

Hampton Corner Rd #70

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name YOUSSEY / CROWAN Date 5 OCT Time 11:30

Property Owners Name (if applicable) _____ Grid ID _____

Stream Name WES HANIC

Reach Location Hampton Corner / Rt 202

Applicable Reference Site _____

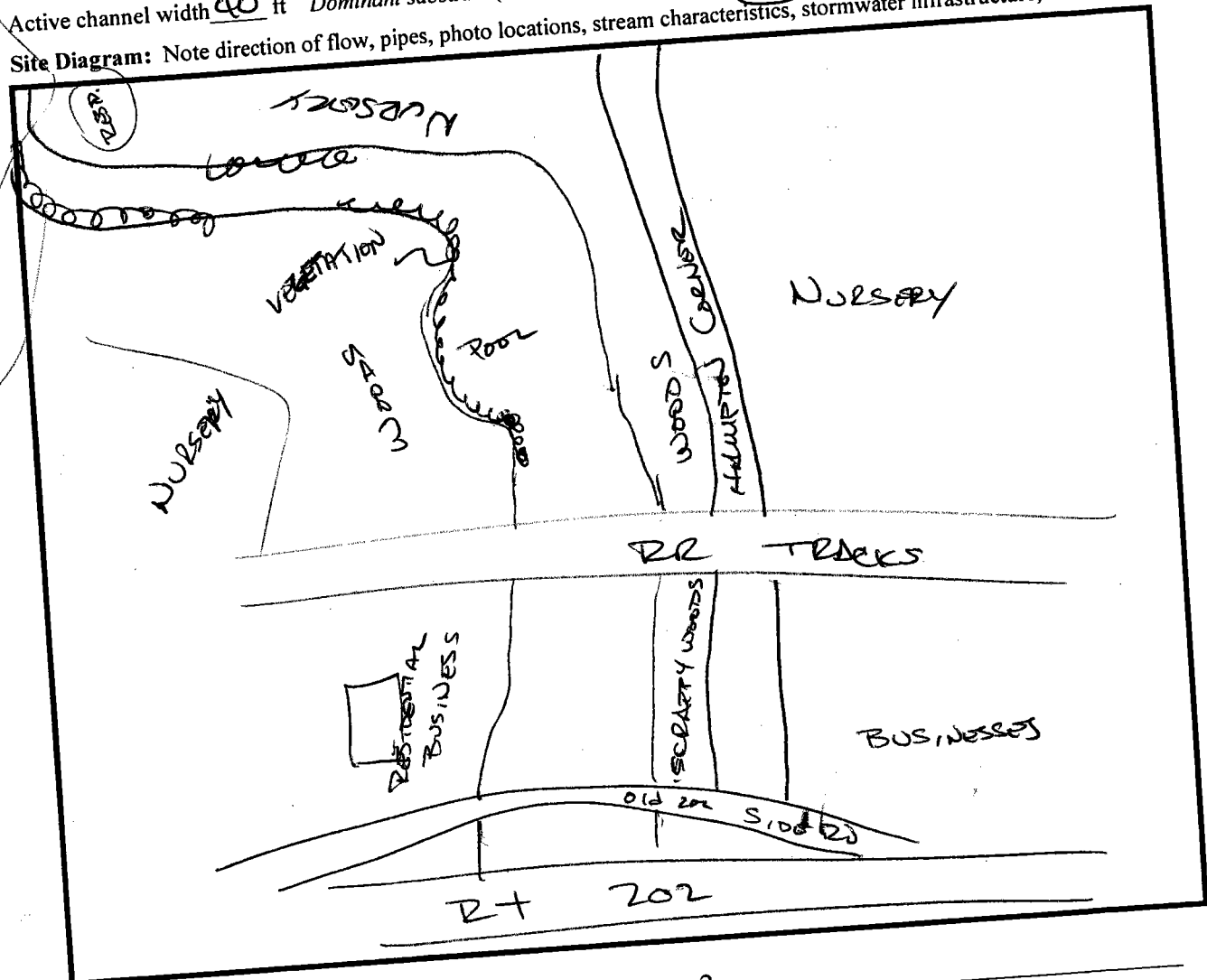
GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today CLOUDY + OVERCAST, Mild Past 2-5 days WET + DRY

Active channel width 40 ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.

Golf Course - 66-Booth side of road



- Photo Notes:
1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____

Assessment Scores (1-Poor to 10-Excellent)

Channel Condition 4

Hydrologic Alteration (Score only if Applicable) 2

Riparian Zone Left: 7 Right: 3

Bank Stability Left: 3 Right: 4

Water Appearance 6

Nutrient Enrichment 6

Barriers to fish movement 10

Instream fish cover 6

*** (facing upstream) ***

Pools 5

Invertebrate habitat 10

Score only if applicable

Canopy Cover (use Manual for guidance) 10

Manure presence —

Salinity —

Riffle embeddedness (look in riffles) —

Macroinvertebrates Observed (optional) ✓

Overall Score < 6.0 Poor
 (Total divided by number scored) 6.1-7.4 Fair
 Left: 5.9 Right: 5.6 Average: 5.8 7.5-8.9 Good
> 9.0 Excellent
59 56

Streamside Land Use: (within 100 ft. of top of bank)

Check all that apply:

Land Use Category	While Observed in the field	
	Left Bank	Right Bank
Forest	X	
Pasture		
Cultivated Field		
Nursery		X
Residential		X
Commercial	X	
Industrial		
Other	R2 X	Road X

Outfall Pipe 1: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N
 _____ W

Diameter: _____ in

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Outfall Pipe 2: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N
 _____ W

Diameter: _____ in

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

23" PVC

Left side

STEEL

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph # ___ and mark on site diagram) GPS Coordinates _____ N
W
Width of ditch 5 ft
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: 202 runoff between Old + New 202 w/PIPE

Concrete
Drainage Ditch: (Photograph # ___ and mark on site diagram) GPS Coordinates _____ N
W
Width of ditch 8 ft
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: Old 202 + Hampton Cooper w/PIPE

Comments & Suggestions:
Do you have suggestions for remediation along this reach?
Reconnect to floodplain

Given dry weather, is there any running water in nearby stormwater structures?
No water in development stormwater structures

Access to this site...how far off of road is it? Accessible for large equipment, if necessary?
Close to road

Debris, trash, litter?
Yes, lots

Additional comments:
LONG LOT FOR SALE NEAR COUNTRY CLUB RD on HAMPTON C.
NEXT TO IT IS LARSEN LOT THAT HEADS BACK TO
2ND NESHANIC - OWNED BY TML LANDSCAPE CONTRACTORS
RIGHT ALONG 2ND NESHANIC.

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name THAYER / PERLMAN Date 9/19/07 Time 10:00

Property Owners Name (if applicable) _____

Stream Name THIRD NESHAUC Grid ID C2-74

Reach Location Down stream of 523 crossing

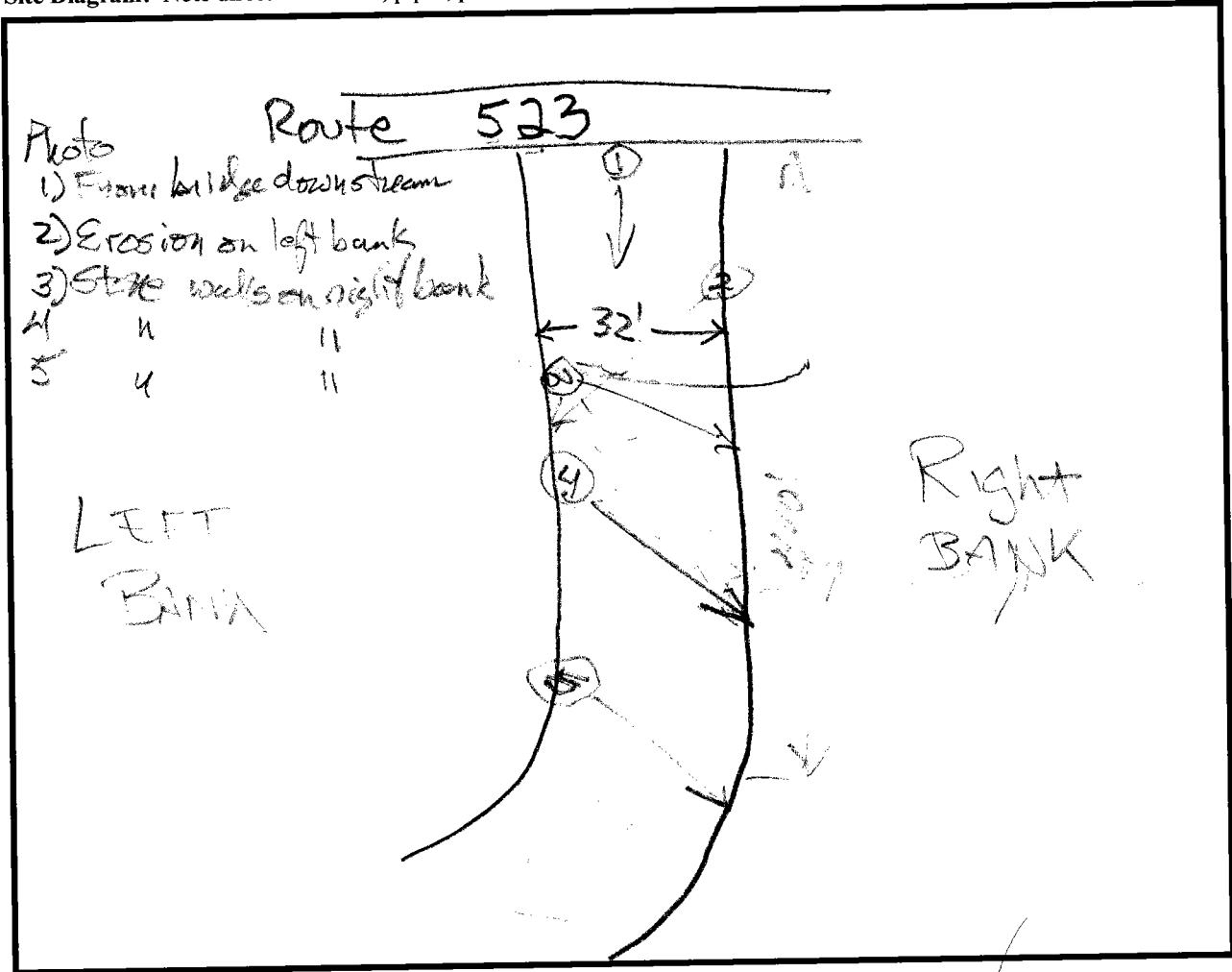
Applicable Reference Site _____

GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today Sunny Past 2-5 days FAIR

Active channel width 32 ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.



- Photo Notes:
- | | |
|--------------------------------|------------------|
| 1. D/S from 523 bridge | 2. L/B erosion |
| 3. R/B Rock wall | 4. R/B Rock wall |
| 5. R/B Rock wall at river bend | 6. _____ |
| 7. _____ | 8. _____ |
| 9. _____ | 10. _____ |

Assessment Scores (1-Poor to 10-Excellent)

*** (facing upstream) ***

Channel Condition 2

Hydrologic Alteration 10
(Score only if Applicable)

Riparian Zone Left: 3 Right: 3

Bank Stability Left: 1 Right: 1

Water Appearance 8

Nutrient Enrichment 9

Barriers to fish movement 10

Instream fish cover 5

Pools 4

Invertebrate habitat 7

Score only if applicable

Canopy Cover 7
(use Manual for guidance)

Manure presence /

Salinity /

Riffle embeddedness 2
(look in riffles)

Macroinvertebrates /

Observed (optional) /

Gerris

Overall Score	< 6.0	Poor
(Total divided by number scored)	6.1-7.4	Fair
Left: <u>5.9</u> Right: <u>5.9</u> Average: <u>5.9</u>	7.5-8.9	Good
5.9 5.9	> 9.0	Excellent

Streamside Land Use:

(within 100 ft. of top of bank)
Check all that apply:

Land Use Category	While Observed in the field	
	Left Bank	Right Bank
Forest	X	
Pasture		
Cultivated Field		
Nursery		
Residential		X
Commercial		
Industrial		
Other		

Outfall Pipe 1: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N
 Diameter: _____ in _____ W
 Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO
 Pipe Material: concrete steel PVC Clay Other
 Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____
 Channel downstream eroded? YES NO
 Pipe gathers water from (road, yard, farm, etc.): _____
 Flow appearance: clear turbid oily foamy colored other _____

Outfall Pipe 2: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N
 Diameter: _____ in _____ W
 Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO
 Pipe Material: concrete steel PVC Clay Other
 Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____
 Channel downstream eroded? YES NO
 Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Comments & Suggestions:

Do you have suggestions for remediation along this reach?

Given dry weather, is there any running water in nearby stormwater structures?

Access to this site...how far off of road is it? Accessible for large equipment, if necessary?

at crossing

NO

Debris, trash, litter?

Small amount

Additional comments:

Considerably altered by channeling walls

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name Kellogg/Hinesley Date 10-30-07 Time 1:30 PM

Property Owners Name (if applicable) _____ Grid ID C2-74

Stream Name Tined Nestanic

Reach Location URBAN OF C.R. 523

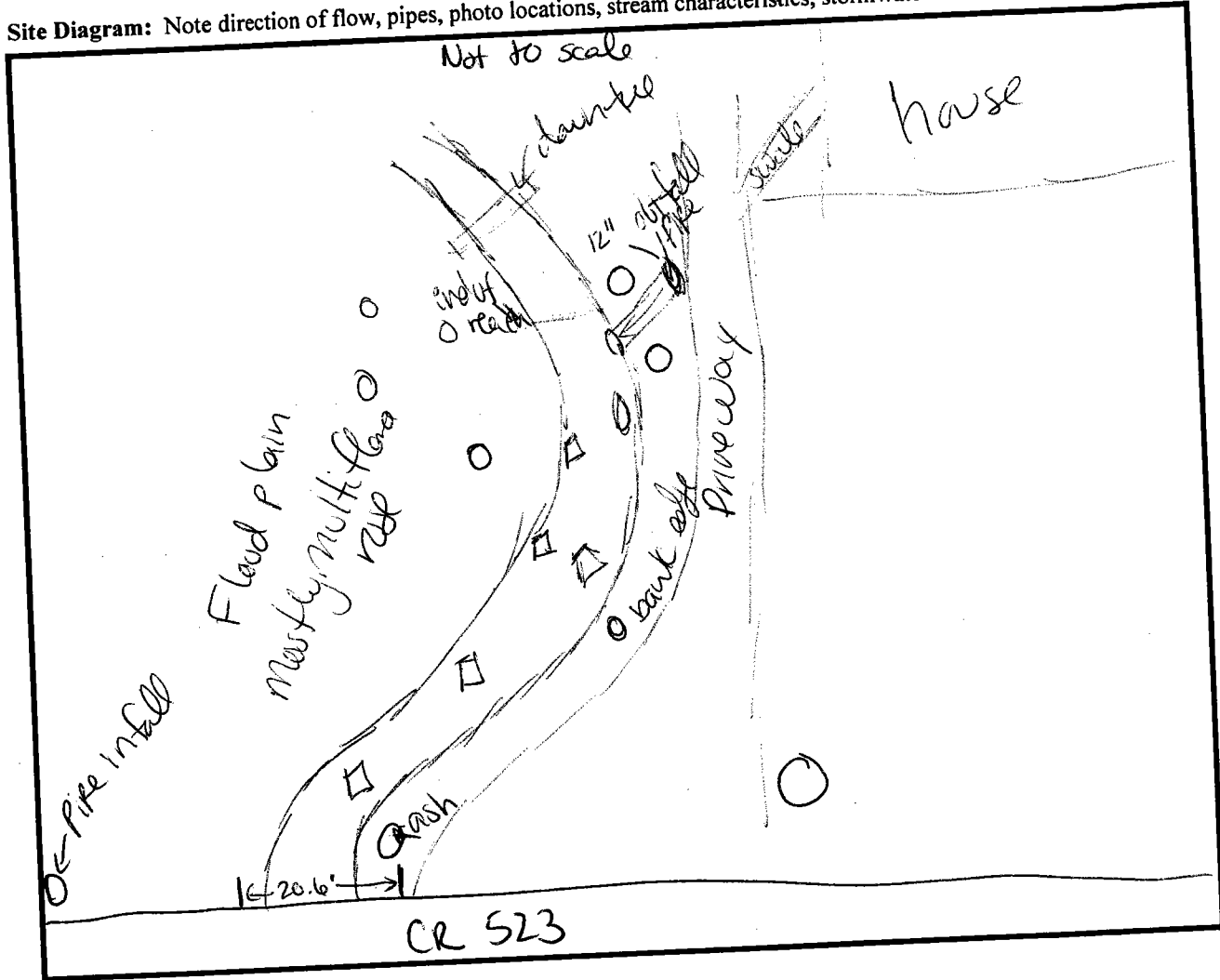
Applicable Reference Site CR 523 - width of culvert = channel width

GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today Clear, sunny Past 2-5 days Heavy rain Oct, 26-27

Active channel width 20.5 ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.



- Photo Notes: 1. _____ 2. _____
 3. _____ 4. _____
 5. _____ 6. _____
 7. _____ 8. _____
 9. _____ 10. _____

Assessment Scores (1-Poor to 10-Excellent)

*** (facing upstream) ***

Channel Condition 6

Pools 1

Hydrologic Alteration (Score only if Applicable) 8

Invertebrate habitat 8

Riparian Zone Left: 9

Right: 5 *-mowed adjacent to stream*

Score only if applicable

Canopy Cover 9

(use Manual for guidance)

Manure presence NA

Salinity NA

Riffle embeddedness NA

(look in riffles)

Macroinvertebrates NA

Observed (optional) NA

Bank Stability Left: 7

Right: 8

Water Appearance 10

Nutrient Enrichment 10

Barriers to fish movement 3

Instream fish cover *Culvert narrows to 3" wide* 8

Overall Score 7.0

(Total divided by number scored)

Left: 7.2 Right: 6.9 Average: 7.05

7.2 7.0

	< 6.0	Poor
	6.1-7.4	Fair
	7.5-8.9	Good
	> 9.0	Excellent

Streamside Land Use: (within 100 ft. of top of bank)

Check all that apply:

Land Use Category	While Observed in the field	
	Left Bank	Right Bank
Forest	X	
Pasture		
Cultivated Field		
Nursery		
Residential		X lawn
Commercial		
Industrial		
Other		

Outfall Pipe 1: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N _____ W

Diameter: 12 in

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): lawn/swale

Flow appearance: clear turbid oily foamy colored other NA

Outfall Pipe 2: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N _____ W

Diameter: 24 in

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO *but large boulders placed along beneath*

Pipe gathers water from road, yard, farm, etc.): _____

pipe decaying

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph # ___ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Drainage Ditch: (Photograph # ___ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Comments & Suggestions:

Do you have suggestions for remediation along this reach?

Given dry weather, is there any running water in nearby stormwater structures?

Access to this site...how far off of road is it? Accessible for large equipment, if necessary?

The site is adjacent to the road

Debris, trash, litter?

NO

Additional comments:

The stream corridor is in good shape. It looks like there was historic downcutting but the stream is stable now. Left bank is undercutting slightly with some roots exposed.



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Britton ~~PA~~ 76 ~~76~~

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name Kellogg/Hinesley Date 10/30/07 Time 1420

Property Owners Name (if applicable) _____

Stream Name SECOND MESCHANIC Grid ID ~~76~~ 76

Reach Location upstream of Sandbrook headquarters Rd & Britton Rd

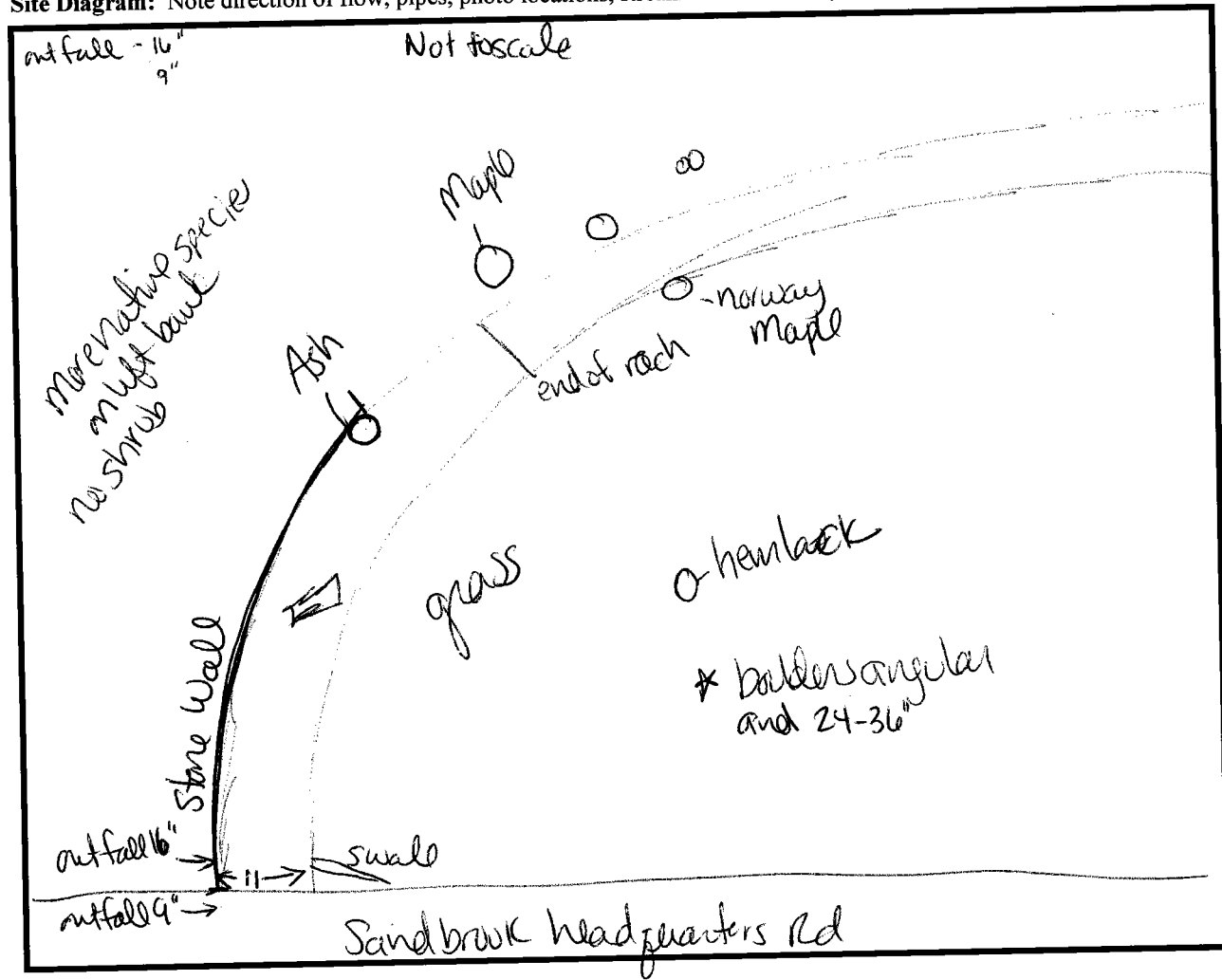
Applicable Reference Site _____

GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today Sunny Past 2-5 days 2.5 inches of rain from 10/26 to 10/27

Active channel width _____ ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.



- Photo Notes: 1. _____ 2. _____
 3. _____ 4. _____
 5. _____ 6. _____
 7. _____ 8. _____
 9. _____ 10. _____

Assessment Scores (1-Poor to 10-Excellent)

*** (facing upstream) ***

Channel Condition *left side controlled by wall*

Hydrologic Alteration (Score only if Applicable)

Riparian Zone Left: Right: *because of 8' stone wall →*

Bank Stability Left: Right: *left bank is 8' stone wall*

Water Appearance

Nutrient Enrichment

Barriers to fish movement

Instream fish cover

Pools

Invertebrate habitat

Score only if applicable

Canopy Cover (use Manual for guidance)

Manure presence

Salinity

Riffle embeddedness (look in riffles)

Macroinvertebrates

Observed (optional)

Overall Score	< 6.0	Poor
(Total divided by number scored)	6.1-7.4	Fair
Left: <u>5.5</u> Right: <u>5.6</u> Average: <u>5.6</u>	7.5-8.9	Good
<u>55</u> <u>62</u>	> 9.0	Excellent

Streamside Land Use:

(within 100 ft. of top of bank)
Check all that apply:

Land Use Category	While Observed in the field	
	Left Bank	Right Bank
Forest	X	
Pasture		
Cultivated Field		
Nursery		
Residential		X lawn
Commercial		
Industrial		
Other		

Outfall Pipe 1: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N _____ W

Diameter: 16 in

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO *out of wall*

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO *~ 6ft above water level*

Pipe gathers water from (road) yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other no cut flow

Outfall Pipe 2: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N _____ W

Diameter: 9 in

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO *out of wall*

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO *left bank*

Pipe gathers water from (road) yard, farm, etc.): _____ *no cut flow*

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph # ___ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Drainage Ditch: (Photograph # ___ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Comments & Suggestions:

Do you have suggestions for remediation along this reach?

Given dry weather, is there any running water in nearby stormwater structures?

Access to this site...how far off of road is it? Accessible for large equipment, if necessary?

adjacent to road

Debris, trash, litter? *No*

Additional comments:

Spoke with local resident who stated the stream is clear in the summer and cloudy in the winter

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name THAYER/PERLMAN Date 9/19 Time 11:00

Property Owners Name (if applicable) _____

Stream Name THIRD NESHAMIC Grid ID B2-84

Reach Location BRITTON ROAD

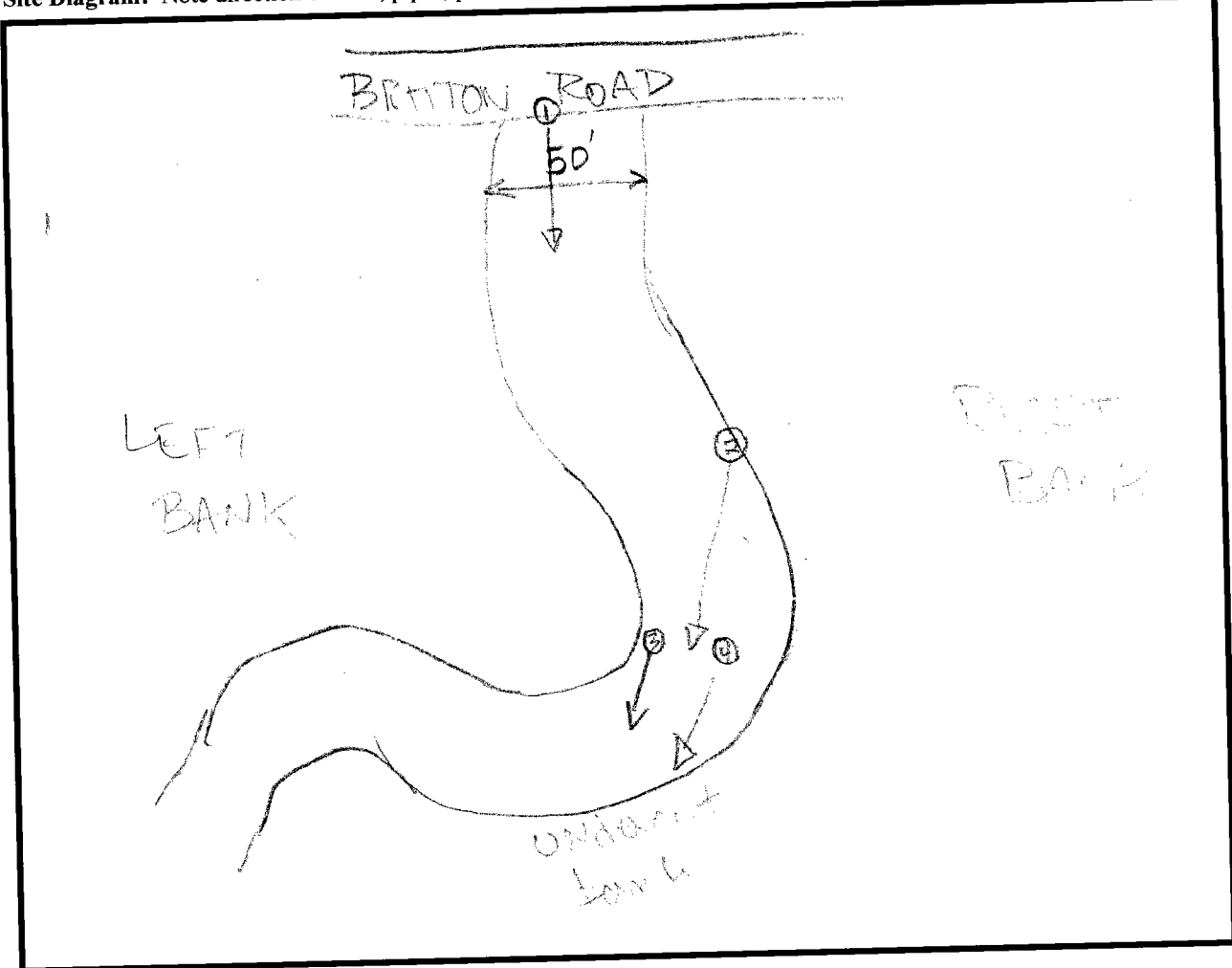
Applicable Reference Site _____

GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today Sunny Past 2-5 days FAIR

Active channel width 50ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.



- Photo Notes:
- | | |
|------------------------|------------------|
| 1. D/S from Britton Rd | 2. undercut bank |
| 3. undercut bank | 4. undercut bank |
| 5. _____ | 6. _____ |
| 7. _____ | 8. _____ |
| 9. _____ | 10. _____ |

Assessment Scores (1-Poor to 10-Excellent)

*** (facing upstream) ***

Channel Condition

Hydrologic Alteration
(Score only if Applicable)

Riparian Zone Left: Right:

Bank Stability Left: Right:

Water Appearance

Nutrient Enrichment

Barriers to fish movement

Instream fish cover

Pools

Invertebrate habitat

Score only if applicable

Canopy Cover
(use Manual for guidance)

Manure presence

Salinity

Riffle embeddedness
(look in riffles)

Macroinvertebrates

Observed (optional)

Overall Score < 6.0 Poor
6.1-7.4 Fair
7.5-8.9 Good
> 9.0 Excellent

(Total divided by number scored)

Left: 8.6 Right: 8.4 Average: 8.5

8.6 8.3 8.4 8.2

Streamside Land Use:

(within 100 ft. of top of bank)
Check all that apply:

Land Use Category	While Observed in the field	
	Left Bank	Right Bank
Forest	X	X
Pasture		
Cultivated Field		
Nursery		
Residential		
Commercial		
Industrial		
Other		

Outfall Pipe 1: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N _____ W

Diameter: _____ in

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Outfall Pipe 2: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N _____ W

Diameter: _____ in

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Comments & Suggestions:

Do you have suggestions for remediation along this reach?

Given dry weather, is there any running water in nearby stormwater structures?

Access to this site...how far off of road is it? Accessible for large equipment, if necessary? Yes

Debris, trash, litter?

None

Additional comments:

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name Kellogg / HINSLEY Date _____ Time _____

Property Owners Name (if applicable) _____

Stream Name THIRD NEWARK Grid ID B2-84

Reach Location Upstream of Britten drive @ bridge D375

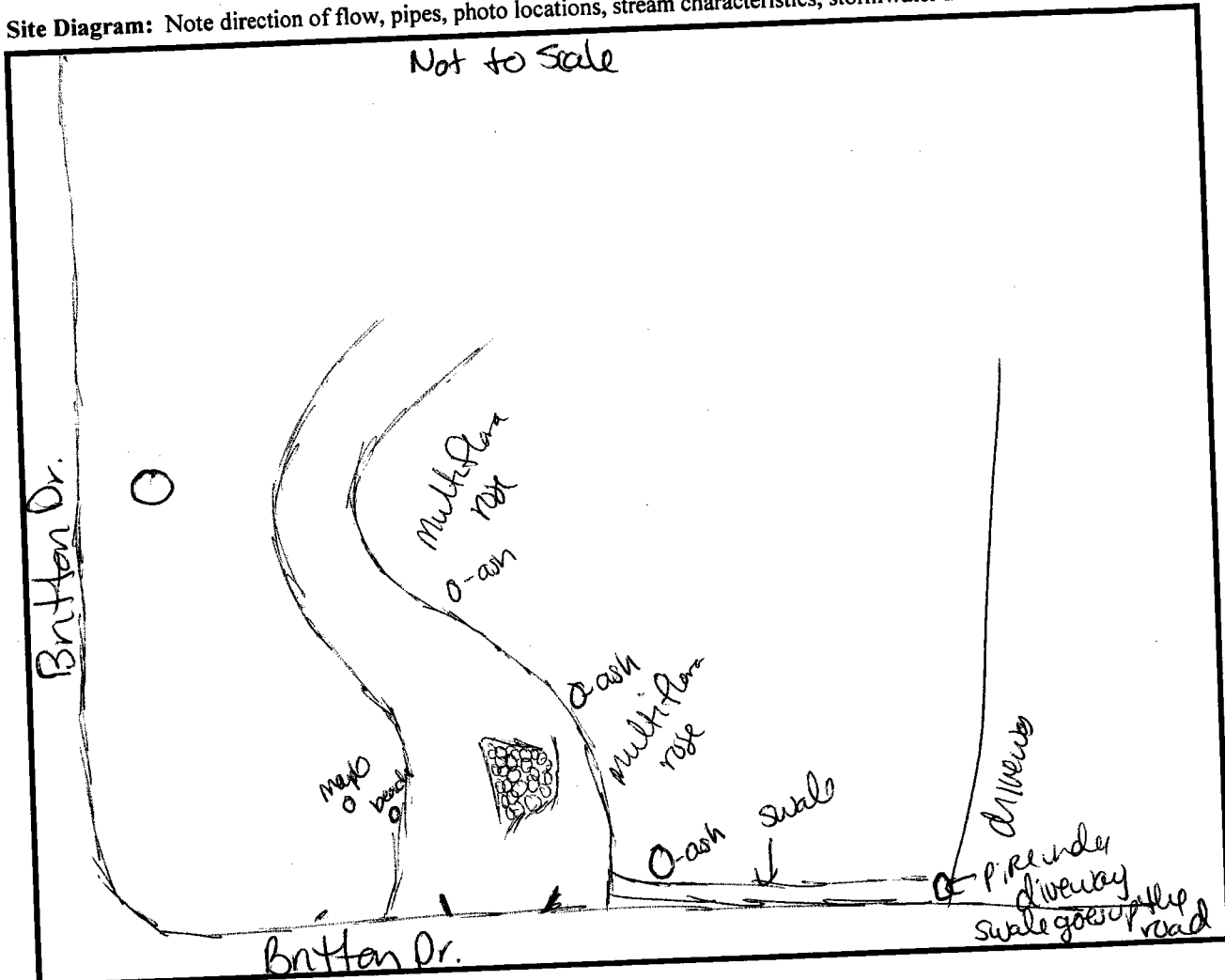
Applicable Reference Site _____

GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today Sunny 26.5°F Past 2-5 days 2.5 inches of rain on 10/26 + 10/27

Active channel width 18 ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.



- Photo Notes: 1. _____ 2. _____
 3. _____ 4. _____
 5. _____ 6. _____
 7. _____ 8. _____
 9. _____ 10. _____

Assessment Scores (1-Poor to 10-Excellent)

(facing upstream)

Channel Condition 67

Hydrologic Alteration (Score only if Applicable) 8

Riparian Zone Left: 4 Right: 8

Bank Stability *rigid clay road* Left: 7 Right: 7

Water Appearance 10

Nutrient Enrichment 10

Barriers to fish movement 5

Instream fish cover 4

Pools 0 1

Invertebrate habitat 5

Score only if applicable

Canopy Cover 5
(use Manual for guidance)

Manure presence NA

Salinity NA

Riffle embeddedness NA
(look in riffles)

Macroinvertebrates Observed (optional) NA

Overall Score < 6.0 Poor
(Total divided by number scored)
 Left: 6.0 Right: 6.4 Average: 6.2 6.1-7.4 Fair
66 70 7.5-8.9 Good
> 9.0 Excellent

Streamside Land Use:

(within 100 ft. of top of bank)
Check all that apply:

Land Use Category	While Observed in the field	
	Left Bank	Right Bank
Forest	X	X
Pasture		
Cultivated Field		
Nursery		
Residential		
Commercial		
Industrial		
Other	<i>road rite of way w/ vegetation + trees</i>	

Outfall Pipe 1: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N _____ W

Diameter: _____ in

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Outfall Pipe 2: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N _____ W

Diameter: _____ in

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch 12.1 ft _____ W
Begins at: driveway Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored no flow
Ditch comes from: road

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Comments & Suggestions:

Do you have suggestions for remediation along this reach?

Given dry weather, is there any running water in nearby stormwater structures?

no

Access to this site...how far off of road is it? Accessible for large equipment, if necessary?

along road on 2 sides

Debris, trash, litter? no

Additional comments:

this reach appears to get all the drainage as far as can be seen
up the road. pipes only exist under pavement. the rest is swales/ditches

88

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name Kellogg & Hinopley Date 9-18-07 Time 9:00 AM

Property Owners Name (if applicable) Dick Yard

Stream Name THIRD MESHANIC Grid ID B2-88

Reach Location _____

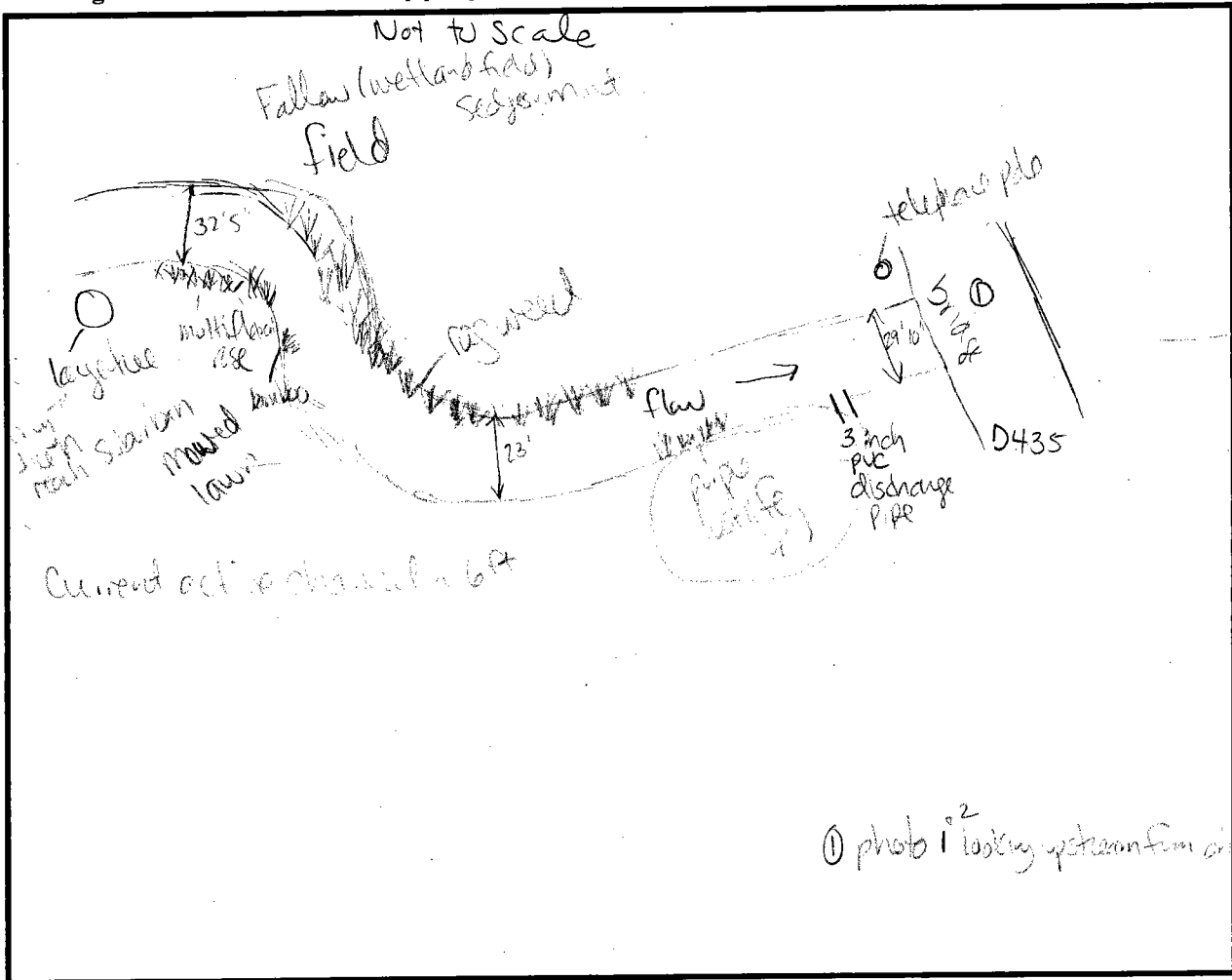
Applicable Reference Site YARD RD, CALVERT D-435

GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today CLEAR - 74° Past 2-5 days FR. SAT-RAIN; SUN-74° CLEAR

Active channel width 28 ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.



- Photo Notes: 1. _____ 2. _____
3. _____ 4. _____
5. _____ 6. _____
7. _____ 8. _____
9. _____ 10. _____

Assessment Scores (1-Poor to 10-Excellent)

(facing upstream)

Channel Condition

5

*based on no. 15 in
in the stream*

Pools

1

Hydrologic Alteration
(Score only if Applicable)

2

*don't know flood figures
deeply incised
steep banks*

Invertebrate habitat

5

Riparian Zone

Left:

2

Right:

5

Score only if applicable

Bank Stability

Left:

2

Right:

4-5

Canopy Cover
(use Manual for guidance)

1

Water Appearance

7

*not seen during
storm event*

Manure presence

NA

Nutrient Enrichment

10

Salinity

NA

Barriers to fish movement

10

Riffle embeddedness
(look in riffles)

NA

Instream fish cover

3

Macroinvertebrates
Observed (optional)

NA

Overall Score

(Total divided by number scored)

Left: 4.4 Right: 4.9 Average: 4.6
48 53

< 6.0 Poor

6.1-7.4 Fair

7.5-8.9 Good

> 9.0 Excellent

Streamside Land Use:

(within 100 ft. of top of bank)

Check all that apply:

Land Use Category	While Observed in the field	
	Left Bank	Right Bank
Forest		
Pasture		
Cultivated Field		
Nursery		
Residential	X	
Commercial		
Industrial		
Other		Fallow (sedges) wetland?

Outfall Pipe 1: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N

Diameter: 3 in _____ W

Headwall? YES NO

Double culvert? YES NO

Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): road

Flow appearance: clear turbid oily foamy colored other _____

Outfall Pipe 2: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N

Diameter: _____ in _____ W

Headwall? YES NO

Double culvert? YES NO

Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Comments & Suggestions:

Do you have suggestions for remediation along this reach?

FOR ROADSIDE MOWING

Given dry weather, is there any running water in nearby stormwater structures?

Access to this site...how far off of road is it? Accessible for large equipment, if necessary?

AT ROAD ; BARE ACCESS,

Debris, trash, litter?

NONE

Additional comments:

YARD Rd.

#89

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name Hinesley/Kellogg Date 9/18/09 Time 10:30

Property Owners Name (if applicable) _____

Stream Name Tried Mechanic Grid ID BZ-89

Reach Location YARD Rd.

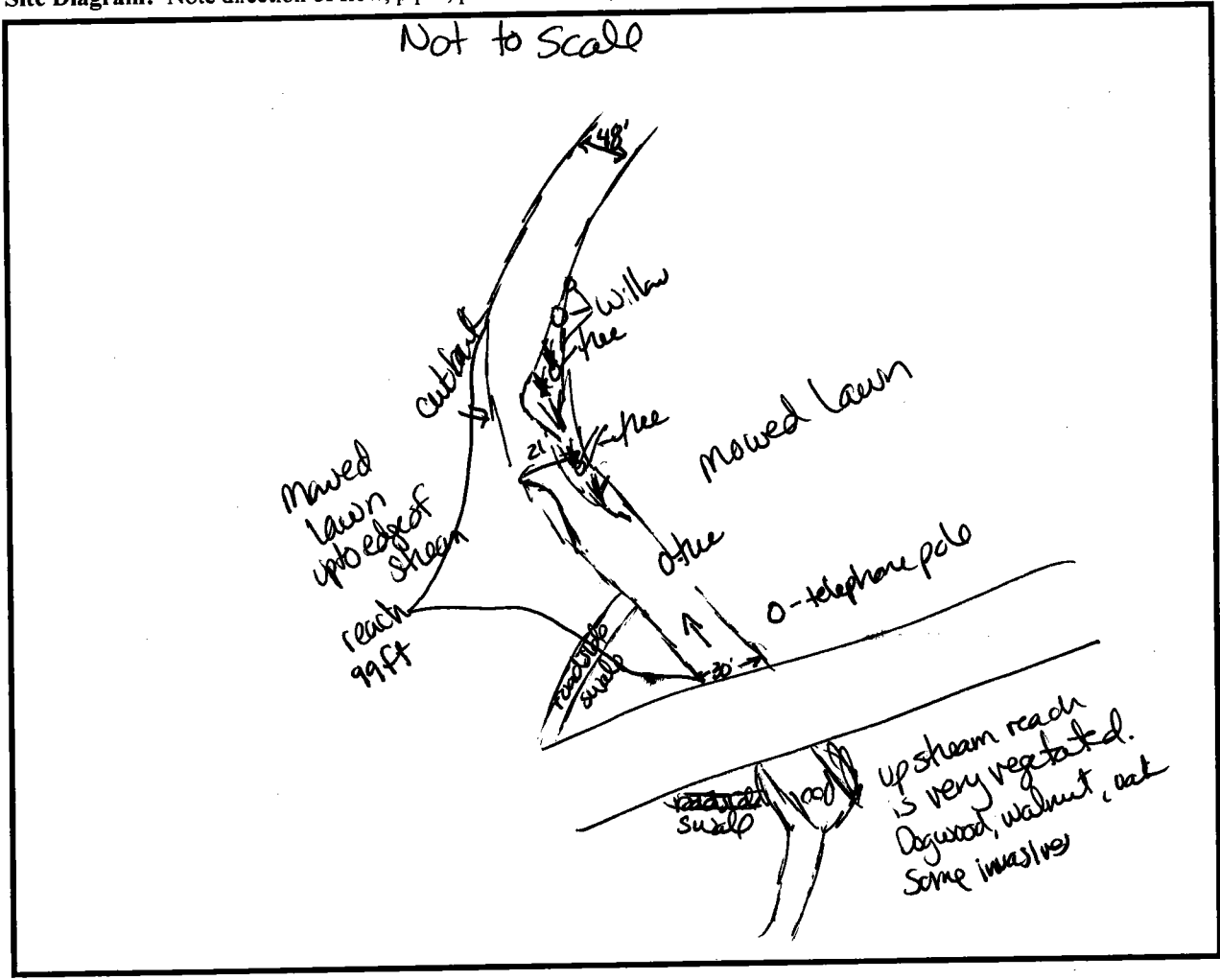
Applicable Reference Site _____

GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today Sunny Past 2-5 days _____

Active channel width 33 ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.



- Photo Notes: 1. _____ 2. _____
3. _____ 4. _____
5. _____ 6. _____
7. _____ 8. _____
9. _____ 10. _____

Assessment Scores (1-Poor to 10-Excellent)

*** (facing upstream) ***

Channel Condition

*achieve
down right
and eroding right
along bank*

Pools

Hydrologic Alteration
(Score only if Applicable)

mostly in left right bank

Invertebrate habitat

Riparian Zone

Left:

Right:

Score only if applicable

Bank Stability

Left:

Right:

Canopy Cover
(use Manual for guidance)

Water Appearance

Manure presence

*upstream have
farm, but no
visible manure*

Nutrient Enrichment

Salinity

Barriers to fish movement

Riffle embeddedness
(look in riffles)

Instream fish cover

Macroinvertebrates
Observed (optional)

Overall Score	< 6.0	Poor
(Total divided by number scored)	6.1-7.4	Fair
Left: <u>3.2</u> Right: <u>2.7</u> Average: <u>3.0</u>	7.5-8.9	Good
<u>39</u> <u>32</u>	> 9.0	Excellent

Streamside Land Use:

(within 100 ft. of top of bank)
Check all that apply:

Land Use Category	While Observed in the field	
	Left Bank	Right Bank
Forest		
Pasture		
Cultivated Field		
Nursery		
Residential	<i>lawn</i>	<i>big lawn</i>
Commercial		
Industrial		
Other		

Outfall Pipe 1: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N

Diameter: _____ in _____ W

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Outfall Pipe 2: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N

Diameter: _____ in _____ W

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from:

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from:

Comments & Suggestions:

Do you have suggestions for remediation along this reach?

Given dry weather, is there any running water in nearby stormwater structures?

Access to this site...how far off of road is it? Accessible for large equipment, if necessary?

Debris, trash, litter?

Additional comments:

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name POZYNA / THAYER Date 9/19 Time 12:00

Property Owners Name (if applicable) _____

Stream Name THIRD NESHANOK Grid ID B3-90

Reach Location _____

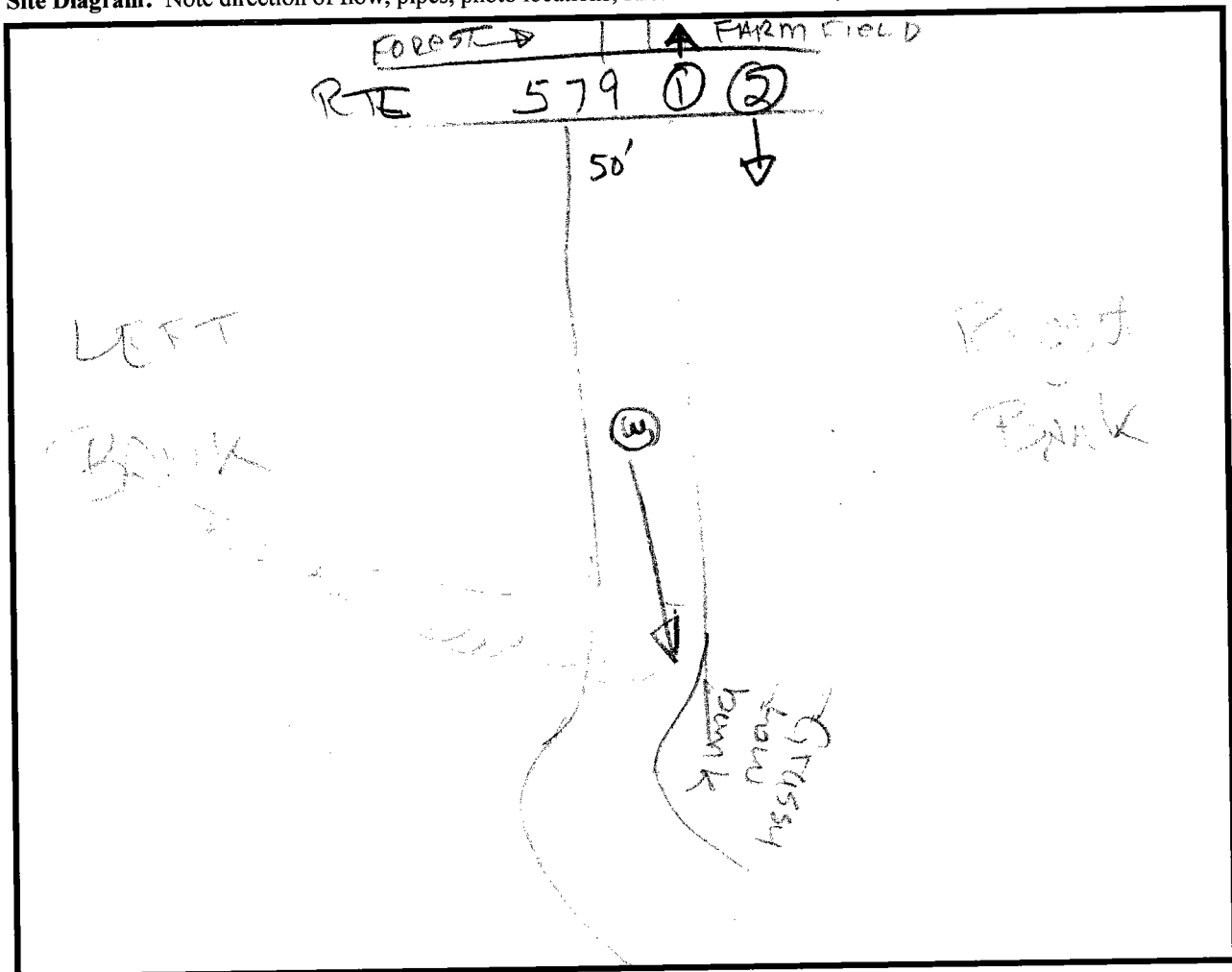
Applicable Reference Site _____

GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today FAIR Past 2-5 days FAIR

Active channel width 50 ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.



- Photo Notes:
- | | |
|-------------------------------|---------------------------|
| 1. <u>U/S from bridge</u> | 2. <u>D/S from bridge</u> |
| 3. <u>DIS grassy low bank</u> | 4. _____ |
| 5. _____ | 6. _____ |
| 7. _____ | 8. _____ |
| 9. _____ | 10. _____ |

Assessment Scores (1-Poor to 10-Excellent)

*** (facing upstream) ***

Channel Condition

Hydrologic Alteration
(Score only if Applicable)

Riparian Zone Left: Right:

Bank Stability Left: Right:

Water Appearance

Nutrient Enrichment

Barriers to fish movement

Instream fish cover

Pools

Invertebrate habitat

Score only if applicable

Canopy Cover
(use Manual for guidance)

Manure presence

Salinity

Riffle embeddedness
(look in riffles)

Macroinvertebrates

Observed (optional)

*Whip bug beetle
Water penny
May fly*

Overall Score Average:

(Total divided by number scored)

< 6.0	Poor
6.1-7.4	Fair
7.5-8.9	Good
> 9.0	Excellent

Streamside Land Use:

(within 100 ft. of top of bank)
Check all that apply:

Land Use Category	While Observed in the field	
	Left Bank	Right Bank
Forest		
Pasture		
Cultivated Field		
Nursery		
Residential		
Commercial		
Industrial		
Other		

Outfall Pipe 1: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N
 Diameter: _____ in _____ W

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Outfall Pipe 2: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N
 Diameter: _____ in _____ W

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Drainage Ditch: (Photograph #__ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Comments & Suggestions:

Do you have suggestions for remediation along this reach?

Given dry weather, is there any running water in nearby stormwater structures?

Access to this site...how far off of road is it? Accessible for large equipment, if necessary? Yes

Debris, trash, litter?

Additional comments:

579 BRIDGE scheduled for replacement
current bridge dates for 1838

112

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name Pat Shea / Mariano Rangel Date 10/6/2007 Time 12:45 pm

Property Owners Name (if applicable) _____

Stream Name Neshanic Grid ID B3-112

Reach Location EVERITTS RD

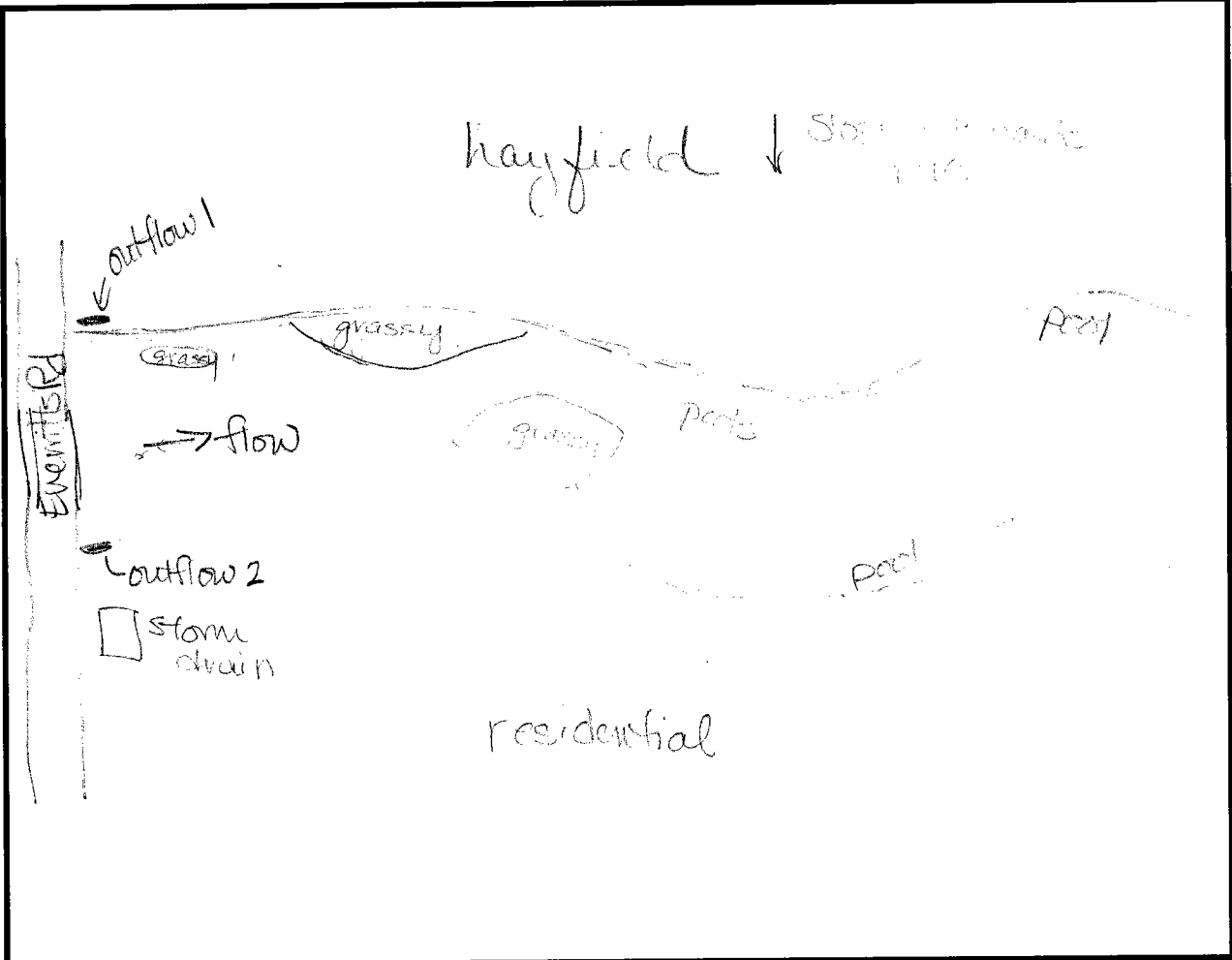
Applicable Reference Site _____

GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today Sunny, 80° Past 2-5 days Sunny, 85° - Extended drought

Active channel width 35 ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.



- Photo Notes: 1. _____ 2. _____
 3. _____ 4. _____
 5. _____ 6. _____
 7. _____ 8. _____
 9. _____ 10. _____

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph # ___ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Drainage Ditch: (Photograph # ___ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from: _____

Comments & Suggestions:

Do you have suggestions for remediation along this reach?

Given dry weather, is there any running water in nearby stormwater structures?

Access to this site...how far off of road is it? Accessible for large equipment, if necessary?

Debris, trash, litter?

five in stream, scattered bottles & cans

Additional comments:

The middle 1/3 of the reach has a green macroalgal
plant growing in it. It has algae associated with it.

Small fish seen in stream along the reach.

YARD RD.

115

Stream Visual Assessment Protocol

(Modified by the Rutgers Cooperative Extension Water Resources Program, www.water.rutgers.edu)

PROJECT:

Evaluators Name Hinesley / Kellogg Date 9/18/07 Time 1110

Property Owners Name (if applicable) _____

Stream Name THIRD MESHANIC Grid ID B3-115

Reach Location Culvert 0433, YARD RD.

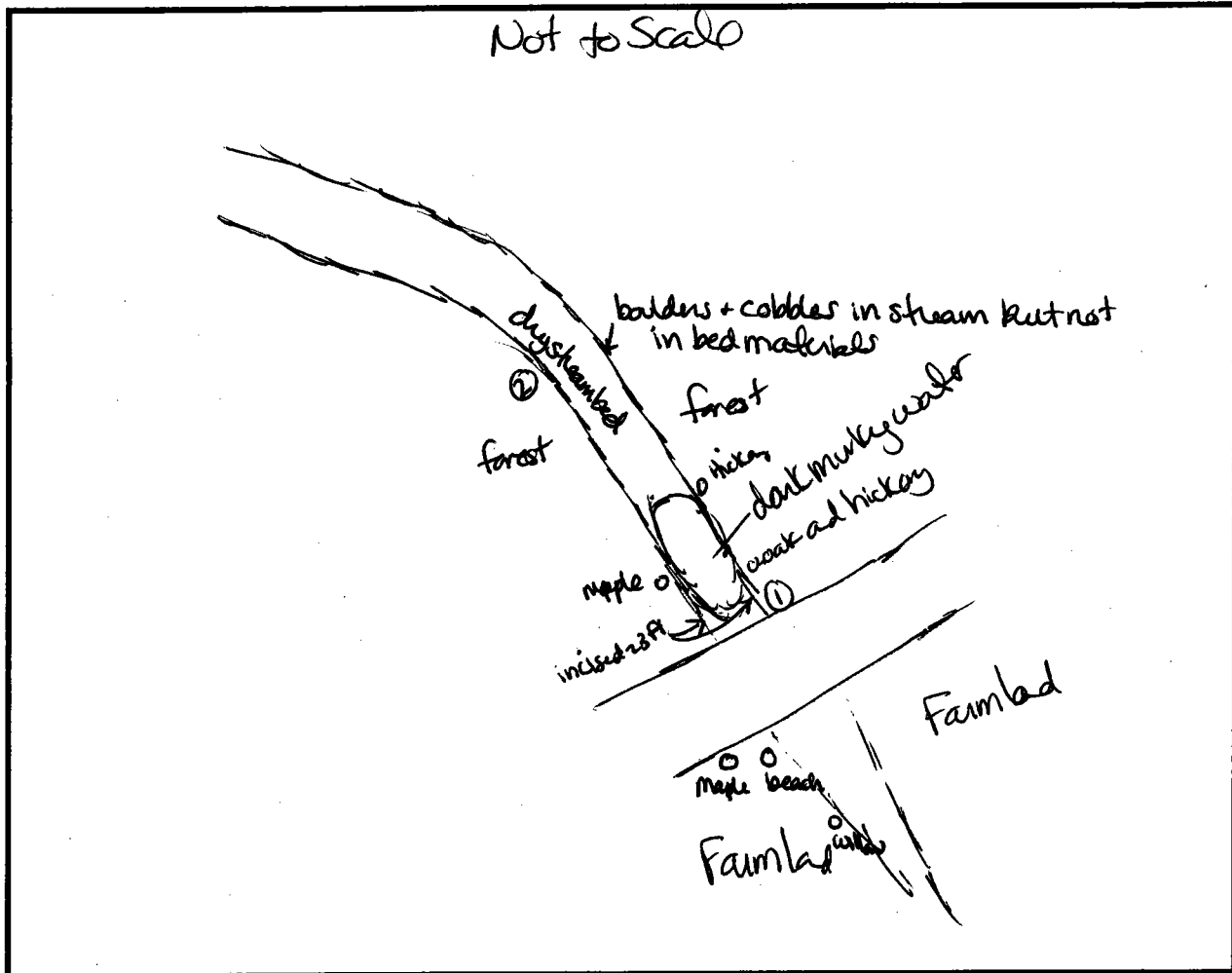
Applicable Reference Site _____

GPS Coordinates (in degrees, minutes, and seconds): _____

Weather conditions today _____ Past 2-5 days _____

Active channel width 36 ft Dominant substrate (circle one): boulder cobble gravel sand silt mud

Site Diagram: Note direction of flow, pipes, photo locations, stream characteristics, stormwater infrastructure, & ditches.



- Photo Notes: 1. Downstream from road crossing 2. upstream
3. _____ 4. _____
5. _____ 6. _____
7. _____ 8. _____
9. _____ 10. _____

Assessment Scores (1-Poor to 10-Excellent)

*** (facing upstream) ***

Channel Condition

5

road culvert is promoting incision and undercutting trees

Pools

2

Hydrologic Alteration
(Score only if Applicable)

5

overbank flow likely occurs every 1-2 years but is unknown

Invertebrate habitat

NA

Riparian Zone

Left:

8

Right:

8

Score only if applicable

Bank Stability

Left:

5

Right:

6

Canopy Cover

10

Water Appearance

1

poor water quality is partly related to culvert discharging

Manure presence

1

Nutrient Enrichment

NA

Salinity

NA

Barriers to fish movement

10

culvert is a barrier but there are no fish

Riffle embeddedness

NA

Instream fish cover

10

but there are no fish

Macroinvertebrates

NA

Observed (optional)

Overall Score

(Total divided by number scored)

Left: 5.7 Right: 5.8 Average: 5.75

< 6.0 Poor
6.1-7.4 Fair
7.5-8.9 Good
> 9.0 Excellent

Streamside Land Use:

(within 100 ft. of top of bank)

Check all that apply:

Land Use Category	While Observed in the field	
	Left Bank	Right Bank
Forest	X	X
Pasture		
Cultivated Field		X
Nursery		
Residential		
Commercial		
Industrial		
Other		

Outfall Pipe 1: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N

Diameter: _____ in _____ W

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

Flow appearance: clear turbid oily foamy colored other _____

Outfall Pipe 2: (Photo # ___ and mark on site diagram) GPS Coordinates _____ N

Diameter: _____ in _____ W

Headwall? YES NO Double culvert? YES NO Streambank at outfall eroded? YES NO

Pipe Material: concrete steel PVC Clay Other

Location of Pipe: in stream, at top of bank, in bank, out of/ under bridge, other _____

Channel downstream eroded? YES NO

Pipe gathers water from (road, yard, farm, etc.): _____

because right bank has better access to flood plains

Flow appearance: clear turbid oily foamy colored other _____

Drainage Ditch: (Photograph # ___ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from:

Drainage Ditch: (Photograph # ___ and mark on site diagram) GPS Coordinates _____ N
Width of ditch _____ ft _____ W
Begins at: _____ Ditch lining: stone, vegetation, concrete, mud, other _____
Ditch is: Stable, Eroding Ditch Flow is: none, intermittent, steady
Stream channel downstream is: stable, eroded, silted Flow is: clear, cloudy, oily, foamy, colored
Ditch comes from:

Comments & Suggestions:

Do you have suggestions for remediation along this reach?

Given dry weather, is there any running water in nearby stormwater structures?

Access to this site...how far off of road is it? Accessible for large equipment, if necessary?

Debris, trash, litter?

Additional comments:

This reach is representative of a headwater tributary. Upstream of the road, the demarcation from mesic to wet ^{plac} species is evident. There is no water flow into the channel at the current time. However, willow, Birch + sedge are flourishing.

Culvert appears to be promoting incision downstream of the road crossing. Culvert is 48 inches in diameter and 32 feet long. Suggest replacement w/ open bottom culvert when necessary