

APPENDIX B

Freehold Soil Conservation District Stream Assessment Information

Reach Assessment Data Sheet Wreck Pond Watershed

All assessments must be done looking downstream of reach assessment point

Subwatershed ID _____ Inventoried by _____
 Reach ID _____ Date _____
 Temperature (F) _____ Time _____
 Precipitation Date _____ Precipitation (in) _____
 Weather Conditions Clear, Overcast, Rain, Snow

Channel Width (ft) _____ Channel Depth (ft) _____
 Flow Width (ft) _____ Flow Depth (ft) _____
 Right Buffer Width (ft) _____
 Left Buffer Width (ft) _____

Right Bank Slope Flat, Gentle, Moderate, Steep
 Left Bank Slope Flat, Gentle, Moderate, Steep
 Right Bank Vegetation less than 50%, 51-70%, 71-90%, 90%+
 Left Bank Vegetation less than 50%, 51-70%, 71-90%, 90%+
 Right Bank Disturbance Natural, Man-made
 Left Bank Disturbance Natural, Man-made
 Right Bank Erosion None, Minimal, Moderate, Severe
 Left Bank Erosion None, Minimal, Moderate, Severe
 Right Bank Land Use Forest, Orchard, Farmland, Industrial, Residential
 Left bank Land Use Forest, Orchard, Farmland, Industrial, Residential

Stream Movement Stagnant, Sluggish, Slow, Swift
 Water Clarity Clear, Cloudy, Opaque, Eutrophic
 Bed Material Mud, Sand, Gravel, Rip-Rap
 Bank Symmetry Symmetric, Non-symmetric
 Stream Shading 0-24%, 25-49%, 50-74%, 75-100%
 Debris None, Natural, Natural & Garbage, Garbage
 Stream Alterations None, Around Structures, 40-80% Channelized, >80% Channelized

Indicator Plants Algae, Mosses, Herbaceous, None
 Aquatic Plants Purple Loosestrife, Phragmites, Cattails, Tussock Sedge, None

Upstream Pic # _____ Misc Pic # _____
 Downstream Pic # _____ Misc Pic # _____
 Right Land Use Pic # _____ Misc Pic # _____
 Left Land Use Pic # _____ Misc Pic # _____

Notes:

Reach Assessment Score Sheet Wreck Pond Watershed

Subwatershed ID _____
 Reach ID _____
 Total Score _____

Inventoried By _____
 Date _____

STREAM ASSESSMENT FOR LOW GRADIENT STREAMS

Condition Category																					
	Optimal					Suboptimal					Marginal			Poor							
1. Pool Substrate Characterization	Mixture of substrate materials, with gravel and firm sand prevalent, root mats and submerged vegetation common.					Mixture of soft sand, mud, or clay; mud may be dominant; some root mats and submerged vegetation present					All mud or clay or sand bottom; little or no root mat, no submerged vegetation			Hard-pan clay or bedrock. No root mat or vegetation							
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
2. Pool Variability	Even mix of large-shallow large-deep small-shallow, small-deep pool's Present					Majority of pools large deep; very few shallow					Shallow pools much more prevalent than deep pools.			Majority of pools small-shallow or pools absent.							
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
3. Sediment Deposition	Little or no enlargement of islands or point bars and less than 5% (20% for low gradient streams) of the bottom affected by sediment deposition.					Some new increases in bar formation mostly from gravel, sand or fine sediment; 5-30% (20-50% for low gradient streams) of the bottom affected; slight deposition in pools.					Moderate deposition of new gravel sand or fine sediment on old and new bars; 30-50% (50-80% for low gradient) of the bottom affected; sediment deposits is at obstructions, bends and constrictions.			Heavy deposits of fine material, increased bar development; more than 50% (80% for low gradient) of the bottom changing frequently; pools almost absent due to substantial sediment deposition							
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
4. Channel Flow Status	Water reaches base of both lower banks, and minimal amount of channel substrate is exposed.					Water fills >75% of the available channel; or <25% of channel substrate is exposed.					Water fills 25-75% of the available channel, and/or riffle substrates are mostly exposed			Very little water in channel and mostly present as standing pools.							
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
5. Channel Alteration	Channelization or dredging absent or minimal; stream width normal pattern.					Some channelization present, usually areas of bridge abutments; evidence of past channelization, i.e., dredging, (greater than past 20 yrs) may be present, but recent channelization not present.					Channelization may be extensive; embankments or shoring structures present on both banks; and 40 to 80% of stream reach channelized and disrupted.			Banks shored with Gabion or cement; over 80% of the stream reach channelized and disrupted. In stream habitat greatly altered or removed entirely.							
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
6. Channel Sinuosity	The bends in the stream increase the stream length 3 to 4 times longer than it was a straight line. (Note – channel braiding is considered normal in coastal plains and other low-laying areas. This parameter is not easily read in these areas.)					The bends in the stream increase the stream length 2 to 3 times longer than if it was a straight line.					The bends in the stream increase the stream length 2 to 1 times longer than if it was a straight line.			Channel straight; waterway has been channelized for a long time							
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
7. Bank Stability (score each bank)	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Moderately stable; infrequent, small areas of erosion mostly healed over. 5-30% of bank in reach has areas of erosion.					Moderately unstable; 30-60% of bank in reach has areas of erosion; high erosion potential during floods.			Unstable; many eroded areas; "raw" areas frequent along straight sections and bends; obvious bank sloughing; 60-100% bank has erosional scars.							
SCORE (LB)	Left bank	10	9			8	7	6			5	4	3			2	1	0			
SCORE (RB)	Right bank	10	9			8	7	6			5	4	3			2	1	0			
8. Bank Vegetative Protection (score each bank)	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation; including trees, under story shrubs, or nonwoody macrophytes vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally					70-90% of the streambank surfaces covered by native vegetation, but one class of plants is not well represented Disruption evident but not affecting full plant growth potential to any great extent; more than 1/2 of the potential plant stubble height remaining.					50-70% of the streambank surfaces covered by vegetation; disruption obvious; patches of bare soil or closely cropped vegetation common; less than 1/2 of the potential plant stubble height remaining.			Less than 50% of the streambank surfaces covered by vegetation; disruption of streambank vegetation is very high; vegetation has been removed to 5 centimeters or less in average stubble height.							
SCORE (LB)	Left bank	10	9			8	7	6			5	4	3			2	1	0			
SCORE (RB)	Right bank	10	9			8	7	6			5	4	3			2	1	0			
9. Riparian Vegetative Zone Width (score each bank riparian zone)	Width of riparian zone >18 meters; Human activities (i.e.: parking lots, Roadbeds, clear-cuts, lawns, or crops Have not impacted zone.					Width of riparian zone 12-18 meters; human activities have impacted zone only minimally					Width of riparian zone 6-12 meters; human activities have impacted zone a great deal			Width of riparian zone <6 meters; little or no riparian vegetation due to human activities.							
SCORE (LB)	Left bank	10	9			8	7	6			5	4	3			2	1	0			
SCORE (RB)	Right bank	10	9			8	7	6			5	4	3			2	1	0			

Score: Optimal 145-180

Sub-Optimal 100-144

Marginal 50-99

Poor <50

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