

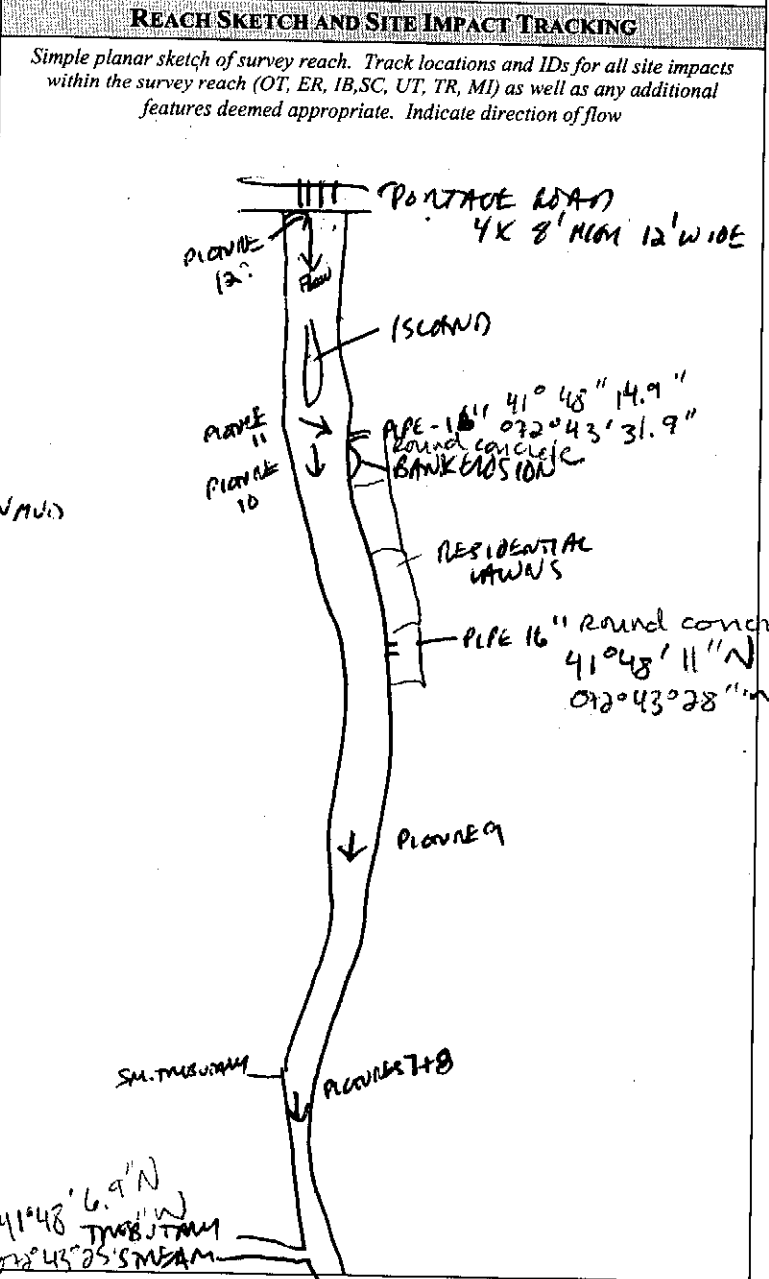
Reach Level Assessment



SURVEY REACH ID: <u>NR-4</u>		WTRSHD/SUBSHD:		DATE: <u>11/23/09</u>		ASSESSED BY: <u>SG+CM</u>	
START TIME: <u>10:15</u> AM/PM	LMK: <u>FORMATION</u>	END TIME: <u>11:45</u> AM/PM	LMK: <u>ARMY</u>	GPS ID:			
LAT <u>41° 43' 04"</u> LONG <u>72° 43' 24"</u>		LAT <u>41° 48' 18"</u> LONG <u>72° 43' 34"</u>		DESCRIPTION:			

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Trace
PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Trace
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input type="checkbox"/> Urban/Residential	<input checked="" type="checkbox"/> Suburban/Res	<input checked="" type="checkbox"/> Forested
	<input type="checkbox"/> Golf course	<input type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input type="checkbox"/> Other:

AVERAGE CONDITIONS (check applicable)	
BASE FLOW AS %	<input type="checkbox"/> 0-25% <input type="checkbox"/> 50%-75%
CHANNEL WIDTH	<input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE	
<input type="checkbox"/> Silt/clay (fine or slick)	<input checked="" type="checkbox"/> Cobble (2.5-10")
<input type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")
<input type="checkbox"/> Gravel (0.1-2.5")	<input type="checkbox"/> Bed rock <u>SOME BEDROCK</u>
WATER CLARITY <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid (suspended matter)	
<input type="checkbox"/> Stained (clear, naturally colored) <input type="checkbox"/> Opaque (milky)	
<input type="checkbox"/> Other (chemicals, dyes)	
AQUATIC PLANTS	Attached: <input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
IN STREAM	Floating: <input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
WILDLIFE IN OR AROUND STREAM (Evidence of)	
<input type="checkbox"/> Fish <input type="checkbox"/> Beaver <input type="checkbox"/> Deer	
<input type="checkbox"/> Snails <input checked="" type="checkbox"/> Other: <u>DUCKS, PRAILS IN MUDD</u>	
STREAM SHADING (water surface)	
<input checked="" type="checkbox"/> Mostly shaded (≥75% coverage)	
<input type="checkbox"/> Halfway (≥50%)	
<input type="checkbox"/> Partially shaded (≥25%)	
<input type="checkbox"/> Unshaded (<25%)	
CHANNEL DYNAMICS	<input type="checkbox"/> Downtcutting <input type="checkbox"/> Bed scour
	<input type="checkbox"/> Widening <input type="checkbox"/> Bank failure
	<input type="checkbox"/> Headcutting <input checked="" type="checkbox"/> Bank scour
<input type="checkbox"/> Unknown	<input type="checkbox"/> Aggrading <input type="checkbox"/> Slope failure
	<input type="checkbox"/> Sed. deposition <input type="checkbox"/> Channelized
CHANNEL DIMENSIONS (FACING DOWNSTREAM)	Height: LT bank <u>RF 30"</u> (ft)
	RT bank _____ (ft)
	Width: Bottom <u>39' RF</u> (ft)
	Top _____ (ft)



REACH ACCESSIBILITY		
Good: Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	Fair: Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	Difficult: Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.
5	4	3

NOTES: (biggest problem you see in survey reach)

IMPACTED BUFFER - RESIDENTIAL LAWNS

REPORTED TO AUTHORITIES  YES  NO

OVERALL STREAM CONDITION																				
	Optimal					Suboptimal					Marginal					Poor				
<b>IN-STREAM HABITAT</b>  <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.					Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>VEGETATIVE PROTECTION</b>  <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory 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 one-half 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 one-half 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.				
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>BANK EROSION</b>  <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.					Past downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure					Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.				
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
OVERALL BUFFER AND FLOODPLAIN CONDITION																				
	Optimal					Suboptimal					Marginal					Poor				
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.					Width of buffer zone 25-50 feet; human activities have impacted zone only minimally.					Width of buffer zone 10-25 feet; human activities have impacted zone a great deal.					Width of buffer zone <10 feet; little or no riparian vegetation due to human activities.				
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest					Predominant floodplain vegetation type is young forest					Predominant floodplain vegetation type is shrub or old field					Predominant floodplain vegetation type is turf or crop land				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water					Even mix of wetland and non-wetland habitats, no evidence of standing/ponded water					Either all wetland or all non-wetland habitat, evidence of standing/ponded water					Either all wetland or all non-wetland habitat, no evidence of standing/ponded water				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures					Minor floodplain encroachment in the form of fill material, land development, or manmade structures, but not effecting floodplain function					Moderate floodplain encroachment in the form of filling, land development, or manmade structures, some effect on floodplain function					Significant floodplain encroachment (i.e. fill material, land development, or man-made structures). Significant effect on floodplain function				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>Sub Total In-stream:</b> 65 /80 + <b>Buffer/Floodplain:</b> 51 /80 = <b>Total Survey Reach</b> 116 /160																				



WATERSHED/SUBSHED: N6P DATE: 11/23/09 ASSESSED BY: cm/BS  
 SURVEY REACH: 4 TIME: 11:00 AM PM PHOTO ID: (Camera-Pic #) 10+11/#

SITE ID: (Condition-#) IB-A START LAT 41°48'10" LONG 72°43'26" LMK Resident GPS: (Unit ID)  
 END LAT 41°48'18" LONG 72°43'34" LMK Portage Rd. (cm)

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: Mown, MAINTAINED LAWS + yard waste dumping

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank     :  
 RT Bank     :

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank       :  
 RT Bank       :

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA		REFORESTATION POTENTIAL: (Circle #)	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting		
LT BANK	RT						
Length (ft): _____	_____		5	4	3	2	1
Width (ft): _____	_____						

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: Residential yard-space up to top of bank, areas are mown actively + grass is short (~1"). Yard waste dumping in riparian area + in places at bank top + even in water channel.  
 → See photo PB230010.jpg for overall  
 → See photo PB230011.jpg for minor bank erosion



WATERSHED/SUBSHED: NBP DATE: 1/23/09 ASSESSED BY: am/Bo  
 SURVEY REACH: 4 TIME: 11:00 AM PHOTO ID: (Camera-Pic #) am # PB2300 11  
 SITE ID: (Condition #) IB-8 START LAT 41° 48' 15" LONG 92° 43' 32" LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT \_\_\_\_\_ LONG \_\_\_\_\_ LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: Residential/Private Property

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank        
 RT Bank      : Right bank - forested

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank         
 RT Bank

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA	REFORESTATION POTENTIAL:	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting
Length (ft): <u>15'</u> LT BANK RT	(Circle #)	5	4	3
Width (ft): _____				2
				<u>1</u>

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: there is an outflows pipe located approx imately 5 feet upstream of the erosion (you can just see it in the photo [PB230011])  
 This is residential private property.



<b>WATERSHED/SUBSHED:</b> <u>NBP</u>		<b>DATE:</b> <u>11/23/09</u>	<b>ASSESSED BY:</b> <u>BG/CM</u>
<b>SURVEY REACH ID:</b> <u>4</u>	<b>TIME:</b> _____ AM/PM	<b>PHOTO ID: (Camera-Pic #)</b> _____ #	
<b>SITE ID (Condition-#):</b> <u>OT-A</u>	<b>LAT</b> <u>41°48'6.9"</u> <b>LONG</b> <u>72°43'25.9"</u>	<b>LMK</b> _____	<b>GPS: (Unit ID)</b> _____

<b>BANK:</b> <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input type="checkbox"/> Closed pipe  <input checked="" type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:  <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:  <input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	<i>NOT APPLICABLE</i>				
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:  <b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:	

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:					
	<b>TURBIDITY:</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque					
	<b>FLOATABLES:</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:					
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:						

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> <i>(circle #)</i>	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			(1)

**SKETCH/NOTES:**

**REPORTED TO AUTHORITIES:**  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/23/09</u>	ASSESSED BY: <u>cm/bp</u>
SURVEY REACH ID: <u>4</u>	TIME: <u>4</u> AM/PM	PHOTO ID: (Camera-Pic #) <u>1#</u>	
SITE ID (Condition #): <u>OT-6</u>		LAT <u>41° 48' 11" N</u>	LONG <u>72° 43' 28" W</u> LMK _____
GPS: (Unit ID) _____			

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>16</u> (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  <div style="border: 1px solid black; width: 100%; height: 100%; text-align: center; line-height: 100%;">NOT APPLICABLE</div>
	<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input type="checkbox"/> No <input type="checkbox"/> Gas <input checked="" type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:
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**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated  
 Land Use description: Residential  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	(3)
			2
			1

**SKETCH/NOTES:** located approximately 5' upstream of minor bank erosion + residential lawn.

REPORTED TO AUTHORITIES:  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/23/09</u>	ASSESSED BY: <u>CM 166</u>
SURVEY REACH ID: <u>4</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) _____	# _____
SITE ID (Condition #): <u>OT-C</u>	LAT <u>41° 48' 14.9"</u>	LONG <u>72° 43' 31.9"</u>	LMK _____ GPS: (Unit ID) _____

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>6</u> (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>FLOW:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	<div style="border: 1px solid black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 2em; font-weight: bold;">X</span> </div> NOT APPLICABLE		
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input checked="" type="checkbox"/> Other: <u>Scum</u>	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input checked="" type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:
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**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization

no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated  
 Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:**  
pipe is jutting out slightly, approx 5'

REPORTED TO AUTHORITIES:  YES  NO



WATERSHED/SUBSHED: NBP DATE: 11/23/07 ASSESSED BY: GGJW  
 SURVEY REACH ID: NBP-4 TIME: 11:45 AM PHOTO ID: (Camera-Pic #) 12 #  
 SITE ID: (Condition #) SC-MY LAT 41° 48' 18" LONG 72° 43' 34" LMK ROAD GPS (Unit ID)

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input checked="" type="checkbox"/> Box <input type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other:	<b># BARRELS:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input checked="" type="checkbox"/> Other: <u>4</u>	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> Other:	<b>ALIGNMENT:</b> <input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: _____ (ft) Height: <u>8 1/2</u> (ft) Culvert length: <u>264'</u> (ft) Width: <u>12' X 4</u> (ft) Roadway elevation: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe):			<b>CULVERT SLOPE:</b> <input checked="" type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

POTENTIAL RESTORATION CANDIDATE  no  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 Local stream repair  Other:

IS SC ACTING AS GRADE CONTROL  No  Yes  Unknown

<i>If yes for fish barrier</i>	<b>EXTENT OF PHYSICAL BLOCKAGE:</b> <input type="checkbox"/> Total <input type="checkbox"/> Partial <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown	<b>BLOCKAGE SEVERITY: (circle #)</b>				
	<b>CAUSE:</b> <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other:	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.		
		5	4	3	2	1

NOTES/SKETCH: SAUND 4-BAY CONCRETE BOX CULVERT, NO IMPACT TO FLOW OR FISH PASSAGE



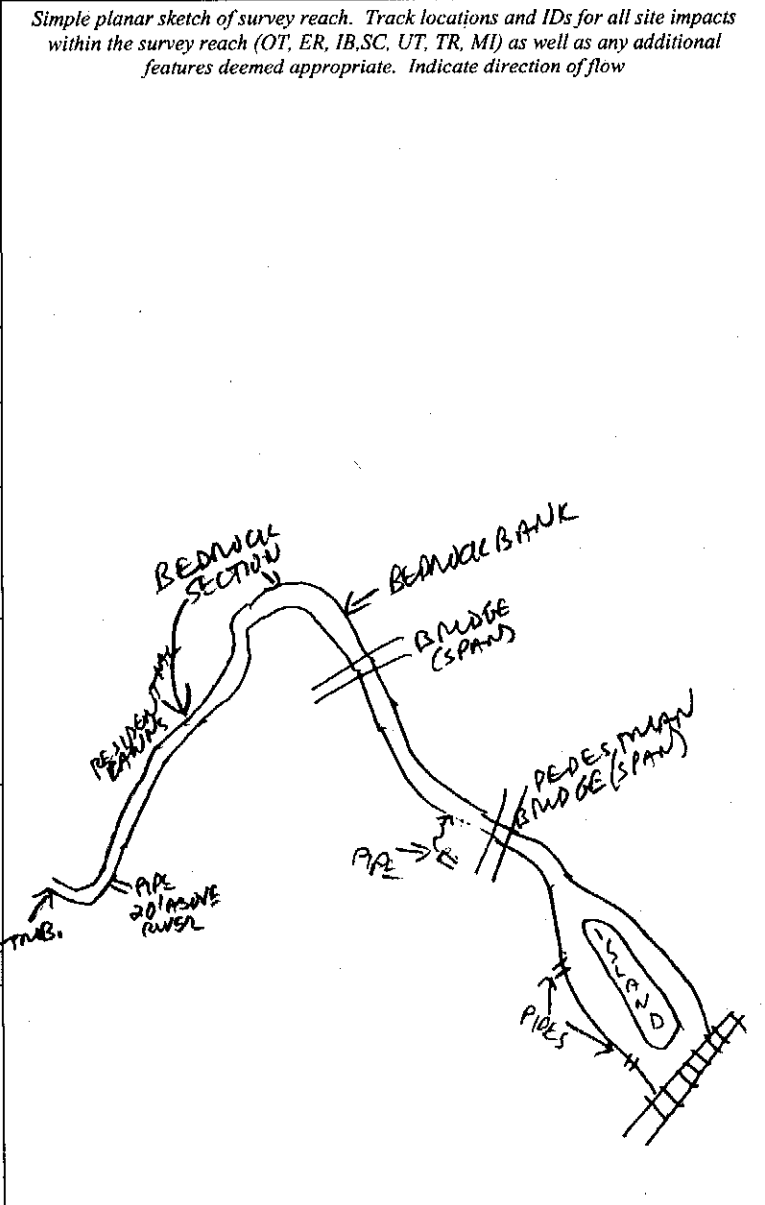


SURVEY REACH ID: <u>9</u>		WTRSHD/SUBSHD: <u>NBP</u>	DATE: <u>11/23/09</u>	ASSESSED BY: <u>CM/BE</u>
START TIME: <u>9:30 AM/PM</u>	LMK: _____	END TIME: <u>3:45 AM/PM</u>	LMK: _____	GPS ID: <u>(CM)</u>
LAT <u>41°47'54"</u> LONG <u>72°42'46"</u>		LAT <u>41°47'48"</u> LONG <u>72°43'06"</u>		
DESCRIPTION: <u>culvert/road crossing</u>		DESCRIPTION: <u>tributary (2) inputs</u>		

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent
	<input type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input type="checkbox"/> Overcast	<input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input type="checkbox"/> Urban/Residential	<input type="checkbox"/> Suburban/Res	<input type="checkbox"/> Forested	<input type="checkbox"/> Institutional
	<input type="checkbox"/> Golf course	<input type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input type="checkbox"/> Other:	

AVERAGE CONDITIONS (check applicable)	REACH SKETCH AND SITE IMPACT TRACKING
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BASE FLOW AS %	<input type="checkbox"/> 0-25%	<input type="checkbox"/> 50%-75%
CHANNEL WIDTH	<input type="checkbox"/> 25-50%	<input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE		
<input type="checkbox"/> Silt/clay (fine or slick)	<input type="checkbox"/> Cobble (2.5-10")	
<input type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")	
<input type="checkbox"/> Gravel (0.1-2.5")	<input checked="" type="checkbox"/> Bed rock	
WATER CLARITY		
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Turbid (suspended matter)	
<input type="checkbox"/> Stained (clear, naturally colored)	<input type="checkbox"/> Opaque (milky)	
<input type="checkbox"/> Other (chemicals, dyes)		
AQUATIC PLANTS		
Attached:	<input type="checkbox"/> none	<input checked="" type="checkbox"/> some
	<input type="checkbox"/> lots	
Floating:	<input checked="" type="checkbox"/> none	<input type="checkbox"/> some
	<input type="checkbox"/> lots	
WILDLIFE IN OR AROUND STREAM		
(Evidence of)	<input type="checkbox"/> Fish	<input type="checkbox"/> Beaver
	<input type="checkbox"/> Deer	<input type="checkbox"/> Snails
	<input checked="" type="checkbox"/> Other: <u>Elk photo</u>	
STREAM SHADING (water surface)		
<input checked="" type="checkbox"/> Mostly shaded (≥75% coverage)	<input type="checkbox"/> Halfway (≥50%)	<input type="checkbox"/> Unshaded (<25%)
<input type="checkbox"/> Partially shaded (≥25%)		
CHANNEL DYNAMICS		
<input type="checkbox"/> Downcutting	<input type="checkbox"/> Bed scour	<input type="checkbox"/> Bank failure
<input type="checkbox"/> Widening	<input type="checkbox"/> Bank scour	<input checked="" type="checkbox"/> Slope failure
<input type="checkbox"/> Headcutting	<input checked="" type="checkbox"/> Channelized	
<input type="checkbox"/> Aggrading		
<input type="checkbox"/> Sed. deposition		
<input type="checkbox"/> Unknown		
CHANNEL DIMENSIONS (FACING DOWNSTREAM)		
Height: LT bank	_____ (ft)	
RT bank	_____ (ft)	
Width: Bottom	_____ (ft)	
Top	_____ (ft)	



REACH ACCESSIBILITY		
<b>Good:</b> Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	<b>Fair:</b> Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	<b>Difficult:</b> Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.
5	4	3

NOTES: (biggest problem you see in survey reach) some impacted water associated w/ U.H. FORD AND with private landownery - difficult accessibility + bedrock substrate would likely make this a poor candidate for restoration.

REPORTED TO AUTHORITIES  YES  NO

OVERALL STREAM CONDITION																				
	Optimal					Suboptimal					Marginal					Poor				
<b>IN-STREAM HABITAT</b> <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.					Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
	20 (19) 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
<b>VEGETATIVE PROTECTION</b> <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory 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 one-half 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 one-half 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.				
	Left Bank 10 (9)					8 7 6					5 4 3					2 1 0				
	Right Bank 10 (9)					8 7 6					5 4 3					2 1 0				
<b>BANK EROSION</b> <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.					Past downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure					Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.				
	Left Bank 10 (9)					8 7 6					5 4 3					2 1 0				
	Right Bank 10 (9)					8 7 6					5 4 3					2 1 0				
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) <u>not</u> able to enter floodplain. Stream deeply entrenched.					High flows (greater than bankfull) <u>not</u> able to enter floodplain. Stream deeply entrenched.				
	20 19 18 (17) 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
OVERALL BUFFER AND FLOODPLAIN CONDITION																				
	Optimal					Suboptimal					Marginal					Poor				
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.					Width of buffer zone 25-50 feet; human activities have impacted zone only minimally.					Width of buffer zone 10-25 feet; human activities have impacted zone a great deal.					Width of buffer zone <10 feet: little or no riparian vegetation due to human activities.				
	Left Bank 10 9					8 (7) 6					5 4 3					2 1 0				
	Right Bank (10) 9					8 7 6					5 4 3					2 1 0				
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest					Predominant floodplain vegetation type is young forest					Predominant floodplain vegetation type is shrub or old field					Predominant floodplain vegetation type is turf or crop land				
	20 (19) 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water					Even mix of wetland and non-wetland habitats, no evidence of standing/ponded water					Either all wetland or all non-wetland habitat, evidence of standing/ponded water					Either all wetland or all non-wetland habitat, no evidence of standing/ponded water				
20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 (3) 2 1 0					
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures					Minor floodplain encroachment in the form of fill material, land development, or manmade structures, but not effecting floodplain function					Moderate floodplain encroachment in the form of filling, land development, or manmade structures, some effect on floodplain function					Significant floodplain encroachment (i.e. fill material, land development, or man-made structures). Significant effect on floodplain function				
	20 19 18 17 (16)					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
<b>Sub Total In-stream:</b> 72 /80 + <b>Buffer/Floodplain:</b> 55 /80 = <b>Total Survey Reach</b> 127 /160																				



WATERSHED/SUBSHED: NBP DATE: 11/23/09 ASSESSED BY: CM/186

SURVEY REACH: 9 TIME: \_\_\_:\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) # PB230032

SITE ID: (Condition #) IB-A START LAT 41°47'54" LONG 72°42'46" LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT 41°47'56" LONG 72°42'59" LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: riparian buffer is thin ~ 10' wide

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank     :  
 RT Bank     :

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank      :  
 RT Bank      :

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA	REFORESTATION POTENTIAL: (Circle #)	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting
Length (ft): LT BANK _____ RT BANK <u>200'</u>				
Width (ft): _____		5	4	3

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: thin forested area (~100') with maintained lawn on other side on U-Hartford campus.  
 → Landmark of start to IB ⇒ 8-bay culvert/stream crossing that marks the start of reach 9  
 → Landmark to end to IB ⇒ student overpass bridge



WATERSHED/SUBSHED: NBP DATE: 1/23/09 ASSESSED BY: cm/BC  
 SURVEY REACH: 9 TIME: \_\_\_:\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) # PG230036  
 SITE ID: (Condition #) IB-6 START LAT 41° 47' 54" N LONG 72° 43' 07" W LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT 41° 47' 52" N LONG 72° 43' 06" W LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: Residential/Landscaped

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank     :  
 RT Bank   Maintained  : Bedrock cliff on RB

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank      :  
 RT Bank      : Bedrock cliff

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA	REFORESTATION POTENTIAL:	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting
Length (ft): <u>75'</u> LT BANK RT	(Circle #)	5	4	3
Width (ft): _____				2 <u>1</u>

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: Impacted area is located on private property + is a maintained lawn w/ some yard waste disposal at edge of River. The Right Bank is a bedrock cliff.



WATERSHED/SUBSHEED: <u>NBP</u>		DATE: <u>11/23/09</u>	ASSESSED BY: <u>cm/870</u>
SURVEY REACH ID: <u>9</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) _____	# <u>PB230031</u>
SITE ID (Condition #): <u>OT-A</u>		LAT <u>41° 47' 54" N</u> LONG <u>72° 42' 46" W</u>	LMK _____ GPS: (Unit ID) _____

<b>BANK:</b> <input type="checkbox"/> LT <input type="checkbox"/> RT <input checked="" type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>24</u> (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<div style="border: 1px solid black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 2em; font-weight: bold;">X</span> </div> NOT APPLICABLE	
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input checked="" type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:
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**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated  
 Land Use description: U-Hartford Campus  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.		
	5	4	3	2	1

**SKETCH/NOTES:** Associated with the 9-bay Culvert that marks the division between reaches 9+10 (NBP) where there is also an 8-bay culvert.



WATERSHED/SUBSHED: NBP DATE: 11/23/09 ASSESSED BY: CW1/BG

SURVEY REACH ID: 9 TIME: \_\_\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) \_\_\_\_\_ #

SITE ID (Condition #): OT-67C LAT 41°47'55" N LONG 72°42'51" W LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
C=41°47'50" / 72°42'55"

<b>BANK:</b> <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:  <input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:  <input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	<b>NOT APPLICABLE</b>				
<b>CONDITION:</b> <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:  <b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:	

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

**OTHER CONCERNS:**  Excess Trash (paper/plastic bags)  Dumping (bulk)  Excessive Sedimentation  
 Needs Regular Maintenance  Bank Erosion  Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.	
	5	4	3	2

**SKETCH/NOTES:**

REPORTED TO AUTHORITIES:  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/23/09</u>	ASSESSED BY: <u>BG/om</u>
SURVEY REACH ID: <u>9</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) # <u>P0230033</u>	
SITE ID (Condition-#): <u>OT-0</u>	LAT <u>41° 47' 56"</u> LONG <u>72° 42' 57"</u>	LMK _____	GPS: (Unit ID)

<b>BANK:</b> <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input type="checkbox"/> Closed pipe  <input checked="" type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input checked="" type="checkbox"/> Other: <u>Red Rock</u>			<div style="border: 1px solid black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 2em; font-weight: bold;">X</span> </div> NOT APPLICABLE	

<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input checked="" type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:
---	---	---	--	--	---

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 No  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.	
	5	4	3	2

**SKETCH/NOTES:** outfall pipe located approx. 20' from top of bank.

**REPORTED TO AUTHORITIES:**  YES  NO



<b>WATERSHED/SUBSHED:</b> <u>NBP</u>		<b>DATE:</b> <u>1/23/09</u>	<b>ASSESSED BY:</b> <u>BCG/CM</u>
<b>SURVEY REACH ID:</b> <u>9</u>	<b>TIME:</b> _____ AM/PM	<b>PHOTO ID:</b> (Camera-Pic #) _____	<b>#</b> <u>PB 230537</u>
<b>SITE ID (Condition-#):</b> <u>OT-E</u>		<b>LAT</b> <u>41° 47' 48" N</u> <b>LONG</b> <u>72° 43' 06" W</u>	<b>LMK</b> _____ <b>GPS: (Unit ID)</b> _____

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: ? (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No ~ 20' up / over water <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:				<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:	

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no - bedrock  Storm water retrofit  Other:

**If yes for daylighting:**  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

**If yes for stormwater:**  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.	
	5	4	3	2

**SKETCH/NOTES:**  
 This outfall pipe is located near the top of a bedrock cliff, approx. 20' higher from surface of water @ time of assessment (near bankfull). Located approx. 40' from end of reach 9, NBP

**REPORTED TO AUTHORITIES:**  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>	DATE: <u>11/23/09</u>	ASSESSED BY: <u>CM/186</u>
SURVEY REACH ID: <u>Break betwn 9+10</u>	TIME: <u>2:30 AM/PM</u>	PHOTO ID: (Camera-Pic #) <u># PB230031</u>
SITE ID: (Condition #) <u>SC: 832</u>	LAT <u>41° 47' 54" N</u>	LONG <u>72° 42' 46" W</u>
	LMK _____	GPS (Unit ID) _____

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

FOR ROAD/ RAILROAD CROSSINGS ONLY	SHAPE:	# BARRELS:	MATERIAL:	ALIGNMENT:	DIMENSIONS: (if variable, sketch)
	<input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input type="checkbox"/> Box <input checked="" type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other:	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input checked="" type="checkbox"/> Other: <u>8</u>	<input checked="" type="checkbox"/> Concrete <sup>with</sup> <input checked="" type="checkbox"/> Metal lining <input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	Barrel diameter: <u>30"</u> (ft) Height: _____ (ft) Culvert length: _____ (ft) Width: _____ (ft) Roadway elevation: _____ (ft)
CONDITION: (Evidence of...)			CULVERT SLOPE:		
<input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe):			<input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)		

POTENTIAL RESTORATION CANDIDATE  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 no  Local stream repair  Other:

IS SC ACTING AS GRADE CONTROL  No  Yes  Unknown

If yes for fish barrier	EXTENT OF PHYSICAL BLOCKAGE:	BLOCKAGE SEVERITY: (circle #)		
	<input type="checkbox"/> Total <input type="checkbox"/> Partial <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.
CAUSE:	Water Drop: _____ (in)			
<input type="checkbox"/> Drop too high <input type="checkbox"/> Flow too shallow <input type="checkbox"/> Other:	Water Depth: _____ (in)			

NOTES/SKETCH: → Downstream of 8-bay culvert is Reach 9 (NBP) + upstream is Reach 10 the Reach 9 side was varried size Rip-RAP in the channel, velocity is high, and immediately downstream (for ~20') is shallow, riffle zone. Upstream (Reach 10) of culvert is deeper, slower + ponded.  
 → There is also a stemwater pipe (24" metal) here.

REPORTED TO AUTHORITIES  YES  NO



SURVEY REACH ID: <u>10</u>		WTRSHD/SUBSHD: <u>NBP</u>	DATE: <u>11/23/01</u>	ASSESSED BY: <u>CM/BSG</u>
START TIME: <u>1:45 AM/PM</u>	LMK: _____	END TIME: <u>2:30 AM/PM</u>	LMK: _____	GPS ID: <u>(CM)</u>
LAT <u>41° 47' 40"</u> LONG <u>72° 42' 37"</u>		LAT <u>41° 47' 54"</u> LONG <u>72° 42' 46"</u>		
DESCRIPTION: <u>AT JUNCTION</u>		DESCRIPTION: <u>ROAD / CULVERT</u>		

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent
	<input type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input type="checkbox"/> Overcast	<input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Urban/Residential	<input type="checkbox"/> Suburban/Res	<input type="checkbox"/> Forested	<input checked="" type="checkbox"/> Institutional
	<input type="checkbox"/> Golf course	<input type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input checked="" type="checkbox"/> Other: <u>u - Harvard</u>	

**AVERAGE CONDITIONS (check applicable)**

BASE FLOW AS %  0-25%  50%-75%

CHANNEL WIDTH  25-50%  75-100%

**DOMINANT SUBSTRATE**

Silt/clay (fine or slick)  Cobble (2.5 - 10")

Sand (gritty)  Boulder (>10")

Gravel (0.1-2.5")  Bed rock

**WATER CLARITY**  Clear  Turbid (suspended matter)

Stained (clear, naturally colored)  Opaque (milky)

Other (chemicals, dyes)

**AQUATIC PLANTS IN STREAM**

Attached:  none  some  lots

Floating:  none  some  lots

**WILDLIFE IN OR AROUND STREAM**

(Evidence of)

Fish  Beaver  Deer

Snails  Other: Elliptio maculans

**STREAM SHADING (water surface)**

Mostly shaded (≥75% coverage)

Halfway (≥50%)

Partially shaded (≥25%)

Unshaded (< 25%)

**CHANNEL DYNAMICS**

Downcutting  Bed scour

Widening  Bank failure

Headcutting  Bank scour

Aggrading  Slope failure

Sed. deposition  Channelized

Unknown

**CHANNEL DIMENSIONS (FACING DOWNSTREAM)**

Height: LT bank \_\_\_\_\_ (ft)

RT bank \_\_\_\_\_ (ft)

Width: Bottom \_\_\_\_\_ (ft)

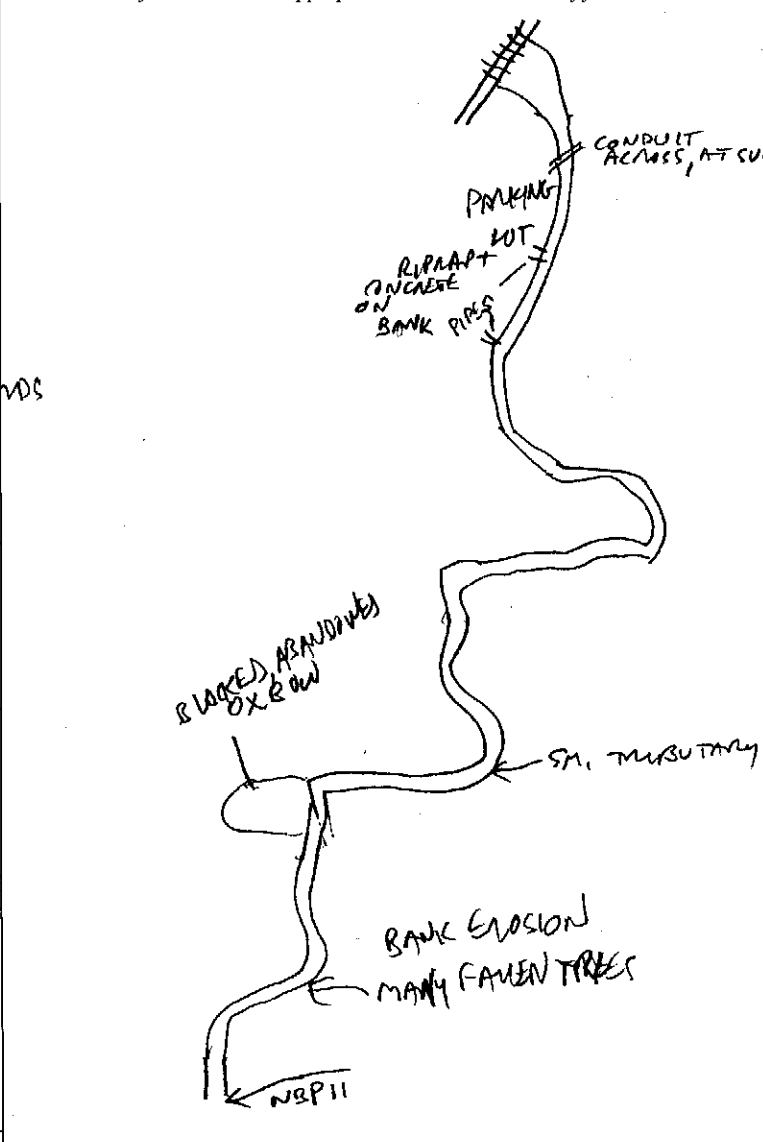
Top \_\_\_\_\_ (ft)

**REACH ACCESSIBILITY**

<b>Good:</b> Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	<b>Fair:</b> Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	<b>Difficult:</b> Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.
5	3	2
4		1

**REACH SKETCH AND SITE IMPACT TRACKING**

Simple planar sketch of survey reach. Track locations and IDs for all site impacts within the survey reach (OT, ER, IB, SC, UT, TR, MI) as well as any additional features deemed appropriate. Indicate direction of flow



NOTES: (biggest problem you see in survey reach) Impacted Buffer adjacent to parking lot along Right Bank

REPORTED TO AUTHORITIES  YES  NO

**OVERALL STREAM CONDITION**

	Optimal	Suboptimal	Marginal	Poor
<b>IN-STREAM HABITAT</b> <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).	40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).	20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.	Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.
	20 <u>19</u> 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>VEGETATIVE PROTECTION</b> <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory 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 one-half 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 one-half 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.
	Left Bank 10 <u>9</u>	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	8 <u>7</u> 6	5 4 3	2 1 0
<b>BANK EROSION</b> <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.	Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.	Past downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure	Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.
	Left Bank 10 9	8 7 6	5 <u>4</u> 3	2 1 0
	Right Bank 10 9	8 <u>7</u> 6	5 4 3	2 1 0
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.	High flows (greater than bankfull) <b>not</b> able to enter floodplain. Stream deeply entrenched.	High flows (greater than bankfull) <b>not</b> able to enter floodplain. Stream deeply entrenched.
	20 19 18 17 <u>16</u>	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

**OVERALL BUFFER AND FLOODPLAIN CONDITION**

	Optimal	Suboptimal	Marginal	Poor
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.	Width of buffer zone 25-50 feet; human activities have impacted zone only minimally.	Width of buffer zone 10-25 feet; human activities have impacted zone a great deal.	Width of buffer zone <10 feet: little or no riparian vegetation due to human activities.
	Left Bank 10 <u>9</u>	8 7 6	5 4 3	2 1 0
	Right Bank 10 9	<u>8</u> 7 6	5 4 3	2 1 0
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest	Predominant floodplain vegetation type is young forest	Predominant floodplain vegetation type is shrub or old field	Predominant floodplain vegetation type is turf or crop land
	20 19 18 17 16	<u>15</u> 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water	Even mix of wetland and non-wetland habitats, no evidence of standing/ponded water	Either all wetland or all non-wetland habitat, evidence of standing/ponded water	Either all wetland or all non-wetland habitat, no evidence of standing/ponded water
	20 19 18 17 16	15 14 13 12 11	<u>10</u> 9 8 7 6	5 4 3 2 1 0
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures	Minor floodplain encroachment in the form of fill material, land development, or manmade structures, but not effecting floodplain function	Moderate floodplain encroachment in the form of filling, land development, or manmade structures, some effect on floodplain function	Significant floodplain encroachment (i.e. fill material, land development, or man-made structures). Significant effect on floodplain function
	20 19 18 17 16	15 <u>14</u> 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Sub Total In-stream: 46 /80 + Buffer/Floodplain: 56 /80 = Total Survey Reach 102 /160





WATERSHED/SUBSHED: NBP DATE: 11/23/09 ASSESSED BY: CM/13e

SURVEY REACH: 10 TIME: \_\_\_\_\_ AM/PM PHOTO ID (CAMERA-PIC #): # PB230023

SITE ID: (Condition #) \_\_\_\_\_ START LAT 41° 47' 41" LONG 72° 42' 39" LMK \_\_\_\_\_ GPS: (Unit ID) +PB2300  
 ER: (only if) \_\_\_\_\_ END LAT \_\_\_\_\_ LONG \_\_\_\_\_ LMK \_\_\_\_\_

PROCESS:  Currently unknown  
 Downcutting  Bed scour  
 Widening  Bank failure  
 Headcutting  Bank scour  
 Aggrading  Slope failure  
 Sed. deposition  Channelized

BANK OF CONCERN:  LT  RT  Both (looking downstream)  
 LOCATION:  Meander bend  Straight section  Steep slope/valley wall  Other:  
 DIMENSIONS:  
 Length (if no GPS) LT \_\_\_\_\_ ft and/or RT \_\_\_\_\_ ft Bottom width \_\_\_\_\_ ft  
 Bank Ht LT \_\_\_\_\_ ft and/or RT \_\_\_\_\_ ft Top width \_\_\_\_\_ ft  
 Bank Angle LT \_\_\_\_\_ ° and/or RT \_\_\_\_\_ ° Wetted Width \_\_\_\_\_ ft

LAND OWNERSHIP:  Private  Public  Unknown LAND COVER:  Forest  Field/Ag  Developed:

POTENTIAL RESTORATION CANDIDATE:  Grade control  Bank stabilization  
 No  Other:

THREAT TO PROPERTY/INFRASTRUCTURE:  No  Yes (Describe):

EXISTING RIPARIAN WIDTH:  <25 ft  25 - 50 ft  50-75ft  75-100ft  >100ft

EROSION SEVERITY(circle#) Channelized= <input type="checkbox"/> 1	Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.	Pat downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure	Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.
	5	4	1

ACCESS:	Good access: Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	Fair access: Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	Difficult access. Must cross wetland, steep slope or other sensitive areas to access stream. Minimal stockpile areas available and/or located a great distance from stream section. Specialized heavy equipment required.
	5	4	1

NOTES/CROSS SECTION SKETCH: a bend in stream.

REPORTED TO AUTHORITIES  Yes  No



WATERSHED/SUBSHED: NBP DATE: 11/23/09 ASSESSED BY: em/BG

SURVEY REACH: 10 TIME:    :     AM/PM PHOTO ID: (Camera-Pic #) PB2300#27

SITE ID: (Condition-#) IB- only one sheet START LAT 41° 47' 46" LONG 72° 42' 43" LMK     GPS: (Unit ID)      
 END LAT 41° 47' 48" LONG 72° 42' 44" LMK    

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: Parking lot, concrete + other debris

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank     :  
 RT Bank     :

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank       :  
 RT Bank       :

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA		REFORESTATION POTENTIAL: (Circle #)	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting
LT BANK	RT				
Length (ft): <u>   </u>	<u>   </u>		5	4	3
Width (ft): <u>   </u>	<u>   </u>		2	1	

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES:  
Rip - RAP, chunks of concrete, exposed concrete, parking lot, and lawn



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/23/09</u>	ASSESSED BY: <u>CM/BG</u>
SURVEY REACH ID: <u>10</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #)	# <u>PP230027</u>
SITE ID (Condition-#): <u>OT-A</u>	LAT <u>41° 47' 46"</u>	LONG <u>72° 42' 43"</u>	LMK _____ GPS: (Unit ID)

<b>BANK:</b> <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>24"</u> (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	NOT APPLICABLE				
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input checked="" type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b> <input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:	

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated  
 Land Use description: NEAR PARKING, Mostly forested  
 Area available:

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:**



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/23/09</u>	ASSESSED BY: <u>CM/BB</u>
SURVEY REACH ID: <u>10</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u># P62300 28</u>	
SITE ID (Condition-#): <u>OT-B</u>	LAT <u>41° 47.47 "</u>	LONG <u>72° 42.45 "</u>	LMK _____ GPS: (Unit ID)

<b>BANK:</b> <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>30 "</u> (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<div style="border: 1px solid black; width: 100px; height: 100px; margin: auto; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 2em; font-weight: bold;">X</span> </div> NOT APPLICABLE	

<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:
				<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:						
	<b>TURBIDITY:</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque						
	<b>FLOATABLES:</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:						
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:							

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.	
	5	4	(3)	2

**SKETCH/NOTES:** Headwall + outflow pipe located ~10' back from channel

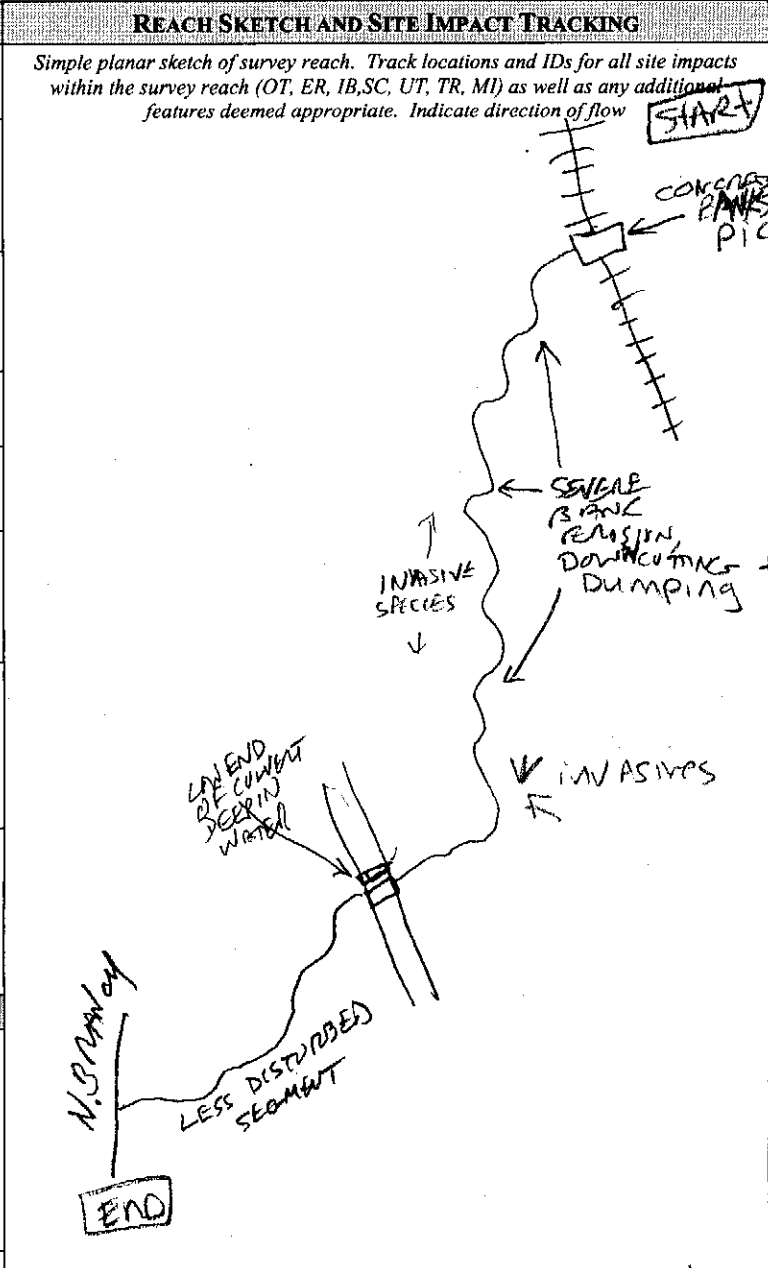




SURVEY REACH ID: <u>11</u>		WTRSHD/SUBSHD: <u>NB-P</u>		DATE: <u>11/23/01</u>		ASSESSED BY: <u>CM/BSG</u>	
START TIME: <u>1:00 AM</u> LMK: <u>RR</u>		END TIME: <u>1:46 AM</u> LMK: <u>Ink</u>		GPS ID: <u>CM</u>			
LAT <u>41° 47' 51"</u> LONG <u>72° 42' 30"</u>		LAT <u>41° 47' 40"</u> LONG <u>72° 42' 37"</u>					
DESCRIPTION: <u>RR TRAX</u>		DESCRIPTION: <u>TR10 joins MAIN stem</u>					

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent
	<input type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input type="checkbox"/> Overcast	<input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input type="checkbox"/> Urban/Residential	<input checked="" type="checkbox"/> Suburban/Res	<input checked="" type="checkbox"/> Forested	<input checked="" type="checkbox"/> Institutional
	<input type="checkbox"/> Golf course	<input checked="" type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input checked="" type="checkbox"/> Other: <u>W. Hayfield</u>	

AVERAGE CONDITIONS (check applicable)	
BASE FLOW AS %	<input type="checkbox"/> 0-25% <input type="checkbox"/> 50%-75%
CHANNEL WIDTH	<input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE	
<input type="checkbox"/> Silt/clay (fine or slick)	<input type="checkbox"/> Cobble (2.5-10")
<input checked="" type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")
<input type="checkbox"/> Gravel (0.1-2.5")	<input type="checkbox"/> Bed rock
WATER CLARITY	
<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Turbid (suspended matter)
<input type="checkbox"/> Stained (clear, naturally colored)	<input checked="" type="checkbox"/> Opaque (milky)
<input type="checkbox"/> Other (chemicals, dyes)	
AQUATIC PLANTS	
Attached:	<input type="checkbox"/> none <input checked="" type="checkbox"/> some <input type="checkbox"/> lots
Floating:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
WILDLIFE IN OR AROUND STREAM	
(Evidence of)	
<input type="checkbox"/> Fish	<input type="checkbox"/> Beaver
<input type="checkbox"/> Snails	<input type="checkbox"/> Deer
<input type="checkbox"/> Other:	
STREAM SHADING (water surface)	
<input type="checkbox"/> Mostly shaded (≥75% coverage)	
<input type="checkbox"/> Halfway (≥50%)	
<input checked="" type="checkbox"/> Partially shaded (≥25%)	
<input type="checkbox"/> Unshaded (<25%)	
CHANNEL DYNAMICS	
<input checked="" type="checkbox"/> Downcutting	<input checked="" type="checkbox"/> Bed scour
<input type="checkbox"/> Widening	<input checked="" type="checkbox"/> Bank failure
<input type="checkbox"/> Headcutting	<input checked="" type="checkbox"/> Bank scour
<input type="checkbox"/> Aggrading	<input type="checkbox"/> Slope failure
<input type="checkbox"/> Sed. deposition	<input type="checkbox"/> Channelized
<input type="checkbox"/> Unknown	
CHANNEL DIMENSIONS	
Height:	<del>Bank</del> <u>30</u> (ft)
Width:	<del>Bottom</del> <u>10</u> (ft)
	<del>Top</del> (ft)



REACH ACCESSIBILITY		
<b>Good:</b> Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	<b>Fair:</b> Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	<b>Difficult:</b> Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.
5	4	3 2 1

NOTES: (biggest problem you see in survey reach) Dumping, flashy flow, or invasive plants, SEDIMENT LOAD.

REPORTED TO AUTHORITIES  YES  NO

OVERALL STREAM CONDITION																				
	Optimal					Suboptimal					Marginal					Poor				
<b>IN-STREAM HABITAT</b> <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.					Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking. <i>UNSTABLE WITH UPSTREAMING BANKS + SNAGS</i>				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>VEGETATIVE PROTECTION</b> <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory 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 one-half 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 one-half of the potential plant stubble height remaining. <i>PREDOMINANTLY NON-NATIVE</i>					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.				
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>BANK EROSION</b> <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.					Past downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure					Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.				
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
OVERALL BUFFER AND FLOODPLAIN CONDITION																				
	Optimal					Suboptimal					Marginal					Poor				
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.					Width of buffer zone 25-50 feet; human activities have impacted zone only minimally.					Width of buffer zone 10-25 feet; human activities have impacted zone a great deal.					Width of buffer zone <10 feet; little or no riparian vegetation due to human activities.				
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest					Predominant floodplain vegetation type is young forest					Predominant floodplain vegetation type is shrub or old field					Predominant floodplain vegetation type is turf or crop land				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water					Even mix of wetland and non-wetland habitats, no evidence of standing/ponded water					Either all wetland or all non-wetland habitat, evidence of standing/ponded water					Either all wetland or all non-wetland habitat, no evidence of standing/ponded water				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures					Minor floodplain encroachment in the form of fill material, land development, or manmade structures, but not effecting floodplain function					Moderate floodplain encroachment in the form of filling, land development, or manmade structures, some effect on floodplain function					Significant floodplain encroachment (i.e. fill material, land development, or man-made structures). Significant effect on floodplain function				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>Sub Total In-stream:</b> 29 /80 + <b>Buffer/Floodplain:</b> 59 /80 = <b>Total Survey Reach</b> 88 /160																				



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/23/09</u>	ASSESSED BY: <u>CM/86</u>	
SURVEY REACH ID: <u>11</u>		TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>PB23001# 10</u>	
SITE ID: (Condition #) <u>TR-A</u>		LAT <u>41° 47' 50"</u> LONG <u>72° 42' 30"</u> LMK _____	GPS: (Unit ID)	
<b>TYPE:</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Plastic <input checked="" type="checkbox"/> Tires <input type="checkbox"/> Appliances <input type="checkbox"/> Automotive <input type="checkbox"/> Paper <input type="checkbox"/> Construction <input type="checkbox"/> Yard Waste <input type="checkbox"/> Other: <u>RR ties, sharp CRATES</u>	<b>SOURCE:</b> <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Flooding <input checked="" type="checkbox"/> Illegal dump <input checked="" type="checkbox"/> Local outfall	<b>LOCATION:</b> <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Riparian Area <input type="checkbox"/> Lt bank <input type="checkbox"/> Rt bank	<b>LAND OWNERSHIP:</b> <input checked="" type="checkbox"/> Public? <input type="checkbox"/> Unknown <input type="checkbox"/> Private <b>AMOUNT (# Pickup truck loads):</b>
<b>POTENTIAL RESTORATION CANDIDATE</b> <input checked="" type="checkbox"/> Stream cleanup <input checked="" type="checkbox"/> Stream adoption segment <input checked="" type="checkbox"/> Removal/prevention of dumping <input type="checkbox"/> no <input type="checkbox"/> Other:				
If yes for trash or debris removal	<b>EQUIPMENT NEEDED:</b> <input type="checkbox"/> Heavy equipment <input checked="" type="checkbox"/> Trash bags <input type="checkbox"/> Unknown <u>Hand Removal</u>		<b>DUMPSTER WITHIN 100 FT:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	
	<b>WHO CAN DO IT:</b> <input checked="" type="checkbox"/> Volunteers <input checked="" type="checkbox"/> Local Gov <input type="checkbox"/> Hazmat Team <input checked="" type="checkbox"/> Other			
<b>CLEAN-UP POTENTIAL:</b> (Circle #)	A small amount of trash (i.e., less than two pickup truck loads) located inside a park with easy access <u>5</u>	A large amount of trash, or bulk items, in a small area with easy access. Trash may have been dumped over a long period of time but it could be cleaned up in a few days, possibly with a small backhoe. <u>4</u>	A large amount of trash or debris scattered over a large area, where access is very difficult. Or presence of drums or indications of hazardous materials <u>(3)</u>	
			A large amount of trash or debris scattered over a large area, where access is very difficult. Or presence of drums or indications of hazardous materials <u>2</u>	<u>1</u>
<b>NOTES:</b> Debris includes sleeping cart, crates, tires, railroad ties, plastic bottles, broken glass, etc.				
<b>REPORTED TO AUTHORITIES</b> <input type="checkbox"/> YES <input type="checkbox"/> NO				



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/23/09</u>		ASSESSED BY: <u>cm/BG</u>	
SURVEY REACH ID: <u>11</u>		TIME: _____ AM/PM		PHOTO ID: (Camera-Pic #) <u># none</u>	
SITE ID: (Condition-#) <u>TR-B</u>		LAT <u>41.47.46</u> " LONG <u>72.42.27</u> " LMK _____		GPS: (Unit ID)	
<b>TYPE:</b> <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial ? <input type="checkbox"/> Residential	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Paper <input type="checkbox"/> Metal <input type="checkbox"/> Tires <input type="checkbox"/> Construction <input type="checkbox"/> Medical <input type="checkbox"/> Appliances <input type="checkbox"/> Yard Waste <input type="checkbox"/> Automotive <input checked="" type="checkbox"/> Other: <u>CRATES</u>		<b>SOURCE:</b> <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Flooding <input type="checkbox"/> Illegal dump <input type="checkbox"/> Local outfall	<b>LOCATION:</b> <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Riparian Area <input type="checkbox"/> Lt bank <input type="checkbox"/> Rt bank	<b>LAND OWNERSHIP:</b> <input type="checkbox"/> Public <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Private <b>AMOUNT (# Pickup truck loads):</b>
<b>POTENTIAL RESTORATION CANDIDATE</b> <input checked="" type="checkbox"/> Stream cleanup <input checked="" type="checkbox"/> Stream adoption segment <input type="checkbox"/> Removal/prevention of dumping <input type="checkbox"/> no <input type="checkbox"/> Other:					
<i>If yes for trash or debris removal</i>	<b>EQUIPMENT NEEDED :</b> <input type="checkbox"/> Heavy equipment <input type="checkbox"/> Trash bags <input type="checkbox"/> Unknown			<b>DUMPSTER WITHIN 100 FT:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
	<b>WHO CAN DO IT:</b> <input checked="" type="checkbox"/> Volunteers <input checked="" type="checkbox"/> Local Gov <input type="checkbox"/> Hazmat Team <input checked="" type="checkbox"/> Other*				
<b>CLEAN-UP POTENTIAL:</b> (Circle #)	A small amount of trash (i.e., less than two pickup truck loads) located inside a park with easy access	A large amount of trash, or bulk items, in a small area with easy access. Trash may have been dumped over a long period of time but it could be cleaned up in a few days, possibly with a small backhoe.	A large amount of trash or debris scattered over a large area, where access is very difficult. Or presence of drums or indications of hazardous materials		
	5	4	3	2	1
<b>NOTES:</b> <u>plastic bottles + plastic crates have piled up against a fallen tree. This has been dumped / flooded + settled here - indicates overall litter problem + worth noting</u>					
<b>REPORTED TO AUTHORITIES</b> <input type="checkbox"/> YES <input type="checkbox"/> NO					



WATERSHED/SUBSHED: NBP DATE: 11/23/09 ASSESSED BY: CM/1867

SURVEY REACH ID: 11 TIME: 1:00 AM/ED PHOTO ID: (Camera-Pic #) PB2300 # 13+14

SITE ID: (Condition #) SC: A LAT 41° 47' 51" LONG 72° 42' 30" LMK \_\_\_\_\_ GPS (Unit ID) \_\_\_\_\_

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input checked="" type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input type="checkbox"/> Box <input type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other:	<b># BARRELS:</b> <input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> Other: <u>stone mason</u>	<b>ALIGNMENT:</b> <input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: <u>10</u> (ft) Height: _____ (ft) Culvert length: <u>20'</u> (ft) Width: _____ (ft) Roadway elevation: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe): _____			<b>CULVERT SLOPE:</b> <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

**POTENTIAL RESTORATION CANDIDATE**  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 no  Local stream repair  Other:

**IS SC ACTING AS GRADE CONTROL**  No  Yes  Unknown

<b>If yes for fish barrier NO</b>	<b>EXTENT OF PHYSICAL BLOCKAGE:</b> <input type="checkbox"/> Total <input type="checkbox"/> Partial <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown	<b>BLOCKAGE SEVERITY: (circle #)</b>		
	<b>CAUSE:</b> <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other: _____	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

**NOTES/SKETCH:** upstream of RR crossing there is concrete lining the left bank (see photo B)-but this is not part of Reach 11.

**REPORTED TO AUTHORITIES**  YES  NO



WATERSHED/SUBSHED: NBP DATE: 11/23/09 ASSESSED BY: om/BSG  
 SURVEY REACH ID: 11 TIME: : AM/PM PHOTO ID: (Camera-Pic #) PB2300 # 18+19  
 SITE ID: (Condition #) SC-6 LAT 41° 47' 41" LONG 72° 42' 32" LMK \_\_\_\_\_ GPS (Unit ID) \_\_\_\_\_

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input checked="" type="checkbox"/> Box <input type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other:	<b># BARRELS:</b> <input type="checkbox"/> Single <input checked="" type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> Other:	<b>ALIGNMENT:</b> <input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: <u>12'</u> (ft) Height: <u>3 1/2'</u> (ft)  Culvert length: _____ (ft) Width: _____ (ft)  Roadway elevation: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe): _____			<b>CULVERT SLOPE:</b> <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

POTENTIAL RESTORATION CANDIDATE  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 no  Local stream repair  Other:

IS SC ACTING AS GRADE CONTROL  No  Yes  Unknown

<i>If yes for fish barrier</i>	<b>EXTENT OF PHYSICAL BLOCKAGE:</b> <input type="checkbox"/> Total <input type="checkbox"/> Partial <input type="checkbox"/> Temporary <input checked="" type="checkbox"/> Unknown	<b>BLOCKAGE SEVERITY: (circle #)</b>		
	<b>CAUSE:</b> <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other: _____	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

upstream of culvert the water is deeper than downstream, this shouldn't impact fish - but would not be an acceptable passage for turtles given the low light penetration (you can't see the light AT the end of the tunnel, so to speak).

REPORTED TO AUTHORITIES  YES  NO

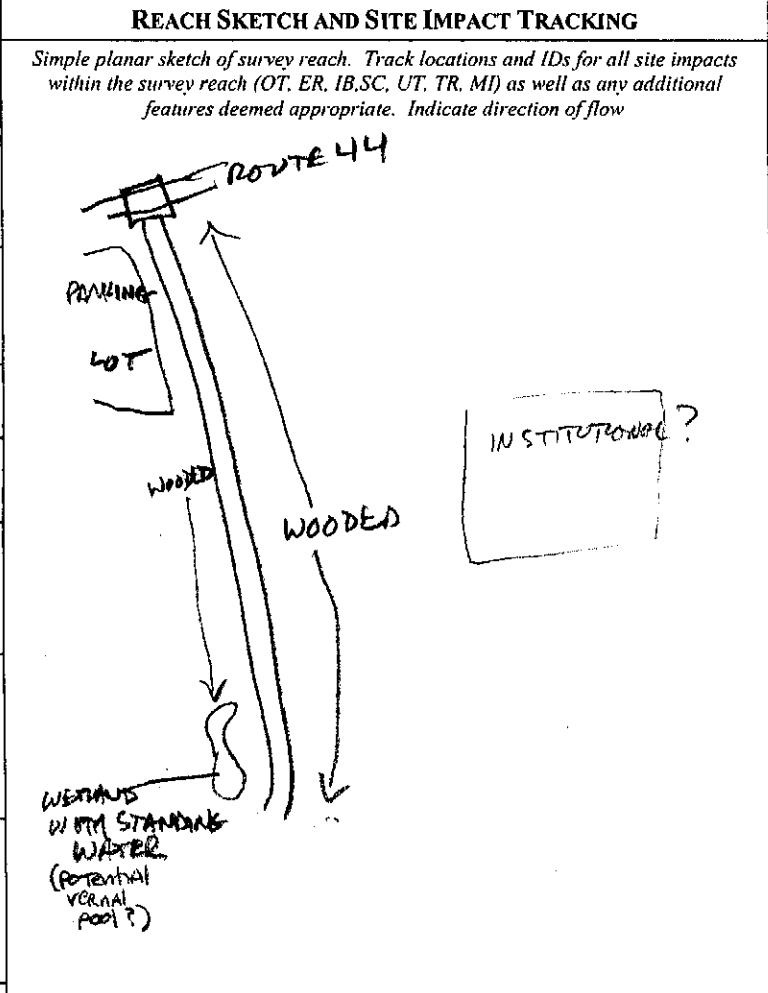
P. 1 of 2  
NBP, Reach 13



SURVEY REACH ID: <u>NBP-13</u>		WTRSHD/SUBSHD: <u>NBP</u>	DATE: <u>11/24/09</u>	ASSESSED BY: <u>RG+CM</u>
START TIME: <u>12:30 AM</u>	LMK: _____	END TIME: <u>1:05 AM</u>	LMK: _____	GPS ID: <u>cm</u>
LAT: <u>42° 46' 56" N</u> LONG: <u>92° 42' 28" W</u>		LAT: <u>41° 47' 04" N</u> LONG: <u>92° 42' 28" W</u>		
DESCRIPTION: <u>Potential Vernal Pool (Photo # 071)</u>		DESCRIPTION: <u>Rte. 44 overpass</u>		

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent
	<input type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input type="checkbox"/> Urban/Residential	<input checked="" type="checkbox"/> Suburban/Res	<input checked="" type="checkbox"/> Forested	<input checked="" type="checkbox"/> Institutional
	<input type="checkbox"/> Golf course	<input type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input type="checkbox"/> Other:	

AVERAGE CONDITIONS (check applicable)	
BASE FLOW AS %	<input type="checkbox"/> 0-25% <input type="checkbox"/> 50-75%
CHANNEL WIDTH	<input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE	
<input type="checkbox"/> Silt/clay (fine or slick)	<input checked="" type="checkbox"/> Cobble (2.5-10")
<input type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")
<input type="checkbox"/> Gravel (0.1-2.5")	<input type="checkbox"/> Bed rock
WATER CLARITY	
<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Turbid (suspended matter)
<input type="checkbox"/> Stained (clear, naturally colored)	<input type="checkbox"/> Opaque (milky)
<input type="checkbox"/> Other (chemicals, dyes)	
AQUATIC PLANTS	
Attached:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
Floating:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
WILDLIFE IN OR AROUND STREAM	
(Evidence of)	
<input type="checkbox"/> Fish	<input type="checkbox"/> Beaver <input type="checkbox"/> Deer
<input type="checkbox"/> Snails	<input type="checkbox"/> Other:
STREAM SHADING (water surface)	
<input checked="" type="checkbox"/> Mostly shaded (≥75% coverage)	
<input type="checkbox"/> Halfway (≥50%)	
<input type="checkbox"/> Partially shaded (≥25%)	
<input type="checkbox"/> Unshaded (< 25%)	
CHANNEL DYNAMICS	
<input type="checkbox"/> Downcutting	<input type="checkbox"/> Bed scour
<input type="checkbox"/> Widening	<input type="checkbox"/> Bank failure
<input type="checkbox"/> Headcutting	<input checked="" type="checkbox"/> Bank scour
<input type="checkbox"/> Aggrading	<input type="checkbox"/> Slope failure
<input type="checkbox"/> Sed. deposition	<input type="checkbox"/> Channelized
<input type="checkbox"/> Unknown	
CHANNEL DIMENSIONS (FACING DOWNSTREAM)	
Height: LT bank	_____ (ft)
RT bank	_____ (ft)
Width: Bottom	<u>51</u> (ft)
<u>CANKFOUL</u> Top	_____ (ft)



REACH ACCESSIBILITY		
Good: Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	Fair: Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	Difficult. Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.
5	4	3

NOTES: (biggest problem you see in survey reach) Debris, parking lot adjacent to nearly 1/2 of right bank to this reach, stormwater cut fall pipes in need of repair.

REPORTED TO AUTHORITIES  YES  NO

P. 2702  
NRP, Reach 13

OVERALL STREAM CONDITION																					
		Optimal					Suboptimal					Marginal					Poor				
<b>IN-STREAM HABITAT</b> <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).																				
	20 19 18 17 16					<u>15</u> 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0					
<b>VEGETATIVE PROTECTION</b> <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.																				
	Left Bank <u>10</u> <u>9</u>					8 7 6					5 4 3					2 1 0					
	Right Bank 10 <u>9</u>					8 7 6					5 4 3					2 1 0					
<b>BANK EROSION</b> <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.																				
	Left Bank 10 9					<u>8</u> 7 6					5 4 3					2 1 0					
Right Bank 10 9					<u>8</u> 7 6					5 4 3					2 1 0						
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.																				
	20 19 <u>18</u> 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0					
<b>OVERALL BUFFER AND FLOODPLAIN CONDITION</b>																					
		Optimal					Suboptimal					Marginal					Poor				
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.																				
	Left Bank <u>10</u> 9					8 7 6					5 4 3					2 1 0					
	Right Bank 10 9					<u>8</u> 7 6					5 4 3					2 1 0					
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest																				
	20 19 18 17 16					<u>15</u> 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0					
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water																				
	20 <u>19</u> 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0					
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures																				
	20 19 18 17 16					<u>15</u> 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0					
Sub Total In-stream: <u>68</u> /80		+		Buffer/Floodplain: <u>67</u> /80		=		Total Survey Reach <u>135</u> /160													





WATERSHED/SUBSHED: <u>DBP</u>		DATE: <u>11/24/09</u>	ASSESSED BY: <u>cm/BG</u>
SURVEY REACH ID: <u>13</u>	TIME: <u>12:35 AM/PM</u>	PHOTO ID: (Camera-Pic #) <u>PB2400/# 72</u>	
SITE ID (Condition-#): <u>OT-A</u>	LAT <u>41° 47' 00" N</u>	LONG <u>72° 42' 25" W</u>	LMK _____ GPS: (Unit ID) _____

<b>BANK:</b> <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	NOT APPLICABLE				

<b>CONDITION:</b> <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input checked="" type="checkbox"/> Other: <u>detached pipe failure</u>	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	<b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:
--	---	---	--	--	---

<b>FOR NO FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

<b>OTHER CONCERNS:</b> <input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:
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**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
5	4	3	2 1

**SKETCH/NOTES:**  
Not clear whether outfall water can reach the river except through seepage or extreme overflow.



<b>WATERSHED/SUBSHED:</b> NBP	<b>DATE:</b> 11/24/09	<b>ASSESSED BY:</b> CM/BG
<b>SURVEY REACH ID:</b> 13	<b>TIME:</b> _____ AM/PM	<b>PHOTO ID:</b> (Camera-Pic #) none #
<b>SITE ID (Condition-#):</b> OT- B	<b>LAT</b> 41° 47' 01" <b>LONG</b> 72° 42' 26" <b>LMK</b> _____	<b>GPS:</b> (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe x2 <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal x2 <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular x2 <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: 10" (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	<b>NOT APPLICABLE</b>		
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:				
	<b>TURBIDITY:</b>	<input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque				
	<b>FLOATABLES:</b>	<input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:				
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:					

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

**If yes for daylighting:**  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

**If yes for stormwater:**  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:** one on RB + corresponding one in LB

**REPORTED TO AUTHORITIES:**  YES  NO



<b>WATERSHED/SUBSHED:</b> <u>NBP</u>		<b>DATE:</b> <u>11/24/09</u>	<b>ASSESSED BY:</b> <u>cm/BG</u>
<b>SURVEY REACH ID:</b> <u>13</u>	<b>TIME:</b> _____ AM/PM	<b>PHOTO ID:</b> (Camera-Pic #) _____ #	
<b>SITE ID (Condition-#):</b> <u>OT-2</u>		<b>LAT</b> <u>41° 47' 00"</u> <b>LONG</b> <u>72° 42' 27"</u>	<b>LMK</b> _____ <b>GPS:</b> (Unit ID)

<b>BANK:</b> <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:  <input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:  <input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>10</u> " (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  <div style="border: 1px solid black; width: 100%; height: 100%; text-align: center; font-size: 2em; color: red;">NOT APPLICABLE</div>
	<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:  <b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:						
	<b>TURBIDITY:</b>	<input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque						
	<b>FLOATABLES:</b>	<input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:						
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:							

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated  
 Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:**

**REPORTED TO AUTHORITIES:**  YES  NO



<b>WATERSHED/SUBSHED:</b> <u>NBP</u>		<b>DATE:</b> <u>11/24/09</u>	<b>ASSESSED BY:</b> <u>cm/86</u>
<b>SURVEY REACH ID:</b> <u>13</u>	<b>TIME:</b> _____ AM/PM	<b>PHOTO ID:</b> (Camera-Pic #) <u>None #</u>	
<b>SITE ID (Condition-#):</b> <u>OT-D</u>		<b>LAT</b> _____ ° _____ ' _____ " <b>LONG</b> _____ ° _____ ' _____ "	<b>LMK</b> _____ <b>GPS: (Unit ID)</b> _____

<b>BANK:</b> <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:  <input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:  <input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>10</u> " (in) <u>~ 3' off water level</u>  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  <div style="border: 1px solid black; width: 100%; height: 100%; text-align: center; font-size: 2em; color: red;">NOT APPLICABLE</div>
	<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:  <b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:									
	<b>TURBIDITY:</b>	<input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque									
	<b>FLOATABLES:</b>	<input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:									
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:										

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:** located approx 3' high

**REPORTED TO AUTHORITIES:**  YES  NO

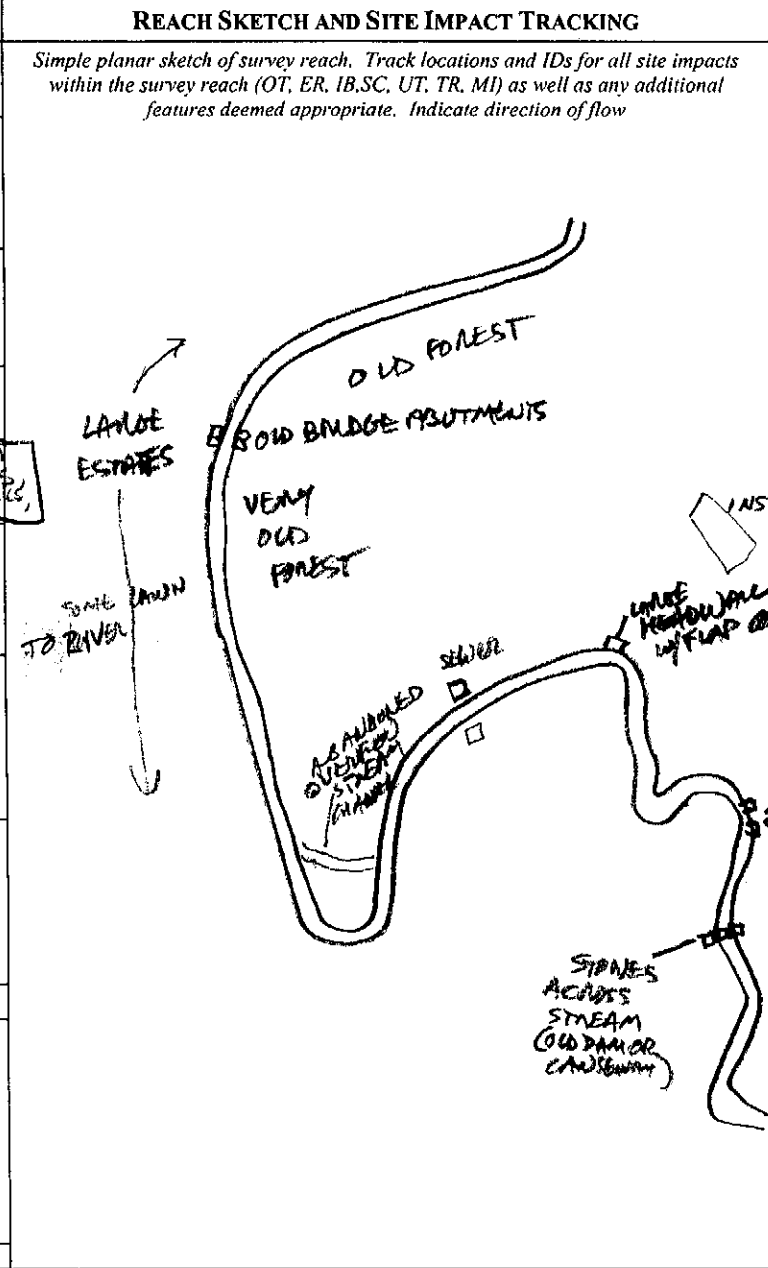
P. 1862  
NBP, REACH 14



SURVEY REACH ID: <u>14</u>		WTRSHD/SUBSHD: <u>NBP</u>		DATE: <u>11/24/07</u>		ASSESSED BY: <u>CM/86</u>	
START TIME: <u>10:52</u> AM LMK: _____		END TIME: <u>12:30</u> AM LMK: _____		GPS ID: <u>CM0</u>			
LAT <u>41° 46' 36"</u> LONG <u>72° 42' 04"</u>		LAT <u>42° 46' 56"</u> LONG <u>72° 42' 22"</u>		DESCRIPTION: <u>tributary input</u>			
				DESCRIPTION: <u>potential vernal pool (Add to Right Bank)</u>			

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent
	<input type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input type="checkbox"/> Urban/Residential	<input checked="" type="checkbox"/> Suburban/Res	<input checked="" type="checkbox"/> Forested	<input type="checkbox"/> Institutional
	<input type="checkbox"/> Golf course	<input type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input type="checkbox"/> Other:	

AVERAGE CONDITIONS (check applicable)	
BASE FLOW AS %	<input type="checkbox"/> 0-25% <input type="checkbox"/> 50%-75%
CHANNEL WIDTH	<input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE	
<input type="checkbox"/> Silt/clay (fine or slick)	<input checked="" type="checkbox"/> Cobble (2.5-10")
<input type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")
<input type="checkbox"/> Gravel (0.1-2.5")	<input type="checkbox"/> Bed rock
WATER CLARITY	
<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Turbid (suspended matter)
<input type="checkbox"/> Stained (clear, naturally colored)	<input type="checkbox"/> Opaque (milky)
<input type="checkbox"/> Other (chemicals, dyes)	
AQUATIC PLANTS IN STREAM	
Attached:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
Floating:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
WILDLIFE IN OR AROUND STREAM	
(Evidence of)	<input checked="" type="checkbox"/> Fish <input type="checkbox"/> Beaver <input checked="" type="checkbox"/> Deer <input type="checkbox"/> Muskrats
	<input type="checkbox"/> Snails <input checked="" type="checkbox"/> Other: <u>RACOONS, MALLARDS, WOODCHUCKS, SMALL MAMMALS</u>
STREAM SHADING (water surface)	
<input checked="" type="checkbox"/> Mostly shaded (≥75% coverage)	
<input type="checkbox"/> Halfway (≥50%)	
<input type="checkbox"/> Partially shaded (≥25%)	
<input type="checkbox"/> Unshaded (<25%)	
CHANNEL DYNAMICS	
<input type="checkbox"/> Downcutting	<input type="checkbox"/> Bed scour
<input type="checkbox"/> Widening	<input type="checkbox"/> Bank failure
<input type="checkbox"/> Headcutting	<input type="checkbox"/> Bank scour
<input type="checkbox"/> Aggrading	<input type="checkbox"/> Slope failure
<input type="checkbox"/> Sed. deposition	<input type="checkbox"/> Channelized
<input type="checkbox"/> Unknown	
CHANNEL DIMENSIONS	
Height: LT bank	_____ (ft)
RT bank	_____ (ft)
Width: Bottom	<u>55</u> (ft)
Top	_____ (ft)
REACH ACCESSIBILITY	
Good: Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	Fair: Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.
	Difficult: Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.



NOTES: (biggest problem you see in survey reach) TRASH in water (i.e., styrofoam cups + plates), plastic bottles, some invasive plants, but overall there is wide forested buffer - particularly along the left bank there is mature floodplain forest with many trees DBH > 30" + excellent riparian wildlife habitat.

REPORTED TO AUTHORITIES  YES  NO

P. 2002  
 NSP, REACH 14

OVERALL STREAM CONDITION																				
	Optimal					Suboptimal					Marginal					Poor				
<b>IN-STREAM HABITAT</b> <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.					Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>VEGETATIVE PROTECTION</b> <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory 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 one-half 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 one-half 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.				
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>BANK EROSION</b> <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.					Past downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure					Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.				
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
OVERALL BUFFER AND FLOODPLAIN CONDITION																				
	Optimal					Suboptimal					Marginal					Poor				
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.					Width of buffer zone 25-50 feet; human activities have impacted zone only minimally.					Width of buffer zone 10-25 feet; human activities have impacted zone a great deal.					Width of buffer zone <10 feet: little or no riparian vegetation due to human activities.				
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest					Predominant floodplain vegetation type is young forest					Predominant floodplain vegetation type is shrub or old field					Predominant floodplain vegetation type is turf or crop land				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water					Even mix of wetland and non-wetland habitats, no evidence of standing/ponded water					Either all wetland or all non-wetland habitat, evidence of standing/ponded water					Either all wetland or all non-wetland habitat, no evidence of standing/ponded water				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures					Minor floodplain encroachment in the form of fill material, land development, or manmade structures, but not effecting floodplain function					Moderate floodplain encroachment in the form of filling, land development, or manmade structures, some effect on floodplain function					Significant floodplain encroachment (i.e. fill material, land development, or man-made structures). Significant effect on floodplain function				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Sub Total In-stream: <u>69</u> /80 + Buffer/Floodplain: <u>72</u> /80 = Total Survey Reach <u>141</u> /160																				

WATERSHED/SUBSHED: NBP DATE: 11/24/09 ASSESSED BY: CM/BB

SURVEY REACH: 14 TIME: \_\_\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) PB0400 #58, 59, 60, 61, 62 + 70

SITE ID: (Condition-#) IB - <sup>one</sup> sheet only  
 START LAT see NOTES below " LONG ° ' " LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT \_\_\_\_\_ " LONG ° ' " LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both  
 REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: see notes below

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank     :  
 RT Bank     :

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank       :  
 RT Bank       :

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA LT BANK RT	REFORESTATION POTENTIAL: (Circle #)	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting
		5	4	3
Length (ft): _____				
Width (ft): _____				

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: ① minor bank erosion to RB adjacent to brick mansion (see pic. 58), but good wildlife habitat, some invasive plants here. Private property so restoration potential unknown.  
 ② remnant stone mason bridge @ 41°46'42" / 72°42'07" - see pic. 60  
 ③ TRASH behind low-income housing  
 ④ very minor bank erosion on RB but looks like good wildlife habitat (overhanging roots, cover habitat) + not easy access so low restoration potential @ 41°46'45" / 72°42'12" - kingfisher burrows here  
 ⑤ remnant stone mason bridge @ 41°46'45" / 72°42'26"  
 ⑥ lawn @ edges of RB  
 ⇒ these issues are minor and overall this reach is in good condition. The riparian area is mostly mature floodplain forest + trees with a diameter @ greatest height >30" are common on the floodplain.



WATERSHED/SUBSHED: <u>NBP</u>	DATE: <u>11/24/09</u>	ASSESSED BY: <u>cm/84</u>
SURVEY REACH ID: <u>14</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>PB2400 # 59</u>
SITE ID (Condition-#): <u>OT-A</u>	LAT <u>41° 46' 40"</u> LONG <u>72° 42' 06"</u> LMK _____	GPS: (Unit ID) _____

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>18"</u> (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially ( <u>~ 1/2</u> ) <input type="checkbox"/> Fully
<b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other: ? <u>submerged</u>	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	NOT APPLICABLE		
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input type="checkbox"/> None <input type="checkbox"/> Brown <input checked="" type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other: <u>but could be from fence</u>	
<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input checked="" type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input checked="" type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input checked="" type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b> <input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input checked="" type="checkbox"/> Other: <u>fence in water (bank)</u>	

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	(4)	3
			2
			1

**SKETCH/NOTES:** located behind 10-story building.

REPORTED TO AUTHORITIES:  YES  NO





WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/24/09</u>	ASSESSED BY: <u>64/cm</u>
SURVEY REACH ID: <u>14</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>PB2400# 64</u>	
SITE ID (Condition-#): <u>OT- B</u>		LAT _____° _____' _____" LONG _____° _____' _____" LMK _____	GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>?</u> (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially (~ 1/2) <input type="checkbox"/> Fully
	<b>CONDITION:</b> <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input checked="" type="checkbox"/> Other: <u>See notes</u>		<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:
<b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b> <input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:	

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_°

*If yes for stormwater:*  
 Is stormwater currently controlled?  
 Yes  No  Not investigated

Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:** this looks like some kind of headwall with an overflow flap - however - it was closed - didn't look like it functions properly (?) located behind some kind of medical facility.

REPORTED TO AUTHORITIES:  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/24/09</u>	ASSESSED BY: <u>CM/BSG</u>
SURVEY REACH ID: <u>14</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>P32400 # b1 + 62</u>	
SITE ID (Condition #): <u>OT-6</u>		LAT <u>41° 46' 45.8"</u> LONG <u>72° 42' 08.6"</u>	GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>24"</u> (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	<b>CONDITION:</b> <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input checked="" type="checkbox"/> Other: <u>see notes below</u>		<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:
<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input checked="" type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:						
	<b>TURBIDITY:</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque						
	<b>FLOATABLES:</b>	<input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:						
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:							

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.	
	5	4	3	2

**SKETCH/NOTES:** Concrete chunks around outfalls slope.



<b>WATERSHED/SUBSHED:</b> <u>NBP</u>		<b>DATE:</b> <u>11/24/09</u>	<b>ASSESSED BY:</b> <u>cm/BG</u>
<b>SURVEY REACH ID:</b> <u>14</u>	<b>TIME:</b> _____ AM/PM	<b>PHOTO ID: (Camera-Pic #)</b> <u>none</u> #	
<b>SITE ID (Condition-#):</b> <u>OT-C</u>	<b>LAT</b> <u>41° 46' 50"</u> <b>LONG</b> <u>72° 42' 16"</u>	<b>LMK</b> _____	<b>GPS: (Unit ID)</b> _____

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully	<b>NOT APPLICABLE</b>	
							<b>CONCRETE</b> <input type="checkbox"/> <b>EARTHEN</b> <input type="checkbox"/> <input type="checkbox"/> Other:
<b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:							
<b>CONDITION:</b> <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:			<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags)	<input type="checkbox"/> Dumping (bulk)	<input type="checkbox"/> Excessive Sedimentation
	<input type="checkbox"/> Needs Regular Maintenance	<input type="checkbox"/> Bank Erosion	<input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> <i>(circle #)</i>	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.	
	5	4	3	2

**SKETCH/NOTES:**

**REPORTED TO AUTHORITIES:**  YES  NO



<b>WATERSHED/SUBSHED:</b> <u>NBP</u>		<b>DATE:</b> <u>11/24/09</u>	<b>ASSESSED BY:</b> <u>cm/BS</u>
<b>SURVEY REACH ID:</b> <u>M</u>	<b>TIME:</b> _____:____AM/PM	<b>PHOTO ID:</b> (Camera-Pic #) <u>None</u> /#	
<b>SITE ID</b> (Condition #): <u>OT-0</u>		<b>LAT</b> <u>41° 46' 48"</u> <b>LONG</b> <u>72° 42' 17"</u> <b>LMK</b> _____	<b>GPS:</b> (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>12</u> " (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
			<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	NOT APPLICABLE

<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	<b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:
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<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:					
	<b>TURBIDITY:</b>	<input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque					
	<b>FLOATABLES:</b>	<input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:					

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:
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**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization

no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.		
	5	4	3	2	1

**SKETCH/NOTES:** Located on both banks approximately 10' downstream of the OT, there are 2 sewer holes (one on each bank). The one on the left bank was open - both smelled like sewage.



WATERSHED/SUBSHED: <u>NBP</u>	DATE: <u>11/24/09</u>	ASSESSED BY: <u>cm/186</u>
SURVEY REACH ID: <u>14</u>	TIME: <u>12:00</u> AM/PM	PHOTO ID: (Camera-Pic #) <u>None</u>
SITE ID (Condition-#): <u>OT-6</u>	LAT <u>41° 46' 46"</u> LONG <u>72° 42' 20.5"</u> LMK _____	GPS: (Unit ID) _____

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input type="checkbox"/> Closed pipe <input checked="" type="checkbox"/> Open channel <i>but pipe up slope ~ 40'</i>	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other: <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other: <input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully <div style="border: 1px solid black; width: 100px; height: 100px; margin: 5px auto; text-align: center; line-height: 100px;">NOT APPLICABLE</div>
<b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>CONDITION:</b> <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other: <b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:						
	<b>TURBIDITY:</b>	<input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque						
	<b>FLOATABLES:</b>	<input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:						
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:							

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.		
	5	4	3	2	1

**SKETCH/NOTES:**

**REPORTED TO AUTHORITIES:**  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>1/24/09</u>	ASSESSED BY: <u>cm/86</u>
SURVEY REACH ID: <u>14</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>PB2400/# 66</u>	
SITE ID (Condition #): <u>OT-F</u>		LAT <u>41° 46' 44" N</u>	LONG <u>72° 42' 21" W</u> LMK _____ GPS: (Unit ID) _____

<b>BANK:</b> <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>12"</u> (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	NOT APPLICABLE	
<b>CONDITION:</b> <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input checked="" type="checkbox"/> Other: <u>see notes below</u>	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:				
	<b>TURBIDITY:</b>	<input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque				
	<b>FLOATABLES:</b>	<input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:				

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:
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**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization

no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.		
	5	4	3	2	1

**SKETCH/NOTES:** outfall pipe is disconnected from headwall + pipe behind headwall (leader). No flow.

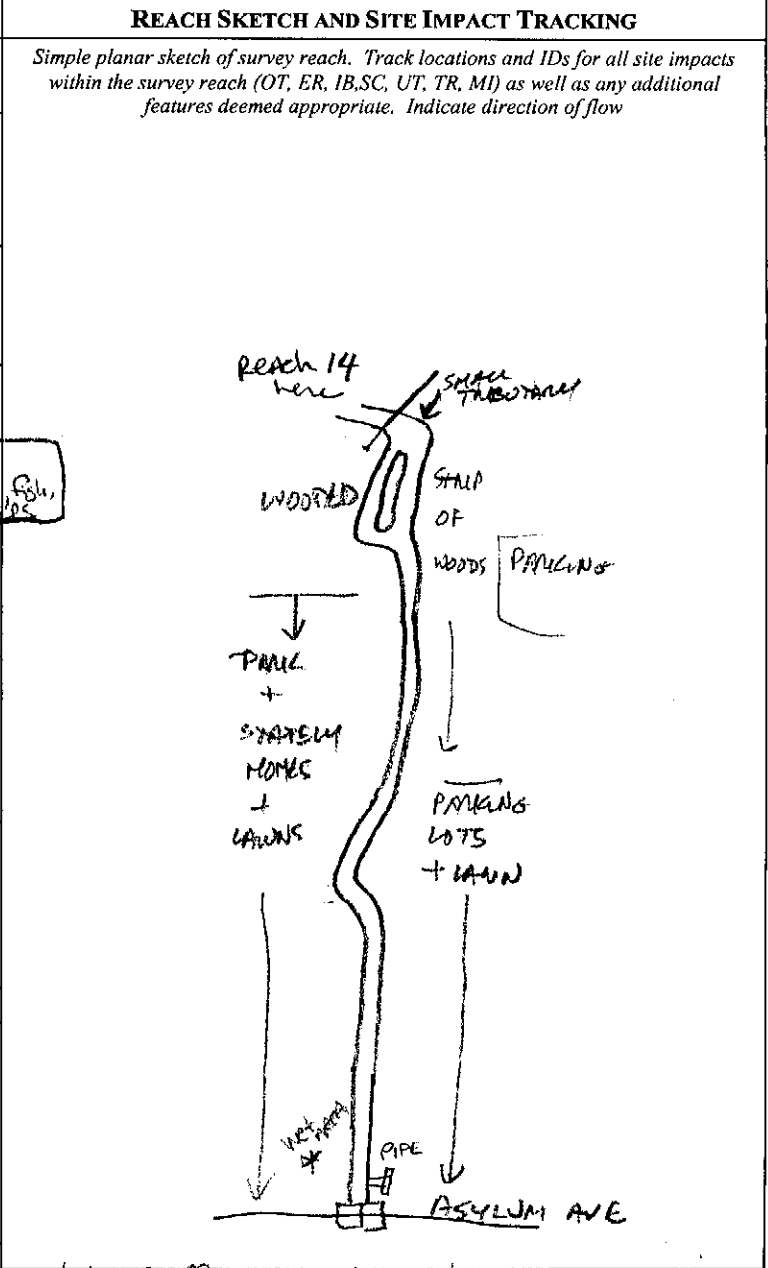
REPORTED TO AUTHORITIES:  YES  NO



SURVEY REACH ID: <u>15</u>		WTRSHD/SUBSHD: <u>NBP</u>		DATE: <u>11/24/09</u>		ASSESSED BY: <u>OM/BG</u>	
START TIME: <u>10:15</u> PM LMK: _____		END TIME: <u>10:52</u> PM LMK: _____		GPS ID: <u>(CWD)</u>			
LAT <u>41° 46' 24"</u> LONG <u>92° 42' 12"</u>		LAT <u>41° 46' 36"</u> LONG <u>92° 42' 04"</u>					
DESCRIPTION: <u>Elizabeth Park Street overpass</u>				DESCRIPTION: <u>Tributary junction w/ main stem</u>			

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent
	<input type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Urban/Residential	<input type="checkbox"/> Suburban/Res	<input type="checkbox"/> Forested	<input checked="" type="checkbox"/> Institutional
	<input type="checkbox"/> Golf course	<input checked="" type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input type="checkbox"/> Other:	

AVERAGE CONDITIONS (check applicable)	
BASE FLOW AS %	<input type="checkbox"/> 0-25% <input type="checkbox"/> 50%-75%
CHANNEL WIDTH	<input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE	
<input checked="" type="checkbox"/> Silt/clay (fine or slick)	<input type="checkbox"/> Cobble (2.5-10")
<input type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")
<input type="checkbox"/> Gravel (0.1-2.5")	<input type="checkbox"/> Bed rock
WATER CLARITY	
<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Turbid (suspended matter)
<input type="checkbox"/> Stained (clear, naturally colored)	<input type="checkbox"/> Opaque (milky)
<input type="checkbox"/> Other (chemicals, dyes)	
AQUATIC PLANTS IN STREAM	
Attached:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
Floating:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
WILDLIFE IN OR AROUND STREAM (Evidence of)	
<input checked="" type="checkbox"/> Fish	<input type="checkbox"/> Beaver
<input type="checkbox"/> Snails	<input checked="" type="checkbox"/> Deer
<input checked="" type="checkbox"/> Other: <u>Small mammals</u>	<input type="checkbox"/> Mallards, water ducks, fish
STREAM SHADING (water surface)	
<input checked="" type="checkbox"/> Mostly shaded (≥75% coverage)	
<input type="checkbox"/> Halfway (≥50%)	
<input type="checkbox"/> Partially shaded (≥25%)	
<input type="checkbox"/> Unshaded (< 25%)	
CHANNEL DYNAMICS	
<input type="checkbox"/> Downcutting	<input type="checkbox"/> Bed scour
<input type="checkbox"/> Widening	<input type="checkbox"/> Bank failure
<input type="checkbox"/> Headcutting	<input checked="" type="checkbox"/> Bank scour
<input type="checkbox"/> Aggrading	<input type="checkbox"/> Slope failure
<input type="checkbox"/> Sed. deposition	<input type="checkbox"/> Channelized
<input type="checkbox"/> Unknown	
CHANNEL DIMENSIONS	
Height: LT bank	_____ (ft)
RT bank	_____ (ft)
Width: Bottom	<u>64</u> (ft)
Top	_____ (ft)



REACH ACCESSIBILITY		
<b>Good:</b> Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	<b>Fair:</b> Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	<b>Difficult:</b> Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.

NOTES: (biggest problem you see in survey reach) Impacted Buffer due to parking lots, Main thorough LAWN, invasive plants (J. Knotweed), TRASH, stormwater runoff + chunks of concrete in isolated areas.

REPORTED TO AUTHORITIES  YES  NO

OVERALL STREAM CONDITION																					
		Optimal					Suboptimal					Marginal					Poor				
<b>IN-STREAM HABITAT</b> <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).																				
	20 19 18 17 16					15 <u>(4)</u> 13 12 11					10 9 8 7 6					5 4 3 2 1 0					
<b>VEGETATIVE PROTECTION</b> <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.																				
	Left Bank 10 9					8 <u>(7)</u> 6					5 4 3					2 1 0					
	Right Bank 10 9					8 <u>(7)</u> 6					5 4 3					2 1 0					
<b>BANK EROSION</b> <i>(facing downstream)</i> <i>Most areas of bank failure are good with the majority through</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.																				
	Left Bank 10 9					8 <u>(7)</u> 6					5 4 3					2 1 0					
	Right Bank 10 9					8 <u>(7)</u> 6					5 4 3					2 1 0					
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.																				
	20 19 <u>(18)</u> 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0					
OVERALL BUFFER AND FLOODPLAIN CONDITION																					
		Optimal					Suboptimal					Marginal					Poor				
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.																				
	Left Bank 10 9					<u>(8)</u> 7 6					5 4 3					2 1 0					
	Right Bank 10 <u>(9)</u>					8 7 6					5 4 3					2 1 0					
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest																				
	20 19 <u>(18)</u> 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0					
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water																				
	20 19 <u>(18)</u> 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0					
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures																				
	20 19 18 17 16					15 14 <u>(13)</u> 12 11					10 9 8 7 6					5 4 3 2 1 0					
Sub Total In-stream: <u>60</u> /80		+		Buffer/Floodplain: <u>66</u> /80		=		Total Survey Reach <u>126</u> /160													





WATERSHED/SUBSHED: NBP DATE: 1/24/09 ASSESSED BY: cm/bg  
 SURVEY REACH: 15 TIME: \_\_\_:\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) #

SITE ID: (Condition-#) START LAT 41° 46' 23.8" LONG 72° 42' 12" LMK \_\_\_\_\_ GPS: (Unit ID)  
 IB- \_\_\_\_\_ END LAT 41° 46' 28" LONG 72° 42' 08.5" LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other:

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank      Parking lots  
 RT Bank     :

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank       :  
 RT Bank       :

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA LT BANK RT	REFORESTATION POTENTIAL: (Circle #)	5	4	3	2	1
		Length (ft): _____	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting	
Width (ft): _____						

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES:  
 ① Left Bank (LB) <sup>start</sup> @ 41° 46' 23.8" / 72° 42' 12" due to maintained lawns, parking lots, invasive plants, chunks of concrete, trash,  
 ② But @ end point (41° 46' 28" / 72° 42' 08.5") there is impact to the Right Bank (RB) due to a retaining wall.



<b>WATERSHED/SUBSHED:</b> <u>NBP</u>		<b>DATE:</b> <u>11/24/09</u>	<b>ASSESSED BY:</b> <u>em/bg</u>
<b>SURVEY REACH ID:</b> <u>15</u>	<b>TIME:</b> <u>2:20 PM</u>	<b>PHOTO ID:</b> (Camera-Pic #) <u>PB2400 # 50</u>	
<b>SITE ID (Condition-#):</b> <u>OT-A</u>		<b>LAT</b> <u>41°46'24" N</u>	<b>LONG</b> <u>72°42'11" W</u> <b>LMK</b> _____ <b>GPS: (Unit ID)</b> _____

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other: ?	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>30"</u> (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially (~ 1/2) <input type="checkbox"/> Fully
	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:		<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:		NOT APPLICABLE

<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input checked="" type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:
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<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:						
	<b>TURBIDITY:</b>	<input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque						
	<b>FLOATABLES:</b>	<input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:						

**OTHER CONCERNS:**  Excess Trash (paper/plastic bags)  Dumping (bulk)  Excessive Sedimentation  
 Needs Regular Maintenance  Bank Erosion  Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:**



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/21/09</u>	ASSESSED BY: <u>cm/166</u>
SURVEY REACH ID: <u>15</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>none</u> #	
SITE ID (Condition #): <u>OT-6</u>	LAT <u>41°46'26"</u> LONG <u>72°42'09.6"</u>	LMK _____	GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>12"</u> (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:		<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:		<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">         NOT APPLICABLE       </div>

<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:
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<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet, paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

**OTHER CONCERNS:**  Excess Trash (paper/plastic bags)  Dumping (bulk)  Excessive Sedimentation  
 Needs Regular Maintenance  Bank Erosion  Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

SKETCH/NOTES: Large concrete headwall + puny pipe. Japi knotweed here



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/24/09</u>	ASSESSED BY: <u>om/86</u>
SURVEY REACH ID: <u>15</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>P02400/# 51</u>	
SITE ID (Condition #): <u>OT-C</u>		LAT <u>41° 46' 28"</u> LONG <u>72° 42' 08.5"</u>	LMK _____ GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>24</u> " (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<div style="border: 1px solid black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 2em; font-weight: bold;">X</span> </div> NOT APPLICABLE	

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

SKETCH/NOTES: near Retaining wall

REPORTED TO AUTHORITIES:  YES  NO

Storm Water Outfalls



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/24/09</u>	ASSESSED BY: <u>em/sg</u>
SURVEY REACH ID: <u>15</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>None</u> ##	
SITE ID (Condition-#): <u>OT-0</u>		LAT <u>42° 46' 30"</u> LONG <u>72° 42' 07"</u> LMK _____	GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input checked="" type="checkbox"/> Other: ? <u>to submerged</u>	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>30"</u> (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully
	<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:		<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:
<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					NOT APPLICABLE

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input type="checkbox"/> Clear	<input type="checkbox"/> Brown	<input type="checkbox"/> Grey	<input type="checkbox"/> Yellow	<input type="checkbox"/> Green	<input type="checkbox"/> Orange	<input type="checkbox"/> Red	<input type="checkbox"/> Other:
	<b>TURBIDITY:</b>	<input type="checkbox"/> None	<input type="checkbox"/> Slight Cloudiness	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Opaque				
	<b>FLOATABLES:</b>	<input type="checkbox"/> None	<input type="checkbox"/> Sewage (toilet paper, etc.)	<input type="checkbox"/> Petroleum (oil sheen)	<input type="checkbox"/> Other:				
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags)		<input type="checkbox"/> Dumping (bulk)		<input type="checkbox"/> Excessive Sedimentation				
	<input type="checkbox"/> Needs Regular Maintenance		<input type="checkbox"/> Bank Erosion		<input type="checkbox"/> Other:				

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 No  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.	
	5	4	3	2

**SKETCH/NOTES:** Adjacent to a parking lot

REPORTED TO AUTHORITIES:  YES  NO



WATERSHED/SUBSHED: <b>NBP</b>		DATE: <b>11/24/09</b>	ASSESSED BY: <b>cm/166</b>
SURVEY REACH ID: <b>15</b>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <b>P32400# 53</b>	
SITE ID (Condition-#): <b>OT-E</b>	LAT <b>41° 46' 32"</b> LONG <b>72° 42' 05.8"</b>	LMK _____	GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <b>54"</b> (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:		<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	NOT APPLICABLE	
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:
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**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:** out flow is surrounded by rip-rap - however there was no flow on 11/24/09.

REPORTED TO AUTHORITIES:  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/24/09</u>	ASSESSED BY: <u>CM/BG</u>
SURVEY REACH ID: <u>15</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>PB2400 # 55</u>	
SITE ID (Condition-#): <u>OT-F</u>	LAT <u>41° 46' 33"</u>	LONG <u>72° 42' 06"</u>	LMK _____ GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input type="checkbox"/> Closed pipe <input checked="" type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other: <input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input checked="" type="checkbox"/> Other: <u>concrete chunks</u>	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Parabolic <input type="checkbox"/> Trapezoid <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully <div style="border: 1px solid black; width: 100px; height: 100px; margin: 5px auto; text-align: center; line-height: 100px;">NOT APPLICABLE</div>
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<b>CONDITION:</b> <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input checked="" type="checkbox"/> Other: <u>scour</u>	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	<b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:
--	---	---	--	---	---

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:
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<b>POTENTIAL RESTORATION CANDIDATE</b> <input type="checkbox"/> Discharge investigation <input type="checkbox"/> Stream daylighting <input type="checkbox"/> Local stream repair/outfall stabilization <input type="checkbox"/> no <input checked="" type="checkbox"/> Storm water retrofit <input type="checkbox"/> Other:
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*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_°

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.		
	5	4	3	2	1

**SKETCH/NOTES:** steep grade, some scour (see photo)

**REPORTED TO AUTHORITIES:**  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>	DATE: <u>11/24/09</u>	ASSESSED BY: <u>CM/BSG</u>
SURVEY REACH ID: <u>15</u>	TIME: _____:_____AM/PM	PHOTO ID: (Camera-Pic #) <u>None</u> #
SITE ID (Condition-#): <u>OT-6</u>	LAT <u>41° 46' 34.9"</u> LONG <u>72° 42' 04.6"</u>	LMK _____ GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>12</u> " (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>FLOW:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	NOT APPLICABLE		
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:**





WATERSHED/SUBSHED: <u>NBP</u>	DATE: <u>11/24/09</u>	ASSESSED BY: <u>cm/66</u>
SURVEY REACH ID: <u>15</u>	TIME: <u>10:15</u> AM/PM	PHOTO ID: (Camera-Pic #) <u>PB2400</u> /# <u>49</u>
SITE ID: (Condition-#) <u>SC-one sheet</u> LAT <u>41° 46' 23.8"</u> LONG <u>72° 42' 12"</u> LMK _____		GPS (Unit ID) _____

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input checked="" type="checkbox"/> Box <input type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other:	<b># BARRELS:</b> <input type="checkbox"/> Single <input checked="" type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> Other:	<b>ALIGNMENT:</b> <input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: _____ (ft) Height: _____ (ft) Culvert length: _____ (ft) Width: _____ (ft) Roadway elevation: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <u>None</u> <input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe):			<b>CULVERT SLOPE:</b> <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

POTENTIAL RESTORATION CANDIDATE  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 no  Local stream repair  Other:

IS SC ACTING AS GRADE CONTROL  No  Yes  Unknown

<i>If yes for fish barrier</i>	<b>EXTENT OF PHYSICAL BLOCKAGE:</b> <u>None</u> <input type="checkbox"/> Total <input type="checkbox"/> Partial <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown	<b>BLOCKAGE SEVERITY: (circle #)</b>				
	<b>CAUSE:</b> <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other:	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.		
		5	4	3	2	1

NOTES/SKETCH:

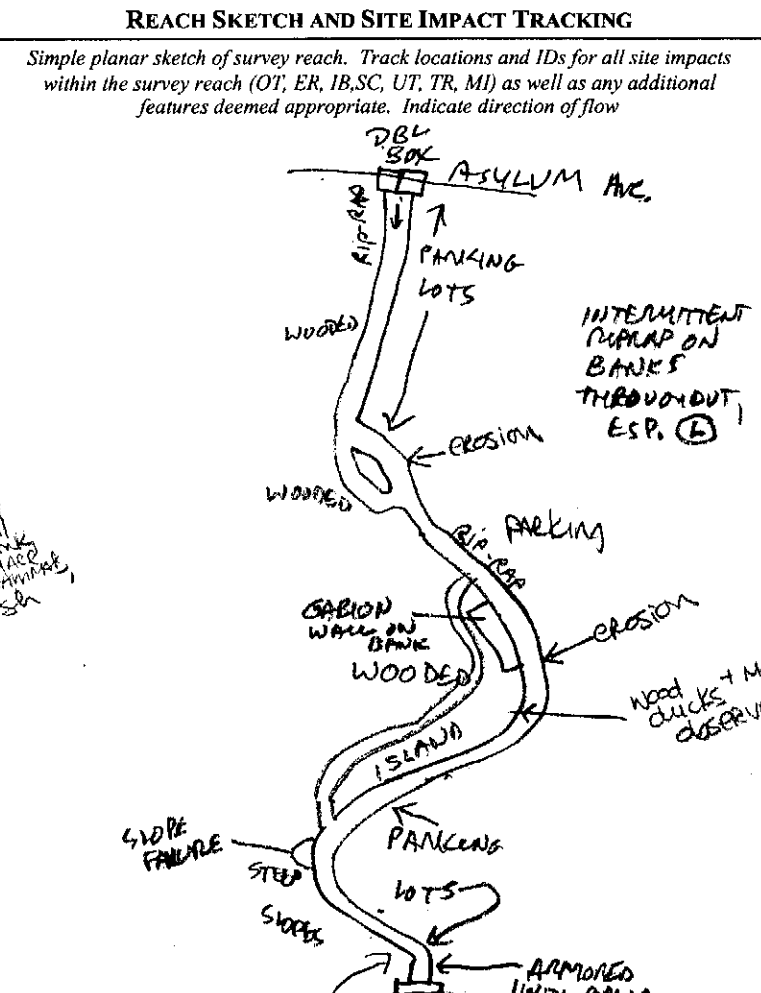


Reach Level Assessment

SURVEY REACH ID: <u>16</u>	WTRSHD/SUBSHD: <u>(NBP) North Branch Park</u>	DATE: <u>11/24/09</u>	ASSESSED BY: <u>CM + BL</u>
START TIME: <u>9:00 AM</u> LMK: _____	END TIME: <u>10:15 AM</u> LMK: _____	GPS ID: <u>(CM)</u>	
LAT <u>41° 46' 04"</u> LONG <u>92° 42' 13"</u>	LAT <u>41° 46' 24"</u> LONG <u>92° 42' 12"</u>	DESCRIPTION: <u>Elizabeth Park</u>	
DESCRIPTION: <u>Medical Center</u>			

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent
	<input type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input checked="" type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Urban/Residential	<input type="checkbox"/> Suburban/Res	<input type="checkbox"/> Forested	<input checked="" type="checkbox"/> Institutional
	<input type="checkbox"/> Golf course	<input type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input type="checkbox"/> Other: <u>medical offices</u>	

AVERAGE CONDITIONS (check applicable)	
BASE FLOW AS %	<input type="checkbox"/> 0-25% <input type="checkbox"/> 50%-75%
CHANNEL WIDTH	<input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE <u>But mostly Rip-Rap</u>	
<input checked="" type="checkbox"/> Silt/clay (fine or slick)	<input type="checkbox"/> Cobble (2.5-10")
<input type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")
<input type="checkbox"/> Gravel (0.1-2.5")	<input type="checkbox"/> Bed rock
WATER CLARITY	
<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Turbid (suspended matter)
<input type="checkbox"/> Stained (clear, naturally colored)	<input type="checkbox"/> Opaque (milky)
<input type="checkbox"/> Other (chemicals, dyes)	
AQUATIC PLANTS IN STREAM	
Attached:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
Floating:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
WILDLIFE IN OR AROUND STREAM	
(Evidence of)	<input checked="" type="checkbox"/> Fish <input type="checkbox"/> Beaver <input type="checkbox"/> Deer
	<input type="checkbox"/> Snails <input checked="" type="checkbox"/> Other: <u>Wood ducks, Mallards, Fish</u>
STREAM SHADING (water surface)	
<input checked="" type="checkbox"/> Mostly shaded (≥75% coverage)	
<input type="checkbox"/> Halfway (≥50%)	
<input type="checkbox"/> Partially shaded (≥25%)	
<input type="checkbox"/> Unshaded (< 25%)	
CHANNEL DYNAMICS	
<input type="checkbox"/> Downcutting	<input type="checkbox"/> Bed scour
<input type="checkbox"/> Widening	<input checked="" type="checkbox"/> Bank failure
<input type="checkbox"/> Headcutting	<input type="checkbox"/> Bank scour
<input type="checkbox"/> Aggrading	<input checked="" type="checkbox"/> Slope failure
<input type="checkbox"/> Sed. deposition	<input type="checkbox"/> Channelized
<input type="checkbox"/> Unknown	
CHANNEL DIMENSIONS (Facing Downstream)	
Height: LT bank	_____ (ft)
RT bank	_____ (ft)
Width: Bottom	<u>70</u> (ft)
Top	_____ (ft)



REACH ACCESSIBILITY		
Good: Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	Fair: Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	Difficult: Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.
5	④ 3	2 1

NOTES: (biggest problem you see in survey reach) Impacted Buffer ⇒ Parking lots adjacent to bank, rip-rap along almost entire reach/bank, residential lawn mowing, yard waste dumping, snow piling, TRASH/debris, invasive species (especially Jap. Knotweed).  
Unstable channel related to impacted buffer + stormwater inputs.

REPORTED TO AUTHORITIES  YES  NO

OVERALL STREAM CONDITION																				
	Optimal					Suboptimal					Marginal			Poor						
<b>IN-STREAM HABITAT</b>  <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.			Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.						
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>VEGETATIVE PROTECTION</b>  <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory 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 one-half 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 one-half 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. <i>LOTS of RIP-RAP</i>						
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>BANK EROSION</b>  <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.					Past downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure			Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.						
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.			High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.						
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
OVERALL BUFFER AND FLOODPLAIN CONDITION																				
	Optimal					Suboptimal					Marginal			Poor						
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.					Width of buffer zone 25-50 feet; human activities have impacted zone only minimally.					Width of buffer zone 10-25 feet; human activities have impacted zone a great deal.			Width of buffer zone <10 feet; little or no riparian vegetation due to human activities.						
	Left Bank	10	9			8	7	6			5	4	3			2	1	0		
	Right Bank	10	9			8	7	6			5	4	3			2	1	0		
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest					Predominant floodplain vegetation type is young forest					Predominant floodplain vegetation type is shrub or old field			Predominant floodplain vegetation type is turf or crop land						
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water					Even mix of wetland and non-wetland habitats, no evidence of standing/ponded water					Either all wetland or all non-wetland habitat, evidence of standing/ponded water			Either all wetland or all non-wetland habitat, no evidence of standing/ponded water						
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures					Minor floodplain encroachment in the form of fill material, land development, or manmade structures, but not effecting floodplain function					Moderate floodplain encroachment in the form of filling, <u>land development</u> , or <u>manmade structures</u> , some effect on floodplain function			Significant floodplain encroachment (i.e. fill material, land development, or man-made structures). Significant effect on floodplain function						
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Sub Total In-stream: <u>31</u> /80 + Buffer/Floodplain: <u>25</u> /80 = Total Survey Reach <u>56</u> /160																				

*RIP-RAP + poor water quality but wood ducks indicate potential food base*

*LOTS of RIP-RAP*

*Developed*

WATERSHED/SUBSHED: NBP DATE: 11/24/09 ASSESSED BY: CM/BG  
 SURVEY REACH: 16 TIME: \_\_\_:\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) PB2400 # 38, 39, 40 + 42  
 SITE ID: (Condition-#) IB-A START LAT 41° 46' 04.7" LONG 72° 42' 13.6" LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT 41° 46' 09.9" LONG 72° 42' 13.8" LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: see notes below

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank        
 RT Bank      Parking lots

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank         
 RT Bank

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA	REFORESTATION POTENTIAL:	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting
LT BANK RT Length (ft): _____ Width (ft): _____	(Circle #)	5	<u>4</u>	3 2 1

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: ① upstream of the culvert on the LB there is a parking lot, on the RB there is rip-rap with screen tied in, a retaining wall, + loose rip-rap. Both banks ~ 30' upstream of culvert are covered with rip-rap.  
 ② Residential lawn adjacent to RB + parking lots adjacent to LB. Leaf/yard waste dumping.  
 ③ Bank failure on RB (see photo 40) @ 41° 46' 05.9" / 72° 42' 17.1"  
 → very good candidate for restoration.



WATERSHED/SUBSHED: NBP DATE: 11/24/09 ASSESSED BY: CM/SG  
 SURVEY REACH: 16 TIME: \_\_\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) PB0400 # 44  
 SITE ID: (Condition-#) IB-B START LAT 41°46'11" LONG 72°42'14" LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT 41°46'12" LONG 72°42'14.8" LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both  
 REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: Rip-rap with wire mesh

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank     :  
 RT Bank     :

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank       :  
 RT Bank       :

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA	REFORESTATION POTENTIAL: (Circle #)	5	4	3	2	1
		Length (ft): _____ Width (ft): _____				

Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting

Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate

Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: ① Impacts to both banks associated with Rip-rap covered with wire mesh  
 ② Minor bank erosion just upstream of end GPS mark.



WATERSHED/SUBSHED: NBP DATE: 1/24/09 ASSESSED BY: om/AB

SURVEY REACH: 16 TIME: \_\_\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) none #

SITE ID: (Condition-#) IB-C START LAT 41°46'08.7" LONG 72°42'18" LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT 41°46'09.9" LONG 72°42'13.8" LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: see below

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank     :  
 RT Bank     :

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank       :  
 RT Bank       :

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA	REFORESTATION POTENTIAL:	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting
LT BANK RT Length (ft): _____ Width (ft): _____	(Circle #)	5	(4)	3 2 1

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: ① Rip-rap Along LB  
 ② Leaf dumping on LB adjacent to River + possible snow piling (parking lot); Possible salt depositions?



WATERSHED/SUBSHED: <b>NBP</b>		DATE: <b>11/24/09</b>	ASSESSED BY: <b>CM/BS</b>
SURVEY REACH: <b>16</b>		TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) #
SITE ID: (Condition-#) <b>IB-D</b>	START	LAT <b>41° 46' 11" N</b>	LONG <b>72° 42' 14" W</b>
	END	LAT <b>41° 46' 12" N</b>	LONG <b>72° 42' 14.8" W</b>

IMPACTED BANK:  LT  RT  Both

REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: **Rip-RAP (poor wildlife value)**

LAND USE: Private Institutional Golf Course Park Other Public

(Facing downstream) LT Bank

RT Bank

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other

LT Bank

RT Bank

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal

no  Other:

RESTORABLE AREA	LT BANK	RT	REFORESTATION POTENTIAL: (Circle #)	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting	
				Length (ft): _____	_____	_____	5
Width (ft): _____	_____	_____	_____	_____	_____	_____	

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun

Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: ① Rip-RAP on both banks

② Minor bank erosion on both banks



WATERSHED/SUBSHED: NBP DATE: 11/24/09 ASSESSED BY: CM/86

SURVEY REACH: 16 TIME: \_\_\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) PB2400 # 47 (wall)

SITE ID: (Condition-#) IB-E START LAT 41°46'14" LONG 72°42'15.4" LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT 41°46'18.9" LONG 72°42'14.3" LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: erosion, parking lots, trash, remaining wall

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank     :  
 RT Bank     :

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank       :  
 RT Bank       :

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA	REFORESTATION POTENTIAL:	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting
LT BANK RT Length (ft): _____ Width (ft): _____	(Circle #)	5	4	③ 2 1

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: ① Parking lot adjacent to LB ② starting GPS MARK  
 ② rip-rap on banks (poor wildlife value)  
 ③ minor erosion (both banks)  
 ④ mown lawn up to edge of river





<b>WATERSHED/SUBSHED:</b> <u>NBP</u>	<b>DATE:</b> <u>11/24/09</u>	<b>ASSESSED BY:</b> <u>cm 186</u>
<b>SURVEY REACH ID:</b> <u>16</u>	<b>TIME:</b> _____ AM/PM	<b>PHOTO ID:</b> (Camera-Pic #) <u>None</u> #
<b>SITE ID</b> (Condition-#): <u>OT-A</u>	<b>LAT</b> <u>41°46'08.7"</u> <b>LONG</b> <u>72°42'18"</u> <b>LMK</b> _____	<b>GPS:</b> (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Circular <input checked="" type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>24"</u> (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	<b>NOT APPLICABLE</b>		
<b>CONDITION:</b> <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:			
	<b>TURBIDITY:</b>	<input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque			
	<b>FLOATABLES:</b>	<input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:			

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags)	<input type="checkbox"/> Dumping (bulk)	<input type="checkbox"/> Excessive Sedimentation
	<input type="checkbox"/> Needs Regular Maintenance	<input type="checkbox"/> Bank Erosion	<input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft    Type of existing vegetation: \_\_\_\_\_    Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated    Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:** rip-rap surrounding pipe, also leaf dumping here (+ possible snow/icing + salt inputs).

**REPORTED TO AUTHORITIES:**  YES  NO



WATERSHED/SUBSHED: <b>NBP</b>	DATE: <b>11/24/09</b>	ASSESSED BY: <b>cm/BG</b>
SURVEY REACH ID: <b>16</b>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <b>PE0400 # 43</b>
SITE ID (Condition-#): <b>OT-8</b>	LAT <b>41° 46' 09.9"</b> LONG <b>72° 42' 13.8"</b> LMK _____	GPS: (Unit ID) _____
+91° 46' 11" / 72° 42' 14"		

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <i>* notes</i> <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:		<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:		NOT APPLICABLE	
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization

no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated  
 Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	③
			2
			1

**SKETCH/NOTES:** → the pipe is jutting out from bank ~10', possible evidence of bank erosion + channel widening?  
 → Another pipe a LB with same CHARA characteristics is included to reduce redundancy.



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/24/09</u>	ASSESSED BY: <u>BG/crm</u>
SURVEY REACH ID: <u>10</u>	TIME: <u>-</u> : <u>-</u> AM/PM	PHOTO ID: (Camera-Pic #) <u>None</u> #	
SITE ID (Condition-#): <u>OT-C</u>		LAT <u>41° 46' 12.9"</u> LONG <u>72° 42' 15.2"</u>	LMK _____ GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Circular <input type="checkbox"/> Triple <input checked="" type="checkbox"/> Elliptical <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	NOT APPLICABLE				
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	
<b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b> <input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:	

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.		
	5	4	3	2	1

**SKETCH/NOTES:** Adjacent to parking lot.

**REPORTED TO AUTHORITIES:**  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>		DATE: <u>11/24/00</u>	ASSESSED BY: <u>BG/cum</u>
SURVEY REACH ID: <u>16</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>PB2400 # 46</u>	
SITE ID (Condition-#): <u>OT-D</u>	LAT <u>41° 46' 17"</u>	LONG <u>70° 42' 16"</u>	LMK _____ GPS: (Unit ID)

<b>BANK:</b> <input type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other: ?	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>30"</u> (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully
	NOT APPLICABLE				
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:  <b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:	

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			(2)
			1

SKETCH/NOTES: Sewer?

REPORTED TO AUTHORITIES:  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>	DATE: <u>11/24/09</u>	ASSESSED BY: <u>CM/BB</u>
SURVEY REACH ID: <u>16</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>None</u> #
SITE ID (Condition-#): <u>OT-E</u>	LAT <u>41° 46' 18.9"</u> LONG <u>70° 40' 14.3"</u>	LMK _____ GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>36"</u> (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:		<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:
<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:					

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:
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**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.		
	5	4	3	2	1

**SKETCH/NOTES:** Metal pipe with cap on end that is ajar + housed in a concrete box culvert. Coming out of parking lot AREA, possible sewer?

REPORTED TO AUTHORITIES:  YES  NO



WATERSHED/SUBSHED: <u>NBP</u>	DATE: <u>11/24/09</u>	ASSESSED BY: <u>CM/86</u>
SURVEY REACH ID: <u>16</u>	TIME: <u>9:00 AM</u>	PHOTO ID: (Camera-Pic #) <u>P132400 #38</u>
SITE ID: (Condition-#) <u>SC-<sup>only</sup><del>16</del></u>	LAT <u>41° 46' 04.7"</u> LONG <u>072° 42' 13.6"</u>	LMK _____ GPS (Unit ID) _____

TYPE:  Road Crossing    Railroad Crossing    Manmade Dam    Beaver Dam    Geological Formation    Other:

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input checked="" type="checkbox"/> Box <input type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other:	<b># BARRELS:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input checked="" type="checkbox"/> Other: <u>5</u>	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> Other:	<b>ALIGNMENT:</b> <input type="checkbox"/> Flow-aligned <input checked="" type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: _____ (ft) Height: _____ (ft) Culvert length: _____ (ft) Width: _____ (ft) Roadway elevation: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <u>none</u> <input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe):			<b>CULVERT SLOPE:</b> <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

POTENTIAL RESTORATION CANDIDATE    Fish barrier removal    Culvert repair/replacement    Upstream storage retrofit  
 no    Local stream repair    Other:

IS SC ACTING AS GRADE CONTROL    No    Yes    Unknown

<i>If yes for fish barrier</i> <u>none</u>	<b>EXTENT OF PHYSICAL BLOCKAGE:</b> <input type="checkbox"/> Total <input type="checkbox"/> Partial <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown	<b>BLOCKAGE SEVERITY: (circle #)</b>				
	<b>CAUSE:</b> <input type="checkbox"/> Drop too high   Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow   Water Depth: _____ (in) <input type="checkbox"/> Other:	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.		
		5	4	3	2	1

NOTES/SKETCH: This marks the downstream (start) of reach 16 (NBP) + the southernmost point in this assessment

P. 1042  
NBP, REACH 19

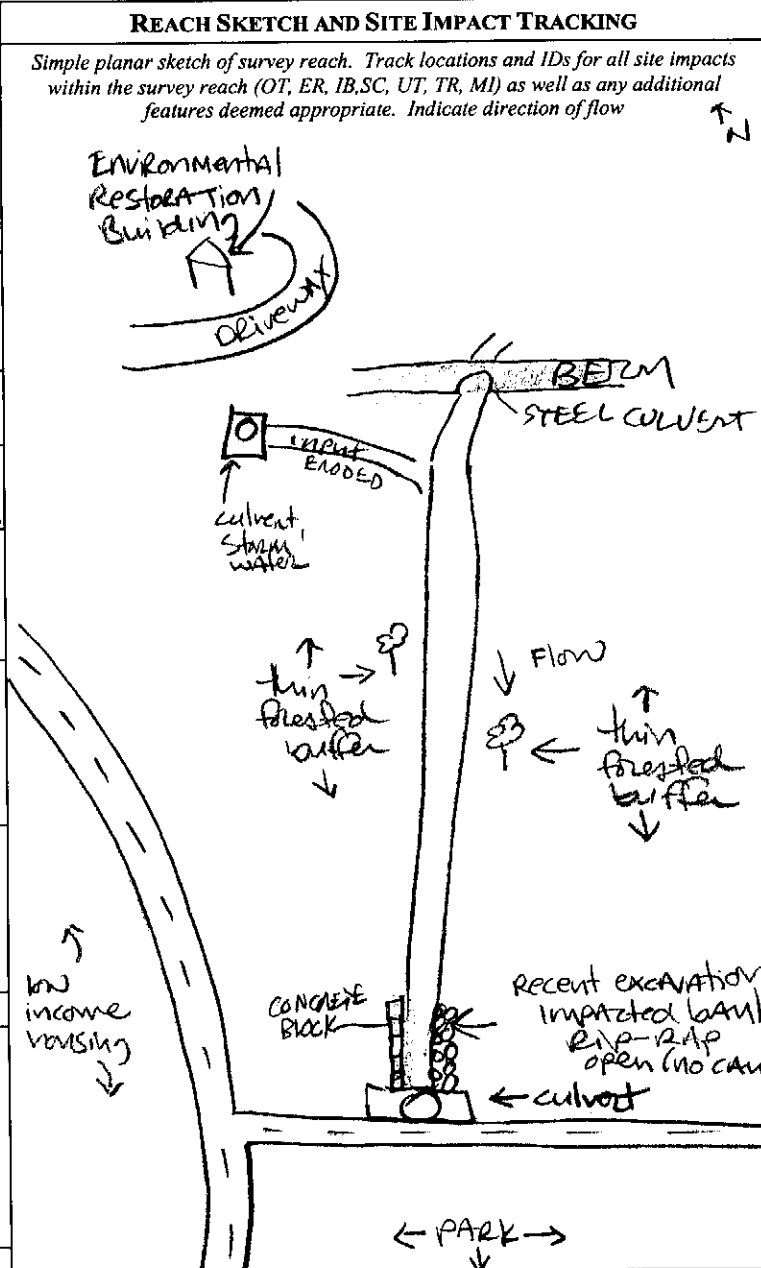
Reach Level Assessment



SURVEY REACH ID: <u>19</u>		WTRSHD/SUBSHD: <u>NBP</u>		DATE: <u>11/23/09</u>		ASSESSED BY: <u>CMI/BB</u>	
START TIME: <u>8:21 AM</u> LMK: _____		END TIME: <u>7:25 PM</u> LMK: _____		GPS ID: <u>(circled)</u>			
LAT <u>41° 48' 18"</u> LONG <u>72° 42' 24"</u>		LAT <u>41° 48' 24"</u> LONG <u>72° 42' 24"</u>		DESCRIPTION: <u>Environmental Restoration</u>		DESCRIPTION: <u>Driveway / Storm Culvert</u>	

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input checked="" type="checkbox"/> Intermittent	
<input checked="" type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Trace	<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Trace	<input type="checkbox"/> Overcast	<input type="checkbox"/> Partly cloudy	
SURROUNDING LAND USE:		<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Urban/Residential	<input type="checkbox"/> Suburban/Res	<input type="checkbox"/> Forested	<input type="checkbox"/> Institutional
		<input type="checkbox"/> Golf course	<input checked="" type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input type="checkbox"/> Other:	

AVERAGE CONDITIONS (check applicable)	
BASE FLOW AS %	<input type="checkbox"/> 0-25% <input type="checkbox"/> 50%-75%
CHANNEL WIDTH	<input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE	
<input checked="" type="checkbox"/> Silt/clay (fine or slick)	<input type="checkbox"/> Cobble (2.5-10")
<input type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")
<input type="checkbox"/> Gravel (0.1-2.5")	<input type="checkbox"/> Bed rock
WATER CLARITY	
<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Turbid (suspended matter)
<input type="checkbox"/> Stained (clear, naturally colored)	<input type="checkbox"/> Opaque (milky)
<input type="checkbox"/> Other (chemicals, dyes)	
AQUATIC PLANTS IN STREAM	
Attached:	<input type="checkbox"/> none <input checked="" type="checkbox"/> some <input type="checkbox"/> lots
Floating:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
WILDLIFE IN OR AROUND STREAM	
(Evidence of)	
<input type="checkbox"/> Fish <input type="checkbox"/> Beaver <input type="checkbox"/> Deer	
<input type="checkbox"/> Snails <input checked="" type="checkbox"/> Other: <u>RACCOON TRACKS</u>	
STREAM SHADING (water surface)	
<input checked="" type="checkbox"/> Mostly shaded (≥75% coverage)	
<input type="checkbox"/> Halfway (≥50%)	
<input type="checkbox"/> Partially shaded (≥25%)	
<input type="checkbox"/> Unshaded (<25%)	
CHANNEL DYNAMICS	
<input type="checkbox"/> Downcutting	<input type="checkbox"/> Bed scour
<input checked="" type="checkbox"/> Widening	<input type="checkbox"/> Bank failure
<input type="checkbox"/> Headcutting	<input type="checkbox"/> Bank scour
<input type="checkbox"/> Aggrading	<input type="checkbox"/> Slope failure
<input type="checkbox"/> Sed. deposition	<input type="checkbox"/> Channelized
<input type="checkbox"/> Unknown	
CHANNEL DIMENSIONS (FACING DOWNSTREAM)	
Height: LT bank	<u>30"</u> (ft)
RT bank	_____ (ft)
Width: Bottom	<u>12"</u> (ft)
Top	_____ (ft)



REACH ACCESSIBILITY		
<b>Good:</b> Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	<b>Fair:</b> Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	<b>Difficult:</b> Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.
5	4	3 2 1

NOTES: (biggest problem you see in survey reach)  
 Impacted bank & southern end upstream of culvert. The underlying tunnel that carries water downstream must be very long - it is not located on the other side of the street - or it is closed.

REPORTED TO AUTHORITIES  YES  NO

P. 2 of 2  
 N6P, Reach 19

OVERALL STREAM CONDITION																					
		Optimal					Suboptimal					Marginal					Poor				
<b>IN-STREAM HABITAT</b>  <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).																				
	20 19 18 17 16					15 14 13 12 <u>11</u>					10 9 8 7 6					5 4 3 2 1 0					
<b>VEGETATIVE PROTECTION</b>  <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.																				
	Left Bank		10 9			8 7 6			<u>5</u> 4 3			2 1 0									
	Right Bank		10 9			8 7 <u>6</u>			5 4 3			2 1 0									
<b>BANK EROSION</b>  <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.																				
	Left Bank		10 9			8 7 6			<u>3</u> 4 3			2 1 0									
	Right Bank		10 9			8 <u>7</u> 6			5 4 3			2 1 0									
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.																				
	20 19 18 17 16					15 14 13 12 <u>11</u>					10 9 8 7 6					5 4 3 2 1 0					

OVERALL BUFFER AND FLOODPLAIN CONDITION																					
		Optimal					Suboptimal					Marginal					Poor				
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.																				
	Left Bank		10 9			8 7 6			<u>5</u> 4 3			2 1 0									
	Right Bank		10 9			8 7 <u>6</u>			5 4 3			2 1 0									
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest																				
	20 19 18 17 16					15 14 <u>13</u> 12 11					10 9 8 7 6					5 4 3 2 1 0					
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water																				
	20 19 18 17 16					15 14 <u>13</u> 12 11					10 9 8 7 6					5 4 3 2 1 0					
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures																				
	20 19 18 17 16					<u>11</u> 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0					

Sub Total In-stream: 45 /80 + Buffer/Floodplain: 52 /80 = Total Survey Reach 97 /160





WATERSHED/SUBSHED: NBP DATE: 11/23/09 ASSESSED BY: CM/BCG  
 SURVEY REACH ID: 19 TIME: 8:25 AM PHOTO ID: (Camera-Pic #) PB3300 # 01 + 02  
 SITE ID: (Condition #) SC-A LAT 41° 48' 18" LONG 72° 42' 24" LMK \_\_\_\_\_ GPS (Unit ID) \_\_\_\_\_

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input checked="" type="checkbox"/> Box <input type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other:	<b># BARRELS:</b> <input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> Other:	<b>ALIGNMENT:</b> <input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: _____ (ft) Height: _____ (ft) Culvert length: <u>?</u> (ft) Width: _____ (ft) Roadway elevation: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <input checked="" type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input checked="" type="checkbox"/> Other (describe): <u>rip-rap, fill, recent possible flood? excavation</u>			<b>CULVERT SLOPE:</b> <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

POTENTIAL RESTORATION CANDIDATE  no  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 Local stream repair  Other: investigate length - can it be shorter

IS SC ACTING AS GRADE CONTROL  No  Yes  Unknown

<i>If yes for fish barrier</i>	<b>EXTENT OF PHYSICAL BLOCKAGE:</b> <input type="checkbox"/> Total <input checked="" type="checkbox"/> Partial <input type="checkbox"/> Temporary <input checked="" type="checkbox"/> Unknown - <u>did not locate other end</u>	<b>BLOCKAGE SEVERITY: (circle #)</b>				
	<b>CAUSE:</b> <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other:	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.		
		5	4	3	2	1

**NOTES/SKETCH:**

Reach 19 (NBP) flows into this box culvert but it is unclear how far the stream must travel underground - no outlet was observed and there is an athletic field at the other side of the street. At the box culvert inlet there appears to be evidence of recent excavation - possibly from an emergency flood event (?) there is fill, rip-rap, + evidence of a recent washout under the road (see photo #01+02).

REPORTED TO AUTHORITIES  YES  NO



WATERSHED/SUBSHED: NBP DATE: 11/03/09 ASSESSED BY: CM/BC  
 SURVEY REACH ID: 19 TIME: 9:15 AM/PM PHOTO ID: (Camera-Pic #) PB2300 # 05  
 SITE ID: (Condition-#) SC-β LAT 41° 48' 24" N LONG 72° 42' 24" W LMK \_\_\_\_\_ GPS (Unit ID) \_\_\_\_\_

TYPE:  <sup>FARM</sup> Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input checked="" type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input type="checkbox"/> Box <input type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other:	<b># BARRELS:</b> <input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input checked="" type="checkbox"/> Other: <u>open bottom</u>	<b>ALIGNMENT:</b> <input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: <u>9'</u> (ft) Height: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input checked="" type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe):	<b>CULVERT SLOPE:</b> <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	Culvert length: _____ (ft) Width: _____ (ft)	Roadway elevation: _____ (ft)	

POTENTIAL RESTORATION CANDIDATE  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 no  Local stream repair  Other: Sediment removal / better storm water management

IS SC ACTING AS GRADE CONTROL  No  Yes  Unknown

If yes for fish barrier  <b>EXTENT OF PHYSICAL BLOCKAGE:</b> <input type="checkbox"/> Total <input checked="" type="checkbox"/> Partial <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown  <b>CAUSE:</b> <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other:	<b>BLOCKAGE SEVERITY: (circle #)</b>				
	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.		
	5	4	3	2	1

NOTES/SKETCH: the stream passes through this culvert under a berm - possibly an old farm road. It is in good condition other than high sediment loads - likely from storm water inputs.



WATERSHED/SUBSHED: <b>NBP</b>		DATE: <b>11/23/09</b>	ASSESSED BY: <b>cm/B6</b>
SURVEY REACH ID: <b>19</b>		TIME: <b>8:32 AM</b>	PHOTO ID: (Camera-Pic #) <b>100 # 002</b>
SITE ID: (Condition-#) CM: _____	START LAT <b>41° 48' 18"</b> LONG <b>° ' "</b>	LMK <b>(Handwritten)</b>	GPS: (Unit ID)
	END LAT <b>42° 42' 24"</b> LONG <b>° ' "</b>	LMK _____	
TYPE: <input type="checkbox"/> Channelization <input checked="" type="checkbox"/> <b>RIP-RAP</b> Bank armoring <input type="checkbox"/> concrete channel <input checked="" type="checkbox"/> Floodplain encroachment <input type="checkbox"/> Other:			
MATERIAL: <input type="checkbox"/> Concrete <input type="checkbox"/> Gabion <input checked="" type="checkbox"/> Rip Rap <input type="checkbox"/> Earthen <input type="checkbox"/> Metal <input type="checkbox"/> Other:	Does channel have perennial flow? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		DIMENSIONS: Height <u>8</u> (ft) Bottom Width _____ (ft) Top Width: <u>8</u> (ft) Length: <u>12</u> (ft)
	Is there evidence of sediment deposition? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
	Is vegetation growing in channel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
	Is channel connected to floodplain? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
BASE FLOW CHANNEL Depth of flow <u>10</u> (in) Defined low flow channel? <input type="checkbox"/> Yes <input type="checkbox"/> No % of channel bottom _____ %		ADJACENT STREAM CORRIDOR Available width LT _____ (ft) RT _____ (ft) Utilities Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>only under road</b> Fill in floodplain? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
POTENTIAL RESTORATION CANDIDATE <input type="checkbox"/> no <input type="checkbox"/> Structural repair <input type="checkbox"/> Base flow channel creation <input checked="" type="checkbox"/> Natural channel design <input type="checkbox"/> Can't tell <input type="checkbox"/> De-channelization <input type="checkbox"/> Fish barrier removal <input checked="" type="checkbox"/> Bioengineering			
CHANNELIZATION SEVERITY: (Circle #)	A long section of concrete stream (>500') channel where water is very shallow (<1" deep) with no natural sediments present in the channel.	A moderate length (> 200') ,but channel stabilized and beginning to function as a natural stream channel. Vegetated bars may have formed in channel.	An earthen channel less than 100 ft with good water depth, a natural sediment bottom, and size and shape similar to the unchannelized stream reaches above and below impacted area.
	5	4	3
NOTES:			

- APPEARS to have been emergency flooding + RIP-RAP/excavation was been placed/occurred recently.



P. 1002  
 FYS, Reach 1

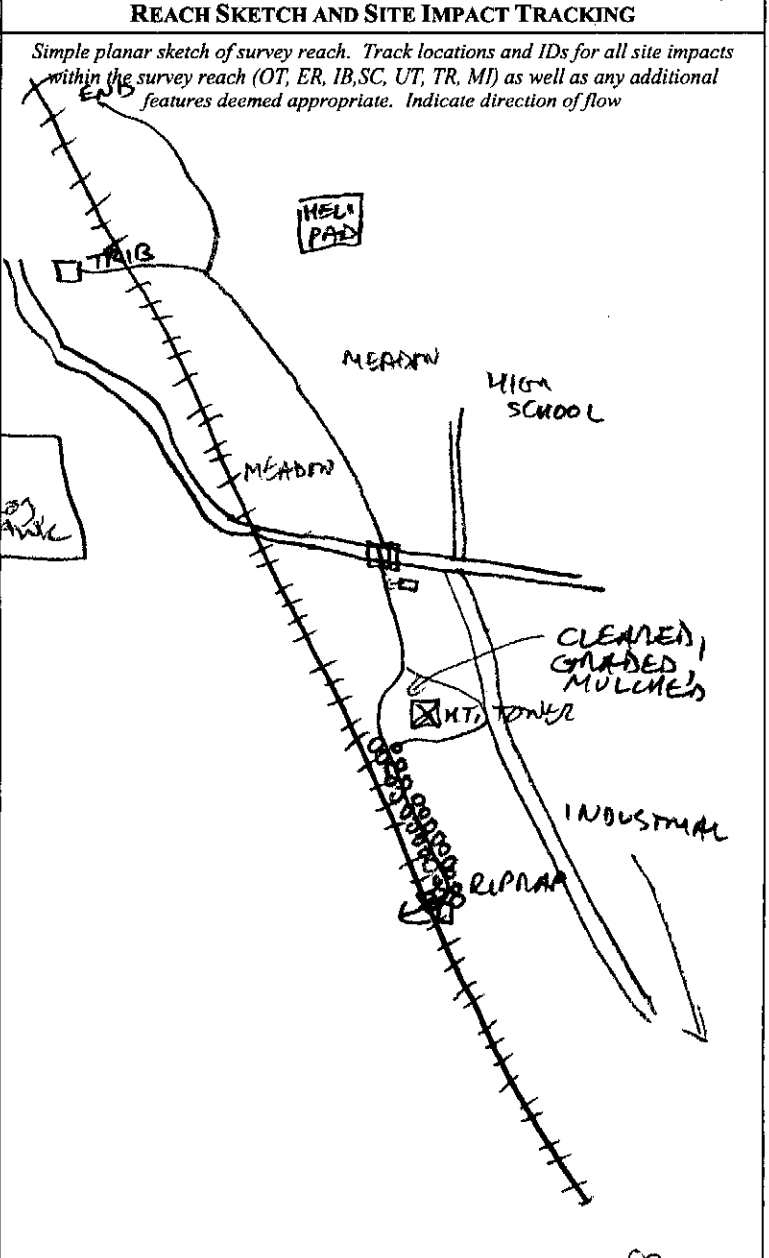
Reach Level Assessment



SURVEY REACH ID: <u>1</u>		WTRSHD/SUBSHD: <u>FYS</u>		DATE: <u>11/30/09</u>		ASSESSED BY: <u>CM/BB</u>	
START TIME: <u>9:55 AM</u> LMK: _____		END TIME: <u>10:30 AM</u> LMK: _____		GPS ID: <u>CM</u>			
LAT <u>41° 49' 28"</u> LONG <u>72° 43' 41"</u>		LAT <u>41° 49' 42"</u> LONG <u>72° 43' 50"</u>					
DESCRIPTION: <u>RAILROAD TRACKS/CULVERT</u>		DESCRIPTION: <u>HELI PAD</u>					

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input checked="" type="checkbox"/> Intermittent
	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input type="checkbox"/> Overcast	<input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input type="checkbox"/> Urban/Residential	<input type="checkbox"/> Suburban/Res	<input type="checkbox"/> Forested	<input checked="" type="checkbox"/> Institutional
	<input type="checkbox"/> Golf course	<input type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input checked="" type="checkbox"/> Other: <u>Powerlines, High School, R-trails</u>	

AVERAGE CONDITIONS (check applicable)	
BASE FLOW AS %	<input type="checkbox"/> 0-25% <input type="checkbox"/> 50%-75%
CHANNEL WIDTH	<input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE	
<input checked="" type="checkbox"/> Silt/clay (fine or slick)	<input type="checkbox"/> Cobble (2.5-10")
<input type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")
<input type="checkbox"/> Gravel (0.1-2.5")	<input type="checkbox"/> Bed rock
WATER CLARITY	
<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Turbid (suspended matter)
<input type="checkbox"/> Stained (clear, naturally colored)	<input type="checkbox"/> Opaque (milky)
<input type="checkbox"/> Other (chemicals, dyes)	
AQUATIC PLANTS IN STREAM	
Attached:	<input type="checkbox"/> none <input checked="" type="checkbox"/> some <input type="checkbox"/> lots
Floating:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
WILDLIFE IN OR AROUND STREAM	
(Evidence of)	
<input type="checkbox"/> Fish	<input type="checkbox"/> Beaver
<input checked="" type="checkbox"/> Deer	<input checked="" type="checkbox"/> Raccoon
<input type="checkbox"/> Snails	<input checked="" type="checkbox"/> Other: <u>Snake, Mole, Skunk, R. Hawk</u>
STREAM SHADING (water surface)	
<input type="checkbox"/> Mostly shaded (≥75% coverage)	
<input checked="" type="checkbox"/> Halfway (≥50%)	
<input type="checkbox"/> Partially shaded (≥25%)	
<input type="checkbox"/> Unshaded (<25%)	
CHANNEL DYNAMICS	
<input type="checkbox"/> Downtcutting	<input type="checkbox"/> Bed scour
<input type="checkbox"/> Widening	<input type="checkbox"/> Bank failure
<input type="checkbox"/> Headcutting	<input type="checkbox"/> Bank scour
<input type="checkbox"/> Aggrading	<input type="checkbox"/> Slope failure
<input type="checkbox"/> Sed. deposition	<input type="checkbox"/> Channelized
<input type="checkbox"/> Unknown	
CHANNEL DIMENSIONS (FACING DOWNSTREAM)	
Height: <u>LT bank</u>	<u>32"</u> (ft)
	<u>RT bank</u> _____ (ft)
Width: <u>Bottom</u>	<u>14.6</u> (ft)
	<u>Top</u> _____ (ft)



REACH ACCESSIBILITY		
<b>Good:</b> Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	<b>Fair:</b> Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	<b>Difficult:</b> Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.
5	4	3 2 1

NOTES: (biggest problem you see in survey reach) Impacted buffer: lacks tall trees + wide buffer, mostly herbaceous with some shrubs, saplings + vines. AREAS of RIP-RAP, adjacent to Reel, road, Railroad tracks

REPORTED TO AUTHORITIES  YES  NO

P.2 to J  
FYB, REACH

OVERALL STREAM CONDITION																									
		Optimal					Suboptimal					Marginal					Poor								
<b>IN-STREAM HABITAT</b> <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).										40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.					Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0									
<b>VEGETATIVE PROTECTION</b> <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory 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 one-half 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 one-half 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.				
	Left Bank		10 9			8 7 6			5 4 3			2 1 0													
	Right Bank		10 9			8 7 6			5 4 3			2 1 0													
<b>BANK EROSION</b> <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.										Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.					Past downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure					Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.				
	Left Bank		10 9			8 7 6			5 4 3			2 1 0													
	Right Bank		10 9			8 7 6			5 4 3			2 1 0													
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.										High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0									

OVERALL BUFFER AND FLOODPLAIN CONDITION																									
		Optimal					Suboptimal					Marginal					Poor								
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.										Width of buffer zone 25-50 feet; human activities have impacted zone only minimally.					Width of buffer zone 10-25 feet; human activities have impacted zone a great deal.					Width of buffer zone <10 feet; little or no riparian vegetation due to human activities.				
	Left Bank		10 9			8 7 6			5 4 3			2 1 0													
	Right Bank		10 9			8 7 6			5 4 3			2 1 0													
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest										Predominant floodplain vegetation type is young forest					Predominant floodplain vegetation type is shrub or old field					Predominant floodplain vegetation type is turf or crop land				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0									
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water										Even mix of wetland and non-wetland habitats, no evidence of standing/ponded water					Either all wetland or all non-wetland habitat, evidence of standing/ponded water					Either all wetland or all non-wetland habitat, no evidence of standing/ponded water				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0									
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures										Minor floodplain encroachment in the form of fill material, land development, or manmade structures, but not affecting floodplain function					Moderate floodplain encroachment in the form of filling, land development, or manmade structures, some effect on floodplain function					Significant floodplain encroachment (i.e. fill material, land development, or man-made structures). Significant effect on floodplain function				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0									

Sub Total In-stream: 59 /80 + Buffer/Floodplain: 27 /80 = Total Survey Reach 86 /160



WATERSHED/SUBSHED: F1B DATE: 11/30/09 ASSESSED BY: cm + B9

SURVEY REACH: \_\_\_\_\_ TIME: 7:58 AM/PM PHOTO ID: (Camera-Pic #) 4930 # 03

SITE ID: (Condition-#) IB-A START LAT 41°49'28" LONG 72°43'41" LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT \_\_\_\_\_ LONG \_\_\_\_\_ LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: RIP-RAP

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank     : RR TRACKS + wetland  
 RT Bank     : RR TRACKS

DOMINANT Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LAND COVER: LT Bank       :  
 RT Bank       : RR TRAX

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA	REFORESTATION POTENTIAL: (Circle #)	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting
		5	4	3
LT BANK RT Length (ft): <u>200'</u> <u>200'</u> Width (ft): _____				

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES: RAILROAD TRACKS / RIP-RAP along both banks for ~200'



WATERSHED/SUBSHED: FYB DATE: 11/30/07 ASSESSED BY: CM/BSG  
 SURVEY REACH: \_\_\_\_\_ TIME: \_\_\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) 4930 # 04 + 07

SITE ID: (Condition-#) IB-B START LAT 41° 49' 32" N LONG 72° 43' 42" W LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT 41° 49' 39" N LONG 72° 43' 47" W LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation <sup>canopy</sup>  Too narrow  Widespread invasive plants  
 Recently planted  Other: stormwater inputs without canopy cover (4 samples)

LAND USE: ? Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank      :  
 RT Bank      :

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank        :  
 RT Bank        :

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA		REFORESTATION POTENTIAL: (Circle #)	Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting		
LT BANK	RT						
Length (ft): _____	_____		5	4	3	2	1
Width (ft): _____	_____						

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

NOTES:  
 → Recent clearing of veg + topsoil. stream has been laid down to keep seed/soil. (left bank)  
 → No buffer (left bank)  
 → main lawn without vegetation in riparian zone + low % cover of canopy (30%) - left bank  
 → field (both banks) with stormwater inputs through grassy swales - could increase thermal regime.





WATERSHED/SUBSHED: <u>FYB</u>		DATE: <u>11/30/09</u>	ASSESSED BY: <u>cm/86</u>
SURVEY REACH ID: <u>1</u>	TIME: <u>9:55 AM</u> /PM	PHOTO ID: (Camera-Pic #) <u>149300 # 03</u>	
SITE ID (Condition-#): <u>OT-A</u>		LAT <u>41° 49' 28"</u> LONG <u>72° 43' 41"</u>	LMK _____ GPS: (Unit ID) _____

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>5'</u> (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> Partially <input type="checkbox"/> Fully
	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> Other:		<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:		<div style="border: 1px solid black; width: 100px; height: 100px; margin: auto; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 2em; font-weight: bold;">X</span> </div> NOT APPLICABLE

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:
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**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:** next to culvert which carries stream under RR tracks.

**REPORTED TO AUTHORITIES:**  YES  NO



<b>WATERSHED/SUBSHED:</b> <u>FYB</u>	<b>DATE:</b> <u>11/30/09</u>	<b>ASSESSED BY:</b> <u>cmj/86</u>
<b>SURVEY REACH ID:</b> _____	<b>TIME:</b> _____ AM/PM	<b>PHOTO ID:</b> (Camera-Pic #) <u>none</u> /#
<b>SITE ID</b> (Condition-#): <u>OT-3</u>	<b>LAT</b> <u>41° 49' 30"</u> <b>LONG</b> <u>72° 43' 41"</u>	<b>LMK</b> _____ <b>GPS:</b> (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe <input type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:  <input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in) Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<b>FLOW:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>NOT APPLICABLE</b>				
<b>CONDITION:</b> <input type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:  <b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:	

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:							
	<b>TURBIDITY:</b>	<input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque							
	<b>FLOATABLES:</b>	<input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:							

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags)	<input type="checkbox"/> Dumping (bulk)	<input type="checkbox"/> Excessive Sedimentation
	<input type="checkbox"/> Needs Regular Maintenance	<input type="checkbox"/> Bank Erosion	<input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:** insufficient notes.  
?

**REPORTED TO AUTHORITIES:**  YES  NO



WATERSHED/SUBSHED: <b>FYB</b>		DATE: <b>11/30/09</b>	ASSESSED BY: <b>cm/B6</b>
SURVEY REACH ID:	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <b>149300 # 07 + 09</b>	
SITE ID (Condition #): <b>OT-C</b>		LAT <b>* see below</b>	LONG _____ " LMK _____ GPS: (Unit ID)

<b>BANK:</b> * see below <input type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input type="checkbox"/> Closed pipe <input checked="" type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:

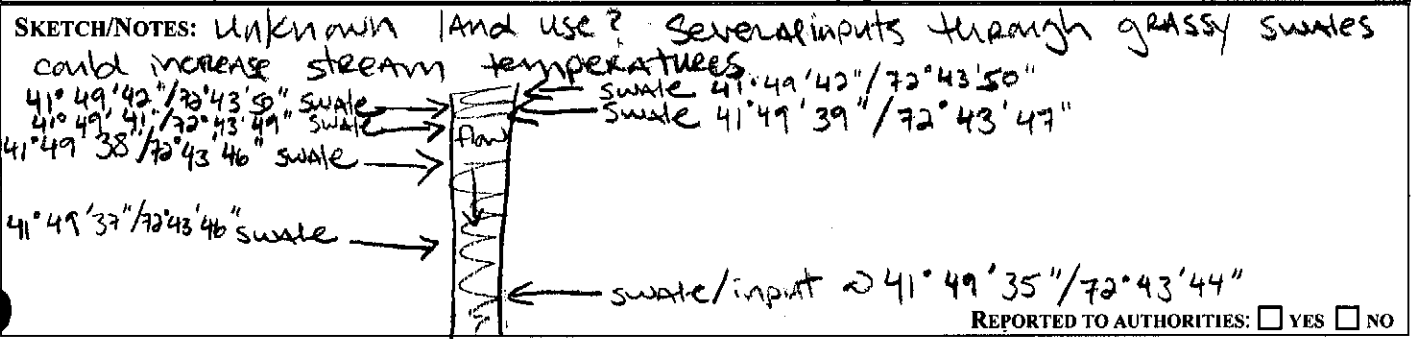
<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

**If yes for daylighting:**  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

**If yes for stormwater:**  
 Is stormwater currently controlled?  Yes  No  Not investigated Land Use description: \_\_\_\_\_  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.	
	5	4	(3)	2





WATERSHED/SUBSHED: <u>FYB</u>	DATE: <u>11 / 30 / 09</u>	ASSESSED BY: <u>CM/ABG</u>
SURVEY REACH ID: <u>1</u>	TIME: <u>7:55</u> AM/PM	PHOTO ID: (Camera-Pic #) <u>14930</u> /# <u>03</u>
SITE ID: (Condition-#) <u>SC-A</u>	LAT <u>41° 49' 28"</u>	LONG <u>72° 43' 41"</u> LMK _____ GPS (Unit ID) _____

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input checked="" type="checkbox"/> Box <input type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other: <u>cement bottom</u>	<b># BARRELS:</b> <input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <sup>+ stone</sup> <input type="checkbox"/> Metal <input type="checkbox"/> Other:	<b>ALIGNMENT:</b> <input type="checkbox"/> Flow-aligned <input checked="" type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: <u>10'</u> (ft) Height: _____ (ft) Culvert length: _____ (ft) Width: _____ (ft) Roadway elevation: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe):			<b>CULVERT SLOPE:</b> <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

POTENTIAL RESTORATION CANDIDATE  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 no  Local stream repair  Other:

IS SC ACTING AS GRADE CONTROL  No  Yes  Unknown

<i>If yes for fish barrier</i>	<b>EXTENT OF PHYSICAL BLOCKAGE:</b> <input type="checkbox"/> Total <input type="checkbox"/> Partial <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown	<b>BLOCKAGE SEVERITY: (circle #)</b>				
	<b>CAUSE:</b> <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other:	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.		
		5	4	3	2	1

NOTES/SKETCH:



WATERSHED/SUBSHED: FYB DATE: 11/30/09 ASSESSED BY: cm/184  
 SURVEY REACH ID: 1 TIME: \_\_\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) 149300 /# 06  
 SITE ID: (Condition #) SC-B LAT 41° 49' 33" LONG 72° 43' 42" LMK \_\_\_\_\_ GPS (Unit ID) \_\_\_\_\_

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

FOR ROAD/ RAILROAD CROSSINGS ONLY	SHAPE: <input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input type="checkbox"/> Box <input type="checkbox"/> Elliptical <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Other:	# BARRELS: <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input checked="" type="checkbox"/> Other: <u>4</u>	MATERIAL: <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input type="checkbox"/> Other:	ALIGNMENT: <input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	DIMENSIONS: (if variable, sketch) Barrel diameter: _____ (ft) Height: _____ (ft) Culvert length: _____ (ft) Width: _____ (ft) Roadway elevation: _____ (ft)
	CONDITION: (Evidence of...) <input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe): _____			CULVERT SLOPE: <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

\* see below

POTENTIAL RESTORATION CANDIDATE  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 no  Local stream repair  Other:

IS SC ACTING AS GRADE CONTROL  No  Yes  Unknown

If yes for fish barrier	EXTENT OF PHYSICAL BLOCKAGE: <input type="checkbox"/> Total <input type="checkbox"/> Partial <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown	BLOCKAGE SEVERITY: (circle #)				
	CAUSE: <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other: _____	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.		
		5	4	3	2	1

NOTES/SKETCH:

4 barrels with varying sizes (18" one may be stormwater)

left bank

downstream side

right bank

Park Ave

\* There are 3 barrels on the upstream side of the culvert. we assume, therefore, that the 18" barrel is stormwater.



WATERSHED/SUBSHED: FYB DATE: 11/30/09 ASSESSED BY: BG + CM

SURVEY REACH ID: 1 TIME: \_\_\_\_\_ AM/PM PHOTO ID: (Camera-Pic #) 149300 # 05

SITE ID: (Condition-#) TR-<sup>only</sup>one LAT throughout " LONG \_\_\_\_\_ " LMK \_\_\_\_\_ GPS: (Unit ID)

<b>TYPE:</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Plastic <input checked="" type="checkbox"/> Tires <input type="checkbox"/> Appliances <input checked="" type="checkbox"/> Automotive	<input type="checkbox"/> Paper <input type="checkbox"/> Construction <input type="checkbox"/> Yard Waste <input checked="" type="checkbox"/> Other: <u>car parts shopping cart</u>	<b>SOURCE:</b> <input type="checkbox"/> Unknown <input type="checkbox"/> Flooding <input type="checkbox"/> Illegal dump <input checked="" type="checkbox"/> Local outfall	<b>LOCATION:</b> <input type="checkbox"/> Stream <input checked="" type="checkbox"/> Riparian Area <input checked="" type="checkbox"/> Lt bank <input checked="" type="checkbox"/> Rt bank	<b>LAND OWNERSHIP:</b> <input type="checkbox"/> Public <input type="checkbox"/> Private <input checked="" type="checkbox"/> Unknown
					<b>AMOUNT (# Pickup truck loads):</b> <u>2 or 3</u>

POTENTIAL RESTORATION CANDIDATE  Stream cleanup  Stream adoption segment  Removal/prevention of dumping  
 no  Other:

If yes for trash or debris removal

EQUIPMENT NEEDED:  Heavy equipment  Trash bags  Unknown

WHO CAN DO IT:  Volunteers  Local Gov  Hazmat Team  Other

DUMPSTER WITHIN 100 FT:  Yes  No  Unknown

CLEAN-UP POTENTIAL: (Circle #)

5 A small amount of trash (i.e., less than two pickup truck loads) located inside a park with easy access	4 A large amount of trash, or bulk items, in a small area with easy access. Trash may have been dumped over a long period of time but it could be cleaned up in a few days, possibly with a small backhoe.	3	2 A large amount of trash or debris scattered over a large area, where access is very difficult. Or presence of drums or indications of hazardous materials	1
--	---	---	--	---

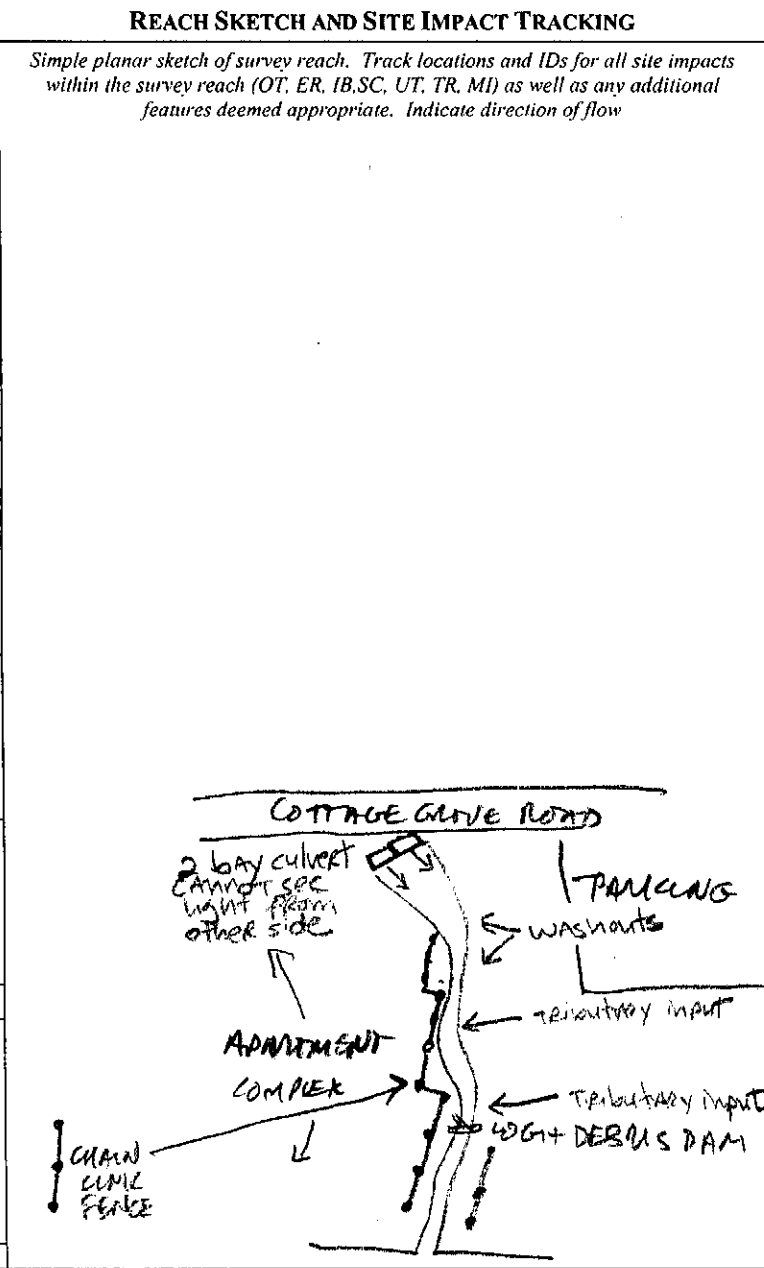
NOTES: oil bottles, plastic bottles shopping carts, tires, parts of a NISSAN which apparently crashed + was poorly cleaned up, etc. The NISSAN was next to PARK Ave.

REPORTED TO AUTHORITIES  YES  NO

SURVEY REACH ID: <u>2</u>	WTRSHD/SUBSHD: <u>FYB</u>	DATE: <u>11/24/08</u>	ASSESSED BY: <u>CM/BG</u>
START TIME: <u>3:25 AM</u> LMK: _____	END TIME: <u>4:20 AM</u> LMK: _____	GPS ID: <u>(CM)</u>	
LAT <u>41° 48' 55" N</u> LONG <u>72° 43' 39" W</u>	LAT <u>41° 49' 00" N</u> LONG <u>72° 43' 40" W</u>		
DESCRIPTION: <u>JUNCTION WITH WBS</u>		DESCRIPTION: <u>Cottage Grove Rd. Underpass / Culvert</u>	

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input checked="" type="checkbox"/> Steady rain	PRESENT CONDITIONS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent
	<input type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input checked="" type="checkbox"/> Overcast	<input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Urban/Residential	<input type="checkbox"/> Suburban/Res	<input type="checkbox"/> Forested	<input type="checkbox"/> Institutional
	<input type="checkbox"/> Golf course	<input type="checkbox"/> Park	<input type="checkbox"/> Crop	<input type="checkbox"/> Pasture	<input checked="" type="checkbox"/> Other: <u>Retirement Community + PARKING LOTS</u>	

AVERAGE CONDITIONS (check applicable)
BASE FLOW AS % <input type="checkbox"/> 0-25% <input type="checkbox"/> 50%-75% CHANNEL WIDTH <input type="checkbox"/> 25-50 % <input checked="" type="checkbox"/> 75-100%
<b>DOMINANT SUBSTRATE</b> <input checked="" type="checkbox"/> Silt/clay (fine or slick) <input type="checkbox"/> Cobble (2.5-10") <input type="checkbox"/> Sand (gritty) <input type="checkbox"/> Boulder (>10") <input type="checkbox"/> Gravel (0.1-2.5") <input type="checkbox"/> Bed rock
<b>WATER CLARITY</b> <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid (suspended matter) <input type="checkbox"/> Stained (clear, naturally colored) <input type="checkbox"/> Opaque (milky) <input type="checkbox"/> Other (chemicals, dyes)
<b>AQUATIC PLANTS IN STREAM</b> Attached: <input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots Floating: <input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
<b>WILDLIFE IN OR AROUND STREAM</b> (Evidence of) <input type="checkbox"/> Fish <input type="checkbox"/> Beaver <input type="checkbox"/> Deer <input type="checkbox"/> Snails <input type="checkbox"/> Other:
<b>STREAM SHADING</b> (water surface) <input type="checkbox"/> Mostly shaded (≥75% coverage) <input checked="" type="checkbox"/> Halfway (≥50%) <input type="checkbox"/> Partially shaded (≥25%) <input type="checkbox"/> Unshaded (< 25%)
<b>CHANNEL DYNAMICS</b> <input type="checkbox"/> Downcutting <input type="checkbox"/> Bed scour <input type="checkbox"/> Widening <input type="checkbox"/> Bank failure <input type="checkbox"/> Headcutting <input type="checkbox"/> Bank scour <input type="checkbox"/> Aggrading <input type="checkbox"/> Slope failure <input type="checkbox"/> Sed. deposition <input type="checkbox"/> Channelized <input type="checkbox"/> Unknown
<b>CHANNEL DIMENSIONS (FACING DOWNSTREAM)</b> Height: LT bank _____ (ft) RT bank _____ (ft) Width: Bottom _____ (ft) Top _____ (ft)



REACH ACCESSIBILITY		
<b>Good:</b> Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	<b>Fair:</b> Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	<b>Difficult.</b> Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.
5	4	3
		2
		1

NOTES: (biggest problem you see in survey reach) STORMWATER RUNOFF NOT WELL MANAGED.

REPORTED TO AUTHORITIES  YES  NO

OVERALL STREAM CONDITION																														
		Optimal					Suboptimal					Marginal					Poor													
<b>IN-STREAM HABITAT</b> <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).																													
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 <u>4</u> 3 2 1 0														
<b>VEGETATIVE PROTECTION</b> <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory shrubs, or nonwoody macrophytes; vegetative disruption through grazing or mowing minimal or not evident; almost all plants allowed to grow naturally.																													
	Left Bank <u>10</u> 9					8 7 6					5 4 3					2 1 0														
	Right Bank 10 <u>9</u>					8 7 6					5 4 3					2 1 0														
<b>BANK EROSION</b> <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.																													
	Left Bank 10 9					8 7 6					5 4 <u>3</u>					2 1 0														
	Right Bank 10 9					8 7 6					5 4 <u>3</u>					2 1 0														
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.																													
	20 19 18 17 16					15 14 <u>13</u> 12 11					10 9 8 7 6					5 4 3 2 1 0														
OVERALL BUFFER AND FLOODPLAIN CONDITION																														
		Optimal					Suboptimal					Marginal					Poor													
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.																													
	Left Bank 10 9					8 <u>7</u> 6					5 4 3					2 1 0														
	Right Bank 10 9					8 7 <u>6</u>					5 4 3					2 1 0														
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest																													
	20 19 18 17 16					15 <u>14</u> 13 12 11					10 9 8 7 6					5 4 3 2 1 0														
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water																													
	20 19 18 17 16					15 14 <u>13</u> 12 11					10 9 8 7 6					5 4 3 2 1 0														
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures																													
	20 19 18 17 16					<u>15</u> 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0														
<b>Sub Total In-stream:</b>		<u>42</u> /80					+		<b>Buffer/Floodplain:</b>					<u>55</u> /80					=		<b>Total Survey Reach</b>					<u>97</u> /160				





WATERSHED/SUBSHED: FYB DATE: 11/24/09 ASSESSED BY: CM + BG  
 SURVEY REACH: 2 TIME: 3:25 AM PM PHOTO ID (CAMERA-PIC #): PB240/#075 + 076 + 078  
 SITE ID: (Condition #) \_\_\_\_\_ START LAT 41° 48' 55" LONG 72° 43' 39" LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 ER- only sheet END LAT \_\_\_\_\_ LONG \_\_\_\_\_ LMK \_\_\_\_\_

PROCESS:  Currently unknown  
 Downcutting  Bed scour  
 Widening  Bank failure  
 Headcutting  Bank scour  
 Aggrading  Slope failure  
 Sed. deposition  Channelized

BANK OF CONCERN:  LT  RT  Both (looking downstream)  
 LOCATION:  Meander bend  Straight section  Steep slope/valley wall  Other:  
 DIMENSIONS:  
 Length (if no GPS) LT \_\_\_\_\_ ft and/or RT \_\_\_\_\_ ft Bottom width \_\_\_\_\_ ft  
 Bank Ht LT \_\_\_\_\_ ft and/or RT \_\_\_\_\_ ft Top width \_\_\_\_\_ ft  
 Bank Angle LT \_\_\_\_\_ ° and/or RT \_\_\_\_\_ ° Wetted Width \_\_\_\_\_ ft

LAND OWNERSHIP:  Private  Public  Unknown LAND COVER:  Forest  Field/Ag  Developed:

POTENTIAL RESTORATION CANDIDATE:  Grade control  Bank stabilization  
 No  Other: stormwater control / minimize flashiness

THREAT TO PROPERTY/INFRASTRUCTURE:  No  Yes (Describe):

EXISTING RIPARIAN WIDTH:  <25 ft  25 - 50 ft  50-75 ft  75-100 ft  >100ft

EROSION SEVERITY(circle#)  Channelized= <input type="checkbox"/> 1	Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.	Pat downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure	Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.
	5	4	3
ACCESS:	Good access: Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	Fair access: Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	Difficult access. Must cross wetland, steep slope or other sensitive areas to access stream. Minimal stockpile areas available and/or located a great distance from stream section. Specialized heavy equipment required.
	5	④	3
		2	①

NOTES/CROSS SECTION SKETCH: minor slope failure at junction of FYB + WBS. Adjacent to Senior Living facility + access could be fairly easy. There is a chain-link fence along portions of both banks, though.

REPORTED TO AUTHORITIES  YES  NO

The following document has not been transmitted. Try to retransmit.

(FRI) JAN 22 2010 9:44

ACCOUNT NAME :  
 DESTINATION : Scan PDF  
 DEST. NUMBER : 1

DOCUMENT# : 6800000-400  
 TIME STORED : JAN 22 9:43  
 TIME SENT :  
 DURATION :  
 MODE :

PAGES : 0 sheets  
 RESULT : NG

*p. 1 of 2*  
FYB, Reach 1

Reach Level Assessment



<b>SURVEY REACH ID:</b> 1	<b>WTRSHD/SUBSHD:</b> FYB	<b>DATE:</b> 11/30/09	<b>ASSESSED BY:</b> CM/BB
<b>START TIME:</b> 9:55 AM	<b>LMK:</b>	<b>END TIME:</b> 10:30 AM	<b>LMK:</b>
<b>LAT:</b> 41° 49' 28" "	<b>LONG:</b> 72° 43' 41" "	<b>LAT:</b> 41° 49' 42" "	<b>LONG:</b> 72° 43' 50" "
<b>DESCRIPTION:</b> Railroad tracks/culvert	<b>DESCRIPTION:</b> heli pad		

<b>RAIN IN LAST 24 HOURS</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Heavy rain <input type="checkbox"/> Intermittent <input type="checkbox"/> Trace	<b>PRESENT CONDITIONS</b> <input type="checkbox"/> Clear <input type="checkbox"/> Heavy rain <input type="checkbox"/> Trace <input type="checkbox"/> Steady rain <input type="checkbox"/> Overcast <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Partly cloudy
<b>SURROUNDING LAND USE:</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Golf course <input type="checkbox"/> Park	<b>SURROUNDING LAND USE:</b> <input type="checkbox"/> Urban/Residential <input type="checkbox"/> Suburban/Res <input type="checkbox"/> Pasture <input type="checkbox"/> Forested <input checked="" type="checkbox"/> Institutional <input checked="" type="checkbox"/> Other: Powerlines, R-tracks, High school

AVERAGE CONDITIONS (check applicable)	REACH SKETCH AND SITE IMPACT TRACKING
<b>BASE FLOW AS %</b> <input type="checkbox"/> 0-25% <input type="checkbox"/> 50%-75% <b>CHANNEL WIDTH</b> <input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> 75-100%	<p>Simple planar sketch of survey reach. Track locations and IDs for all site impacts within the survey reach (OT, ER, IB, SC, UT, TR, MI) as well as any additional features deemed appropriate. Indicate direction of flow</p>
<b>DOMINANT SUBSTRATE</b> <input checked="" type="checkbox"/> Silt/clay (fine or slick) <input type="checkbox"/> Sand (gritty) <input type="checkbox"/> Gravel (0.1-2.5") <input type="checkbox"/> Cobble (2.5-10") <input type="checkbox"/> Boulder (>10") <input type="checkbox"/> Bed rock	
<b>WATER CLARITY</b> <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid (suspended matter) <input type="checkbox"/> Stained (clear, naturally colored) <input type="checkbox"/> Opaque (milky) <input type="checkbox"/> Other (chemicals, dyes)	
<b>AQUATIC PLANTS IN STREAM</b> Attached: <input type="checkbox"/> none <input checked="" type="checkbox"/> some <input type="checkbox"/> lots Floating: <input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	
<b>WILDLIFE IN OR AROUND STREAM</b> (Evidence of) <input type="checkbox"/> Fish <input type="checkbox"/> Beaver <input checked="" type="checkbox"/> Deer <input type="checkbox"/> Snails <input checked="" type="checkbox"/> Other: SNAKE, SILENT BAY, RACCOON, CAT WALK	
<b>STREAM SHADING (water surface)</b> <input checked="" type="checkbox"/> Halfway (>50%) <input type="checkbox"/> Partially shaded (>25%) <input type="checkbox"/> Unshaded (< 25%)	
<b>CHANNEL DYNAMICS</b> <input type="checkbox"/> Downcutting <input type="checkbox"/> Widening <input type="checkbox"/> Headcutting <input type="checkbox"/> Aggrading <input type="checkbox"/> Bed scour <input type="checkbox"/> Bank failure <input type="checkbox"/> Bank scour <input type="checkbox"/> Slope failure	



WATERSHED/SUBSHED: <u>FYB</u>		DATE: <u>11/24/09</u>	ASSESSED BY: <u>CM+BG</u>
SURVEY REACH ID: <u>2</u>		TIME: ___:___ AM/PM	PHOTO ID: (Camera-Pic #) <u>P6240 # 080 + 082</u>
SITE ID: (Condition #) <u>TR-02</u>		LAT <u>41.48.59</u> " LONG <u>72.43.38</u> " LMK ___	GPS: (Unit ID)

<b>TYPE:</b> <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Plastic <input checked="" type="checkbox"/> Paper <input type="checkbox"/> Metal <input type="checkbox"/> Tires <input type="checkbox"/> Construction <input type="checkbox"/> Medical <input type="checkbox"/> Appliances <input type="checkbox"/> Yard Waste <input type="checkbox"/> Automotive <input type="checkbox"/> Other:	<b>SOURCE:</b> <input type="checkbox"/> Unknown <input type="checkbox"/> Flooding <input type="checkbox"/> Illegal dump <input checked="" type="checkbox"/> Local outfall	<b>LOCATION:</b> <input checked="" type="checkbox"/> Stream <input checked="" type="checkbox"/> Riparian Area <input checked="" type="checkbox"/> Lt bank <input type="checkbox"/> Rt bank	<b>LAND OWNERSHIP:</b> <input type="checkbox"/> Public <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Private - <u>Apartment</u> ? <b>AMOUNT (# Pickup truck loads):</b> <u>2 or 3</u>
---	---	---	--	---

**POTENTIAL RESTORATION CANDIDATE**     Stream cleanup     Stream adoption segment     Removal/prevention of dumping  
 no     Other:

<i>If yes for trash or debris removal</i>	<b>EQUIPMENT NEEDED:</b> <input type="checkbox"/> Heavy equipment <input checked="" type="checkbox"/> Trash bags <input type="checkbox"/> Unknown	<b>DUMPSTER WITHIN 100 FT:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
	<b>WHO CAN DO IT:</b> <input checked="" type="checkbox"/> Volunteers <input type="checkbox"/> Local Gov <input type="checkbox"/> Hazmat Team <input type="checkbox"/> Other	

<b>CLEAN-UP POTENTIAL:</b> (Circle #)	A small amount of trash (i.e., less than two pickup truck loads) located inside a park with easy access <u>5</u>	A large amount of trash, or bulk items, in a small area with easy access. Trash may have been dumped over a long period of time but it could be cleaned up in a few days, possibly with a small backhoe. <u>4</u>	A large amount of trash or debris scattered over a large area, where access is very difficult. Or presence of drums or indications of hazardous materials <u>2</u>
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**NOTES:** local outfall - adjacent to dumpster and parking lot in fairly urban area. Stream reach is in between a senior living center + apartment building (?)

**REPORTED TO AUTHORITIES**     YES     NO



WATERSHED/SUBSHED: <u>FYB</u>		DATE: <u>1/24/09</u>	ASSESSED BY: <u>cm/BC</u>
SURVEY REACH ID: <u>2</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) <u>none</u> /#	
SITE ID (Condition-#): <u>OT-A</u>		LAT <u>41° 48' 55"</u> LONG <u>72° 43' 33"</u> LMK _____	GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input type="checkbox"/> None <input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input type="checkbox"/> Closed pipe <input checked="" type="checkbox"/> Open channel	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:  <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Earthen <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:  <input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: _____ (in)  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  <div style="border: 1px solid black; width: 100%; height: 100%; text-align: center; font-size: small;">NOT APPLICABLE</div>
	<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:  <b>POOL QUALITY:</b> <input checked="" type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:

FOR FLOWING ONLY	<b>COLOR:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b> <input checked="" type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:	

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  Yes  No  Not investigated  
 Land Use description: Parking/building (apt?)  
 Area available:

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3
			2
			1

**SKETCH/NOTES:** Poorly designed stormwater from parking lot.

REPORTED TO AUTHORITIES:  YES  NO



WATERSHED/SUBSHED: <u>FYB</u>		DATE: <u>11/24/09</u>	ASSESSED BY: <u>CM + B6</u>
SURVEY REACH ID: <u>2</u>	TIME: _____ AM/PM	PHOTO ID: (Camera-Pic #) _____ /#	
SITE ID (Condition-#): <u>OT-B</u>		LAT <u>See below</u>	LONG _____ " LMK _____ GPS: (Unit ID)

<b>BANK:</b> <u>See below</u> <input type="checkbox"/> LT <input type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input checked="" type="checkbox"/> None <input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input checked="" type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input type="checkbox"/> Single <input type="checkbox"/> Double <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>12</u> " (in)  Depth: _____ (in) Width (Top): <u>5'</u> (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:

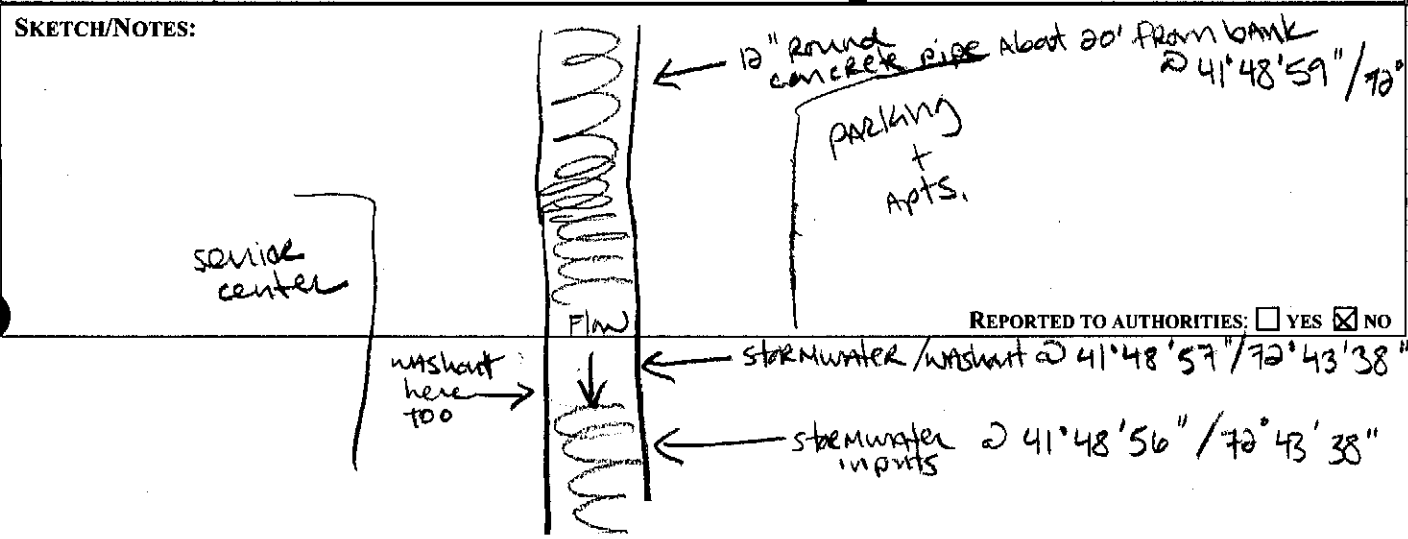
<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:
<b>OTHER CONCERNS:</b>	<input checked="" type="checkbox"/> Excess Trash (paper/plastic bags) <input type="checkbox"/> Dumping (bulk) <input type="checkbox"/> Excessive Sedimentation <input type="checkbox"/> Needs Regular Maintenance <input type="checkbox"/> Bank Erosion <input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization  
 no  Storm water retrofit  Other:

If yes for daylighting:  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

If yes for stormwater:  
 Is stormwater currently controlled?  Yes  No  Not investigated  
 Land Use description: Parking / Building (apartments?)  
 Area available:

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4	3



REPORTED TO AUTHORITIES:  YES  NO



WATERSHED/SUBSHED: <u>FNB</u>	DATE: <u>11/24/09</u>	ASSESSED BY: <u>cm+BC</u>
SURVEY REACH ID: <u>2</u>	TIME: <u>4:10</u> AM/PM	PHOTO ID: (Camera-Pic #) <u>PB240</u> # <u>083</u>
SITE ID: (Condition #) <u>SC-012</u>	LAT <u>41°49'00"</u> LONG <u>72°43'40"</u>	LMK _____ GPS (Unit ID) _____

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input checked="" type="checkbox"/> Box <input type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other:	<b># BARRELS:</b> <input type="checkbox"/> Single <input checked="" type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> Other:	<b>ALIGNMENT:</b> <input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: _____ (ft) Height: _____ (ft) Culvert length: _____ (ft) Width: _____ (ft) Roadway elevation: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input checked="" type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe): _____			<b>CULVERT SLOPE:</b> <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

POTENTIAL RESTORATION CANDIDATE  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 no  Local stream repair  Other: Remove sediment

IS SC ACTING AS GRADE CONTROL  No  Yes  Unknown

<i>If yes for fish barrier</i>	<b>EXTENT OF PHYSICAL BLOCKAGE:</b> <input type="checkbox"/> Total <input checked="" type="checkbox"/> Partial <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown	<b>BLOCKAGE SEVERITY: (circle #)</b>				
	<b>CAUSE:</b> <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other: _____	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.		
		5	4	3	2	1

NOTES/SKETCH: excess sediment.

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FYB REACHS

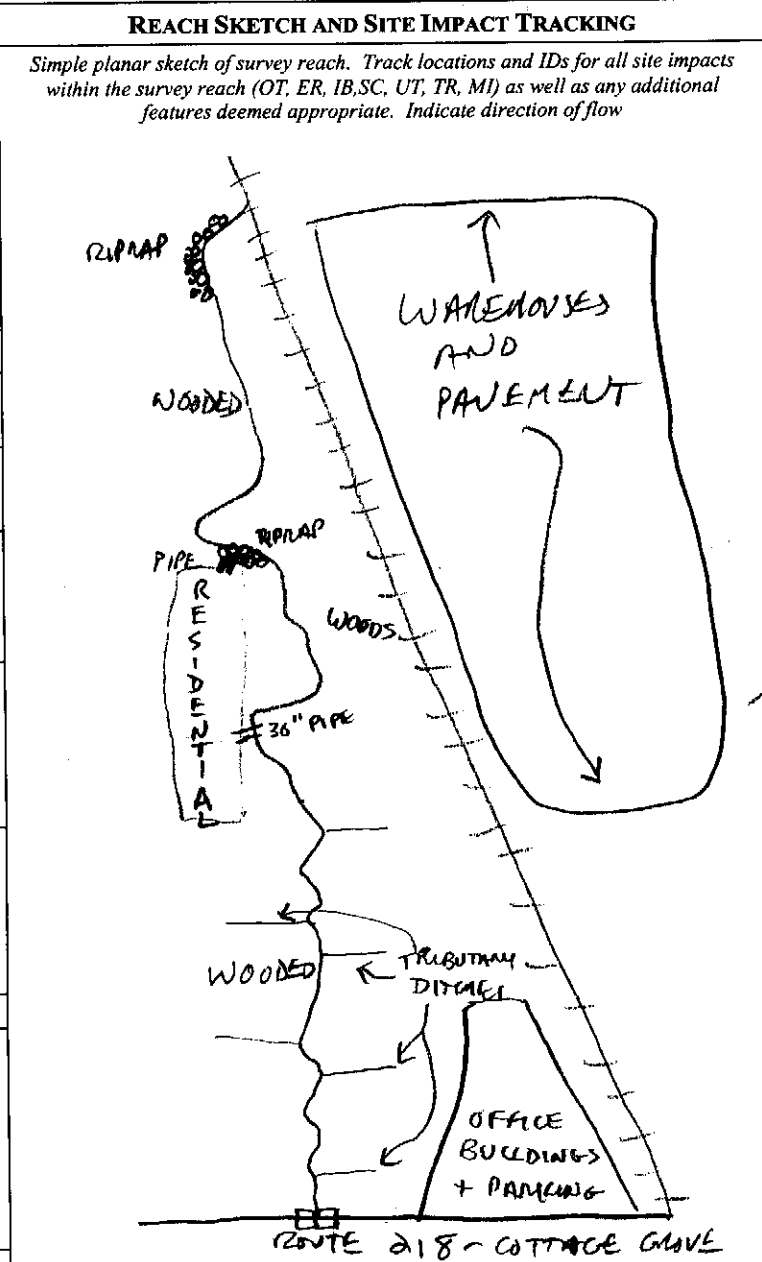
Reach Level Assessment



SURVEY REACH ID: <u>3</u>		WTRSHD/SUBSHD: <u>FYB</u>		DATE: <u>11/30/07</u>		ASSESSED BY: <u>OM/BG</u>	
START TIME: <u>8:15 AM</u>	LMK: _____	END TIME: <u>9:55 AM</u>	LMK: _____	GPS ID: <u>em</u>			
LAT <u>41° 49' 00"</u> LONG <u>72° 43' 40"</u>		LAT <u>41° 49' 28"</u> LONG <u>72° 43' 41"</u>		DESCRIPTION: <u>RR. 218/culvert crossing</u>		DESCRIPTION: <u>RR TRACKS/culvert cross</u>	

RAIN IN LAST 24 HOURS	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input checked="" type="checkbox"/> Intermittent
	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Trace
PRESENT CONDITIONS	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input type="checkbox"/> Overcast
	<input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input type="checkbox"/> Partly cloudy
SURROUNDING LAND USE:	<input type="checkbox"/> Industrial	<input type="checkbox"/> Commercial	<input type="checkbox"/> Urban/Residential
	<input type="checkbox"/> Golf course	<input type="checkbox"/> Park	<input checked="" type="checkbox"/> Suburban/Res
			<input checked="" type="checkbox"/> Forested
			<input type="checkbox"/> Institutional
			<input type="checkbox"/> Pasture
			<input type="checkbox"/> Other:

AVERAGE CONDITIONS (check applicable)	
BASE FLOW AS %	<input type="checkbox"/> 0-25% <input type="checkbox"/> 50%-75%
CHANNEL WIDTH	<input type="checkbox"/> 25-50 % <input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE	
<input checked="" type="checkbox"/> Silt/clay (fine or slick)	<input type="checkbox"/> Cobble (2.5 -10")
<input type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")
<input type="checkbox"/> Gravel (0.1-2.5")	<input type="checkbox"/> Bed rock
WATER CLARITY	
<input type="checkbox"/> Clear	<input checked="" type="checkbox"/> Turbid (suspended matter)
<input type="checkbox"/> Stained (clear, naturally colored)	<input type="checkbox"/> Opaque (milky)
<input type="checkbox"/> Other (chemicals, dyes)	
AQUATIC PLANTS IN STREAM	
Attached:	<input type="checkbox"/> none <input checked="" type="checkbox"/> some <input type="checkbox"/> lots
Floating:	<input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots
WILDLIFE IN OR AROUND STREAM	
(Evidence of)	<input type="checkbox"/> Fish <input type="checkbox"/> Beaver <input checked="" type="checkbox"/> Deer
	<input type="checkbox"/> Snails <input checked="" type="checkbox"/> Other: <u>Raccoon</u>
STREAM SHADING (water surface)	
<input checked="" type="checkbox"/> Mostly shaded (≥75% coverage)	
<input type="checkbox"/> Halfway (≥50%)	
<input type="checkbox"/> Partially shaded (≥25%)	
<input type="checkbox"/> Unshaded (< 25%)	
CHANNEL DYNAMICS	
<input type="checkbox"/> Downcutting	<input type="checkbox"/> Bed scour
<input type="checkbox"/> Widening	<input type="checkbox"/> Bank failure
<input type="checkbox"/> Headcutting	<input type="checkbox"/> Bank scour
<input type="checkbox"/> Aggrading	<input type="checkbox"/> Slope failure
<input type="checkbox"/> Sed. deposition	<input type="checkbox"/> Channelized
<input type="checkbox"/> Unknown	
CHANNEL DIMENSIONS (FACING DOWNSTREAM)	
Height: LT bank	_____ (ft)
RT bank	_____ (ft)
Width: <u>Bottom</u>	<u>13</u> (ft)
<u>Top</u>	_____ (ft)
REACH ACCESSIBILITY	
Good: Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	Fair: Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.
	Difficult: Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.
5	4    3    2    1



NOTES: (biggest problem you see in survey reach) Impacted buffers: AREAS OF EROSION, INVASIVE PLANTS, lots of stormwater inputs/runoffs, AREAS OF RIP-RAP (right bank) behind residential neighborhood.

REPORTED TO AUTHORITIES  YES  NO

P. 262  
 FYB, ReAcl. 12

OVERALL STREAM CONDITION																									
		Optimal					Suboptimal					Marginal					Poor								
<b>IN-STREAM HABITAT</b> <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).										40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.					Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0									
<b>VEGETATIVE PROTECTION</b> <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory 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 one-half 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 one-half 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.				
	Left Bank		10 9			8 7 6			5 4 3			2 1 0													
	Right Bank		10 9			8 7 6			5 4 3			2 1 0													
<b>BANK EROSION</b> <i>(facing downstream)</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.										Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.					Past downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure					Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.				
	Left Bank		10 9			8 7 6			5 4 3			2 1 0													
Right Bank		10 9			8 7 6			5 4 3			2 1 0														
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.										High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.					High flows (greater than bankfull) not able to enter floodplain. Stream deeply entrenched.				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0									
OVERALL BUFFER AND FLOODPLAIN CONDITION																									
		Optimal					Suboptimal					Marginal					Poor								
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.										Width of buffer zone 25-50 feet; human activities have impacted zone only minimally.					Width of buffer zone 10-25 feet; human activities have impacted zone a great deal.					Width of buffer zone <10 feet: little or no riparian vegetation due to human activities.				
	Left Bank		10 9			8 7 6			5 4 3			2 1 0													
	Right Bank		10 9			8 7 6			5 4 3			2 1 0													
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest										Predominant floodplain vegetation type is young forest					Predominant floodplain vegetation type is shrub or old field					Predominant floodplain vegetation type is turf or crop land				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0									
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water										Even mix of wetland and non-wetland habitats, no evidence of standing/ponded water					Either all wetland or all non-wetland habitat, evidence of standing/ponded water					Either all wetland or all non-wetland habitat, no evidence of standing/ponded water				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0									
<b>FLOODPLAIN ENCROACHMENT</b>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures										Minor floodplain encroachment in the form of fill material, land development, or manmade structures, but not effecting floodplain function					Moderate floodplain encroachment in the form of filling, land development, or manmade structures, some effect on floodplain function					Significant floodplain encroachment (i.e. fill material, land development, or man-made structures). Significant effect on floodplain function				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0									
Sub Total In-stream: <u>51</u> /80 + Buffer/Floodplain: <u>54</u> /80 = Total Survey Reach <u>105</u> /160																									





WATERSHED/SUBSHED: FYB DATE: 1/30/09 ASSESSED BY: CM + RSG  
 SURVEY REACH ID: 3 TIME: 8:15 AM PHOTO ID: (Camera-Pic #) olympus/1# 002  
 SITE ID: (Condition #) SC- LAT 41°49'02" LONG 70°43'40" LMK \_\_\_\_\_ GPS (Unit ID) \_\_\_\_\_

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other:

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input checked="" type="checkbox"/> Box <input type="checkbox"/> Elliptical <input type="checkbox"/> Circular <input type="checkbox"/> Other:	<b># BARRELS:</b> <input type="checkbox"/> Single <input checked="" type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input type="checkbox"/> Metal <input type="checkbox"/> Other:	<b>ALIGNMENT:</b> <input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: _____ (ft) Height: _____ (ft) Culvert length: _____ (ft) Width: _____ (ft) Roadway elevation: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <input type="checkbox"/> Cracking/chipping/corrosion <input type="checkbox"/> Downstream scour hole <input checked="" type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe): _____			<b>CULVERT SLOPE:</b> <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

**POTENTIAL RESTORATION CANDIDATE**  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 no  Local stream repair  Other: sediment removal

**IS SC ACTING AS GRADE CONTROL**  No  Yes  Unknown

<i>If yes for fish barrier</i>	<b>EXTENT OF PHYSICAL BLOCKAGE:</b> <input type="checkbox"/> Total <input checked="" type="checkbox"/> Partial <u>left bay</u> <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown	<b>BLOCKAGE SEVERITY: (circle #)</b>		
	<b>CAUSE:</b> <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other: _____	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

**NOTES/SKETCH:** CANNOT see light through tunnel (will not be used by wildlife including turtles - can still be used by fish). Left bay of 2-bay culvert is clogged with sediment + flow is restricted to right bay only. Culvert goes under Rt. 218 / 4-lane highway.

REPORTED TO AUTHORITIES  YES  NO



WATERSHED/SUBSHED: <u>FYB</u>		DATE: <u>11/30/09</u>	ASSESSED BY: <u>CM/BG</u>
SURVEY REACH ID: <u>3</u>	TIME: <u>8:15-9:45</u> AM/PM	PHOTO ID: (Camera-Pic #) _____ #	
SITE ID (Condition-#): <u>OT-<sup>All on one sheet</sup></u>	LAT: <u>*see, reverse*</u>	LONG: <u>*see, reverse*</u>	GPS: (Unit ID)

<b>BANK:</b> <input checked="" type="checkbox"/> LT <input checked="" type="checkbox"/> RT <input type="checkbox"/> Head  <b>FLOW:</b> <input checked="" type="checkbox"/> None <input checked="" type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial <input type="checkbox"/> Other:	<b>TYPE:</b> <input checked="" type="checkbox"/> Closed pipe  <input checked="" type="checkbox"/> Open channel	<b>MATERIAL:</b> <input checked="" type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input type="checkbox"/> PVC/Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Other:	<b>SHAPE:</b> <input checked="" type="checkbox"/> Single <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Double <input type="checkbox"/> Elliptical <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>DIMENSIONS:</b> Diameter: <u>vary - see (in) Reverse</u>  Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)	<b>SUBMERGED:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
	Depth: _____ (in) Width (Top): _____ (in) " (Bottom): _____ (in)				NOT APPLICABLE

<b>CONDITION:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Chip/Cracked <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion <input type="checkbox"/> Other:	<b>ODOR:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Gas <input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/Sour <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<b>DEPOSITS/STAINS:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	<b>VEGGIE DENSITY:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Inhibited <input type="checkbox"/> Excessive <input type="checkbox"/> Other:	<b>PIPE BENTHIC GROWTH:</b> <input type="checkbox"/> None <input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:
				<b>POOL QUALITY:</b> <input type="checkbox"/> No pool <input type="checkbox"/> Good <input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Oils <input type="checkbox"/> Suds <input type="checkbox"/> Algae <input type="checkbox"/> Floatables <input type="checkbox"/> Other:

<b>FOR FLOWING ONLY</b>	<b>COLOR:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Grey <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:
	<b>TURBIDITY:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight Cloudiness <input type="checkbox"/> Cloudy <input type="checkbox"/> Opaque
	<b>FLOATABLES:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Sewage (toilet paper, etc.) <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:

<b>OTHER CONCERNS:</b>	<input type="checkbox"/> Excess Trash (paper/plastic bags)	<input type="checkbox"/> Dumping (bulk)	<input type="checkbox"/> Excessive Sedimentation
	<input type="checkbox"/> Needs Regular Maintenance	<input type="checkbox"/> Bank Erosion	<input type="checkbox"/> Other:

**POTENTIAL RESTORATION CANDIDATE**  Discharge investigation  Stream daylighting  Local stream repair/outfall stabilization

No  Storm water retrofit  Other:

*If yes for daylighting:*  
 Length of vegetative cover from outfall: \_\_\_\_\_ ft Type of existing vegetation: \_\_\_\_\_ Slope: \_\_\_\_\_ °

*If yes for stormwater:*  
 Is stormwater currently controlled?  
 Yes  No  Not investigated

Land Use description: PARKING LOT  
 Area available: \_\_\_\_\_

<b>OUTFALL SEVERITY:</b> (circle #)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.	
	5	4	3	2

**SKETCH/NOTES:** There are several open channel inputs to this reach + a few closed pipes (~21 in total). See reverse side for locations + additional details.

- No unusual observations -

REPORTED TO AUTHORITIES:  YES  NO

- 1.) tributary entering LB @  $41^{\circ}49'03''/72^{\circ}43'41''$  - possibly stemwater from parking lot.
- 2.) washout from stemwater flow or tributary on LB @  $41^{\circ}49'03''/72^{\circ}43'41''$
- 3.) tributary input on LB @  $41^{\circ}49'05''/72^{\circ}43'41''$
- 4.) tributary input on RB @  $41^{\circ}49'05''/72^{\circ}43'41''$
- 5.) " " " @  $41^{\circ}49'06''/72^{\circ}43'41''$
- 6.) " " " @  $41^{\circ}49'06''/72^{\circ}43'42''$
- 7.) " " LB ~ 30' further North
- 8.) " " " "
- 9.) " " " @  $41^{\circ}49'08''/72^{\circ}43'41''$
- 10.) " " " @  $41^{\circ}49'10''/72^{\circ}43'40''$
- 11.) " " " @  $41^{\circ}49'12''/72^{\circ}43'42''$  - there is some running water here, unlike the others listed above, which were more wash-out / SCOUR.

- 12.) washout/tributary input to RB @  $41^{\circ}49'13''/72^{\circ}43'42''$
- 13.) " " " behind residential area @  $41^{\circ}49'13''/72^{\circ}43'42''$
- 14.) stemwater input on RB @  $41^{\circ}49'15''/72^{\circ}43'43''$  - there's a 30" round concrete pipe ~ 2' high off ground + rip-rap under to buffer outfall before it reaches brook. see photo olympus1-006.
- 15.) tributary or stemwater flow (x2) on RB @  $41^{\circ}49'16''/72^{\circ}43'42''$
- 16.) tributary input on LB @  $41^{\circ}49'16''/72^{\circ}43'40''$
- 17.) input on LB @  $41^{\circ}49'17''/72^{\circ}43'41''$
- 18.) stemwater pipe on RB behind residential area ~ 12" diam; rip-rap under pipe ~ 14" off ground + ~ 4' back from top of bank @  $41^{\circ}49'21''/72^{\circ}43'43''$
- 19.) tributary / input with running water to LB @  $41^{\circ}49'22''/72^{\circ}43'42''$
- 20.) input to LB @  $41^{\circ}49'25''/72^{\circ}43'42''$
- 21.) stemwater input (no pipe) to RB @  $41^{\circ}49'26''/72^{\circ}43'42''$
- 22.) @ end of reach (upstream end) @ culvert there is a 5' round metal pipe



WATERSHED/SUBSHED: FYB DATE: 11/30/09 ASSESSED BY: CM + BCP

SURVEY REACH: 3 TIME: \_\_\_\_\_ AM/PM PHOTO ID (CAMERA-PIC #): DSP # 007

SITE ID: (Condition #) \_\_\_\_\_ START LAT 41° 49' 20" LONG 72° 43' 42" LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 ER- \_\_\_\_\_ END LAT \_\_\_\_\_ LONG \_\_\_\_\_ LMK \_\_\_\_\_

PROCESS:  Currently unknown  
 Downcutting  Bed scour  
 Widening  Bank failure  
 Headcutting  Bank scour  
 Aggrading  Slope failure  
 Sed. deposition  Channelized

BANK OF CONCERN:  LT  RT  Both (looking downstream)  
 LOCATION:  Meander bend  Straight section  Steep slope/valley wall  Other:  
 DIMENSIONS:  
 Length (if no GPS) LT \_\_\_\_\_ ft and/or RT \_\_\_\_\_ ft Bottom width \_\_\_\_\_ ft  
 Bank Ht LT \_\_\_\_\_ ft and/or RT \_\_\_\_\_ ft Top width \_\_\_\_\_ ft  
 Bank Angle LT \_\_\_\_\_ ° and/or RT \_\_\_\_\_ ° Wetted Width \_\_\_\_\_ ft

LAND OWNERSHIP:  Private  Public  Unknown LAND COVER:  Forest  Field/Ag  Developed:

POTENTIAL RESTORATION CANDIDATE:  Grade control  Bank stabilization  
 No  Other:

THREAT TO PROPERTY/INFRASTRUCTURE:  No  Yes (Describe):

EXISTING RIPARIAN WIDTH:  <25 ft  25 - 50 ft  50-75 ft  75-100ft  >100ft

EROSION SEVERITY (circle #)  Channelized = <input type="checkbox"/> 1	Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.	Pat downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure	Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.
	5	4 <u>(3)</u>	2 1
ACCESS:	Good access: Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	Fair access: Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	Difficult access. Must cross wetland, steep slope or other sensitive areas to access stream. Minimal stockpile areas available and/or located a great distance from stream section. Specialized heavy equipment required.
	5	4 <u>(3)</u>	2 1

NOTES/CROSS SECTION SKETCH: Minor bank erosion / slope failure at various spots throughout reach - this example is typical  
→ Another slope failure to left bank @ 41° 49' 23" / 72° 43' 42"

REPORTED TO AUTHORITIES  Yes  No



WATERSHED/SUBSHED: FYB DATE: 11/30/09 ASSESSED BY: cmr + BCP

SURVEY REACH: 3 TIME: 9:45 AM PHOTO ID: (Camera-Pic #) DISP # 007

SITE ID: (Condition #) IB- START LAT 41° 49' 26" LONG 72° 43' 42" LMK \_\_\_\_\_ GPS: (Unit ID) \_\_\_\_\_  
 END LAT 41° 49' 28" LONG 72° 43' 41" LMK \_\_\_\_\_

IMPACTED BANK:  LT  RT  Both REASON INADEQUATE:  Lack of vegetation  Too narrow  Widespread invasive plants  
 Recently planted  Other: Rip-rap (poor-no wildlife value)

LAND USE: Private Institutional Golf Course Park Other Public  
 (Facing downstream) LT Bank     :  
 RT Bank     :

DOMINANT LAND COVER: Paved Bare ground Turf/lawn Tall grass Shrub/scrub Trees Other  
 LT Bank       :  
 RT Bank       :

INVASIVE PLANTS:  None  Rare  Partial coverage  Extensive coverage  unknown

STREAM SHADE PROVIDED?  None  Partial  Full WETLANDS PRESENT?  No  Yes  Unknown

POTENTIAL RESTORATION CANDIDATE  Active reforestation  Greenway design  Natural regeneration  Invasives removal  
 no  Other:

RESTORABLE AREA	REFORESTATION POTENTIAL: (Circle #)	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate				
		5	4	3	2	1
LT BANK RT Length (ft): _____ <u>~ 80' ±</u> Width (ft): _____ <u>~ 15' ±</u>		Impacted area on public land where the riparian area does not appear to be used for any specific purpose; plenty of area available for planting	Impacted area on either public or private land that is presently used for a specific purpose; available area for planting adequate	Impacted area on private land where road; building encroachment or other feature significantly limits available area for planting		

POTENTIAL CONFLICTS WITH REFORESTATION  Widespread invasive plants  Potential contamination  Lack of sun  
 Poor/unsafe access to site  Existing impervious cover  Severe animal impacts (deer, beaver)  Other:

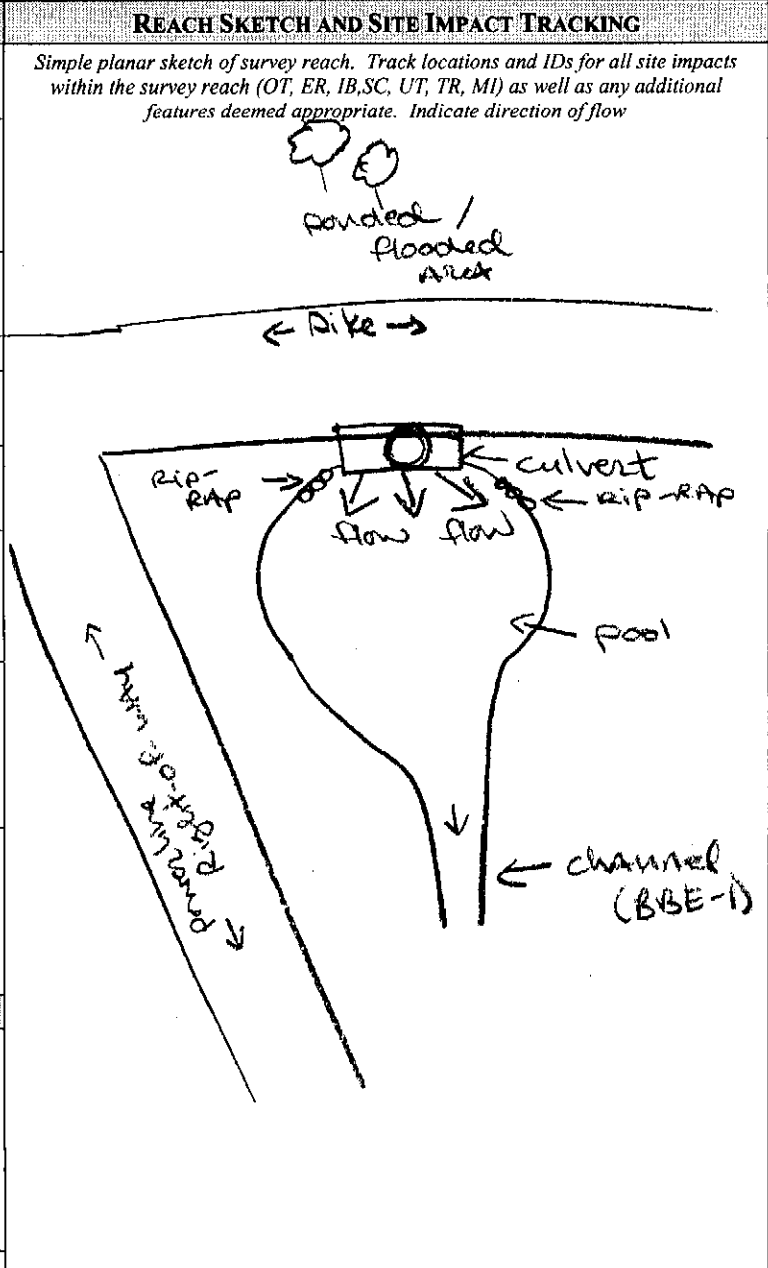
NOTES: There ARE AREAS where Rip-rap has been placed on banks to stabilize. These AREAS were documented as below:  
 → Rip-rap ~ 30' long + 10' high up bank on RB ~ 41° 49' 21" / 72° 43' 43"  
 → Rip-rap ~ 10' high x 30' long with approx. 25' or so no Rip-rap, then another 40' long x 15' high stretch of Rip-rap. Right Bank.  
 ⇒ These AREAS MAY NOT be potential restoration candidates (they have already technically been "restored") - however, it is relevant to note, particularly if future restoration is proposed on this reach, other bioengineering techniques could be proposed instead of more Rip-rap, since Rip-rap can lead to ↑ stream temperatures + does not provide wildlife value.



SURVEY REACH ID: <u>1</u>		WTRSHD/SUBSHD: <u>BBE</u>		DATE: <u>12/3/09</u>		ASSESSED BY: <u>CM/BG</u>	
START TIME: <u>9:20</u> AM	LMK: _____	END TIME: <u>9:45</u> AM	LMK: _____	GPS ID: <u>CM</u>			
LAT <u>41° 50' 21"</u> LONG <u>72° 42' 49"</u>		LAT <u>41° 50' 23"</u> LONG <u>72° 42' 45"</u>		DESCRIPTION: <u>Junction with BBE-2</u>			
DESCRIPTION: <u>culvert w/ dike</u>							

RAIN IN LAST 24 HOURS <input checked="" type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	PRESENT CONDITIONS <input type="checkbox"/> Heavy rain	<input type="checkbox"/> Steady rain	<input type="checkbox"/> Intermittent
<input type="checkbox"/> None	<input type="checkbox"/> Intermittent	<input type="checkbox"/> Clear	<input type="checkbox"/> Trace	<input type="checkbox"/> Overcast
SURROUNDING LAND USE: <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial		<input type="checkbox"/> Urban/Residential <input type="checkbox"/> Suburban/Res		<input type="checkbox"/> Forested <input checked="" type="checkbox"/> Institutional
<input type="checkbox"/> Golf course <input type="checkbox"/> Park		<input type="checkbox"/> Crop <input type="checkbox"/> Pasture		<input checked="" type="checkbox"/> Other: <u>Dike, powerlines</u>

AVERAGE CONDITIONS (check applicable)	
BASE FLOW AS % <input type="checkbox"/> 0-25%	<input type="checkbox"/> 50%-75%
CHANNEL WIDTH <input type="checkbox"/> 25-50 %	<input checked="" type="checkbox"/> 75-100%
DOMINANT SUBSTRATE	
<input checked="" type="checkbox"/> Silt/clay (fine or slick)	<input type="checkbox"/> Cobble (2.5-10")
<input type="checkbox"/> Sand (gritty)	<input type="checkbox"/> Boulder (>10")
<input type="checkbox"/> Gravel (0.1-2.5")	<input type="checkbox"/> Bed rock
WATER CLARITY <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid (suspended matter)	
<input type="checkbox"/> Stained (clear, naturally colored) <input type="checkbox"/> Opaque (milky)	
<input type="checkbox"/> Other (chemicals, dyes)	
AQUATIC PLANTS Attached: <input type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	
IN STREAM Floating: <input checked="" type="checkbox"/> none <input type="checkbox"/> some <input type="checkbox"/> lots	
WILDLIFE IN OR AROUND STREAM (Evidence of)	
<input type="checkbox"/> Fish <input type="checkbox"/> Beaver <input type="checkbox"/> Deer	
<input type="checkbox"/> Snails <input checked="" type="checkbox"/> Other: <u>RT WALK</u>	
STREAM SHADING (water surface)	
<input type="checkbox"/> Mostly shaded (≥75% coverage)	
<input type="checkbox"/> Halfway (≥50%)	
<input checked="" type="checkbox"/> Partially shaded (≥25%)	
<input type="checkbox"/> Unshaded (<25%)	
CHANNEL DYNAMICS in flood	
<input type="checkbox"/> Downcutting	<input type="checkbox"/> Bed scour
<input type="checkbox"/> Widening	<input type="checkbox"/> Bank failure
<input type="checkbox"/> Headcutting	<input type="checkbox"/> Bank scour
<input checked="" type="checkbox"/> Unknown	<input type="checkbox"/> Aggrading
<input type="checkbox"/> Sed. deposition	<input type="checkbox"/> Slope failure
<input type="checkbox"/> Channelized	
Bankfill Height: <u>LT bank</u> <u>3'</u> (ft)	
Channel DIMENSIONS (Facing Downstream) Estimate <u>RP bank</u> _____ (ft)	
Width: <u>Bottom</u> <u>13'</u> (ft)	
Top _____ (ft)	



REACH ACCESSIBILITY		
<b>Good:</b> Open area in public ownership, sufficient room to stockpile materials, easy stream channel access for heavy equipment using existing roads or trails.	<b>Fair:</b> Forested or developed area adjacent to stream. Access requires tree removal or impact to landscaped areas. Stockpile areas small or distant from stream.	<b>Difficult:</b> Must cross wetland, steep slope, or sensitive areas to get to stream. Few areas to stockpile available and/or located a great distance from stream. Specialized heavy equipment required.

NOTES: (biggest problem you see in survey reach) 5 4 3 2 1 The velocity of flow through the culvert was so high it caused the water to pool + the banks to blowout (hence the rip-rap). There is no canopy cover - thermal increase.

REPORTED TO AUTHORITIES  YES  NO

OVERALL STREAM CONDITION																				
	Optimal					Suboptimal					Marginal					Poor				
<b>IN-STREAM HABITAT</b>  <i>(May modify criteria based on appropriate habitat regime)</i>	Greater than 70% of substrate favorable for epifaunal colonization and fish cover; mix of snags, submerged logs, undercut banks, cobble or other stable habitat and at stage to allow full colonization potential (i.e., logs/snags that are <u>not</u> new fall and <u>not</u> transient).					40-70% mix of stable habitat; well-suited for full colonization potential; adequate habitat for maintenance of populations; presence of additional substrate in the form of newfall, but not yet prepared for colonization (may rate at high end of scale).					20-40% mix of stable habitat; habitat availability less than desirable; substrate frequently disturbed or removed.					Less than 20% stable habitat; lack of habitat is obvious; substrate unstable or lacking.				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
<b>VEGETATIVE PROTECTION</b>  <i>(score each bank, determine sides by facing downstream)</i>	More than 90% of the streambank surfaces and immediate riparian zone covered by native vegetation, including trees, understory 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 one-half 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 one-half 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.				
	Left Bank		10 9			8 7 6		8 7 6			5 4 3		5 4 3			2 1 0		2 1 0		
	Right Bank		10 9			8 7 6		8 7 6			5 4 3		5 4 3			2 1 0		2 1 0		
<b>BANK EROSION</b> <i>(facing downstream)</i>  <i>Under water?</i>	Banks stable; evidence of erosion or bank failure absent or minimal; little potential for future problems. <5% of bank affected.					Grade and width stable; isolated areas of bank failure/erosion; likely caused by a pipe outfall, local scour, impaired riparian vegetation or adjacent use.					Past downcutting evident, active stream widening, banks actively eroding at a moderate rate; no threat to property or infrastructure					Active downcutting; tall banks on both sides of the stream eroding at a fast rate; erosion contributing significant amount of sediment to stream; obvious threat to property or infrastructure.				
	Left Bank		10 9			8 7 6		8 7 6			5 4 3		5 4 3			2 1 0		2 1 0		
	Right Bank		10 9			8 7 6		8 7 6			5 4 3		5 4 3			2 1 0		2 1 0		
<b>FLOODPLAIN CONNECTION</b>	High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) able to enter floodplain. Stream not deeply entrenched.					High flows (greater than bankfull) <b>not</b> able to enter floodplain. Stream deeply entrenched.					High flows (greater than bankfull) <b>not</b> able to enter floodplain. Stream deeply entrenched.				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
OVERALL BUFFER AND FLOODPLAIN CONDITION																				
	Optimal					Suboptimal					Marginal					Poor				
<b>VEGETATED BUFFER WIDTH</b>	Width of buffer zone >50 feet; human activities (i.e., parking lots, roadbeds, clear-cuts, lawns, crops) have not impacted zone.					Width of buffer zone 25-50 feet; human activities have impacted zone only minimally.					Width of buffer zone 10-25 feet; human activities have impacted zone a great deal.					Width of buffer zone <10 feet: little or no riparian vegetation due to human activities.				
	Left Bank		10 9			8 7 6		8 7 6			5 4 3		5 4 3			2 1 0		2 1 0		
	Right Bank		10 9			8 7 6		8 7 6			5 4 3		5 4 3			2 1 0		2 1 0		
<b>FLOODPLAIN VEGETATION</b>	Predominant floodplain vegetation type is mature forest					Predominant floodplain vegetation type is young forest					Predominant floodplain vegetation type is shrub or old field					Predominant floodplain vegetation type is turf or crop land - <i>row</i>				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
<b>FLOODPLAIN HABITAT</b>	Even mix of wetland and non-wetland habitats, evidence of standing/ponded water					Even mix of wetland and non-wetland habitats, no evidence of standing/ponded water					Either all wetland or all non-wetland habitat, evidence of standing/ponded water					Either all wetland or all non-wetland habitat, no evidence of standing/ponded water				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
<b>FLOODPLAIN ENCROACHMENT</b>  <i>dike, culvert, R.O. w/</i>	No evidence of floodplain encroachment in the form of fill material, land development, or manmade structures					Minor floodplain encroachment in the form of fill material, land development, or manmade structures, but not affecting floodplain function					Moderate floodplain encroachment in the form of filling, land development, or manmade structures, some effect on floodplain function					Significant floodplain encroachment (i.e. fill material, land development, or man-made structures). Significant effect on floodplain function				
	20 19 18 17 16					15 14 13 12 11					10 9 8 7 6					5 4 3 2 1 0				
<b>Sub Total In-stream:</b> <u>51</u> /80 + <b>Buffer/Floodplain:</b> <u>33</u> /80 = <b>Total Survey Reach</b> <u>84</u> /160																				



WATERSHED/SUBSHED: <u>BBE</u>		DATE: <u>12/03/09</u>	ASSESSED BY: <u>B.oten</u>
SURVEY REACH ID: <u>01</u>		TIME: <u>9:45 AM</u> /PM	PHOTO ID: (Camera-Pic #) <u>PC0300</u> # <u>10</u>
SITE ID: (Condition #) <u>SC-<sup>one</sup>sheet</u>		LAT <u>41° 50' 23"</u> LONG <u>72° 42' 45"</u>	LMK _____ GPS (Unit ID) _____

TYPE:  Road Crossing  Railroad Crossing  Manmade Dam  Beaver Dam  Geological Formation  Other: Dike

<b>FOR ROAD/ RAILROAD CROSSINGS ONLY</b>	<b>SHAPE:</b> <input type="checkbox"/> Arch <input type="checkbox"/> Bottomless <input type="checkbox"/> Box <input type="checkbox"/> Elliptical <input checked="" type="checkbox"/> Circular <input type="checkbox"/> Other: <u>Pipe</u>	<b># BARRELS:</b> <input checked="" type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Triple <input type="checkbox"/> Other:	<b>MATERIAL:</b> <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Metal <input type="checkbox"/> Other:	<b>ALIGNMENT:</b> <input checked="" type="checkbox"/> Flow-aligned <input type="checkbox"/> Not flow-aligned <input type="checkbox"/> Do not know	<b>DIMENSIONS: (if variable, sketch)</b> Barrel diameter: <u>24"</u> (ft) Height: _____ (ft) Culvert length: _____ (ft) Width: _____ (ft) Roadway elevation: _____ (ft)
	<b>CONDITION: (Evidence of...)</b> <input type="checkbox"/> Cracking/chipping/corrosion <input checked="" type="checkbox"/> Downstream scour hole <input type="checkbox"/> Sediment deposition <input type="checkbox"/> Failing embankment <input type="checkbox"/> Other (describe):			<b>CULVERT SLOPE:</b> <input type="checkbox"/> Flat <input type="checkbox"/> Slight (2° - 5°) <input type="checkbox"/> Obvious (>5°)	

POTENTIAL RESTORATION CANDIDATE  Fish barrier removal  Culvert repair/replacement  Upstream storage retrofit  
 no  Local stream repair  Other:

IS SC ACTING AS GRADE CONTROL  No  Yes  Unknown

<i>If yes for fish barrier</i>	<b>EXTENT OF PHYSICAL BLOCKAGE:</b> <input type="checkbox"/> Total <input type="checkbox"/> Partial <input type="checkbox"/> Temporary <input type="checkbox"/> Unknown	<b>BLOCKAGE SEVERITY: (circle #)</b>			
	<b>CAUSE:</b> <input type="checkbox"/> Drop too high Water Drop: _____ (in) <input type="checkbox"/> Flow too shallow Water Depth: _____ (in) <input type="checkbox"/> Other:	A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.	
		5	4	3	2

NOTES/SKETCH: See Rch datasheet for sketch.

REPORTED TO AUTHORITIES  YES  NO