening	Bend at Steep Slope	25	4	Forest	Forest	No		4	2	2
Erosion Site	105202	06/24/2003	Widening	Bend at Steep Slope	800	2	Forest	Lawn	No		4	2	2
Erosion Site	109202	06/03/2003	Widening	Bend at Steep Slope	310	2	Forest	Forest	No		4	1	5
Erosion Site	111101	06/09/2003	Widening	Bend at Steep Slope	50	5	Pasture	Forest	No		4	2	3
Erosion Site	111103	06/09/2003	Widening	Bend at Steep Slope	50	10	Crop Field	Forest	No		4	2	3
Erosion Site	118105	06/24/2003	Widening	Bend at Steep Slope	20	5	Forest	Forest	No		4	4	4
Erosion Site	121101	05/28/2003	Widening	Land Use Change Upstream	600	3	Pasture	Pasture	No		4	3	2
Erosion Site	129101	06/24/2003	Widening	Natural	430	2	Pasture	Crop Field	No		4	2	1
Erosion Site	134103	06/03/2003	Widening	Natural	500	2	Forest	Forest	No		4	3	2
Erosion Site	144102	06/17/2003	Widening	Bend at Steep Slope	45	5	Crop Field	Crop Field	No		4	2	3
Erosion Site	158201	06/12/2003	Downcutting	Bend at Steep Slope	500	1	Forest	Forest	No		4	1	3
Erosion Site	170102	06/17/2003	Widening	Natural	545	2	Crop Field	Crop Field	No		4	3	3
Erosion Site	182101	06/17/2003	Widening	Bend at Steep Slope	550	3	Crop Field	Crop Field	No		4	3	3
Erosion Site	198201	06/11/2003	Widening	Bend at Steep Slope	500	1	Forest	Forest	No		4	2	2
Erosion Site	207203	06/17/2003	Widening	Below Road Crossing	560	1	Forest	Forest	No		4	2	2
Erosion Site	091201	06/24/2003	Downcutting	Bend at Steep Slope	140	2	Forest	Forest	No		5	2	3
Erosion Site	098103	05/12/2003	Headcutting	Instream Debris	120	3	Crop Field	Crop Field	No		5	1	3
Erosion Site	138106	06/11/2003	Widening	Bend at Steep Slope	290	3	Crop Field	Crop Field	No		5	3	2
Erosion Site	139107	06/11/2003	Widening	Natural	30	3	Crop Field	Crop Field	No		5	2	2

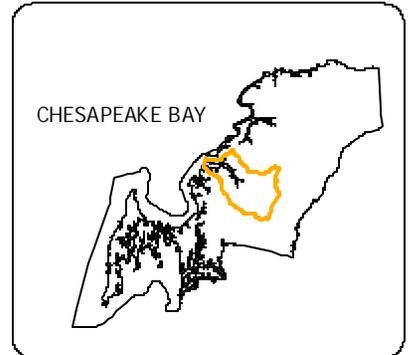
Table 3d - Erosion Sites

Problem	Site	Date	Type	Possible Cause	Length(ft)	Height(ft)	Landuseright	Landuseleft	Infrastructure Threatened?	Describe	Severity	Correctability	Access
Erosion Site	163101	06/11/2003	Widening	Natural	230	3	Crop Field	Crop Field	No		5	3	3
Erosion Site	017002	10/6/2003									4	1	3
Erosion Site	027001	10/6/2003									4		3
Erosion Site	036001	10/6/2003									5		3
Erosion Site	036003	10/6/2003									5	3	4
Erosion Site	038002	10/6/2003									3	3	3
Erosion Site	048001	10/6/2003									4	4	3
Erosion Site	049002	10/6/2003									2	4	3

**CORSICA RIVER WATERSHED  
SCA SURVEY RESULTS**

**Figure 9e  
FISH BARRIERS**

QUEEN ANNE'S COUNTY  
MARYLAND



121122

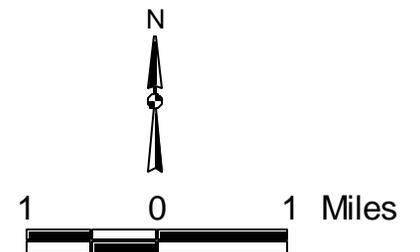


Table 3e - Fish Barriers

Problem	Site	Date	Blockage	Type	Reason	Drop(ft)	Depth(ft)	Severity	Correctability	Access
Fish Barrier	147102	06/03/2003	Temporary	Natural Falls	Too High	8	5	1	3	
Fish Barrier	139108	06/11/2003	Temporary	Natural Falls	Too High	2	5	2	3	
Fish Barrier	121123	05/28/2003	Temporary	Beaver Dam	Too High	3	5	1	2	
Fish Barrier	111201	06/09/2003	Partial	Natural Falls	Too High	3	5	2	2	
Fish Barrier	079201	06/24/2003	Temporary	Natural Falls	Too High	4	5	2	3	
Fish Barrier	124205	06/09/2003	Temporary	Natural Falls	Too High	4	5	1	3	
Fish Barrier	125202	06/09/2003	Partial	Natural Falls	Too High	5	5	2	2	
Fish Barrier	096204	06/03/2003	Temporary	Natural Falls	Too High	6	5	1	2	
Fish Barrier	111203	06/09/2003	Temporary	Natural Falls	Too High	6	5	1	4	
Fish Barrier	139101	06/11/2003	Temporary	Natural Falls	Too High	6	5	1	2	
Fish Barrier	054101	07/01/2003	Total	Road Crossing	Too High	6	4	4	2	
Fish Barrier	090101	06/24/2003	Total	Road Crossing	Too High	6	4	2	1	
Fish Barrier	171201	06/12/2003	Temporary	Beaver Dam	Too High	8	5	2	4	
Fish Barrier	124203	06/09/2003	Temporary	Natural Falls	Too High	8	5	5	3	
Fish Barrier	182103	06/17/2003	Temporary	Natural Falls	Too High	8	5	2	3	
Fish Barrier	092201	06/24/2003	Total	Natural Falls	Too High	8	5	3	4	
Fish Barrier	137202	06/09/2003	Total	Road Crossing	Too High	8	3	3	1	
Fish Barrier	105204	06/24/2003	Total	Road Crossing	Too High	10	4	3	1	
Fish Barrier	110104	05/27/2003	Temporary	Beaver Dam	Too High	12	4	2	5	
Fish Barrier	121125	05/28/2003	Temporary	Beaver Dam	Too High	12	4	4	3	
Fish Barrier	088101	06/09/2003	Temporary	Natural Falls	Too High	12	5	2	3	
Fish Barrier	150108	06/11/2003	Temporary	Natural Falls	Too High	12	5	1	2	
Fish Barrier	163102	06/11/2003	Temporary	Natural Falls	Too High	12	5	3	3	
Fish Barrier	109205	06/03/2003	Total	Natural Falls	Too High	12	5	2	3	
Fish Barrier	195203	06/17/2003	Total	Natural Falls	Too High	12	5	3	4	
Fish Barrier	158203	06/12/2003	Total	Pipe Crossing	Too High	12	4	4	3	
Fish Barrier	054105	07/01/2003	Total	Road Crossing	Too High	12	4	5	1	
Fish Barrier	104201	06/24/2003	Total	Road Crossing	Too High	12	4	4	2	
Fish Barrier	207202	06/17/2003	Total	Road Crossing	Too High	12	4	4	2	
Fish Barrier	139104	06/11/2003	Total	Instream Pond	Too High	18	5	3	2	
Fish Barrier	144105	06/17/2003	Partial	Natural Falls	Too High	18	5	2	2	

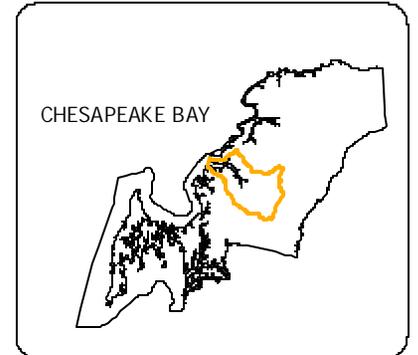
Table 3e - Fish Barriers

Problem	Site	Date	Blockage	Type	Reason	Drop(ft)	Depth(ft)	Severity	Correctability	Access
Fish Barrier	186201	06/11/2003	Temporary	Natural Falls	Too High	18		5	5	1
Fish Barrier	143201	06/17/2003	Total	Road Crossing	Too High	18		4	4	1
Fish Barrier	109206	06/03/2003	Total	Beaver Dam	Too High	24		5	1	3
Fish Barrier	144107	06/17/2003	Partial	Natural Falls	Too High	24		5	3	2
Fish Barrier	040102	07/01/2003	Total	Natural Falls	Too High	24		5	3	3
Fish Barrier	182109	06/17/2003	Total	Road Crossing	Too High	24		4	4	1
Fish Barrier	066201	07/01/2003	Total	Natural Falls	Too High	30		5	1	2
Fish Barrier	215101	06/12/2003	Total	Instream Pond	Too High	36		4	4	2
Fish Barrier	053202	07/01/2003	Total	Road Crossing	Too High	36		4	4	1
Fish Barrier	139105	06/11/2003	Total	Instream Pond	Too High	36		4	4	2
Fish Barrier	156202	06/17/2003	Total	Road Crossing	Too High	48		4	4	2
Fish Barrier	121122	05/28/2003	Total	Dam	Too High	60		1	5	1
Fish Barrier	194105	06/17/2003	Total	Instream Pond	Too High	60		4	5	2
Fish Barrier	208101	06/17/2003	Total	Instream Pond	Too High	60		4	5	2
Fish Barrier	234101	06/12/2003	Total	Instream Pond	Too High	60		4	5	2
Fish Barrier	085101	05/12/2003	Total	Instream Pond	Too High	120		5	5	2
Fish Barrier	096208	06/03/2003	Total	Pipe Crossing	Too High	144		4	5	3
Fish Barrier	207205	06/17/2003	Total	Channelized	Too Shallow		0.5	4	5	1
Fish Barrier	005103	06/25/2003	Temporary	Natural Falls	Too High	24		5	2	3
Fish Barrier	129102	06/24/2003	Temporary	Natural Falls	Too High	24		5	2	2
Fish Barrier	005101	06/24/2003	Partial	Pipe Crossing	Too Shallow		1	4	2	1

**CORSICA RIVER WATERSHED  
SCA SURVEY RESULTS**

**Figure 9f  
INADEQUATE BUFFERS**

QUEEN ANNE'S COUNTY  
MARYLAND



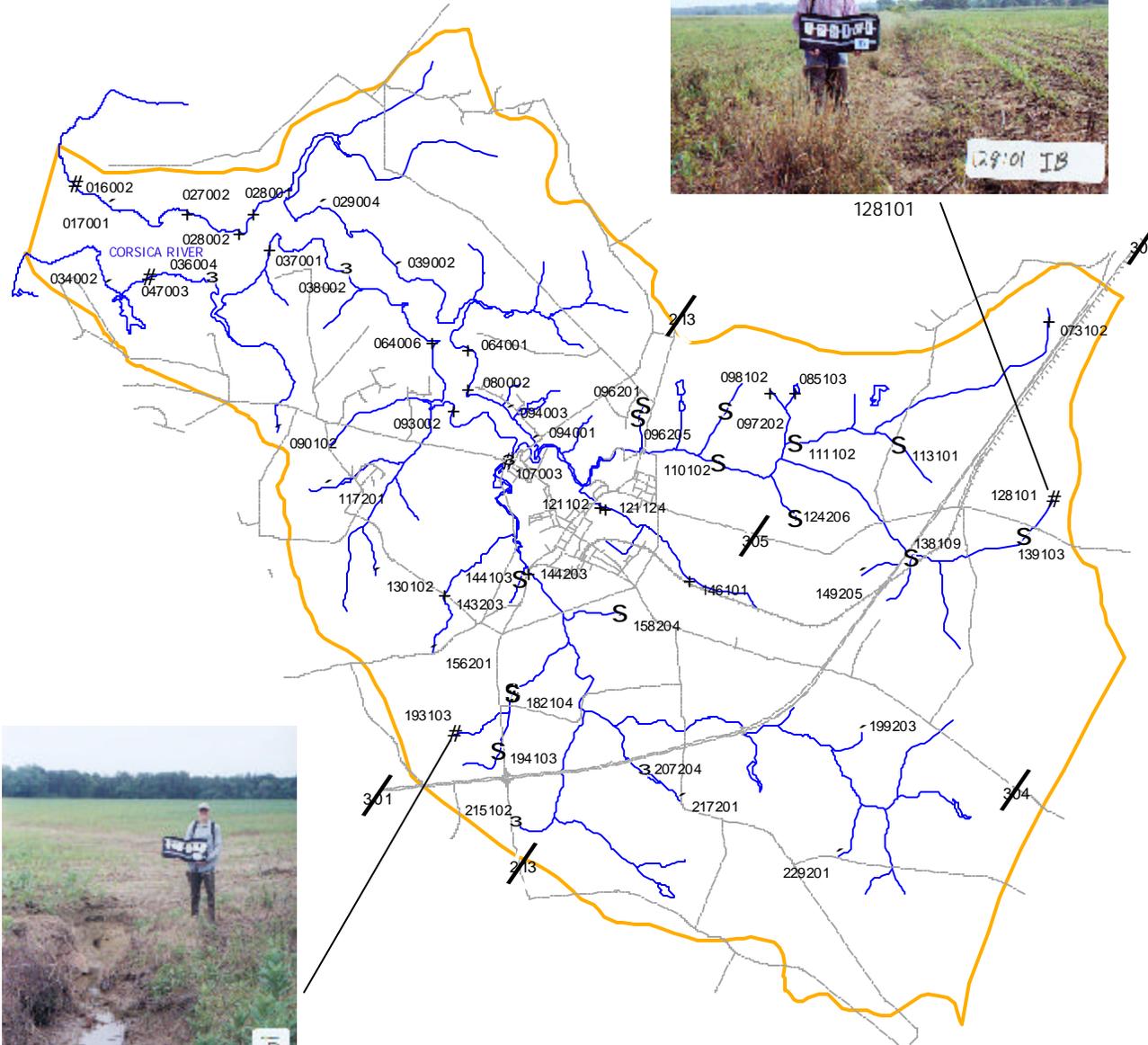
**Inadequate Buffers**

- # Very Severe
- Severe
- 3 Moderate
- + Low Severity
- S Minor

- Roads
- Streams
- Watershed Boundary



128101



193103

Table 3f - Inadequate Buffers

Problem	Site	Date	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	LandUseLeft	LandUseRight	RecentlyEstablished	Livestock	Livestock Type	Severity	Correctability	Access	Wetland
Inadequate Buffer	229201	06/11/2003	Both	Both	10	10	2165	2165	Crop Field	Crop Field	No	No		2	3	1	4
Inadequate Buffer	073102	06/24/2003	Both	Both	2	2	670	670	Crop Field	Crop Field	No	No		4	2	2	5
Inadequate Buffer	085103	05/12/2003	Both	Neither	20	20	770	770	Shrubs & Small Trees	Shrubs & Small Trees	Yes	No		4	2	3	2
Inadequate Buffer	090102	06/24/2003	Both	Neither	5	5	1350	1350	Crop Field	Crop Field	No	No		2	3	2	5
Inadequate Buffer	096201	06/03/2003	Right	Neither		10		115	Forest	Lawn	No	No		5	2	2	5
Inadequate Buffer	096205	06/03/2003	Left	Left	20		110		Lawn	Forest	No	No		5	2	3	3
Inadequate Buffer	097202	06/03/2003	Right	Neither		10		70	Forest	Construction Site	No	No		5	2	4	5
Inadequate Buffer	098102	05/12/2003	Right	Neither		15		860	Forest	Crop Field	No	No		4	2	3	3
Inadequate Buffer	110102	05/27/2003	Right	Neither		15		300	Forest	Crop Field	No	No		5	1	4	4
Inadequate Buffer	111102	06/09/2003	Left	Neither	30		115		Crop Field	Forest	No	No		5	3	3	4
Inadequate Buffer	113101	06/25/2003	Both	Both	15	0	180	180	Crop Field	Lawn	No	No		5	2	1	5
Inadequate Buffer	117201	06/24/2003	Both	Both	2	2	1175	1175	Crop Field	Crop Field	No	No		2	3	2	5
Inadequate Buffer	121102	05/28/2003	Both	Both	10	10	980	400	Pasture	Pasture	No	No		4	4	2	4
Inadequate Buffer	121124	05/28/2003	Right	Neither		10		270	Forest	Lawn	No	No		4	1	2	5
Inadequate Buffer	124206	06/09/2003	Both	Neither	20	20	300	300	Crop Field	Crop Field	No	No		5	2	2	4
Inadequate Buffer	128101	06/11/2003	Both	Both	0	0	1615	1615	Crop Field	Crop Field	No	No		1	4	2	2
Inadequate Buffer	130102	06/24/2003	Both	Both	3	7	1000	1000	Crop Field	Crop Field	No	No		2	2	2	5
Inadequate Buffer	138109	06/11/2003	Both	Both	0	0	150	150	Crop Field	Crop Field	No	No		5	3	2	4
Inadequate Buffer	139103	06/11/2003	Right	Neither		15		260	Crop Field	Crop Field	No	No		5	2	2	3
Inadequate Buffer	143203	06/17/2003	Both	Neither	10	10	340	340	Lawn	Lawn	No	No		4	3	1	3
Inadequate Buffer	144103	06/17/2003	Right	Neither		15		130	Crop Field	Lawn	No	No		5	3	2	3
Inadequate Buffer	144203	06/12/2003	Both	Both	10	10	350	350	Shrubs & Small Trees	Shrubs & Small Trees	No	No		4	2	1	4
Inadequate Buffer	146101	06/03/2003	Left	Left	0		140		Railroad Track	Forest	No	No		4	4	2	5
Inadequate Buffer	149205	06/09/2003	Both	Neither	6	6	850	850	Crop Field	Crop Field	No	No		2	3	2	4
Inadequate Buffer	156201	06/17/2003	Both	Neither	3	3	870	870	Pasture	Pasture	No	No		2	3	1	3
Inadequate Buffer	158204	06/12/2003	Both	Neither	15	15	850	850	Crop Field	Crop Field	No	No		5	3	3	4
Inadequate Buffer	182104	06/17/2003	Right	Right		0		75	Crop Field	Crop Field	No	No		5	3	2	4
Inadequate Buffer	182106	06/17/2003	Both	Both	0	0	85	90	Lawn	Lawn	No	No		5	3	2	3
Inadequate Buffer	193103	06/17/2003	Both	Both	0	0	1575	1575	Crop Field	Crop Field	No	No		1	3	2	2

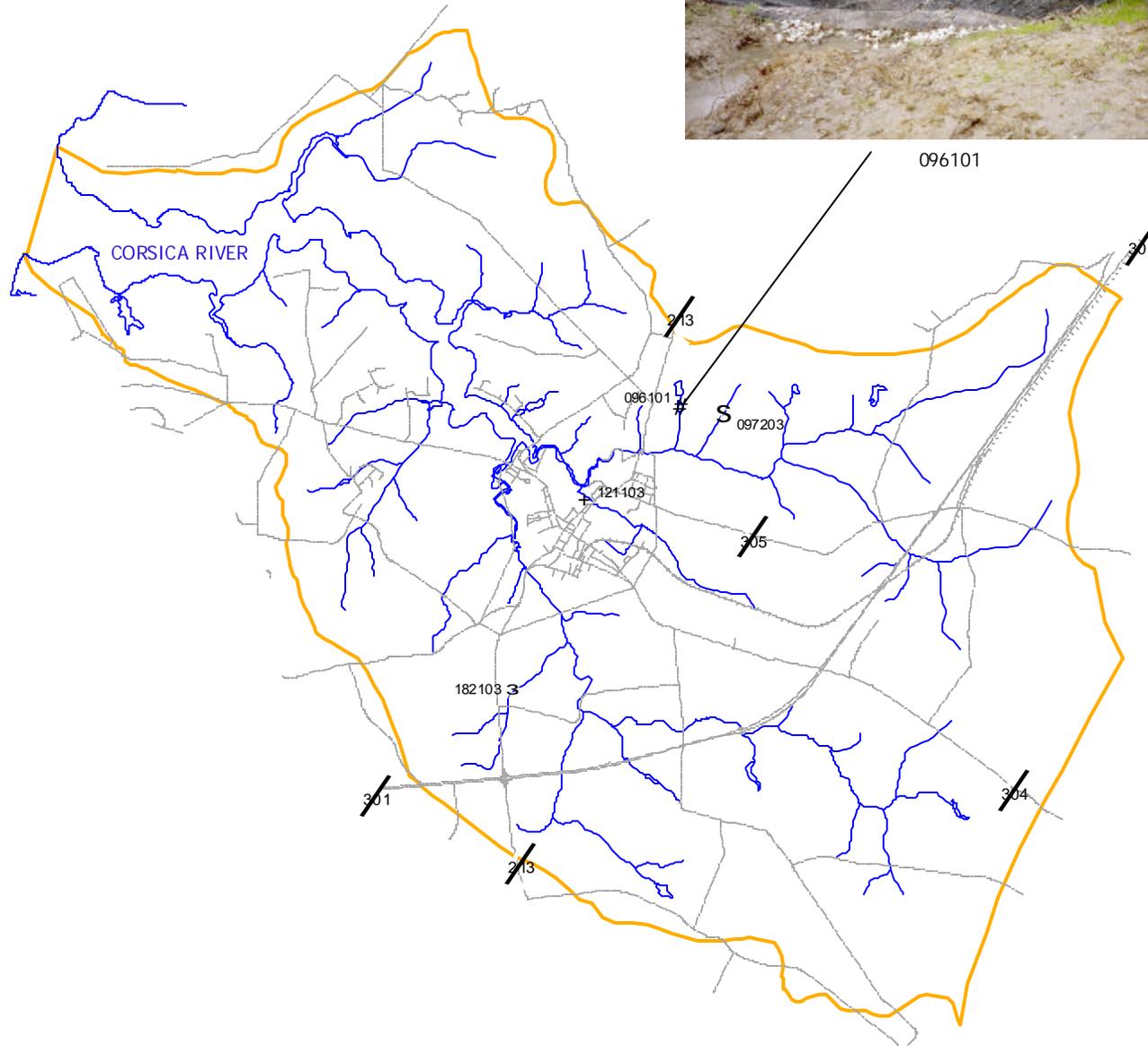
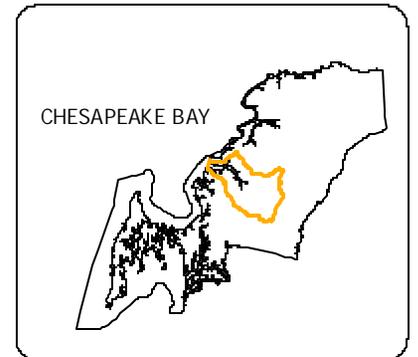
Table 3f - Inadequate Buffers

Problem	Site	Date	Sides	Unshaded	WidthLeft(ft)	WidthRight(ft)	LengthLeft(ft)	LengthRight(ft)	LandUseLeft	LandUseRight	Recentlyestablished	Livestock	Livestock Type	Severity	Correctability	Access	Wetland
Inadequate Buffer	194103	03/17/2003	Both	Neither	20	30	105	105	Crop Field	Crop Field	No	No		5	3	2	2
Inadequate Buffer	199203	06/11/2003	Both	Both	10	10	1220	1220	Crop Field	Crop Field	No	No		2	3	3	4
Inadequate Buffer	207204	06/17/2003	Right	Neither		10		975	Forest	Crop Field	No	No		3	3	2	3
Inadequate Buffer	215102	06/12/2003	Both	Both	0	0	785	785	Crop Field	Pasture	No	Yes	Horses	3	3	2	3
Inadequate Buffer	217201	06/17/2003	Both	Both	1	1	1050	1050	Crop Field	Crop Field	No	No		2	3	1	3
Inadequate buffer	016002	10/6/2003												1	2	3	3
Inadequate buffer	017001	10/6/2003												2	1	3	1
Inadequate buffer	027002	10/6/2003												4	1	3	3
Inadequate buffer	028001	10/6/2003												4	2	3	1
Inadequate buffer	028002	10/6/2003												4	1	3	1
Inadequate buffer	029004	10/6/2003												2	1	2	1
Inadequate buffer	034002	10/6/2003												2	2	3	3
Inadequate buffer	036004	10/6/2003												3	3	2	2
Inadequate buffer	037001	10/6/2003												4	1	2	2
Inadequate buffer	038002	10/6/2003												3	1	2	2
Inadequate buffer	039002	10/6/2003												2	2	3	2
Inadequate buffer	047003	10/6/2003												1			
Inadequate buffer	064001	10/6/2003												4	2	2	3
Inadequate buffer	064006	10/6/2003												4	1	2	4
Inadequate buffer	080002	10/6/2003												4	2	2	3
Inadequate buffer	093002	10/6/2003												4	1	2	3
Inadequate buffer	094001	10/6/2003												2	2	2	2
Inadequate buffer	094003	10/6/2003												2	2	2	2
Inadequate buffer	107001	10/6/2003												3	4	1	2
Inadequate buffer	107003	10/6/2003												1	1	2	3

**CORSICA RIVER WATERSHED  
SCA SURVEY RESULTS**

**Figure 9g  
IN/NEAR STREAM  
CONSTRUCTION**

QUEEN ANNE'S COUNTY  
MARYLAND



**In/Near Stream Construction**

- # Very Severe
- Severe
- 3 Moderate
- + Low Severity
- S Minor

- Roads
- Streams
- Watershed Boundary

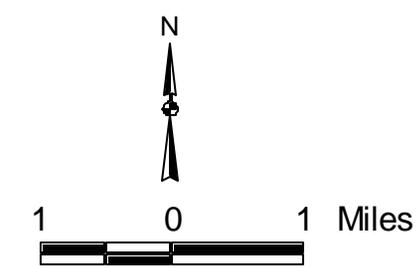


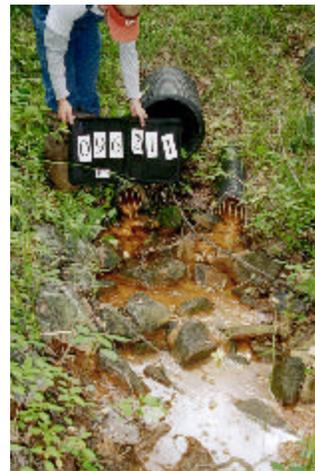
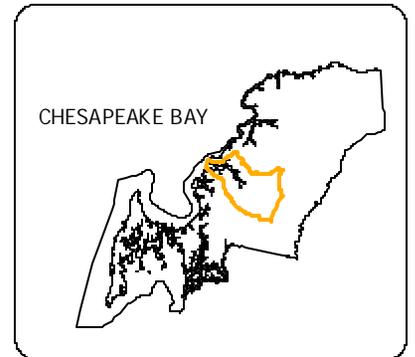
Table 3g - In/Near Stream Construction

<b>Problem</b>	<b>Site</b>	<b>Date</b>	<b>Type of Activity</b>	<b>Sediment Control</b>	<b>Why, if inadequate</b>	<b>Excess Sediment?</b>	<b>Length</b>	<b>Company</b>	<b>Location</b>	<b>Severity</b>
In/Near Stream Construction	096101	05/27/2003	Development	Adequate		Yes	1700	Inc.	Head of Tributary off Three Bridges Branch	1
In/Near Stream Construction	097203	06/03/2003	Development	Adequate		No	1800	Barkers	Tributary of Three Bridges Branch	5
In/Near Stream Construction	121103	05/28/2003	Development	Adequate		No	500	Unknown	Gravel Run under 213 Dam	4
In/Near Stream Construction	182105	06/17/2003	Logging	Inadequate	Present	Yes	150	Unknown		3

**CORSICA RIVER WATERSHED  
SCA SURVEY RESULTS**

**Figure 9h  
PIPE OUTFALL**

QUEEN ANNE'S COUNTY  
MARYLAND



121104

121104 PO



121106

121106 PO

**Pipe Outfalls**

- # Very Severe
- Severe
- 3 Moderate
- + Low Severity
- S Minor

- Roads
- Streams
- Watershed Boundary



Table 3h - Pipe Outfalls

Problem	Site	Date	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Purpose	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	040101	07/01/2003	unknown	Concrete Channel	Left Bank	12	0	Unknown	No			5	-1	-1
Pipe Outfall	121109	05/28/2003	Stormwater	Concrete Channel	Left Bank	0	6	Stormwater	Yes	Clear	None	4	5	1
Pipe Outfall	121110	05/28/2003	Stormwater	Concrete Channel	Left Bank	24	0	Stormwater	Yes	Clear	None	4	5	1
Pipe Outfall	121114	05/28/2003	Stormwater	Concrete Channel	Left Bank	0	2	Stormwater	No			5	5	1
Pipe Outfall	130101	06/24/2003	Agricultural	Concrete Channel	Right Bank	36	3	Stormwater	Yes	Clear	None	4	2	2
Pipe Outfall	138102	06/11/2003	Stormwater	Concrete Channel	Right Bank	0	3	Stormwater	No			5	3	1
Pipe Outfall	140101	06/11/2003	Stormwater	Concrete Channel	Left Bank	18	2	Stormwater	Yes	Clear	None	4	2	1
Pipe Outfall	150104	06/11/2003	Stormwater	Concrete Channel	Right Bank	24	3	Stormwater	No			4	3	2
Pipe Outfall	194106	06/17/2003	Stormwater	Concrete Channel	Right Bank	36	4	Stormwater	No			5	3	2
Pipe Outfall	206101	06/12/2003	Agricultural	Concrete Channel	Left Bank	8	0	Unknown	Yes	Clear	None	3	2	2
Pipe Outfall	207208	06/17/2003	Stormwater	Concrete Channel	Left Bank	0	4	Stormwater	Yes	Clear	None	4	2	1
Pipe Outfall	096209	06/03/2003	Stormwater	Concrete Pipe	Left Bank	8	0	Stormwater	No			5	5	3
Pipe Outfall	121111	05/28/2003	Stormwater	Concrete Pipe	both sides	4	0	Stormwater	Yes	Medium Brown	None	2	5	1
Pipe Outfall	160101	06/03/2003	Stormwater	Concrete Pipe	Stream	18	3	Stormwater	Yes	Clear	None	4	3	2
Pipe Outfall	160103	06/03/2003	Stormwater	Concrete Pipe	Left Bank	18	2	Stormwater	No			5	3	2
Pipe Outfall	096203	06/03/2003	Stormwater	Corrugated Metal	Left Bank	18	0	Stormwater	No			5	4	2
Pipe Outfall	096207	06/03/2003	Dam Outfall	Corrugated Metal	Stream	18	0	Dam Outfall	Yes	Clear	None	3	5	3
Pipe Outfall	100102	06/09/2003	Stormwater	Corrugated Metal	Left Bank	36	10	Stormwater	No			5	5	1
Pipe Outfall	100103	06/09/2003	Stormwater	Corrugated Metal	Left Bank	36	8	Stormwater	No			5	4	2
Pipe Outfall	100105	06/09/2003	Stormwater	Corrugated Metal	Right Bank	18	2	Stormwater	Yes	Clear	None	4	4	2
Pipe Outfall	121106	05/28/2003	Stormwater	Corrugated Metal	Left Bank	18	4	Stormwater	Yes	Medium Brown	Musky	1	5	2
Pipe Outfall	124204	06/09/2003	Stormwater	Corrugated Metal	Right Bank	24	0	Stormwater	Yes	Clear	None	4	5	3
Pipe Outfall	144101	06/17/2003	Unknown	Corrugated Metal	Right Bank	12	3	Unknown	No			5	4	3
Pipe Outfall	182110	06/17/2003	Stormwater	Corrugated Metal	Left Bank	12	1.5	Stormwater	No			5	3	1
Pipe Outfall	196201	06/17/2003	Stormwater	Corrugated Metal	Left Bank	18	3	Stormwater	Yes	Clear	None	4	3	1
Pipe Outfall	206107	06/12/2003	Stormwater	Corrugated Metal	Left Bank	16	0	Stormwater	Yes	Clear	None	4	5	2
Pipe Outfall	207206	06/17/2003	Stormwater	Corrugated Metal	Left Bank	18		Stormwater	No			5	1	1
Pipe Outfall	234102	06/12/2003	Agricultural	Corrugated Metal	Left Bank	8	2	Drainage-Crop	Yes	Clear	None	3	3	3
Pipe Outfall	091202	06/24/2003	Stormwater	Earth Channel	Left Bank	0	1	Stormwater	No			5	2	1
Pipe Outfall	182111	06/17/2003	Stormwater	Earth Channel	Right Bank	0	1.5	Stormwater	No			5	2	1
Pipe Outfall	206108	06/12/2003	Stormwater	Earth Channel	Right Bank	0	4	Stormwater	Yes	Clear	None	4	3	2
Pipe Outfall	096210	06/03/2003	Stormwater	Plastic	Right Bank	18	0	Stormwater	Yes	Clear	None	4	5	3
Pipe Outfall	096211	06/03/2003	unknown	Plastic	Right Bank	6	2	Unknown	Yes	Medium Brown	None	1	5	3
Pipe Outfall	111202	06/09/2003	Stormwater	Plastic	Right Bank	36	1	Stormwater	Yes	Clear	None	4	3	2
Pipe Outfall	121116	05/28/2003	Stormwater	Plastic	Both Sides	4	0	Stormwater	Yes	Medium Brown	None	3	5	1

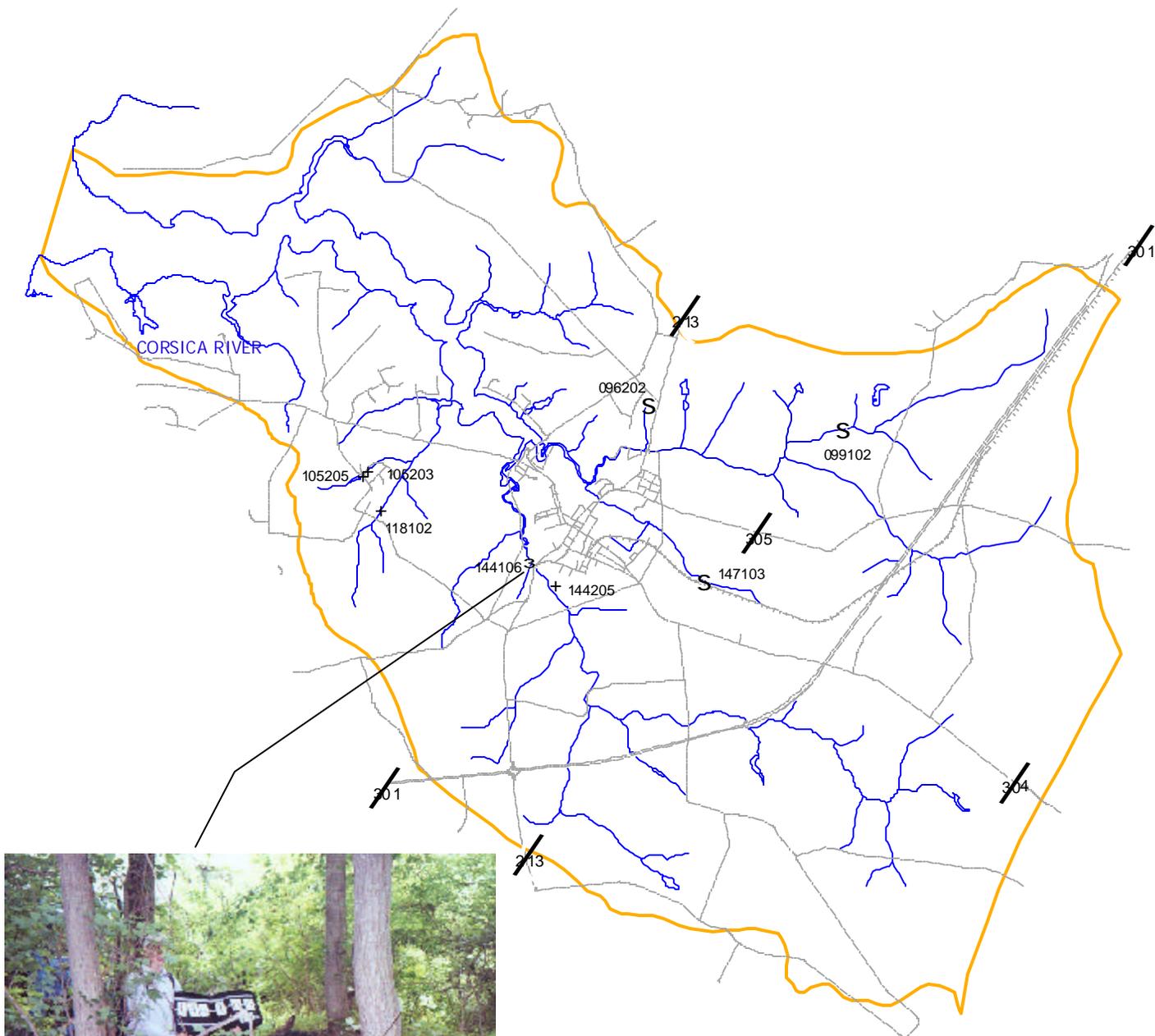
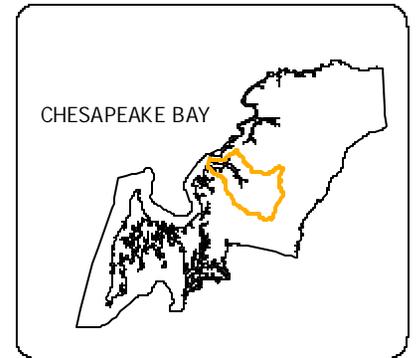
Table 3h - Pipe Outfalls

Problem	Site	Date	Outfall Type	Pipe Type	Location of Pipe	Diameter (in)	Channel Width	Purpose	Discharge	Color	Odor	Severity	Correctability	Access
Pipe Outfall	121117	05/28/2003	Stormwater	Plastic	Right Bank	18	0	Stormwater	Yes	Clear	None	4	5	1
Pipe Outfall	143204	06/17/2003	Unknown	Plastic	Left Bank	4	0	Unknown	Yes	Clear	None	3	2	1
Pipe Outfall	144204	06/12/2003	Restaurant	Plastic	Left Bank	1	0	Unknown	No			5	1	1
Pipe Outfall	149206	06/09/2003	Stormwater	Plastic	Left Bank	8	1	Stormwater	Yes	Clear	None	4	3	2
Pipe Outfall	170101	06/17/2003	Stormwater	Plastic	Left Bank	36	8	Sewage	Yes	Clear	None	4	5	3
Pipe Outfall	206106	06/12/2003	Stormwater	Plastic	Above Stream	12	0	Stormwater	Yes	Clear	None	4	5	2
Pipe Outfall	121104	05/28/2003	Sewage Overflow	Pipe	Left Bank	12	0	Sewage	No			1	5	2
Pipe Outfall	121115	05/28/2003	Stormwater	Pipe	Left Bank	18	0	Stormwater	No			5	5	1
Pipe Outfall	121119	05/28/2003	Pumping Station	Pipe	Left Bank	6	0	Stormwater	Yes	Clear	None	4	5	1
Pipe Outfall	121120	05/28/2003	Dam Outfall	Pipe	Stream	8	0	Dam Outfall	Yes	Clear	None	3	5	1
Pipe Outfall	121121	05/28/2003	Dam Outfalls	Pipe	Stream	12	0	Dam Outfall	Yes	Clear	None	3	5	1
Pipe Outfall	138103	06/11/2003	Stormwater	Pipe	Right Bank	4	0	Stormwater	No			5	3	1
Pipe Outfall	138104	06/11/2003	Stormwater	Pipe	Left Bank	5	0	Stormwater	No			5	3	1
Pipe Outfall	138105	06/11/2003	Stormwater	Pipe	Left Bank	5	0	Water Supply	Yes	Clear	None	4	3	1
Pipe Outfall	206103	06/12/2003	Stormwater	Pipe	Left Bank	6	0	Stormwater	Yes	Clear	None	4	5	2
Pipe Outfall	206104	06/12/2003	Stormwater	Pipe	Left Bank	6	0	Stormwater	Yes	Clear	None	4	5	2
Pipe Outfall	207201	06/17/2003	Agricultural	Pipe	Right Bank	12	0	Water Supply	No			5	1	2
Pipe Outfall	207207	06/17/2003	Stormwater	Pipe	Left Bank	4	0	Stormwater	Yes	Medium Brown	None	3	2	1
Pipe Outfall	144202	06/12/2003	Stormwater	Terra Cotta	Left Bank	18	0	Stormwater	No			5	1	1
Pipe Outfall	182102	06/17/2003	Unknown	Terra Cotta	Left Bank	6	0	Unknown	Yes	Clear	None	3	3	3
Pipe Outfall	134104	06/03/2003	Stormwater	Terra Cotta	Left Bank	6	10	Stormwater	Yes	Clear	None	4	2	2

**CORSICA RIVER WATERSHED  
SCA SURVEY RESULTS**

**Figure 9i  
TRASH DUMPING**

QUEEN ANNE'S COUNTY  
MARYLAND



144106

**Trash Dumping**

- # Very Severe
- Severe
- 3 Moderate
- + Low Severity
- S Minor

 Roads  
 Streams  
 Watershed Boundary

N



1 0 1 Miles



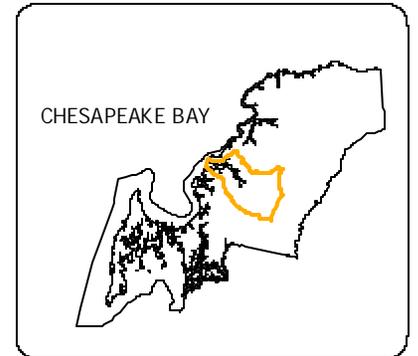
Table 3i - Trash Dumping

Problem	Site	Date	Type	Truckloads	Other measure	Extent	Volunteer Project?	Owner Type	Owner Name	Severity	Correctability	Access
Trash Dumping	144106	06/17/2003	Cars/Buses	30	40-50 Cars, junkyard	Large Area	No	Private		3	4	2
Trash Dumping	105203	06/24/2003	Residential	1		Single Site	Yes	Private		4	1	2
Trash Dumping	105205	06/24/2003	Industrial	2		Single Site	No	Unknown		4	2	2
Trash Dumping	118102	06/24/2003	Residential	1		Single Site	Yes	Private		4	2	2
Trash Dumping	144205	06/12/2003	Tires	3		Single Site	No	Unknown		4	4	3
Trash Dumping	096202	06/03/2003	Construction	3		Large Area	Yes	Unknown		5	2	2
Trash Dumping	099102	06/09/2003	Lumber/Building Materials	1		Single Site	Yes	Private		5	1	3
Trash Dumping	147103	06/03/2003	Lumber	1		Single Site	Yes	Private		5	3	3

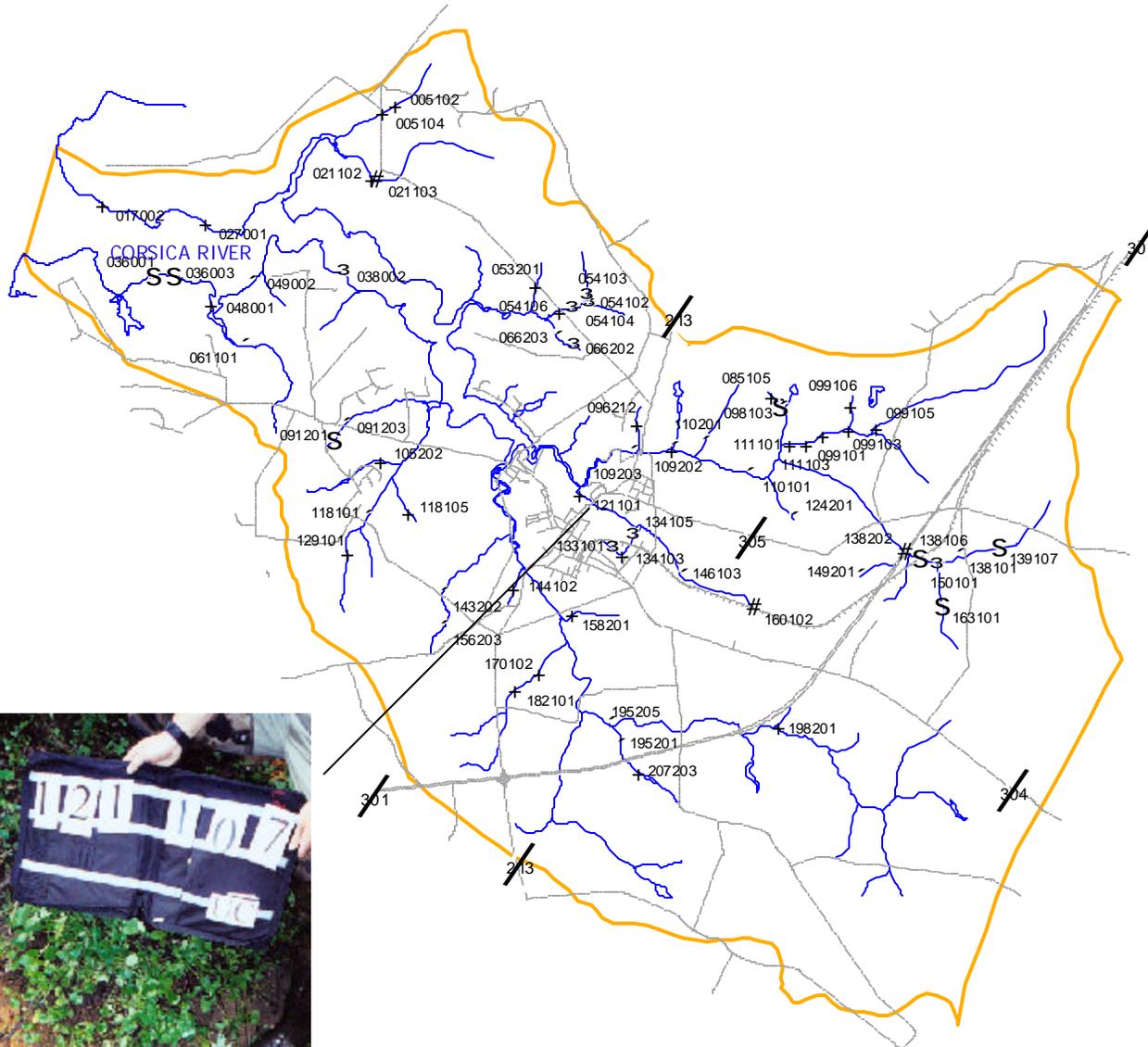
**CORSICA RIVER WATERSHED  
SCA SURVEY RESULTS**

**Figure 9j  
UNUSUAL  
CONDITIONS/COMMENTS**

QUEEN ANNE'S COUNTY  
MARYLAND



121107



- Unusual  
Conditions/Comments**
- \$ **Comment**
  - # **Very Severe**
  - **Severe**
  - 3 **Moderate**
  - + **Low Severity**
  - S **Minor**
  - Roads**
  - Streams**
  - Watershed Boundary**



Table 3j - Unusual Conditions

Problem	Site	Date	Type	Description	Potential Cause	Severity	Correctability	Access
Unusual Condition	121107	05/28/2003	Abnormal Seep From Bank	Musky Smelling Seep 3ft long, 10 inches side	Land Use Change Upstream	2	2	2
Unusual Condition	085102	05/12/2003	Red Flock	Red Flock In Stream below instream pond	eutrophication in pond	3	3	2
Unusual Condition	134106	06/03/2003	Red Flock	Excessive Red Flock Present	Iron Oxides	3	3	2
Unusual Condition	139106	06/11/2003	Channel Discharging into Stream	Dark Brown Discharge in Channel entering stream	Unknown	3	3	2
Unusual Condition	143206	06/17/2003	Orange Substance Leaking from Bank	Orange Substance leaking from bank in many different places along section of bank	Runoff from field	3	4	3
Unusual Condition	098105	05/12/2003	Black Organic Material	Stream has large amount of black organic material present		4	3	3
Unusual Condition	109101	05/27/2003	Excessive Sediment	Whole Tributary w/excessive sediment from upstream construction	Upstream Construction	4	4	3
Unusual Condition	134101	06/03/2003	Red Flock	Discharge from Bank	Runoff	4	3	2
Unusual Condition	150106	06/11/2003	Water Color/Clarity	Water dark brown/red in color - darkens as you proceed upstream	Runoff	4	2	3
Unusual Condition	220201	06/11/2003	Red Flock		Field Drainage	4	4	1
Unusual Condition	118104	06/24/2003	Scum	Orange Scum Washing into Stream	Farm	5	3	3
Unusual Condition	038002	10/06/2003	SE Healing over w/ trees and toe protection			0		

**TABLE 3k**

<i>Summary of Stream Corridor Impairment Remediation Costs</i> Total for Impairment Remediation		
Altered Shorelines	13055 lf @ \$215/lf	\$2,806,825.00 \$714,875.00 (sev./mod. Only)
Channel Alterations	6,185/lf @ \$65.00/lf	\$402,025.00 \$60,450.00 (mod. Only)
Exposed Pipes	4 occurrences @ \$1,000.00/site	\$4,000.00
Erosion Sites	64,312 lf @ \$40.00/lf	\$2,572,480.00 \$467,880.00 (sev./mod. Only)
Fish Barriers	52 occurrences @ \$1,500.00/site	\$78,000.00 (1 sev. @ Gravel Run Dam \$175,00.00)
Inadequate Buffers	54 occurrences (see Implementation Initiatives)	
In-Stream Construction	4 sites @ \$0.00/site	Enforcement of approved BMPs
Pipe Outfalls	56 sites @ \$3,200.00/site	\$179,200.00
Trash Dumping	42 truckloads @ \$375.00/load	\$15,750.00
Unusual Conditions ("Hot Spots")	12 sites	As needed, per site

\*Cost estimates used above are taken from The Technical reference for Maryland's Tributary Strategies October 2002 and from local engineering estimating practices.

## **Additional Concerns**

Particular note is made of certain impairment categories for which the WRAS Steering Committee requests further programmatic protections be provided by the appropriate government entities. These are: channel alterations, construction in or near stream and stream bank erosion sites. Site locations of several large on-going land development projects include, but are not limited to, Northbrook, Symphony Village, Providence Farm (all in the Town of Centreville), and Corsica River Estates, Three Creeks, Hopelands, Claiborne Fields (all in the County). These projects all have approved sediment and erosion control plans in place. Inspection and Maintenance Agreements by the County and MDE relative to those provisions and those for Storm Water Management are in place as well. The Town and its WRAS partners have included specific proposals for increased oversight of these developments and their construction practices within the Watershed. The emphasis on this stems in part from the conclusions in the Corsica River Watershed Characterization which suggest that the disappearance of oysters in the River may have been due to sedimentation and that sedimentation/suspended solids are a listed impairment on Maryland's 303(d) list.