**STX EE WATERSHEDS**

**Site Name/ID:** Fire Station  
**Watershed:** Solitude  
**Date:** 1/25/14  
**Assessed by:** Mull/KR

### EXISTING SITE/STORMWATER MANAGEMENT

**Site Contact Info:**  
Corporal Penny - 6043-8012 (D shift)  
Fire Chief for Demo project

**Land Use:**  
- [x] Public  
- [ ] Private  
- [ ] Unknown

- [ ] Single Family Residential  
- [ ] Multi-Fam. Residential  
- [ ] School  
- [ ] Golf Course  
- [ ] Park  
- [ ] Agricultural  
- [ ] Road  
- [ ] Commercial/Industrial  
- [ ] Resort  
- [ ] Marina  
- [ ] Other: municipal facilities

**Is the site a hotspot?**  
- [x] Yes  
- [ ] No  
- [ ] Unknown: Could be some floor drain issues

**Sources/pollutants observed?**  
- [x] No  
- [ ] Sediment  
- [ ] Nutrients/organics  
- [ ] Oil/grease  
- [ ] Trash/Floatables

**Existing Stormwater BMP on site?**  
- [x] Yes  
- [ ] No  
- [ ] Unknown:

**Soils:**  
- [ ] Unknown  
- [ ] Poor infiltration  
- [ ] Good infiltration

**Describe Existing Stormwater Conditions, Including Existing Site Drainage and Conveyance:**
- Noted rec facility - Ball onsite, want to do a community center  
- Police substation to be constructed?  
- Very flat area at bottom of watershed. Gut directly adjacent to property

### PROPOSED RETROFIT CONCEPT (CONT. ON BACK)

**Proposed Retrofit Practice(s):**  
- [x] Existing BMP upgrade  
- [ ] New BMP

- [x] Island bio/rain garden  
- [ ] Swale  
- [ ] Planter  
- [ ] Tree pits  
- [ ] Infiltration  
- [ ] Permeable paver  
- [ ] Sand filter  
- [ ] Pond  
- [ ] Constructed wetland  
- [ ] Proprietary practice  
- [ ] Soil amendments  
- [ ] Reforestation  
- [ ] Impervious cover removal  
- [ ] Rainwater harvesting  
- [ ] Disconnection  
- [ ] Other (describe):

**Area Draining to Retrofit**
- [ ] Hotspot  
- [x] Parking Lot  
- [x] Street  
- [ ] Other (describe):

**Drainage Area to retrofit**  
- [ ] Acres/sq ft

**Imperviousness**  
- [ ] %

**Impervious Area**  
- [ ] Acres/sq ft

**Benefits of Retrofit (primary & secondary):**  
- [x] Storage  
- [x] Water Quality  
- [ ] Recharge  
- [ ] Gut Protection  
- [x] Demonstration / Education  
- [ ] Repair  
- [ ] Other:

**Possible Conflicts due to:**  
- [ ] Soils  
- [ ] Access  
- [ ] Adjacent Land Use  
- [ ] Existing Utilities  
- [ ] Contamination  
- [ ] High water table  
- [ ] Limited access to water  
- [ ] Other:

**Describe conflicts:**  
- None - very willing fire corporal D-shift

### NEXT STEPS

**Candidate for pilot project**  
- [x] Yep, love it  
- [ ] OK  
- [ ] Undecided  
- [ ] No, but keep listed  
- [ ] No way

**Follow-up needed to complete field concept**

- [ ] Confirm property ownership  
- [ ] Confirm drainage area/impervious cover  
- [ ] Confirm volume computations  
- [ ] Complete concept sketch  
- [ ] Obtain existing as-builts/site plans  
- [ ] Obtain utility mapping  
- [ ] Obtain detailed topography  
- [ ] Confirm soil types  
- [ ] Confirm storm drain invert elevations  
- [ ] Other:
**PROPOSED RETROFIT CONCEPT (CONT.)**

**Narrative Description** (Including key elements, approx. surface area/ depth of treatment, conveyance structures):

Combine with Community Center concept - demonstration area with signage. Island bios for road runoff + some fire station/bus stop runoff.

**Sketch and/or Sizing Cals:**

*see aerial*

**Existing Head Available/Where Measured:**

*very shallow grades*

**Initial Feasibility and Construction Considerations/ Design or Delivery Notes:**

**Thoughts on Maintenance Burden:**  [ ] Low  [ ] Medium  [ ] High

*Fire guys looking for things to do!*
Site Name/ID: **SPR-02 Blue Water Terrace**  
Watershed: **Sodolude**  
Assessed by: **Mulder**

**EXISTING SITE/STORMWATER MANAGEMENT**

Site Contact Info:  
**Stephanie**  
[340] 692-2583

Land Use:  
- [x] Public  
- [ ] Private  
- [ ] Unknown

- Single Family Residential  
- Multi-Fam. Residential  
- School  
- Golf Course  
- Park  
- Agricultural  
- [x] Road  
- Commercial/Industrial  
- [ ] Resort  
- [ ] Marina  
- Other: **Restaurant**

Is the site a hotspot?  
- [x] Yes  
- [ ] No  
- [ ] Unknown

Sources/pollutants observed?  
- [ ] No  
- [x] Sediment  
- [ ] Nutrients/organics  
- [ ] Oil/grease  
- [x] Trash/Floatables

Existing Stormwater BMP on site?  
- [x] Yes  
- [ ] No  
- [ ] Unknown

Soils:  
- [ ] Unknown  
- [ ] Poor infiltration  
- [ ] Good infiltration

**Describe Existing Stormwater Conditions, Including Existing Site Drainage and Conveyance:**

- Unpaved parking lot at restaurant. No gullies, yet a new site. High-end restaurant with good educational potential. Hotspot issues with cleaning products/organics and dumpster juice. A lot of space flat lots. Riparian buffer encroachment. Two separate bio locations.

**PROPOSED RETROFIT CONCEPT (CONT. ON BACK)**

Proposed Retrofit Practice(s):  
- [x] Existing BMP upgrade  
- [ ] New BMP

- Island bio/rain garden  
- Constructed wetland  
- Rainwater harvesting  
- Swale  
- Planter  
- Tree pits  
- Infiltration  
- Permeable paver  
- Sand filter  
- Pond  
- Proprietary practice  
- Soil amendments  
- Reforestation  
- Impervious cover removal  
- Disconnection  
- Other (describe):

**Area Draining to Retrofit**

- Hotspot  
- Parking Lot  
- Street  
- Other (describe):  
- Individual rooftop  
- Other small impervious area  
- Pervious area

**Drainage Area to retrofit**  

**Acres/sq ft**:  

**Imperviousness**:  

**Impervious Area**  

**Benefits of Retrofit (primary & secondary):**  

- Storage  
- Water Quality  
- Recharge  
- Gut Protection

**Possible Conflicts due to:**  

- Soils  
- Access  
- Adjacent Land Use  
- Existing Utilities  
- Contamination  
- High water table  
- Limited access to water  
- Other:

**Describe conflicts:**  

**None - perfect location**

**NEXT STEPS**

**Candidate for pilot project**  

- [x] Yes, love it  
- [ ] OK  
- [ ] Undecided  
- [ ] No, but keep listed  
- [ ] No way

**Follow-up needed to complete field concept**

- Confirm property ownership  
- Confirm drainage area/impervious cover  
- Confirm volume computations  
- Complete concept sketch  
- Obtain existing as-buils/site plans  
- Obtain utility mapping  
- Obtain detailed topography  
- Confirm soil types  
- Confirm storm drain invert elevations  
- Other:
Proposed Retrofit Concept (Cont.)

Narrative Description (Including key elements, approx. surface area/depth of treatment, conveyance structures):

Two Island Bros

Sketch and/or Sizing Cales:

Existing Head Available/Where Measured:

Initial Feasibility and Construction Considerations/Design or Delivery Notes:

Thoughts on Maintenance Burden: □ Low □ Medium □ High

Site ID ___________________________
## EXISTING SITE/STORMWATER MANAGEMENT

**Site Contact Info:**

- **Land Use:** □ Public □ Private □ Unknown: *Private residences/public road*
- □ Single Family Residential □ Multi-Fam. Residential □ School □ Golf Course □ Park □ Agricultural □ Road
- □ Commercial/Industrial □ Resort □ Marina □ Other:

**Is the site a hotspot?** □ Yes □ No □ Unknown:
**Sources/pollutants observed?** □ No □ Sediment □ Nutrients/organics □ Oil/grease □ Trash/Floatables

**Existing Stormwater BMP on site?** □ Yes □ No □ Unknown:
**Soils:** □ Unknown □ Poor infiltration □ Good infiltration

### Describe Existing Stormwater Conditions, Including Existing Site Drainage and Conveyance:

*But follows along road → major erosion, road is threatened. Blocked culverts at downstream end, convergence of 2 gutters. Potential area behind upstream lets for storage.*

## PROPOSED RETROFIT CONCEPT (CONT. ON BACK)

**Proposed Retrofit Practice(s):** □ Existing BMP upgrade □ New BMP

- □ island bio/rain garden □ swale □ planter □ tree pits □ infiltration □ permeable paver □ sand filter □ pond
- □ constructed wetland □ proprietary practice □ soil amendments □ reforestation □ impervious cover removal
- □ rainwater harvesting □ disconnection □ Other (describe):

### Area Draining to Retrofit

- □ Hotspot □ Individual rooftop
- □ Parking Lot □ Other small impervious area
- □ Street □ Pervious area

**Drainage Area to retrofit ≈ _____ acres/sq ft**

**Imperviousness ≈ _____%**

**Impervious Area ≈ _____ acres/sq ft**

**Benefits of Retrofit (primary & secondary):** □ Storage □ Water Quality □ Recharge □ Gut Protection

**Possible Conflicts due to:** □ Soils □ Access □ Adjacent Land Use □ Existing Utilities □ Contamination □ High water table □ Limited access to water □ Other:

**Describe conflicts:**

**Next Steps**

**Candidate for pilot project:** □ Yes, love it □ OK □ Undecided □ No, but keep listed □ No way

**Follow-up needed to complete Field Concept**

- □ Confirm property ownership
- □ Confirm drainage area/impervious cover
- □ Confirm volume computations
- □ Complete concept sketch
- □ Obtain existing as-builts/site plans
- □ Obtain utility mapping
- □ Obtain detailed topography
- □ Confirm soil types
- □ Confirm storm drain invert elevations
- □ Other:
**PROPOSED RETROFIT CONCEPT (CONT.)**

**Narrative Description** (Including key elements, approx. surface area/depth of treatment, conveyance structures):

- Desperately need to pave road and put in stormwater infrastructure along road. Possibility for on-lot storage retrofits to help slow/reduce quantity. New houses added to issue! *Diverge some of road drainage behind houses.*

**Sketch and/or Sizing Cales:**

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<th>Existing Head Available/Where Measured:</th>
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| Initial Feasibility and Construction Considerations/ Design or Delivery Notes: |

| Thoughts on Maintenance Burden:  | □ Low  | □ Medium | □ High |

Site ID ___________________________  Page 2 of 2
### Existing Site/Stormwater Management

**Site Contact Info:** Mike Ziegler 773-8382

**Land Use:**
- [ ] Public
- [X] Private
- [ ] Unknown
- Single Family Residential
- Multi-Fam. Residential
- School
- Golf Course
- Park
- Agricultural
- Road
- Commercial/Industrial
- Resort
- Marina
- Other: Gas Station

**Is the site a hotspot?**
- [X] Yes
- [ ] No
- [ ] Unknown

**Sources/pollutants observed?**
- [ ] No
- [X] Sediment
- [ ] Nutrients/organics
- [X] Oil/grease
- [ ] Trash/Floatables

**Existing Stormwater BMP on site?**
- [X] Yes
- [ ] No
- [ ] Unknown

**Soils:**
- [ ] Unknown
- [ ] Poor infiltration
- [ ] Good infiltration

**Describe Existing Stormwater Conditions, Including Existing Site Drainage and Conveyance:**

- Catchbasin 30 in pipe discharges to Cockley Bay via 48" pipe through Ruban Roebuck's property
- Downstream 48" culvert - sinkholes around manholes - need to harmless, convoluted
- DPW has been contacted - est. $42,000 - fix whole system

---

### Proposed Retrofit Concept (Cont. on Back)

**Proposed Retrofit Practice(s):**
- [ ] Existing BMP upgrade
- [X] new BMP

**Area Draining to Retrofit**
- [X] Hotspot
- [X] Parking Lot
- [X] Street
- [X] Other (describe):

**Drainage Area to retrofit ≈ ____ acres/sq ft**

**Imperviousness ≈ ____%**

**Impervious Area ≈ ____ acres/sq ft**

**Benefits of Retrofit (primary & secondary):**
- [ ] Storage
- [X] Water Quality
- [ ] Recharge
- [ ] Gut Protection

**Possible Conflicts due to:**
- [ ] Soils
- [ ] Access
- [ ] Adjacent Land Use
- [X] Existing Utilities
- [ ] Contamination
- [X] High water table
- [ ] Limited access to water
- [ ] Other: Pavement

**Describe conflicts:**

**Next Steps**

**Candidate for pilot project:**
- [X] OK
- [ ] undecided
- [ ] no, but keep listed
- [ ] no way

**Follow-up needed to complete Field Concept**
- [ ] Confirm property ownership
- [X] Confirm drainage area/impervious cover
- [X] Confirm volume computations
- [X] Complete concept sketch

**Other:**
- [X] Obtain existing as-builts/site plans
- [ ] Obtain utility mapping
- [X] Obtain detailed topography
- [ ] Confirm soil types
- [ ] Confirm storm drain invert elevations

---

**Site ID __________________________**
### PROPOSED RETROFIT CONCEPT (CONT.)

**Narrative Description** (Including key elements, approx. surface area/depth of treatment, conveyance structures):

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<tr>
<th>Thoughts on Maintenance Burden: □ Low □ Medium □ High</th>
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Site ID __________________________
EXISTING SITE/STORMWATER MANAGEMENT

Site Contact Info: Eric Zolner - General Manager
generalmanager@coxleybay.org
340-773-9600
Pam Leach	Office Manager

Land Use: 
☐ Public  ☑ Private  ☐ Unknown:
☐ Single Family Residential  ☑ Multi-Fam. Residential  ☐ School  ☐ Golf Course  ☐ Park  ☐ Agricultural  ☐ Road
☐ Commercial/Industrial  ☐ Resort  ☐ Marina  ☐ Other:

Is the site a hotspot? ☑ Yes  ☐ No  ☐ Unknown:
Sources/pollutants observed? ☑ No  ☐ Sediment  ☐ Nutrients/organics  ☐ Oil/grease  ☐ Trash/Floatables

Existing Stormwater BMP on site? ☑ Yes  ☐ No  ☐ Unknown: concrete channels

Soils: ☐ Unknown  ☐ Poor infiltration  ☐ Good infiltration  B/C

Describe Existing Stormwater Conditions, Including Existing Site Drainage and Conveyance:

Sloppy site with a lot of parking/driveway. Runoff directed around property in a series of concrete ditches/channels. One area where pooling has occurred and condo ass. putting in curb/pipe drains.

PROPOSED RETROFIT CONCEPT (CONT. ON BACK)

Proposed Retrofit Practice(s): ☑ existing BMP upgrade  ☐ new BMP
☐ island bio/rain garden  ☐ swale  ☐ planter  ☐ tree pits  ☐ infiltration  ☐ permeable paver  ☐ sand filter  ☐ pond
☐ constructed wetland  ☐ proprietary practice  ☐ soil amendments  ☐ reforestation  ☐ impervious cover removal
☐ rainwater harvesting  ☐ disconnection  ☑ Other (describe): Sediment forebays

Area Draining to Retrofit
☐ Hotspot  ☐ Individual rooftop  ☐ other small impervious area  ☐ Pervious area
☐ Parking Lot  ☐ Street  ☐ Other (describe):

Drainage Area to retrofit ≈ ______ acres/sq ft

Imperviousness ≈ ______ %

Impervious Area ≈ ______ acres/sq ft

Benefits of Retrofit (primary & secondary): ☑ Storage  ☐ Water Quality  ☐ Recharge  ☐ Gut Protection  ☐ Demonstration / Education  ☐ Repair  ☐ Other:

Possible Conflicts due to: ☑ Soils  ☑ Access  ☐ Adjacent Land Use  ☐ Existing Utilities  ☐ Contamination  ☐ High water table  ☐ Limited access to water  ☐ Other:

Describe conflicts:

NEXT STEPS

Candidate for pilot project ☐ yes, love it  ☐ OK  ☐ undecided  ☐ no, but keep listed  ☐ no way

Follow-up needed to Complete Field Concept
☐ Confirm property ownership  ☐ Obtain existing as-builts/site plans  ☐ Confirm utility mapping
☐ Confirm drainage area/impervious cover  ☐ Obtain detailed topography  ☐ Confirm soil types
☐ Confirm volume computations  ☐ Confirm storm drain invert elevations  ☐ Other:
☐ Complete concept sketch
**PROPOSED RETROFIT CONCEPT (CONT.)**

**Narrative Description** (Including key elements, approx. surface area/ depth of treatment, conveyance structures):

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**Existing Head Available/Where Measured:**

**Initial Feasibility and Construction Considerations/ Design or Delivery Notes:**

**Thoughts on Maintenance Burden:**  □ Low  □ Medium  □ High
**EXISTING SITE/STORMWATER MANAGEMENT**

Site Contact Info:

Land Use:  
- ☑ Public
- ☐ Private
- ☐ Unknown:
- ☐ Single Family Residential
- ☑ Multi-Fam. Residential
- ☐ School
- ☐ Golf Course
- ☑ Park
- ☐ Agricultural
- ☑ Road
- ☐ Commercial/Industrial
- ☐ Resort
- ☐ Marina
- ☐ Other:  

Is the site a hot spot?  
- ☑ Yes
- ☐ No
- ☐ Unknown:

Sources/pollutants observed?  
- ☑ Sediment
- ☐ Nutrients/organics
- ☐ Oil/grease
- ☐ Trash/Floatables

Existing Stormwater BMP on site?  
- ☑ Yes
- ☐ No
- ☐ Unknown:

Soils:  
- ☐ Unknown
- ☐ Poor infiltration
- ☑ Good infiltration

Describe Existing Stormwater Conditions, Including Existing Site Drainage and Conveyance:

```
Stormwater flows from Cockley Buy Condo onto East End Rd, instead of flowing in shallow swale, into a 18-in culvert (SB-RD 16) most of the way on an unpaved, steep beach access.
```

**PROPOSED RETROFIT CONCEPT (CONT. ON BACK)**

Proposed Retrofit Practice(s):  
- ☑ existing BMP upgrade
- ☐ new BMP

Area Draining to Retrofit  
- ☑ Hotspot
- ☐ Parking Lot
- ☑ Street
- ☐ Other (describe):  

Drainage Area to retrofit ≈ ___ acres/sq ft

Imperviousness ≈ ___%

Impervious Area ≈ ___ acres/sq ft

Benefits of Retrofit (primary & secondary):  
- ☑ Storage
- ☑ Water Quality
- ☐ Recharge
- ☐ Gut Protection

Possible Conflicts due to:  
- ☐ Soils
- ☐ Access
- ☐ Adjacent Land Use
- ☑ Existing Utilities
- ☐ Contamination
- ☐ High water table
- ☐ Limited access to water

Describe conflicts:

**NEXT STEPS**

Candidate for pilot project  
- ☑ yes, love it
- ☐ OK
- ☐ undecided
- ☐ no, but keep listed
- ☐ no way

Follow-up needed to complete field concept  
- ☑ Confirm property ownership
- ☑ Confirm drainage area/imperious cover
- ☑ Confirm volume computations
- ☑ Complete concept sketch
- ☐ Obtain existing as-builts/site plans
- ☑ Obtain utility mapping
- ☐ Obtain detailed topography
- ☐ Confirm storm drain invert elevations
- ☐ Other:
**PROPOSED RETROFIT CONCEPT (CONT.)**

<table>
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<th>Narrative Description (Including key elements, aprox. surface area/ depth of treatment, conveyance structures):</th>
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<tr>
<td>- Construct swale to convey runoff from Cockley Bay Condos to existing culvert (SB-RC-14). Enlarge culvert as necessary.</td>
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<td>- Block access from vehicular traffic, stabilize, and create stable pedestrian trail access.</td>
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<td>- Public Ed signage.</td>
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**Sketch and/or Sizing Cales:**

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| Thoughts on Maintenance Burden: | Low | Medium | High |
### Existing Site/Stormwater Management

**Site Contact Info:**

Manager: Don Salbach 778-6798

**Land Use:**
- [ ] Public
- [ ] Private
- [x] Unknown

- [ ] Single Family Residential
- [x] Multi-Fam. Residential
- [ ] School
- [ ] Golf Course
- [ ] Park
- [ ] Agricultural
- [x] Road
- [ ] Commercial/Industrial
- [ ] Resort
- [ ] Marina
- [ ] Other: 

**Is the site a hotspot?**
- [ ] Yes
- [ ] No
- [ ] Unknown

**Sources/pollutants observed?**
- [ ] Yes
- [ ] No
- [ ] Sediment
- [ ] Nutrients/organics
- [ ] Oil/grease
- [ ] Trash/Floatables

**Existing Stormwater BMP on site?**
- [ ] Yes
- [ ] No
- [ ] Unknown

**Soils:**
- [ ] Unknown
- [ ] Poor infiltration
- [ ] Good infiltration

**Describe Existing Stormwater Conditions, Including Existing Site Drainage and Conveyance:**

Stormwater flows from eastern portion of site down through waterbar across cul-de-sac, and into sediment forebay/riparian channel. Some scouring of channel was observed.

### Proposed Retrofit Concept (Cont. on Back)

**Proposed Retrofit Practice(s):**
- [x] Existing BMP upgrade
- [x] New BMP

- [ ] Island bio/rain garden
- [ ] Swale
- [ ] Planter
- [ ] Tree pits
- [ ] Infiltration
- [ ] Permeable paver
- [ ] Sand filter
- [ ] Pond

- [ ] Constructed wetland
- [ ] Proprietary practice
- [ ] Soil amendments
- [ ] Reforestation
- [ ] Impervious cover removal

- [ ] Rainwater harvesting
- [ ] Disconnection
- [x] Other (describe):

**Area Draining to Retrofit**
- [ ] Hotspot
- [ ] Parking Lot
- [ ] Street
- [ ] Other (describe):

**Drainage Area to retrofit ≈ _____ acres/sq ft**

**Imperviousness ≈ _____%**

**Impervious Area ≈ _____ acres/sq ft**

**Benefits of Retrofit (primary & secondary):**
- [x] Storage
- [ ] Water Quality
- [ ] Recharge
- [ ] Gut Protection
- [ ] Demonstration / Education
- [x] Repair
- [ ] Other:

**Possible Conflicts due to:**
- [ ] Soils
- [ ] Access
- [ ] Adjacent Land Use
- [ ] Existing Utilities
- [ ] Contamination
- [ ] High water table
- [ ] Limited access to water
- [ ] Other:

**Describe conflicts:**

Existing depression should be preserved currently undeveloped lot(s)

### Next Steps

**Candidate for pilot project**
- [ ] Yep, love it
- [ ] OK
- [ ] Undecided
- [ ] No, but keep listed
- [ ] No way

**Follow-up needed to Complete Field Concept**
- [ ] Confirm property ownership
- [ ] Confirm drainage area/impervious cover
- [ ] Confirm volume computations
- [ ] Complete concept sketch
- [ ] Obtain existing as-builts/site plans
- [ ] Obtain utility mapping
- [ ] Obtain detailed topography
- [ ] Confirm soil types
- [ ] Confirm storm drain invert elevations
- [ ] Other:
**PROPOSED RETROFIT CONCEPT (CONT.)**

**Narrative Description** (Including key elements, approx. surface area/depth of treatment, conveyance structures):

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Site ID_________________________
STX EE WATERSHEDS

Site Name/ID: SB-R-08
Date: 1/25/11

Watershed: Solitude
Assessed by: mw/kz

EXISTING SITE/STORMWATER MANAGEMENT

Site Contact Info:
Kay Green
718-8474

Land Use: □ Public □ Private □ Unknown:
□ Single Family Residential □ Multi-Fam. Residential □ School □ Golf Course □ Park □ Agricultural □ Road
□ Commercial/Industrial □ Resort □ Marina □ Other: _______

Is the site a hotspot? □ Yes □ No □ Unknown:
Sources/pollutants observed? □ Yes □ No □ Sediment □ Nutrients/organics □ Oil/grease □ Trash/Floatables

Existing Stormwater BMP on site? □ Yes □ No □ Unknown:

Soils: □ Unknown □ Poor infiltration □ Good infiltration

Describe Existing Stormwater Conditions, Including Existing Site Drainage and Conveyance:
Stormwater sheet-flows down road/cul-de-sac to grassy area before flowing into Prune Bay

PROPOSED RETROFIT CONCEPT (CONT. ON BACK)

Proposed Retrofit Practice(s): □ existing BMP upgrade □ new BMP
□ Island bio/rain garden □ swale □ planter □ tree pits □ infiltration □ permeable paver □ sand filter □ pond
□ constructed wetland □ proprietary practice □ soil amendments □ reforestation □ impervious cover removal
□ rainwater harvesting □ disconnection □ Other (describe):

Area Draining to Retrofit
□ Hotspot □ Individual rooftop
□ Parking Lot □ other small impervious area
□ Street □ Pervious area
□ Other (describe):

Drainage Area to retrofit ≈ _____ acres/sq ft
Imperviousness ≈ ____%
Impervious Area ≈ _____ acres/sq ft

Benefits of Retrofit (primary & secondary): □ Storage □ Water Quality □ Recharge □ Gut Protection □
Demonstration / Education □ Repair □ Other:

Possible Conflicts due to: □ Soils □ Access
□ Adjacent Land Use □ Existing Utilities
□ Contamination □ High water table
□ Limited access to water □ Other:

Describe conflicts: 

None

NEXT STEPS

Candidate for pilot project □ yep, love it □ OK □ undecided □ no, but keep listed □ no way

Follow-up needed to Complete Field Concept
□ Confirm property ownership
□ Confirm drainage area/impervious cover
□ Confirm volume computations
□ Complete concept sketch
□ Obtain existing as-builts/site plans
□ Obtain utility mapping
□ Obtain detailed topography
□ Confirm soil types
□ Confirm storm drain invert elevations
□ Other:
**PROPOSED RETROFIT CONCEPT (CONT.)**

**Narrative Description** (Including key elements, approx. surface area/depth of treatment, conveyance structures):

- Demonstration project to construct island bios in a highly visible location.
- Perfect for public ed.

**Sketch and/or Sizing Cales:**

**Existing Head Available/Where Measured:**

**Initial Feasibility and Construction Considerations/Design or Delivery Notes:**

**Thoughts on Maintenance Burden:** [ ] Low [ ] Medium [ ] High
STX EE WATERSHEDS

Site Name/ID: S-RES-01
Watershed: Solitude
Date: 1/24/11
Assessed by: MJK/KR

**EXISTING CONDITIONS**

**Homeowners Association?**
- [ ] No
- [ ] Yes
- [ ] Unknown

If yes, name and contact information:

**Main Road Names:**
- Sierra Verde Rd, Buena Vista, Pelicano, Bajamar, Minas

**Approximate Neighborhood Area (acres)**: 25
**# of lots**: 96
**(# or % undeveloped)**: 39/61

- [ ] Single Family Attached (Duplexes, Row Homes) <1/4 acre
- [ ] Multifamily (Apts., Condos)
- [ ] Single Family Detached <1/4 acre
- [ ] Multifamily (Apts., Condos)
- [ ] >1 acre
- [ ] Other

**Index of Infill, Redevelopment, and Remodeling**
- [ ] No Evidence
- [ ] <5% of existing units
- [ ] 5-10%
- [ ] >10%

**Waste water Management?**
- [ ] Public sewer
- [ ] On-site septic
- [ ] Small package plant

**Problems observed with septic systems?**
- [ ] No
- [ ] Yes (describe):

**AVERAGE ROAD CONDITION**

**Pavement: Type**
- [ ] All Paved
- [ ] Mixed, mostly paved
- [ ] Mixed, mostly unpaved
- [ ] All unpaved

**Condition**
- [ ] Good/mostly good (new, few areas requiring regrading or maintenance)
- [ ] Some road sections need attention (minor erosion, pavement repair needed, limited)
- [ ] Significant maintenance issues (most of road network in bad shape)

**Drainage:**
- [ ] Curb/gutter
- [ ] Mixed, mostly curbed
- [ ] Mixed, mostly open section
- [ ] Open drainage

**Drain Inlets/Catch basins:**
- [ ] None
- [ ] Clean
- [ ] Blocked
- [ ] Other:

**Waterbars/dips/crossdrains:**
- [ ] None
- [ ] Functioning
- [ ] Need maintenance
- [ ] Other:

**Ditches:**
- [ ] None
- [ ] Shallow
- [ ] Well-defined
- [ ] Stable
- [ ] Eroded
- [ ] Full of thick vegetation
- [ ] Other:

**Discharge locations:**
- [ ] Stable
- [ ] Some erosion
g- [ ] Eroded
- [ ] Other:

**Existing Stormwater BMPs on site?**
- [ ] Unknown
- [ ] No
- [ ] Yes, describe:

- [ ] ?

**Average Lot Cover:**
- [ ] % bare
- [ ] % turf
- [ ] % landscape (include trees)
- [ ] % rooftop
- [ ] % driveway

**Average Driveway:**
- [ ] Impervious
- [ ] Pervious
- [ ] Eroded
- [ ] Drain to road
- [ ] Too variable

**Evidence of rooftop or driveway runoff to road/drainage network?**
- [ ] No
- [ ] Yes, describe:

- [ ] ?

**Evidence of residential encroachment on riparian/wetland buffer?**
- [ ] No
- [ ] Yes, describe:

- [ ] ?

**Evidence of Residential Pollution?**
- [ ] Limited
- [ ] Likely
- [ ] Observed for sediment loading
- [ ] Likely
- [ ] Observed for oil/grease
- [ ] Likely
- [ ] Observed for trash and yard waste
- [ ] Likely
- [ ] Observed for nutrient loading
- [ ] Likely
- [ ] Observed for bacteria
- [ ] Likely
- [ ] Observed for other:

**Severity:**
- [ ] Low
- [ ] Medium
- [ ] High

**Describe source:**
- [ ] High-end housing,
- [ ] many set back from road
- [ ] gates

**NEXT STEPS**

- [ ] Low priority
# Proposed Restoration Activities

<table>
<thead>
<tr>
<th>Neighborhood-wide Actions:</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☒ On-site retrofit potential individual lots?</td>
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<td>☐ Other action(s):</td>
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<tr>
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<td>☐ Septic improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Narrative description:**

- One medium-level exposed dirt road with gullying at pavement/dirt transition
- Diver diverted ditch runoff to keep on lots instead of road
- Watershed delineation changed

**Sketch**
## Existing Conditions

**Homeowners Association?**
- [ ] No
- [ ] Yes
- [ ] Unknown

If yes, name and contact information:

Maybe grouped with Hope and Carlton

**Main Road Names:**
- Yellow Cliff Trail
- Hibiscus Circle / Dusk & Rhode

**Approximate Neighborhood Area (acres):** 20
**# of lots:** 240

- [ ] Single Family Attached (Duplexes, Row Homes) < ½ acre
- [ ] Single Family Detached < ¼ acre
- [ ] Multifamily (Apts., Condos) ½ - 1 acre
- [ ] Other

- [x] No Evidence
- [ ] < 5% of existing units
- [ ] 5 - 10%
- [ ] > 10%

**Waste water Management?**
- [ ] Public sewer
- [x] On-site septic
- [ ] Small package plant

**Problems observed with septic systems?**
- [ ] No
- [ ] Yes

---

## Average Road Condition

**Pavement:**
- [ ] All Paved
- [ ] Mixed, mostly paved
- [x] Mixed, mostly unpaved
- [ ] All unpaved

**Condition:**
- [ ] Good/mostly good (new, few areas requiring regrading or maintenance)
- [ ] Some road sections need attention (minor erosion, pavement repair needed, limited)
- [x] Significant maintenance issues (most of road network in bad shape)

**Drainage:**
- [ ] Curb/gutter
- [ ] Mixed, mostly curbed
- [ ] Mixed, mostly open section
- [x] Open drainage

**Drain Inlets/Catch basins:**
- [ ] None
- [ ] Clean
- [ ] Blocked
- [ ] Other:

**Waterbars/dips/crossdrains:**
- [ ] None
- [ ] Functioning
- [x] Need maintenance
- [ ] Other:

**Ditches:**
- [ ] None
- [ ] Shallow
- [ ] Well-defined
- [ ] Stable
- [ ] Eroded
- [ ] Full of thick vegetation
- [ ] Other:

**Discharge locations:**
- [ ] Stable
- [ ] Some erosion
- [ ] Eroded
- [ ] Other:

---

**Existing Stormwater BMPs on site?**
- [ ] Unknown
- [ ] No
- [x] Yes

**Average Lot Cover:**
- [ ] % bare
- [x] % turf
- [ ] % landscape (include trees)
- [ ] % rooftop
- [ ] % driveway

**Average Driveway:**
- [x] Impervious
- [ ] Pervious
- [ ] Eroded
- [x] Drain to road
- [ ] Too variable

**Evidence of rooftop or driveway runoff to road/drainage network?**
- [ ] No
- [x] Yes

**Evidence of residential encroachment on riparian/wetland buffer?**
- [ ] No
- [x] Yes

---

**Evidence of Residential Pollution?**
- [ ] Limited
- [ ] Likely
- [ ] Observed for sediment loading
- [ ] Limited
- [x] Likely
- [ ] Observed for oil/grease
- [ ] Limited
- [ ] Likely
- [ ] Observed for trash and yard waste
- [ ] Limited
- [ ] Likely
- [ ] Observed for nutrient loading
- [ ] Limited
- [ ] Likely
- [ ] Observed for bacteria
- [ ] Limited
- [ ] Likely
- [ ] Observed for other:

**Severity:**
- [ ] Low
- [ ] Medium
- [x] High

**Describe source:**

Dirt road gullying

---

**Next Steps**

- [x] Dirt road issues

---

**Site ID**
<table>
<thead>
<tr>
<th>PROPOSED RESTORATION ACTIVITIES</th>
</tr>
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<tr>
<td><strong>Neighborhood-wide Actions:</strong></td>
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</tr>
<tr>
<td>□ Street ROW retrofit</td>
</tr>
<tr>
<td>□ Parking Lot retrofit</td>
</tr>
</tbody>
</table>

**Narrative description:**

Consider paving roads / performing road maintenance to better manage erosion.
### EXISTING CONDITIONS

**Homeowners Association?** □ No □ Yes □ Unknown If yes, name and contact information:
Josh Tate itate@cdpvi.com Randy Hillis starr@nps.gov

**Main Road Names:**
- Cowbell Tr
- Pony Club Rd
- Yellow Cliff Tr

**Approximate Neighborhood Area (acres):** 160 □ Single Family Attached (Duplexes, Row Homes) <1/4 □ 1/4 - 1/2 □ >1/2 acre □ Single Family Detached <1/4 □ 1/4 - 1/2 □ >1 acre □ Multifamily (Apts., Condos) □ Other □

**Index of Infill, Redevelopment, and Remodeling:** □ No Evidence □ <5% of existing units □ 5-10% □ >10%

**Waste water Management?** □ Public sewer □ On-site septic □ Small package plant □

**Problems observed with septic systems?** □ No □ Yes (describe):

### AVERAGE ROAD CONDITION

**Pavement:** Type □ All Paved □ Mixed, mostly paved □ Mixed, mostly unpaved □ all unpaved □

**Condition** □ Good/mostly good (new, few areas requiring regrading or maintenance) □ Some road sections need attention (minor erosion, pavement repair needed, limited) □ Significant maintenance issues (most of road network in bad shape)

**Drainage:** Type □ Curb/gutter □ Mixed, mostly curbed □ Mixed, mostly open section □ Open drainage □

**Drain Inlets/Catch basins:** □ None □ Clean □ Blocked □ Other:

**Waterbars/dips/crossdrains:** □ None □ Functioning □ Need maintenance □ Other:

**Ditches:** □ None □ Shallow □ Well-defined □ Stable □ Eroded □ Full of thick vegetation □ Other:

**Discharge locations:** □ Stable □ Some erosion □ Eroded □ Other:

### Existing Stormwater BMPs on site?** □ Unknown □ No □ Yes, describe:

- Cisterns

### Average Lot Cover:

- % bare □ 50 □ % turf □ 30 □ % landscape (include trees) □ 10 □ % rooftop □ 10 □ % driveway

### Average Driveway:

□ Impervious □ Pervious □ Eroded □ Drain to road □ Too variable

### Evidence of rooftop or driveway runoff to road/drainage network?** □ No □ Yes, describe:

- Horse pasture in gut - Pony Club - Cotton Valley

### Evidence of Residential Pollution?

<table>
<thead>
<tr>
<th>Limited</th>
<th>Likely</th>
<th>Observed for sediment loading</th>
<th>Oil/grease</th>
<th>Trash and yard waste</th>
<th>Nutrient loading</th>
<th>Bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

**Severity:** □ Low □ Medium □ High

**Describe source:**

- Steep, eroding dirt roads

### NEXT STEPS
### Proposed Restoration Activities

**Neighborhood-wide Actions:**
- [x] On-site retrofit potential individual lots?
- [x] Street ROW retrofit
- [ ] Pond retrofit
- [ ] Parking Lot retrofit

**Narrative Description:**
- Many undeveloped lots - opportunity to deal with drainage better for those.
- Pave steep roads
- Buffer along gut

**Sketch**
- Spoke w/ Josh Tate, HOA president
- Issues w/ collecting dues, road maintenance problems.
- Use sediment from bike club TR culvert area to regrade roads since down to bedrock
- One section of road actually ponds, others erode
**EXISTING CONDITIONS**

Homeowners Association? [ ] No  [ ] Yes  [X] Unknown  If yes, name and contact information:

**Main Road Names:**

- Cotton Valley Tr  
- Unnamed

Approximate Neighborhood Area (acres) 8840 # of lots 147214 (# or % undeveloped 61/609)

- Single Family Detached <1/4 1/16 - 1/4 acre  [ ] Single Family Detached <1/4 1/4 - 1/2 1+ acre  [ ] Multifamily (Apts., Condos)

Index of Infill, Redevelopment, and Remodeling  [ ] No Evidence  [ ] <5% of existing units  [ ] 5-10%  [ ] >10%

**Waste Water Management?**

- [ ] Public sewer  [X] On-site septic  [ ] Small package plant

Problems observed with septic systems? [ ] No  [X] Yes (describe):

**AVERAGE ROAD CONDITION**

Pavement: Type  [ ] All Paved  [X] mixed, mostly paved  [ ] mixed, mostly unpaved  [ ] all unpaved

Condition  [ ] Good/mostly good (new, few areas requiring regrading or maintenance)

- [X] Some road sections need attention (minor erosion, pavement repair needed, limited)

- [ ] Significant maintenance issues (most of road network in bad shape)

Drainage: Type  [ ] Curb/gutter  [ ] Mixed, mostly curbed  [ ] Mixed, mostly open section  [X] Open drainage

Drain Inlets/Catch basins:  [X] None  [ ] Clean  [ ] Blocked  [ ] Other:

Waterbars/dips/crossdrains:  [X] None  [ ] Functioning  [X] Need maintenance  [ ] Other:

Ditches:  [ ] None  [ ] Shallow  [ ] Well-defined  [ ] Stable  [ ] Eroded  [ ] Full of thick vegetation  [ ] Other:

Discharge locations:  [ ] Stable  [ ] Some erosion  [ ] Eroded  [ ] Other:

**Existing Stormwater BMPs on site?**

- [X] No  [ ] Yes, describe:

Cisterns

**Average Lot Cover:**

- [ ] % bare  [ ] 40 % turf  [ ] 25 % landscape (include trees)  [ ] 25 % rooftop  [X] 10 % driveway

**Average Driveway:**

- [X] Impervious  [ ] Pervious  [ ] Eroded  [X] Drain to road  [ ] Too variable

**Evidence of rooftop or driveway runoff to road/drainage network?**

- [ ] No  [X] Yes, describe:

Evidence of residential encroachment on riparian/wetland buffer? [ ] No  [X] Yes, describe:

One yard in gut, gated, mowed

**Evidence of Residential Pollution?**

- [X] Limited  [X] Likely  [ ] Observed for sediment loading

- [X] Limited  [ ] Likely  [ ] Observed for oil/grease

- [ ] Limited  [ ] Likely  [X] Observed for trash and yard waste

- [X] Limited  [X] Likely  [ ] Observed for nutrient loading

- [X] Limited  [X] Likely  [ ] Observed for bacteria

- [X] Limited  [X] Likely  [ ] Observed for other:

**Severity:**

- [ ] Low  [ ] Medium  [X] High

Describe source:

Need pond & gut
### Proposed Restoration Activities

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<tr>
<td>[ ] Better lawn/landscaping practices?</td>
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<tr>
<td>[ ] Household hazardous waste</td>
</tr>
<tr>
<td>[ ] Septic improvements/survey</td>
</tr>
<tr>
<td>Other action(s):</td>
</tr>
</tbody>
</table>

**Narrative description:**
- Areas of dumping undersized culverts - Horses on non-pasture land
- Pond restoration no outlet
- Pony club Dr Culvert undersized, large scour hole, sediment issue from Hope + Carlton Thill

**Sketch**
- Gut in yard, culverts too small, overtops road.
**EXISTING CONDITIONS**

**Homeowners Association?** □ No □ Yes □ Unknown  If yes, name and contact information:

**Main Road Names:**

Approximate Neighborhood Area (acres) __55__ # of lots __55__ (# or % undeveloped __31/76%__)

□ Single Family Attached (Duplexes, Row Homes) <¼ ¼ ¼ ⅛ ⅛ acre □ Multifamily (Apts., Condos)
□ Single Family Detached <¼ ¼ ⅛ ⅛ 1 ¼ acre □ Other

Index of Infill, Redevelopment, and Remodeling □ No Evidence □ <5% of existing units □ 5-10% □ >10%

**Waste water Management?** □ Public sewer □ On-site septic □ Small package plant
Problems observed with septic systems? □ No □ Yes (describe):

**AVERAGE ROAD CONDITION**

Pavement: Type □ All Paved □ Mixed, mostly paved □ Mixed, mostly unpaved □ All unpaved

Condition □ Good/mostly good (new, few areas requiring regrading or maintenance)
□ Some road sections need attention (minor erosion, pavement repair needed, limited)
□ Significant maintenance issues (most of road network in bad shape)

Drainage: □ Curb/gutter □ Mixed, mostly curbed □ Mixed, mostly open section □ Open drainage

Drain Inlets/Catch basins: □ None □ Clean □ Blocked □ Other:
Waterbars/dips/crossdrains: □ None □ Functioning □ Need maintenance □ Other:
Ditches: □ None □ Shallow □ Well-defined □ Stable □ Eroded □ Full of thick vegetation □ Other:
Discharge locations: □ Stable □ Some erosion □ Eroded □ Other:

Existing Stormwater BMPs on site? □ Unknown □ No □ Yes, describe:

[Handwritten notes: Other]

Average Lot Cover: __%bare__ __30 % turf__ __20 % landscape(include trees)__ __30 % rooftop__ __20 % driveway__

Average Driveway: □ Impervious □ Pervious □ Eroded □ Drain to road □ Too variable

Evidence of rooftop or driveway runoff to road/drainage network? □ No □ Yes, describe:

Evidence of residential encroachment on riparian/wetland buffer? □ No □ Yes, describe:

**Evidence of Residential Pollution?**

□ Limited □ Likely □ Observed for sediment loading
□ Limited □ Likely □ Observed for oil/grease
□ Limited □ Likely □ Observed for trash and yard waste
□ Limited □ Likely □ Observed for nutrient loading
□ Limited □ Likely □ Observed for bacteria
□ Limited □ Likely □ Observed for other:

**Severity:** □ Low □ Medium □ High

Describe source:

**NEXT STEPS**
### PROPOSED RESTORATION ACTIVITIES

**Neighborhood-wide Actions:**
- [ ] On-site retrofit potential individual lots?
- [ ] Street ROW retrofit
- [ ] Parking Lot retrofit
- [ ] Better lawn/landscaping practices?
- [ ] Household hazardous waste
- [ ] Septic improvements
- [ ] Other action(s):

  - New construction management

**Narrative description:**

Most roads - great condition. 1 to shore poor condition -

Dirt w/concrete patch

**Sketch**
### EXISTING CONDITIONS

**Homeowners Association?**  
- [ ] No  
- [ ] Yes  
- [x] Unknown  
If yes, name and contact information:

**Main Road Names:**

- [ ] Single Family Attached (Duplexes, Row Homes)  
- [ ] Multifamily (Apts., Condos)  
- [x] Single Family Detached  
- [ ] Other

**Index of Infill, Redevelopment, and Remodeling**  
- [x] No Evidence  
- [ ] <5% of existing units  
- [ ] 5-10%  
- [ ] >10%

**Waste water Management?**  
- [ ] Public sewer  
- [x] On-site septic  
- [ ] Small package plant

**Problems observed with septic systems?**  
- [x] No  
- [ ] Yes (describe):

### AVERAGE ROAD CONDITION

**Pavement:**  
- [ ] All Paved  
- [x] Mixed, mostly paved  
- [ ] Mixed, mostly unpaved  
- [ ] All unpaved

**Condition**  
- [x] Good/mostly good (new, few areas requiring regrading or maintenance)
- [ ] Some road sections need attention (minor erosion, pavement repair needed, limited)
- [ ] Significant maintenance issues (most of road network in bad shape)

**Drainage:**  
- [ ] Curb/gutter  
- [x] Mixed, mostly curbed  
- [ ] Mixed, mostly open section  
- [x] Open drainage

**Drain Inlets/Catch basins:**  
- [x] None  
- [ ] Clean  
- [ ] Blocked  
- [ ] Other:

**Waterbars/dips/crossdrains:**  
- [x] None  
- [ ] Functioning  
- [ ] Need maintenance  
- [ ] Other:

**Ditches:**  
- [ ] None  
- [ ] Shallow  
- [ ] Well-defined  
- [ ] Stable  
- [ ] Eroded  
- [ ] Full of thick vegetation  
- [ ] Other:

**Discharge locations:**  
- [x] Stable  
- [ ] Some erosion  
- [ ] Eroded  
- [ ] Other:

**Existing Stormwater BMPs on site?**  
- [ ] Unknown  
- [ ] No  
- [x] Yes, describe:

**Average Lot Cover:**  
- [ ] % bare  
- [ ] % turf  
- [ ] % landscape (include trees)  
- [ ] % rooftop  
- [ ] % driveway

**Average Driveway:**  
- [x] Impervious  
- [x] Pervious  
- [ ] Eroded  
- [ ] Drain to road  
- [ ] Too variable

**Evidence of rooftop or driveway runoff to road/drainage network?**  
- [x] No  
- [ ] Yes, describe:

**Evidence of residential encroachment on riparian/wetland buffer?**  
- [x] No  
- [x] Yes, describe:

### Evidence of Residential Pollution?

- [x] Limited  
- [ ] Likely  
- [ ] Observed for sediment loading

- [x] Limited  
- [ ] Likely  
- [ ] Observed for oil/grease

- [x] Limited  
- [ ] Likely  
- [ ] Observed for trash and yard waste

- [x] Limited  
- [ ] Likely  
- [ ] Observed for nutrient loading

- [x] Limited  
- [ ] Likely  
- [ ] Observed for bacteria

- [x] Limited  
- [ ] Likely  
- [ ] Observed for other:

### Severity:

- [x] Low  
- [ ] Medium  
- [ ] High

**Describe source:**

### NEXT STEPS

- Seven Flags: Road restoration/drainage improvements
PROPOSED RESTORATION ACTIVITIES

Neighborhood-wide Actions:
☑ On-site retrofit potential individual lots?
☑ Street ROW retrofit  ☐ Pond retrofit
☐ Parking Lot retrofit

☐ Better lawn/landscaping practices?  ☐ Other action(s):
☐ Household hazardous waste
☐ Septic improvements

Narrative description:

See retrofit forms for seven flags

Sketch
**EXISTING CONDITIONS**

Homeowners Association? □ No  ☑ Yes  □ Unknown  If yes, name and contact information:  
Santa Cruz  

Main Road Names: Solitude Rd  

Approximate Neighborhood Area (acres) 75  □ # of lots 98  □ (# or % undeveloped 58% 60%)  
□ Single Family Attached (Duplexes, Row Homes) <½ ⅛ ⅛ ⅛ ⅛ acre  □ Multifamily (Apts., Condos)  
□ Single Family Detached ¼ ⅛ ¼ ½ acre  □ Other  

Index of Infill, Redevelopment, and Remodeling  □ No Evidence  □ <5% of existing units □ 5-10% □ >10%  

Waste Water Management? □ Public sewer  ☑ On-site septic  □ Small package plant  
Problems observed with septic systems? □ No  ☑ Yes, describe:  One house w/ questionable septic - see photo  

**AVERAGE ROAD CONDITION**

Pavement: Type □ All Paved  ☑ mixed, mostly paved  □ mixed, mostly unpaved  □ all unpaved  
Condition □ Good/mostly good (new, few areas requiring regrading or maintenance)  
□ Some road sections need attention (minor erosion, pavement repair needed, limited)  
□ Significant maintenance issues (most of road network in bad shape)  

Drainage: Type □ Curb/gutter □ Mixed, mostly curbed □ Mixed, mostly open section, □ Open drainage  

Drain Inlets/Catch basins: □ None □ Clean □ Blocked □ Other:  
Waterbars/dips/crossdrains: □ None □ Functioning □ Need maintenance □ Other:  
Ditches: □ None □ Shallow □ Well-defined □ Stable □ Eroded □ Full of thick vegetation □ Other:  
Discharge locations: □ Stable □ Some erosion □ Eroded □ Other:  

Existing Stormwater BMPs on site? □ Unknown □ No □ Yes, describe:  

cisterns  

Average Lot Cover: □ % bare □ 40% turf □ 45% landscape (include trees) □ 30% rooftop □ 15% driveway  

Average Driveway: □ Impervious □ Pervious □ Eroded □ Drain to road □ Too variable  

Evidence of rooftop or driveway runoff to road/drainage network? □ No  ☑ Yes, describe:  

clearing in gut/farmland  

Evidence of residential encroachment on riparian/wetland buffer? □ No  ☑ Yes, describe:  

Evidence of Residential Pollution?  
☑ Limited  □ Likely □ Observed for sediment loading  
☑ Limited □ Likely □ Observed for oil/grease  
□ Limited □ Likely □ Observed for trash and yard waste  
☑ Limited □ Likely □ Observed for nutrient loading  
☑ Limited □ Likely □ Observed for bacteria  
□ Limited □ Likely □ Observed for other:  

Severity: ☑ Low □ Medium □ High  

Describe source:  

**NEXT STEPS**  

~ ditch/culvert issue in Pleasant Valley  

Site ID ____________________________  Page 1 of 2
### PROPOSED RESTORATION ACTIVITIES

<table>
<thead>
<tr>
<th>Neighborhood-wide Actions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ On-site retrofit potential individual lots?</td>
</tr>
<tr>
<td>☑ Street ROW retrofit</td>
</tr>
<tr>
<td>☐ Parking Lot retrofit</td>
</tr>
<tr>
<td>☐ Other action(s):</td>
</tr>
</tbody>
</table>

**Narrative description:**

1. High-end homes up in Eagles Solitude, while network of paved roads not on map. Nice landscaping, paved drives. Little erosion issues (Santa Cruz HDOA)  
2. Pleasant Valley → lower end, a few drainage issues since road follows headwaters of gut, culverts here some need repair

**Sketch**
**EXISTING CONDITIONS**

**Homeowners Association?** □ No  □ Yes  □ Unknown  If yes, name and contact information:  
**Main Road Names:**  
- Green Cay  
- Candle Reef II - Kay Green 718-8474

**Approximate Neighborhood Area (acres):** 100  
**# of lots:** 94  
(# or % undeveloped 61/44 %)

**Single Family Attached (Duplexes, Row Homes):** <1/4  
**Single Family Detached:**  
- <1/4 acre  
- >1 acre  
□ Multifamily (Apts., Condos) □ Other

**Index of Infill, Redevelopment, and Remodeling:**  
□ No Evidence  □ <5% of existing units  □ 5-10%  □ >10%

**Waste water Management?** □ Public sewer  □ On-site septic  □ Small package plant  
**Problems observed with septic systems?** □ No  □ Yes (describe):

**AVERAGE ROAD CONDITION**

**Pavement:** Type  
□ All Paved  □ Mixed, mostly paved  □ Mixed, mostly unpaved  □ All unpaved  
□ Poor pavement  □ Good/mostly good (new, few areas requiring regrading or maintenance)  
□ Some road sections need attention (minor erosion, pavement repair needed, limited)  
□ Significant maintenance issues (most of road network in bad shape)

**Drainage:** Type  
□ Curb/gutter  □ Mixed, mostly curbed  □ Mixed, mostly open section  □ Open drainage  
□ Drainage ditches:
□ None  □ Clean  □ Blocked  □ Other:
□ Waterbars/dips/crossdrains:
□ None  □ Functioning  □ Need maintenance  □ Other:
□ Ditches:
□ None  □ Shallow  □ Well-defined  □ Stable  □ Eroded  □ Full of thick vegetation  □ Other:
□ Discharge locations:
□ Stable  □ Some erosion  □ Eroded  □ Other:

**Existing Stormwater BMPs on site?** □ Unknown  □ No  □ Yes, describe:

**Average Lot Cover:**  
□ % bare  □ 10% turf  □ 20% landscape(include trees)  □ 30% rooftop  □ 30% driveway

**Average Driveway:** □ Impervious  □ Pervious  □ Eroded  □ Drain to road  □ Too variable

**Evidence of rooftop or driveway runoff to road/drainage network?** □ No □ Yes, describe:

**Evidence of residential encroachment on riparian/wetland buffer?** □ No □ Yes, describe:

**Evidence of Residential Pollution?**
□ Limited  □ Likely  □ Observed for sediment loading  
□ Limited  □ Likely  □ Observed for oil/grease  
□ Limited  □ Likely  □ Observed for trash and yard waste  
□ Limited  □ Likely  □ Observed for nutrient loading  
□ Limited  □ Likely  □ Observed for bacteria  
□ Limited  □ Likely  □ Observed for other:

**Severity:** □ Low  □ Medium  □ High  
**Describe source:**

**NEXT STEPS**

A few gravel spurs straight to beach are an issue, and at the condos a cul-de-sac right near water that creates an issue. Lots of landscaping maintenance.
<table>
<thead>
<tr>
<th>PROPOSED RESTORATION ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neighborhood-wide Actions:</strong></td>
</tr>
<tr>
<td>☑ On-site retrofit potential individual lots?</td>
</tr>
<tr>
<td>☑ Street ROW retrofit</td>
</tr>
<tr>
<td>☑ Parking Lot retrofit</td>
</tr>
<tr>
<td>☑ Septic improvements</td>
</tr>
</tbody>
</table>

**Narrative description:**

**Sketch**
**EXISTING CONDITIONS**

**Contact Information/location:**

See Retrofit Form

**Land Use:**
- Commercial
- Industrial
- Institutional
- Municipal
- Golf Course
- Transport-Related
- Marina
- Animal Facility
- Other: Restaurant/Deli

**Basic Description of Operation:**

Existing stormwater management on-site?
- Unknown
- No
- Yes, describe:

**Condition of drain inlets on-site:**
- None
- Good
- Need maintenance

Evidence of riparian/wetland buffer encroachment:
- Unknown
- No
- Yes, describe:

**Potential pollutants associated with:**
- Vehicular operations (fueling, storage, maintenance)
- Waste management (dumping)
- Outdoor material storage (uncovered, leaking, no secondary containment)
- Landscaping (over fertilizing, irrigation)
- Building/parking lot maintenance (washdowns)
- Other:

**Pollutant of concern?**
- Limited
- Likely
- Observed for sediment loading
- Limited
- Likely
- Observed for oil/grease
- Limited
- Likely
- Observed for trash
- Limited
- Likely
- Observed for nutrient loading
- Limited
- Likely
- Observed for bacteria
- Limited
- Likely
- Observed for other:

**Severity of Problem:**
- Low
- Medium
- High

Describe Conditions:
- Dumpster juice - uncovered surrounded by toxic material storage
- Clearing Area outside
- Potential Septic issues

**PROPOSED RESTORATION ACTIVITIES**

- Education, containment, pollution prevention

**NEXT STEPS**

- Discuss with owners
sec photos
**STX EE WATERSHEDS**

**HOTSPOT/POLLUTION PREVENTION**

**Site Name/ID:** Cotton Valley Dumpster Site  
**Watershed:** Solitude  
**Date:** 1/25/11  
**Assessed by:** MWJKR

### EXISTING CONDITIONS

**Contact Information/location:** ST. Crox Foundation / VIAPCo Fire Station

**Land Use:**  
- Commercial
- Industrial
- Institutional
- Municipal
- Golf Course
- Transport-Related
- Marina
- Animal Facility
- Other: Quasi

**Basic Description of Operation:** Dumpster site

**Existing stormwater management on-site?**  
- Unknown
- No
- Yes, describe:

**Condition of drain inlets on-site:**  
- None
- Good
- Need maintenance

**Evidence of riparian/wetland buffer encroachment:**  
- Unknown
- No
- Yes, describe: adjacent to gut - may drain to gut

**Potential pollutants associated with:**  
- Vehicular operations (fueling, storage, maintenance)
- Waste management (dumping)
- Outdoor material storage (uncovered, leaking, no secondary containment)
- Landscaping (over fertilizing, irrigation)
- Building/parking lot maintenance (washdowns)
- Other:

**Pollutant of concern?**  
- Limited
- Likely
- Observed for sediment loading
- Limited
- Likely
- Observed for oil/grease
- Limited
- Likely
- Observed for trash
- Limited
- Likely
- Observed for nutrient loading
- Limited
- Likely
- Observed for bacteria
- Limited
- Likely
- Observed for other:

**Severity of Problem:**  
- Low
- Medium
- High

**Describe Conditions:**  
- Completely impervious, paved dumping site
- Uncovered dumpsters
- Very flat site - may flow directly to gut or to street, eventually to gut

### PROPOSED RESTORATION ACTIVITIES

**Education, maintenance**

### NEXT STEPS

* Contact managers!
See photos

- Adjacent gut investigated
  - Culvert under Road
    - ~30"
    - Likely blocked significantly
    - Pounding on downstream end - Submerged Culvert
  - Small pipes - 8" also under road at same level or higher than main Culvert.
  - Upstream end - same pounding - wide (50'+)
- See photos

See fire station sketch
### EXISTING CONDITIONS

#### Contact Information/location:

#### Land Use:
- [ ] Commercial
- [ ] Industrial
- [ ] Institutional
- [ ] Municipal
- [ ] Golf Course
- [ ] Transport-Related
- [X] Marina
- [ ] Animal Facility
- [ ] Other: Gas station, deli/sandwich shop, convenience store, restrooms, public

#### Basic Description of Operation:

#### Existing stormwater management on-site?
- [ ] Unknown
- [ ] No
- [X] Yes, describe:

#### Condition of drain inlets on-site:
- [ ] None
- [ ] Good
- [ ] Need maintenance

#### Evidence of riparian/wetland buffer encroachment:
- [ ] Unknown
- [ ] No
- [ ] Yes, describe:

#### Potential pollutants associated with:
- [ ] Vehicular operations (fueling, storage, maintenance)
- [ ] Waste management (dumping)
- [ ] Outdoor material storage (uncovered, leaking, no secondary containment)
- [ ] Landscaping (over fertilizing, irrigation)
- [ ] Building/parking lot maintenance (washdowns)
- [ ] Other:

#### Pollutant of concern?
- [X] Limited
- [X] Likely
- [ ] Observed for sediment loading
- [ ] Limited
- [ ] Likely
- [ ] Observed for oil/grease
- [X] Limited
- [X] Likely
- [ ] Observed for trash
- [X] Limited
- [X] Likely
- [ ] Observed for nutrient loading
- [ ] Limited
- [X] Likely
- [ ] Observed for bacteria
- [ ] Limited
- [X] Likely
- [ ] Observed for other:

#### Severity of Problem:
- [X] Low
- [ ] Medium
- [ ] High

#### Describe Conditions:
- Everything seems to be well maintained
- One uncovered diesel pump

### PROPOSED RESTORATION ACTIVITIES

- See retrofit form

### NEXT STEPS

---

Site ID ____________________________ Page 1 of 2
<table>
<thead>
<tr>
<th>EXISTING CONDITION</th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>SHAPE:</td>
<td></td>
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</tr>
<tr>
<td>Arch</td>
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<tr>
<td>Box</td>
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<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>Elliptical</td>
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<tr>
<td>Other:</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>□ Culverts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># BARRELS:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>□</td>
<td>□</td>
<td>□</td>
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</tr>
<tr>
<td>Double</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>Triple</td>
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<td>Other:</td>
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<tr>
<td>MATERIAL:</td>
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</tr>
<tr>
<td>Concrete</td>
<td>□</td>
<td>□</td>
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<tr>
<td>ALIGNMENT:</td>
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</tr>
<tr>
<td>Flow-aligned</td>
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<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Not flow-aligned</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Do not know</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
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<tr>
<td>DIMENSIONS: (if variable, sketch)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barrel diameter:</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Height:</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Culvert length:</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Width:</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>BLOCKAGE SEVERITY:</td>
<td>□ none □ minor □ partial □ significant □ complete</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential barrier to aquatic species?</td>
<td>□ No □ Yes □ Unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is it acting as grade control?</td>
<td>□ No □ Yes □ Unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONDITION:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Evidence of...)</td>
<td>□ In good condition</td>
<td>□ cracked/chipping/corrosion</td>
<td>□ downstream scour hole</td>
<td>□ upstream erosion</td>
</tr>
<tr>
<td></td>
<td>□ Sediment deposition</td>
<td>□ blockage</td>
<td>□ failing embankment</td>
<td>□ threatened infrastructure</td>
</tr>
<tr>
<td></td>
<td>□ Threatened infrastructure</td>
<td>□ Other (describe):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CULVERT SLOPE:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flat</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Slight (2 – 5%)</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Steeper</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>IS IT FLOWING?</td>
<td>□ No □ Yes □ Unknown</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Roadway elevation:</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

| ROAD SEGMENTS      |                                       |                                       |                                       |                                       |
| SURFACE:           |                                       |                                       |                                       |                                       |
| Concrete           | □                                    | □                                    | □                                    | □                                    |
| Asphalt            | □                                    | □                                    | □                                    | □                                    |
| Unpaved: >gravel   | □                                    | □                                    | □                                    | □                                    |
| Unpaved: >dirt     | □                                    | □                                    | □                                    | □                                    |
| Other:             | □                                    | □                                    | □                                    | □                                    |
| STEEPNESS:         |                                       |                                       |                                       |                                       |
| Pretty flat        | □                                    | □                                    | □                                    | □                                    |
| Slight (around 5:1, 20%) | □                                    | □                                    | □                                    | □                                    |
| Steep (more like 2:1, 50%) | □                                    | □                                    | □                                    | □                                    |
| Big time steep (≥ 75%) | □                                    | □                                    | □                                    | □                                    |
| ACCESS/USE:        |                                       |                                       |                                       |                                       |
| Private            | □                                    | □                                    | □                                    | □                                    |
| Public             | □                                    | □                                    | □                                    | □                                    |
| Unknown            | □                                    | □                                    | □                                    | □                                    |
| Surface:           | □ good condition □ minor maintenance needed □ large gullies and potholes □ clean □ blocked □ other: | | | |
| Drain Inlets/Catch basins: | □ None □ clean □ blocked □ other: | | | |
| Waterbars/dips/cross drains: | □ None □ functioning □ need maintenance □ other: | | | |
| Ditches:           | □ none □ shallow □ well-defined □ stable □ eroded □ excess vegetation □ other: | | | |
| Discharge locations: | □ Stable □ some erosion □ eroded □ other: | | | |
| SEVERITY OF PROBLEM: | □ High □ Med □ Low (Explain): | | | |
| POTENTIAL FOR SEDIMENT LOADING TO RESOURCE AREA: | □ High □ Med □ Low | | | |

DESCRIPTION OF EXISTING CONDITIONS:

Serves as driveway to 2 homes-
upper portion paved-
water crosses at paved/dirt bound

NEXT STEPS

Potential Repair Candidate? □ Yes □ No □ Other:

CONTACT □ DPW □ LANDOWNER □ HOA □ Other:

Site Name ________________________________  Page 1 of 2
REPAIR/IMPROVEMENT CONCEPT

Narrative:

Sketch:

Initial Feasibility and Construction Considerations/ Design or Delivery Notes:

Thoughts on Maintenance Burden:  □ Low  □ Medium  □ High

Site Name 5-RC-01
### Existing Condition

**Shape:**
- Arch
- Box
- Circular
- Bottomless
- Elliptical
- Other:

**# Barrels:**
- Single
- Double
- Triple
- Other:

**Material:**
- Concrete
- Metal
- Other:

**Alignment:**
- Flow-aligned
- Not flow-aligned
- Do not know

**Condition:** (Evidence of...)
- In good condition
- Cracking/chipping/corrosion
- Sediment deposition
- Blockage
- Threatened infrastructure
- Other (describe):

**Culvert Slope:**
- Flat
- Slight (2 – 5%)
- Steeper

**Is it Flowing?**
- No
- Yes

**Blockage Severity:**
- none
- minor
- partial
- significant
- complete

**Potential barrier to aquatic species?**
- No
- Yes
- Unknown

**Is it acting as grade control?**
- No
- Yes
- Unknown

**Surface:**
- Concrete
- Asphalt
- Unpaved: > gravel
- Unpaved: > dirt
- Other

**Steepness:**
- Pretty flat
- Slight (around 5:1, 20%)
- Steep (more like 2:1, 50%)
- Big time steep (> 75%)

**Access/Use:**
- Private
- Public
- Unknown

**Dimensions:** (if variable, sketch)
- Barrel diameter: [mm (ft)]
- Height: [mm (ft)]
- Culvert length: [mm (ft)]
- Width: [mm (ft)]

**Roadway elevation:** [mm (ft)]

### Road Segments

**Surface:**
- good condition
- minor maintenance needed
- large gullies and potholes

**Drain Inlets/Catch basins:**
- None
- clean
- blocked
- other:

**Waterbars/dips/cross drains:**
- None
- functioning
- need maintenance
- other:

**Ditches:**
- none
- shallow
- well-defined
- stable
- eroded
- excess vegetation
- other:

**Discharge locations:**
- Stable
- some erosion
- eroded
- other:

**Severity of Problem:**
- High
- Med
- Low (Explain):

### Potential for Sediment Loading to Resource Area:
- High
- Med
- Low

**Description of Existing Conditions:**

### Next Steps

**Potential Repair Candidate?**
- Yes
- No
- Other:

**Contact:**
- DPW
- Landowner
- HOA
- Other:
<table>
<thead>
<tr>
<th>REPAIR/IMPROVEMENT CONCEPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative:</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

| Sketch:                    |
|                            |

| Initial Feasibility and Construction Considerations/ Design or Delivery Notes: |
|                                                                            |

| Thoughts on Maintenance Burden: □ Low □ Medium □ High                       |
## Existing Condition

### Culverts
- **Shape:**
  - [ ] Arch
  - [ ] Box
  - [X] Elliptical
  - [ ] Bottomless
  - [ ] Circular
  - [ ] Other:
- **# Barrels:**
  - [X] Single
  - [ ] Double
  - [ ] Triple
  - [ ] Other:
- **Material:**
  - [ ] Concrete
  - [ ] Metal
  - [ ] Other:
- **Alignment:**
  - [ ] Flow-aligned
  - [ ] Not flow-aligned
  - [ ] Do not know
- **Condition:**
  - [X] In good condition
  - [ ] Cracking/chipping/corrosion
  - [ ] Sediment deposition
  - [X] Blockage
  - [ ] Threatened infrastructure
- **Culvert Slope:**
  - [ ] Flat
  - [X] Slight (2 – 5%)
  - [ ] Steeper
- **Is it flowing?**
  - [X] Yes
  - [ ] No
- **Blockage Severity:**
  - [X] None
  - [ ] Minor
  - [ ] Partial
  - [ ] Significant
  - [ ] Complete
- **Potential barrier to aquatic species?**
  - [X] Yes
  - [ ] No
  - [ ] Unknown
- **Is it acting as grade control?**
  - [ ] No
  - [ ] Yes
  - [ ] Unknown

### Surface:
- [ ] Concrete
- [ ] Asphalt
- [ ] Unpaved: > gravel
- [ ] Unpaved: > dirt
- [ ] Other

### Steepness:
- [ ] Pretty flat
- [ ] Slight (around 5:1, 20%)
- [ ] Steep (more like 2:1, 50%)
- [ ] Big time steep (≥ 75%)

### Access/Use:
- [ ] Private
- [ ] Public
- [ ] Unknown

### Dimensions:
- **Barrel Diameter:** 30" (ft)
- **Height:** ______ (ft)
- **Culvert Length:** 20 (ft)
- **Width:** ______ (ft)
- **Roadway Elevation:** ______ (ft)
- **Total ROW Width:** ______ (ft)
- **Drive lane:** ______ (ft)
- **Shoulder:** ______ (ft)
- **Length of interest:** ______

### Potential for Sediment Loading to Resource Area:
- [ ] High
- [ ] Med
- [ ] Low (Explain):

### Description of Existing Conditions:
- Note: bent from weight of road 15' deep scar / 20' wide
- Tire dumping

### Next Steps
- **Potential Repair Candidate?**
  - [ ] Yes
  - [ ] No
  - [ ] Other:

### Contact:
- [ ] DPW
- [ ] Landowner
- [ ] HOA
- [ ] Other:
### Repair/Improvement Concept

**Narrative:**

**Sketch:**

**Initial Feasibility and Construction Considerations/ Design or Delivery Notes:**

**Thoughts on Maintenance Burden:**  
- [ ] Low  
- [ ] Medium  
- [ ] High
**STX EE WATERSHEDS**

**Site/Road Name/ID:** S-RC-04  
**Watershed:** Subhde  
**Assessed by:**

### EXISTING CONDITION

<table>
<thead>
<tr>
<th>SHAPE:</th>
<th># BARRELS:</th>
<th>MATERIAL:</th>
<th>ALIGNMENT:</th>
<th>DIMENSIONS: (if variable, sketch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch</td>
<td>Single</td>
<td>Concrete</td>
<td>Flow-aligned</td>
<td>Barrel diameter: 24&quot; (ft)</td>
</tr>
<tr>
<td>Box</td>
<td>Double</td>
<td>Metal</td>
<td>Not flow-aligned</td>
<td>Height: ____(ft)</td>
</tr>
<tr>
<td>Circular</td>
<td>Triple</td>
<td>Other</td>
<td>Do not know</td>
<td>Culvert length: 20' (ft)</td>
</tr>
<tr>
<td>Elliptical</td>
<td>Other</td>
<td>Other (describe):</td>
<td></td>
<td>Width: ____(ft)</td>
</tr>
</tbody>
</table>

**CULVERTS**

- Condition: (Evidence of...)
- In good condition
- Cracking/chipping/corrosion
- Downstream scour hole
- Sediment deposition
- Upstream erosion
- Blockage
- Failing embankment
- Threatened infrastructure
- Other (describe):

**CULVERT SLOPE:**

- Flat
- Slight (2 – 5%)
- Steeper

**IS IT FLOWING?**

- No
- Yes

**BLOCKAGE SEVERITY:**

- none
- minor
- partial
- significant
- complete

**Potential barrier to aquatic species?**

- No
- Yes
- Unknown

**Is it acting as grade control?**

- No
- Yes
- Unknown

**ROAD SEGMENTS**

<table>
<thead>
<tr>
<th>SURFACE:</th>
<th>STEEPNESS:</th>
<th>ACCESS/USE:</th>
<th>Total ROW Width:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Pretty flat</td>
<td>Private</td>
<td>_____ (ft)</td>
</tr>
<tr>
<td>Asphalt</td>
<td>Slight (around 5:1, 20%)</td>
<td>Public</td>
<td>Drive lane: _____ (ft)</td>
</tr>
<tr>
<td>Unpaved: &gt;gravel</td>
<td>Steep (more like 2:1, 50%)</td>
<td>Unknown</td>
<td>Shoulder: _____ (ft)</td>
</tr>
<tr>
<td>Unpaved: &gt;dirt</td>
<td>Big time steep (≥ 75%)</td>
<td></td>
<td>Length of interest:</td>
</tr>
</tbody>
</table>

**Surface:**

- good condition
- minor maintenance needed
- large gullies and potholes

**Drain Inlets/Catch basins:**

- None
- clean
- blocked
- other:

**Waterbars/dips/cross drains:**

- None
- functioning
- need maintenance
- other:

**Ditches:**

- none
- shallow
- well-defined
- stable
- eroded
- excess vegetation
- other:

**Discharge locations:**

- Stable
- some erosion
- eroded
- other:

**SEVERITY OF PROBLEM:**

- High
- Med
- Low (Explain):

**DESCRIPTION OF EXISTING CONDITIONS:**

... (Blank space)

**NEXT STEPS**

**Potential Repair Candidate?**

- Yes
- No
- Other:

**CONTACT**

- DPW;
- LANDOWNER
- HOA;
- Other:

---

**Site Name: ________________________________**  
**Page 1 of 2**
### EXISTING CONDITION

**SHAPE:**
- [ ] Arch
- [ ] Box
- [x] Elliptical
- [ ] Circular
- [ ] Other:

**# BARRELS:**
- [ ] Single
- [ ] Double
- [ ] Triple
- [ ] Other:

**MATERIAL:**
- [ ] Concrete
- [x] Metal
- [ ] Other:

**ALIGNMENT:**
- [ ] Flow-aligned
- [ ] Not flow-aligned
- [ ] Do not know

**CONDITION:**
- [ ] In good condition
- [ ] Cracking/chipping/corrosion
- [ ] Sediment deposition
- [ ] Blockage
- [ ] Threatened infrastructure
- [ ] Other (describe):

**CULVERT SLOPE:**
- [ ] Flat
- [ ] Slight (2 – 5%)
- [ ] Steeper
- [ ] Other:

**IS IT FLOWING?**
- [ ] No
- [ ] Yes

**BLOCKAGE SEVERITY:**
- [ ] none
- [ ] minor
- [ ] partial
- [ ] significant
- [ ] complete

**Potential barrier to aquatic species?**
- [ ] No
- [ ] Yes
- [ ] Unknown

**Is it acting as grade control?**
- [ ] No
- [ ] Yes
- [ ] Unknown

**SURFACE:**
- [ ] Concrete
- [ ] Asphalt
- [x] Unpaved: >gravel
- [ ] Unpaved: >dirt
- [ ] Other

**STEEPLESS:**
- [ ] Pretty flat
- [ ] Slight (around 5:1, 20%)
- [ ] Steep (more like 2:1, 50%)
- [ ] Big time steep (> 75%)

**ACCESS/USE:**
- [ ] Private
- [ ] Public
- [ ] Unknown

**DIMENSIONS:**
- [ ] Barrel diameter: 24” (ft)
- [ ] Height: (ft)
- [ ] Culvert length: 30' (ft)
- [ ] Width: (ft)
- [ ] Roadway elevation: (ft)

**ROAD SEGMENTS**

**Surface:**
- [ ] good condition
- [ ] minor maintenance needed
- [ ] large gullies and potholes

**Drain Inlets/Catch basins:**
- [ ] None
- [ ] clean
- [ ] blocked
- [ ] other:

**Waterbars/dips/cross drains:**
- [ ] None
- [ ] functioning
- [ ] need maintenance
- [ ] other:

**Ditches:**
- [ ] none
- [ ] shallow
- [ ] well-defined
- [ ] stable
- [ ] eroded
- [ ] excess vegetation
- [ ] other:

**Discharge locations:**
- [ ] Stable
- [ ] some erosion
- [ ] eroded
- [ ] other:

**SEVERITY OF PROBLEM:**
- [x] High
- [ ] Med
- [ ] Low (Explain):

**DESCRIPTION OF EXISTING CONDITIONS:**

- Note: Downstream ended channel
- See photos - grated more in tact than fenced
- Scouring from grated
- Pipe from block structure - discharge to ponded inflow - dry flow
- Flaw

**NEXT STEPS**

**Potential Repair Candidate?**
- [ ] Yes
- [ ] No
- [ ] Other:

**CONTACT**
- [ ] DPW
- [ ] LANDOWNER
- [ ] HOA
- [ ] OTHER:

Site Name: ________________________________
<table>
<thead>
<tr>
<th>REPAIR/IMPROVEMENT CONCEPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

| Sketch:                   |
|                           |
|                           |
|                           |
|                           |
|                           |

| Initial Feasibility and Construction Considerations/ Design or Delivery Notes: |
|                                                                             |
|                                                                             |
|                                                                             |
|                                                                             |
|                                                                             |

| Thoughts on Maintenance Burden:  □ Low □ Medium □ High                     |
|                                                                                   |
|                                                                                   |
|                                                                                   |
|                                                                                   |
### EXISTING CONDITION

<table>
<thead>
<tr>
<th>SHAPE:</th>
<th>□ Arch</th>
<th>□ Bottomless</th>
<th>□ Box</th>
<th>□ Elliptical</th>
<th>□ Circular</th>
<th>□ Other:</th>
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<tbody>
<tr>
<td># BARRELS:</td>
<td>□ Single</td>
<td>□ Double</td>
<td>□ Triple</td>
<td>□ Other:</td>
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<td></td>
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<tr>
<td>MATERIAL:</td>
<td>□ Concrete</td>
<td>□ Metal</td>
<td>□ Other:</td>
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<td></td>
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<tr>
<td>ALIGNMENT:</td>
<td>□ Flow-aligned</td>
<td>□ No flow-aligned</td>
<td>□ Do not know</td>
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<td>□ Height:</td>
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<td></td>
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<td></td>
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<tr>
<td></td>
<td>□ Culvert length: 20' (ft)</td>
<td>□ Width:</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>□ Roadway elevation:</td>
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<td></td>
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<td>CONDITION: (Evidence of...)</td>
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<td>□ Downstream scour hole</td>
<td>□ Upstream erosion</td>
<td>□ Failing embankment</td>
<td>□ Other (describe):</td>
<td></td>
</tr>
<tr>
<td>BLOCKAGE SEVERITY:</td>
<td>□ none</td>
<td>□ minor</td>
<td>□ partial</td>
<td>□ significant</td>
<td>□ complete</td>
<td></td>
</tr>
<tr>
<td>Potential barrier to aquatic species?</td>
<td>□ No</td>
<td>□ Yes</td>
<td>□ Unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is it acting as grade control?</td>
<td>□ No</td>
<td>□ Yes</td>
<td>□ Unknown</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| SURFACE: |  □ Concrete |  □ Asphalt |  □ Unpaved: >gravel |  □ Unpaved: >dirt |  □ Other: |
| STEEPNESS: |  □ Pretty flat |  □ Slight (around 5:1, 20%) |  □ Steep (more like 2:1, 50%) |  □ Big time steep (≥ 75%) |
| ACCESS/USE: |  □ Private |  □ Public |  □ Unknown |
| Total ROW Width: |  18 (ft) |
| Drive lane: |  18 (ft) |
| Shoulder: |  0 (ft) |
| Length of interest: |  |

- **Surface:**  □ good condition | □ minor maintenance needed | □ large gullies and potholes
- **Drain Inlets/Catch basins:**  □ None | □ clean | □ blocked | □ other:
- **Waterbars/dips/cross drains:**  □ None | □ functioning | □ need maintenance | □ other:
- **Ditches:**  □ none | □ shallow | □ well-defined | □ stable | □ eroded | □ excess vegetation | □ other:
- **Discharge locations:**  □ Stable | □ some erosion | □ eroded | □ other:

### SEVERITY OF PROBLEM:
- □ High
- □ Med
- □ Low (Explain):

### POTENTIAL FOR SEDIMENT LOADING TO RESOURCE AREA:
- □ HIGH
- □ MED
- □ LOW

### DESCRIPTION OF EXISTING CONDITIONS:

### NEXT STEPS

- Potential Repair Candidate?  □ YES  □ NO  □ OTHER:
- CONTACT □ DPW; □ Landowner □ HOA; □ OTHER:
REPAIR/IMPROVEMENT CONCEPT

Narrative:

Sketch:

Initial Feasibility and Construction Considerations/ Design or Delivery Notes:

Thoughts on Maintenance Burden:  □ Low  □ Medium  □ High

Site Name___________________________________________
STX EE WATERSHEDS

Site/Road Name/ID: Culvert (East)

Watershed: Solitude

Assessed by: MW/KE

EXISTING CONDITION

■ Corroded / Pipe lift withdrawn

Cross ref: RCP D-7 / 407

■ Culverts

□ Arch □ Bottomless □ Box □ Elliptical
□ Circular □ Other:

■ Barrels:
□ Single □ Double □ Triple □ Other:

■ Material:
□ Concrete □ Metal
□ Other:

■ Alignment:
□ Flow-aligned □ Not flow-aligned □ Do not know

■ Dimensions: (if variable, sketch)
Barrel diameter: 30 (ft)
Height:
Culvert length:
Width:
Roadway elevation:

■ Condition: (Evidence of...)
□ In good condition
□ Cracking/chipping/corrosion
□ Sediment deposition
□ Blockage
□ Threatened infrastructure
□ Other (describe):

■ Culvert Slope:
□ Flat
□ Slight (2 - 5%)
□ Steeper

■ Is it flowing?
□ No □ Yes

■ Blockage Severity:
□ None □ Minor □ Partial □ Significant □ Complete

Potential barrier to aquatic species?
□ No □ Yes □ Unknown

Is it acting as grade control?
□ No □ Yes □ Unknown

■ Surface:
□ Concrete
□ Asphalt
□ Unpaved: > gravel
□ Unpaved: > dirt
□ Other

■ Steepness:
□ Pretty flat
□ Slight (around 5:1, 20%)
□ Steep (more like 2:1, 50%)
□ Big time steep (≥ 75%)

■ Access/Use:
□ Private
□ Public
□ Unknown

■ Total ROW Width: 40 (ft)
Drive lane:
Shoulder:
Length of interest:

□ Road

Segments

□ Culverts:

Surface: □ good condition □ minor maintenance needed □ large gullies and potholes

Drain Inlets/Catch basins: □ None □ clean □ blocked □ other:

Waterbars/dips/cross drains: □ None □ functioning □ need maintenance □ other:

Ditches: □ none □ shallow □ well-defined □ stable □ eroded □ excess vegetation □ other:

Discharge locations: □ Stable □ some erosion □ eroded □ other:

Severity Of Problem:
□ High □ Med □ Low (Explain):

Potential for sediment loading to resource area:
□ High □ Med □ Low

Description of existing conditions:

1. Existing culverts:
2. North side of main road - on property - 15" single, metal circular, 10' long, somewhat shallow

Next steps

Potential repair candidate?
□ Yes □ No □ Other:

Contact:
□ DPW □ Landowner □ HOA □ Other:

Site Name ____________________________

Page 1 of 2
Repair/Improvement Concept

Narrative:

2 Issues:
1. Undersized culvert under main road - structural issues + sediment - stagnant pool downstream (result of sediment deposition)
2. Road runoff: low point flows into shallow depression (2:1) clogging on south side of road. Overflow into swale on property and/or gut. Potential that gut overflows into depression too.

Sketch:

See aerial

Initial Feasibility and Construction Considerations/ Design or Delivery Notes:

- Enlarge culverts
- Enlarge depression island bio

Thoughts on Maintenance Burden: ☐ Low ☐ Medium ☐ High

Site Name ___________________________
STX EE WATERSHEDS

Site/Road Name/ID: S-RC - PE near Blue Water

Watershed: Spotted

Assessed by: [Name]

### Existing Condition

<table>
<thead>
<tr>
<th>SHAPE:</th>
<th># BARRELS:</th>
<th>MATERIAL:</th>
<th>ALIGNMENT:</th>
<th>DIMENSIONS: (if variable, sketch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch</td>
<td>Single</td>
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<td>Box</td>
<td>Double</td>
<td>Metal</td>
<td>Not flow-aligned</td>
<td>Height: _______ (ft)</td>
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<tr>
<td>Elliptical</td>
<td>Triple</td>
<td>Other:</td>
<td>Do not know</td>
<td>Culvert length: unk (ft)</td>
</tr>
<tr>
<td>Circular</td>
<td>Other:</td>
<td>Other:</td>
<td></td>
<td>Width: _______ (ft)</td>
</tr>
</tbody>
</table>

**CONDITION:** (Evidence of...)
- In good condition

**CULVERT SLOPE:**
- Flat
- Slight (2 - 5%)
- Steeper

**IS IT FLOWING?**
- No
- Yes

**BLOCKAGE SEVERITY:**
- none
- minor
- partial
- significant
- complete

Potential barrier to aquatic species?
- No
- Yes
- Unknown

Is it acting as grade control?
- No
- Yes
- Unknown

<table>
<thead>
<tr>
<th>SURFACE:</th>
<th>STEEPNESS:</th>
<th>ACCESS/USE:</th>
<th>POTENTIAL FORSEDIMENT LOADING TO RESOURCE AREA:</th>
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</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Pretty flat</td>
<td>Private</td>
<td>High</td>
</tr>
<tr>
<td>Asphalt</td>
<td>Slight (around 5:1, 20%)</td>
<td>Public</td>
<td>Med</td>
</tr>
<tr>
<td>Unpaved: gravel</td>
<td>Steep (more like 2:1, 50%)</td>
<td>Unknown</td>
<td>Low (Explain):</td>
</tr>
<tr>
<td>Unpaved: dirt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Surface: good condition

Drain Inlets/Catch basins:
- None
- clean
- blocked
- other

Waterbars/dips/cross drains:
- None
- functioning
- need maintenance
- other

Ditches:
- None
- shallow
- well-defined
- stable
- eroded
- excess vegetation
- other

Discharge locations:
- Stable
- some erosion
- eroded
- other

**SEVERITY OF PROBLEM:**
- High
- Med
- Low

**DESCRIPTION OF EXISTING CONDITIONS:**
- Blocks blocked, road flooding issues - conveyance directly to ocean via concrete swale over pipe from culvert.
- Needs maintenance/cleaning.

**NEXT STEPS**

Potential Repair Candidate?
- Yes
- No
- Other:

Contact:
- DPW
- Landowner
- HOA
- Other:

Site Name: ___________________________  Page 1 of 2
**REPAIR/IMPROVEMENT CONCEPT**

**Narrative:**

<table>
<thead>
<tr>
<th><strong>Initial Feasibility and Construction Considerations/ Design or Delivery Notes:</strong></th>
</tr>
</thead>
</table>

**Thoughts on Maintenance Burden:** □ Low □ Medium □ High

Site Name ________________________________
**STX EE WATERSHEDS**

**Site/Road Name/ID:** SB-RC-8  
**Watershed:** Southside  
**Assessed by:** MWRK

### EXISTING CONDITION

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<th># BARRELS:</th>
<th>MATERIAL:</th>
<th>ALIGNMENT:</th>
<th>DIMENSIONS: (if variable, sketch)</th>
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<tr>
<td>□ Arch</td>
<td>□ Single</td>
<td>□ Concrete</td>
<td>□ Flow-aligned</td>
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</tr>
<tr>
<td>□ Box</td>
<td>□ Double</td>
<td>□ Metal</td>
<td>□ Not flow-aligned</td>
<td></td>
</tr>
<tr>
<td>□ Circular</td>
<td>□ Triple</td>
<td>□ Other</td>
<td>□ Do not know</td>
<td></td>
</tr>
<tr>
<td>□ Elliptical</td>
<td>□ Other:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CONDITION:** (Evidence of...)  
- □ In good condition
- □ Cracking/chipping/corrosion
- □ Downstream scour hole
- □ Sediment deposition
- □ Upstream erosion
- □ Blockage
- □ Failing embankment
- □ Other (describe):

**CULVERT SLOPE:**  
- □ Flat
- □ Slight (2 - 5%)
- □ Steeper

**IS IT FLOWING?**  
- □ No
- □ Yes

**BLOCKAGE SEVERITY:**  
- □ none
- □ minor
- □ partial
- □ significant
- □ complete

**Potential barrier to aquatic species?**  
- □ No
- □ Yes
- □ Unknown

**Is it acting as grade control?**  
- □ No
- □ Yes
- □ Unknown

**SURFACE:**  
- □ Concrete
- □ Asphalt
- □ Unpaved: >gravel
- □ Unpaved: >dirt
- □ Other

**STEEPNESS:**  
- □ Pretty flat
- □ Slight (around 5:1, 20%)  
- □ Steep (more like 2:1, 50%)  
- □ Big time steep (> 75%)

**ACCESS/USE:**  
- □ Private
- □ Public
- □ Unknown

**TOTAL ROW WIDTH:**  
- □ (ft)

**Drive lane:**  
- □ (ft)

**Shoulder:**  
- □ (ft)

**Length of interest:**  
- □

### ROAD SEGMENTS

**Surface:**  
- □ good condition
- □ minor maintenance needed
- □ large gullies and potholes

**Drain Inlets/Catch basins:**  
- □ None
- □ clean
- □ blocked
- □ other:

**Waterbars/dips/cross drains:**  
- □ None
- □ clean
- □ blocked
- □ other:

**Ditches:**  
- □ none
- □ shallow
- □ well-defined
- □ stable
- □ eroded
- □ excess vegetation
- □ other:

**Discharge locations:**  
- □ Stable
- □ some erosion
- □ eroded
- □ other:

**SEVERITY OF PROBLEM:**  
- □ High
- □ Med
- □ Low (Explain):

**DESCRIPTION OF EXISTING CONDITIONS:**

Very steep, eroded roads - poorly functioning concrete, waterbars in some areas that do not carry water (runoff scours around them)

**NEXT STEPS**

**Potential Repair Candidate?**  
- □ Yes
- □ No
- □ Other:

**CONTACT**  
- □ DPW
- □ Landowner
- □ HOA
- □ Other:
## Repair/Improvement Concept

**Narrative:**

<table>
<thead>
<tr>
<th>Sketch:</th>
</tr>
</thead>
</table>

| Initial Feasibility and Construction Considerations/ Design or Delivery Notes: |

<table>
<thead>
<tr>
<th>Thoughts on Maintenance Burden:</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
</table>
**STX EE WATERSHEDS**

**Site/Road Name/ID:** SB-RC-9 Cotton Valley Trail  
**Watershed:** Solitude

**Date:** 1/25/11  
**Assessed by:** MWRKR

### Existing Condition

<table>
<thead>
<tr>
<th>SHAPE:</th>
<th># BARRELS:</th>
<th>MATERIAL:</th>
<th>ALIGNMENT:</th>
<th>DIMENSIONS: (if variable, sketch)</th>
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<tbody>
<tr>
<td>Arch</td>
<td>Single</td>
<td>Concrete</td>
<td>Flow-aligned</td>
<td>Barrel diameter: 2 4/11 (ft)</td>
</tr>
<tr>
<td>Box</td>
<td>Double</td>
<td>Metal</td>
<td>Not flow-aligned</td>
<td>Height: ___ (ft)</td>
</tr>
<tr>
<td>Circular</td>
<td>Triple</td>
<td>Other</td>
<td>Do not know</td>
<td>Culvert length: ___ (ft)</td>
</tr>
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<td>Other:</td>
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</thead>
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<tr>
<td>Cracking/chipping/corrosion</td>
<td>Sediment deposition</td>
<td>Blockage</td>
<td>Threatened infrastructure</td>
<td>Other (describe):</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CULVERT SLOPE:</th>
<th>IS IT FLOWING?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat</td>
<td>No</td>
</tr>
<tr>
<td>Slight (2 – 5%)</td>
<td>Yes</td>
</tr>
<tr>
<td>Steeper</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BLockage Severity:</th>
<th>Potential barrier to aquatic species?</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>No Yes Unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SURFACE:</th>
<th>STEEPNESS:</th>
<th>ACCESS/USE:</th>
<th>Total ROW Width:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>Pretty flat</td>
<td>Private</td>
<td>Drive lane:</td>
</tr>
<tr>
<td>Asphalt</td>
<td>Slight (around 5:1, 20%)</td>
<td>Public</td>
<td>Shoulder:</td>
</tr>
<tr>
<td>Unpaved: &gt;gravel</td>
<td>Steep (more like 2:1, 50%)</td>
<td>Unknown</td>
<td>Length of interest:</td>
</tr>
</tbody>
</table>

**Road Segments**

<table>
<thead>
<tr>
<th>Surface:</th>
<th>Drain Inlets/Catch basins:</th>
<th>Waterbars/dips/cross drains:</th>
<th>Ditches:</th>
<th>Discharge locations:</th>
<th>SEVERITY OF PROBLEM:</th>
</tr>
</thead>
<tbody>
<tr>
<td>good condition</td>
<td>None clean blocked other:</td>
<td>None functioning need maintenance other:</td>
<td>None shallow well-defined stable eroded excess vegetation other:</td>
<td>Stable some erosion eroded other:</td>
<td>High Med Low (Explain):</td>
</tr>
</tbody>
</table>

**Description of Existing Conditions:**

- 2 culverts
- 24" RC/CP, CMP
- both blocked
- Culvert on Cotton Valley Trail, unknown diameter, completely blocked

---

**Potential Repair Candidate?**

- **Yes**
- **No**
- **Other:**

**Contact:**

- DPW
- Landowner
- HOA
- Other:

---

**Site Name**
<table>
<thead>
<tr>
<th>REPAIR/IMPROVEMENT CONCEPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Sketch:</td>
</tr>
<tr>
<td></td>
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<td></td>
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</tbody>
</table>

| Initial Feasibility and Construction Considerations/ Design or Delivery Notes: |

<table>
<thead>
<tr>
<th>Thoughts on Maintenance Burden:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
</tr>
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</table>
### Existing Condition

<table>
<thead>
<tr>
<th>SHAPE:</th>
<th># BARRELS:</th>
<th>MATERIAL:</th>
<th>ALIGNMENT:</th>
<th>DIMENSIONS: (If variable, sketch)</th>
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</thead>
<tbody>
<tr>
<td>□ Arch □ Bottomless □ Box □ Elliptical □ Circular</td>
<td>□ Single □ Double □ Triple □ Other:</td>
<td>□ Concrete □ Flow-aligned □ Not flow-aligned □ Do not know</td>
<td></td>
<td>Barrel diameter: 30'' (ft)</td>
</tr>
<tr>
<td>□ Culverts near each other (2)</td>
<td></td>
<td></td>
<td></td>
<td>Height:</td>
</tr>
<tr>
<td>□ Culverts</td>
<td></td>
<td></td>
<td></td>
<td>Culvert length:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Width:</td>
</tr>
<tr>
<td>CONDITION: (Evidence of...)</td>
<td>CULVERT SLOPE:</td>
<td>IS IT FLOWING?</td>
<td>ROADWAY ELEVATION: (ft)</td>
<td></td>
</tr>
<tr>
<td>□ In good condition</td>
<td>□ Flat</td>
<td>□ No □ Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Cracking/chipping/corrosion</td>
<td>□ Slight (2 – 5%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Sediment deposition</td>
<td>□ Slight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Blockage</td>
<td>□ Steeper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Threatened infrastructure</td>
<td>□ Other (describe):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLOCKAGE SEVERITY:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ none □ minor □ partial □ significant □ complete</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential barrier to aquatic species? □ No □ Yes □ Unknown</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is it acting as grade control? □ No □ Yes □ Unknown</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### ROAD SEGMENTS

<table>
<thead>
<tr>
<th>SURFACE:</th>
<th>STEEPNESS:</th>
<th>ACCESS/USE:</th>
<th>Total RCW Width: (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Concrete □ Asphalt □ Unpaved: &gt;gravel □ Unpaved: &gt;dirt □ Other</td>
<td>□ Pretty flat □ Slight (around 5:1, 20%) □ Steep (more like 2:1, 50%) □ Big time steep (≥ 75%)</td>
<td>□ Private □ Public □ Unknown</td>
<td></td>
</tr>
<tr>
<td>Surface: □ good condition □ minor maintenance needed □ large gullies and potholes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drain Inlets/Catch basins: □ None □ clean □ blocked □ other:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterbars/dips/cross drains: □ None □ functioning □ need maintenance □ other:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ditches: □ none □ shallow □ well-defined □ stable □ eroded □ excess vegetation □ other:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge locations: □ Stable □ some erosion □ eroded □ other:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEVERITY OF PROBLEM: □ High □ Med □ Low (Explain):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Description of Existing Conditions:

2 Culverts - 30'' CMP

Both

### Next Steps

**Potential Repair Candidate?** □ Yes □ No □ Other:

**Contact:** □ DPW; □ Landowner □ HOA; □ Other:
REPAIR/IMPROVEMENT CONCEPT

Narrative:

Sketch:

Initial Feasibility and Construction Considerations/ Design or Delivery Notes:

Thoughts on Maintenance Burden: ☐ Low ☐ Medium ☐ High
**Existing Condition**

<table>
<thead>
<tr>
<th>SHAPE:</th>
<th># BARRELS:</th>
<th>MATERIAL:</th>
<th>ALIGNMENT:</th>
<th>DIMENSIONS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch</td>
<td>Single</td>
<td>Concrete</td>
<td>Flow-aligned</td>
<td>Barrels diameter: 30&quot; (ft)</td>
</tr>
<tr>
<td>Box</td>
<td>Double</td>
<td>Metal</td>
<td>Not flow-aligned</td>
<td>Height: (ft)</td>
</tr>
<tr>
<td>Elliptical</td>
<td>Other</td>
<td>Other</td>
<td>Do not know</td>
<td>Culvert length: (ft)</td>
</tr>
<tr>
<td>Circular</td>
<td></td>
<td></td>
<td></td>
<td>Width: (ft)</td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td>Roadway elevation: (ft)</td>
</tr>
</tbody>
</table>

- **CULVERTS**
  - CONDITION: (Evidence of...)
    - In good condition
    - Cracking/chipping/corrosion
    - Sediment deposition
    - Blockage
    - Threatened infrastructure
    - Other (describe): Other (describe):
  - BLOCKAGE SEVERITY: none minor partial significant complete
  - Potential barrier to aquatic species? No Yes Unknown
  - Is it acting as grade control? No Yes Unknown

- **SURFACE:**
  - Concrete
  - Asphalt
  - Unpaved: gravel
  - Unpaved: dirt
  - Other

- **STEEPNESS:**
  - Pretty flat
  - Slight (around 5:1, 20%)
  - Steep (more like 2:1, 50%)
  - Big time steep (≥ 75%)

- **ACCESS/USE:**
  - Private
  - Public
  - Unknown

- **ROAD SEGMENTS**
  - Surface: good condition minor maintenance needed large gullies and potholes
  - Drain Inlets/Catch basins: None clean blocked other:
  - Waterbars/dips/cross drains: None functioning need maintenance other:
  - Ditches: none shallow well-defined stable eroded excess vegetation other:
  - Discharge locations: Stable some erosion eroded other:

- **SEVERITY OF PROBLEM:**
  - High Med Low (Explain):

**Description of Existing Conditions:**

4 Culverts - All 30" CMP
Sediment & debris from Solitude road clogging culverts - require regular maintenance

**Potential Repair Candidate?**
- Yes
- No
- Other:

**Contact**
- DPW
- Landowner
- HOA
- Other:

**Site Name** ____________________________
### REPAIR/IMPROVEMENT CONCEPT

**Narrative:**


**Sketch:**


<table>
<thead>
<tr>
<th>Initial Feasibility and Construction Considerations/ Design or Delivery Notes:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Thoughts on Maintenance Burden:</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
</table>
**EXISTING CONDITION**

<table>
<thead>
<tr>
<th>SHAPE:</th>
<th># BARRELS:</th>
<th>MATERIAL:</th>
<th>ALIGNMENT:</th>
<th>DIMENSIONS: (if variable, sketch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch</td>
<td>Single</td>
<td>Concrete</td>
<td>Flow-aligned</td>
<td>Barrel diameter: 48&quot; (ft)</td>
</tr>
<tr>
<td>Bottomless</td>
<td>Double</td>
<td>Metal</td>
<td>Not flow-aligned</td>
<td>Height: __________ (ft)</td>
</tr>
<tr>
<td>Box</td>
<td>Triple</td>
<td>Other</td>
<td>Do not know</td>
<td>Culvert length: __________ (ft)</td>
</tr>
<tr>
<td>Elliptical</td>
<td>Other</td>
<td>Other</td>
<td></td>
<td>Width: __________ (ft)</td>
</tr>
<tr>
<td>Circular</td>
<td></td>
<td></td>
<td></td>
<td>Roadway elevation: __________ (ft)</td>
</tr>
</tbody>
</table>

**CULVERTS**

- Condition: (Evidence of...)
  - In good condition
  - Cracking/chipping/erosion
  - Sediment deposition
  - Blockage
  - Threatened infrastructure

- Manhole cover missing

**BLOCKAGE SEVERITY:**
- None
- Minor
- Partial
- Significant
- Complete

**Is it acting as grade control?**
- No
- Yes
- Unknown

**SURFACE:**
- Concrete
- Asphalt
- Unpaved: gravel
- Unpaved: dirt
- Other

**STEEPLENESS:**
- Pretty flat
- Slight (around 5:1, 20%)
- Steep (more like 2:1, 50%)
- Big time steep (> 75%)

**ACCESS/USE:**
- Private
- Public
- Unknown

**TOTAL ROW WIDTH:**
- 48" (ft)

**Drive lane:**
- __________ (ft)

**Shoulder:**
- __________ (ft)

**Length of interest:**
- __________ (ft)

**DESCRIPTION OF EXISTING CONDITIONS:**

48" CMP
Outlet submerged
Extends from EE Road to Bay
Manhole cover missing - threat to public

**NEXT STEPS**

Potential Repair Candidate?  
- Yes
- No
- Other

Contact:
- DPW
- Landowner
- HOA
- Other

Site Name ____________________________
REPAIR/IMPROVEMENT CONCEPT

Narrative:

Sketch:

Initial Feasibility and Construction Considerations/ Design or Delivery Notes:

Thoughts on Maintenance Burden:  □ Low  □ Medium  □ High

Site Name ___________________________
**EXISTING CONDITION**

<table>
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<th>SHAPE:</th>
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<th>DIMENSIONS: (if variable, sketch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Arch</td>
<td>□ Single</td>
<td>□ Concrete</td>
<td>□ Flow-aligned</td>
<td>Barrel diameter: 24&quot; (ft)</td>
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<tr>
<td>□ Box</td>
<td>□ Double</td>
<td>□ Metal</td>
<td>□ Not flow-aligned</td>
<td>Height: ___ (ft)</td>
</tr>
<tr>
<td>□ Circular</td>
<td>□ Triple</td>
<td>□ Other:</td>
<td>□ Do not know</td>
<td>Culvert length: ___ (ft)</td>
</tr>
<tr>
<td>□ Other</td>
<td>□ Other (describe):</td>
<td></td>
<td></td>
<td>Width: ___ (ft)</td>
</tr>
</tbody>
</table>

**CULVERTS**

- □ In good condition
- □ Cracking/chipping/corrosion
- □ Sediment deposition
- □ Blockage
- □ Threatened infrastructure

**CULVERT SLOPE:**

- □ Downstream scour hole
- □ Upstream erosion
- □ Failing embankment

**IS IT FLOWING?**

- □ No
- □ Yes
- □ Unknown

**BLOCKAGE SEVERITY:**

- □ none
- □ minor
- □ partial
- □ significant
- □ complete

**Potential barrier to aquatic species?**

- □ No
- □ Yes
- □ Unknown

**Is it acting as grade control?**

- □ No
- □ Yes
- □ Unknown

**ROAD SEGMENTS**

<table>
<thead>
<tr>
<th>SURFACE:</th>
<th>STEEPNESS:</th>
<th>ACCESS/USE:</th>
<th>Total ROW Width: ___ (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Concrete</td>
<td>□ Pretty flat</td>
<td>□ Private</td>
<td>Drive lane: ___ (ft)</td>
</tr>
<tr>
<td>□ Asphalt</td>
<td>□ Slight (around 5:1, 20%)</td>
<td>□ Public</td>
<td>Shoulder: ___ (ft)</td>
</tr>
<tr>
<td>□ Unpaved: &gt;gravel</td>
<td>□ Steep (more like 2:1, 50%)</td>
<td>□ Unknown</td>
<td>Length of interest: ___</td>
</tr>
<tr>
<td>□ Unpaved: &gt;dirt</td>
<td>□ Big time steep (≥ 75%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Surface:**

- □ good condition
- □ minor maintenance needed
- □ large gullies and potholes

**Drain Inlets/Catch basins:**

- □ None
- □ clean
- □ blocked
- □ other

**Waterbars/dips/cross drains:**

- □ None
- □ functioning
- □ need maintenance
- □ other

**Ditches:**

- □ none
- □ shallow
- □ well-defined
- □ stable
- □ eroded
- □ excess vegetation
- □ other

**Discharge locations:**

- □ Stable
- □ some erosion
- □ eroded
- □ other

**SEVERITY OF PROBLEM:**

- □ High
- □ Med
- □ Low (Explain):

**DESCRIPTION OF EXISTING CONDITIONS:**

"24" CMP/DI

could not locate upstream end due to veg at edge of pond. Downstream end clogged w/ veg."

**NEXT STEPS**

**Potential Repair Candidate?**

- □ Yes
- □ No
- □ Other:

**CONTACT**

- □ OPW
- □ LANDOWNER
- □ HOA
- □ OTHER:
### Existing Condition

**Shape:**
- □ Arch  □ Bottomless
- □ Box  □ Elliptical
- □ Circular  □ Other:

**# Barrels:**
- □ Single  □ Triple  □ Other:

**Material:**
- □ Concrete  □ Metal  □ Other:

**Alignment:**
- □ Flow-aligned  □ Not flow-aligned  □ Do not know

**Dimensions:** (if variable, sketch)
- Barrel diameter: \(30\) in (ft)
- Height: \(\) ft
- Culvert length: \(\) ft
- Width: \(\) ft

**Culvert Slope:**
- □ Flat  □ Slight (2 - 5%)  □ Steeper

**Is it flowing?**
- □ No  □ Yes

**Blockage Severity:**
- □ None  □ Minor  □ Partial  □ Significant  □ Complete

**Potential barrier to aquatic species?**
- □ No  □ Yes  □ Unknown

**Is it acting as grade control?**
- □ No  □ Yes  □ Unknown

**Surface:**
- □ Concrete  □ Asphalt  □ Unpaved: gravel  □ Unpaved: dirt  □ Other

**Steepness:**
- □ Pretty flat  □ Slight (around 5:1, 20%)  □ Steep (more like 2:1, 50%)  □ Big time steep (> 75%)

**Access/Use:**
- □ Private  □ Public  □ Unknown

**Total ROW Width:** \(\) ft

**Roadway elevation:** \(\) ft

**Surface:**
- □ Good condition  □ Minor maintenance needed  □ Large gullies and potholes

**Drain Inlets/Catch basins:**
- □ None  □ Clean  □ Blocked  □ Other:

**Waterbars/dips/cross drains:**
- □ None  □ Functioning  □ Need maintenance  □ Other:

**Ditches:**
- □ None  □ Shallow  □ Well-defined  □ Stable  □ Eroded  □ Excess vegetation  □ Other:

**Discharge locations:**
- □ Stable  □ Some erosion  □ Eroded  □ Other:

**Severity of Problem:**
- □ High  □ Med  □ Low (Explain):

**Potential for Sediment Loading to Resource Area:**
- □ High  □ Med  □ Low

### Description of Existing Conditions:

30" RCP mostly downstream and submerged. Scour hole, gabion baskets need repair.

### Next Steps

**Potential Repair Candidate?**
- □ Yes  □ No  □ Other:

**Contact:**
- □ DPW  □ Landowner  □ HOA  □ Other:
**REPAIR/IMPROVEMENT CONCEPT**

**Narrative:**

**Sketch:**

**Initial Feasibility and Construction Considerations/ Design or Delivery Notes:**

**Thoughts on Maintenance Burden:**  □ Low  □ Medium  □ High
**EXISTING CONDITION**

<table>
<thead>
<tr>
<th>SHAPE:</th>
<th># BARRELS:</th>
<th>MATERIAL:</th>
<th>ALIGNMENT:</th>
<th>DIMENSIONS: (if variable, sketch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch</td>
<td>Single</td>
<td>Concrete</td>
<td>Flow-aligned</td>
<td>Barrel diameter: 15 - 18&quot;</td>
</tr>
<tr>
<td>Box</td>
<td>Double</td>
<td>Metal</td>
<td>Not flow-aligned</td>
<td>Height: 36&quot;</td>
</tr>
<tr>
<td>Circular</td>
<td>Triple</td>
<td>Other</td>
<td>Do not know</td>
<td>Culvert length:</td>
</tr>
<tr>
<td>Other:</td>
<td>Other:</td>
<td>Other:</td>
<td></td>
<td>Width:</td>
</tr>
</tbody>
</table>

**CULVERTS**

- In good condition
- Cracking/chipping/corrosion
- Sediment deposition
- Blockage
- Threatened infrastructure

**CONDITION:**

**CULVERT SLOPE:**
- Flat
- Slight (2 – 5%)
- Steeper

**IS IT FLOWING?:**
- No
- Yes

**BLOCKAGE SEVERITY:**
- none
- minor
- partial
- significant
- complete

**Roadway elevation:**

**Potential barrier to aquatic species?**
- No
- Yes
- Unknown

**Is it acting as grade control?**
- No
- Yes
- Unknown

**SURFACE:**
- Concrete
- Asphalt
- Unpaved: >gravel
- Unpaved: >dirt
- Other

**STEEPNESS:**
- Pretty flat
- Slight (around 5:1, 20%)
- Steep (more like 2:1, 50%)
- Big time steep (≥ 75%)

**ACCESS/USE:**
- Private
- Public
- Unknown

**Total ROW Width:**

**ROAD SEGMENTS**

- good condition
- minor maintenance needed
- large gullies and potholes

**Drain Inlets/Catch basins:**
- None
- clean
- blocked
- other

**Waterbars/dips/cross drains:**
- None
- functioning
- need maintenance
- other

**Ditches:**
- none
- shallow
- well-defined
- stable
- eroded
- excess vegetation
- other

**Discharge locations:**
- Stable
- some erosion
- eroded
- other

**SEVERITY OF PROBLEM:**
- High
- Med
- Low

**DESCRIPTION OF EXISTING CONDITIONS:**

- "Three culverts - 18" RCP - scour, need riprap"
- "15" RCP - chipping, blockage"
- "15" RCP - farmland, up, block, sediment"
- "15" RCP - scour, hole, stabilization needed"
- "34" RCP - scour, hole, grab needed"

**NEXT STEPS**

**Potential Repair Candidate?**
- Yes
- No
- Other

**CONTACT:**
- DPW: Landowner
- HOA: Other
**STX EE WATERSHEDS**

**Site/Road Name/ID:** SB-RC-10  
**Watershed:** Solitude  
**Assessed by:** MW/CR  

---

**EXISTING CONDITION**

<table>
<thead>
<tr>
<th>SHAPE:</th>
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</thead>
<tbody>
<tr>
<td>Arch</td>
<td>Single</td>
<td>Concrete</td>
<td>Flow-aligned</td>
<td>Barrel diameter: 18 (ft)</td>
</tr>
<tr>
<td>Box</td>
<td>Double</td>
<td>Metal</td>
<td>Not flow-aligned</td>
<td>Height:</td>
</tr>
<tr>
<td>Elliptical</td>
<td>Triple</td>
<td>Other:</td>
<td>Do not know</td>
<td>Culvert length:</td>
</tr>
<tr>
<td>Circular</td>
<td>Other</td>
<td>Other (describe):</td>
<td>Culvert slope:</td>
<td></td>
</tr>
<tr>
<td>Other:</td>
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</table>

<table>
<thead>
<tr>
<th>CONDITION: (Evidence of):</th>
<th># In good condition</th>
<th>Downstream scour hole</th>
<th>Upstream erosion</th>
<th>Failing embankment</th>
<th>Other (describe):</th>
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</thead>
<tbody>
<tr>
<td>Cracking/chipping/corrosion</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Culvert slope:</td>
</tr>
<tr>
<td>Sediment deposition</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Culvert slope:</td>
</tr>
<tr>
<td>Blockage</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Culvert slope:</td>
</tr>
<tr>
<td>Threatened infrastructure</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Culvert slope:</td>
</tr>
</tbody>
</table>

**CULVERTS**

- Barrel diameter: 18 (ft)
- Height:
- Culvert length:
- Width:
- Roadway elevation:

**BLOCKAGE SEVERITY:**

- None
- Minor
- Partial
- Significant
- Complete

**Potential barrier to aquatic species?**

- No
- Yes
- Unknown

- Is it acting as grade control?  
  - No
  - Yes
  - Unknown

---

**SURFACE:**

- Concrete
- Asphalt
- Unpaved: > gravel
- Unpaved: > dirt
- Other

**STEEPNESS:**

- Pretty flat
- Slight (around 5:1, 20%)
- Steep (more like 2:1, 50%)
- Big time steep (75%)

<table>
<thead>
<tr>
<th>ACCESS/USE:</th>
<th>Total ROW Width:</th>
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</thead>
<tbody>
<tr>
<td>Private</td>
<td>Drive lane:</td>
</tr>
<tr>
<td>Public</td>
<td>Shoulder:</td>
</tr>
<tr>
<td>Unknown</td>
<td>Length of interest:</td>
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</table>

---

**ROAD SEGMENTS**

- Surface: good condition
- Minor maintenance needed
- Large gullies and potholes

**Drain Inlets/Catch basins:**

- None
- Clean
- Blocked
- Other:

**Waterbars/dips/cross drains:**

- None
- Functioning
- Need maintenance
- Other:

**Ditches:**

- None
- Shallow
- Well-defined
- Stable
- Eroded
- Excess vegetation
- Other:

**Discharge locations:**

- Stable
- Some erosion
- Eroded
- Other:

**SEVERITY OF PROBLEM:**

- High
- Med
- Low (Explain):

---

**DESCRIPTION OF EXISTING CONDITIONS:**

Dry weather flow from black PVC pipe. See retrofit section for more on this area. Receives flow from Cooley Bay Condos.

---

**NEXT STEPS**

**Potential Repair Candidate?**

- Yes
- No
- Other:

**CONTACT:**

- DPW
- Landowner
- HOA
- Other:

---

Site Name: ____________________________
REPAIR/IMPROVEMENT CONCEPT

Narrative:

Sketch:

Initial Feasibility and Construction Considerations/Design or Delivery Notes:

Thoughts on Maintenance Burden:  □ Low  □ Medium  □ High
East End Rd - East of Cockley Boy Landing

Watershed: Solitude

Site/Road Name/ID: SB-RC-17

Assessed by: MW/KR

Date: 1/20/11

EXISTING CONDITION:

**SHAPE:**
- Arch
- Box
- Elliptical
- Circular
- Other:

**# BARRELS:**
- Single
- Double
- Triple
- Other:

**MATERIAL:**
- Concrete
- Metal
- Other:

**ALIGNMENT:**
- Flow-aligned
- Not flow-aligned
- Do not know

**DIMENSIONS:** (if variable, sketch)
- Barrel diameter: 15 (ft)
- Height: ___ (ft)
- Culvert length: ___ (ft)
- Width: ___ (ft)
- Roadway elevation: ___ (ft)

**CONDITION:** (Evidence of...)
- In good condition
- Cracking/chipping/corrosion
- Downstream scour hole
- Sediment deposition
- Upstream erosion
- Blockage
- Failing embankment
- Threatened infrastructure
- Other (describe):

**CULVERT SLOPE:**
- Flat
- Slight (2 – 5%)
- Steeper

**IS IT FLOWING?**
- No
- Yes

**BLOCKAGE SEVERITY:**
- none
- minor
- partial
- significant
- complete

Potential barrier to aquatic species? Yes [ ] No [ ] Unknown

Is it acting as grade control? Yes [ ] No [ ] Unknown

**SURFACE:**
- Concrete
- Asphalt
- Unpaved: gravel
- Unpaved: dirt
- Other

**STEEPNESS:**
- Pretty flat
- Slight (around 5:1, 20%)
- Steep (more like 2:1, 50%)
- Big time steep (≥ 75%)

**ACCESS/USE:**
- Private
- Public
- Unknown

**TOTAL ROW WIDTH:** ___ (ft)

**Surface:**
- good condition
- minor maintenance needed
- large gullies and potholes

**Drain Inlets/Catch basins:**
- None
- clean
- blocked
- other:

**Waterbars/dips/cross drains:**
- None
- functioning
- need maintenance
- other:

**Ditches:**
- none
- shallow
- well-defined
- stable
- eroded
- excess vegetation
- other:

**Discharge locations:**
- Stable
- some erosion
- eroded
- other:

**SEVERITY OF PROBLEM:**
- High
- Med
- Low (Explain):___

**POTENTIAL FOR SEDIMENT LOADING TO RESOURCE AREA:**
- High
- Med
- Low

**DESCRIPTION OF EXISTING CONDITIONS:**

Upstream end is mostly blocked with vegetation. Downstream end is also clogged with vegetation. There is a large scour hole that needs to be stabilized. Larger culvert is necessary.

**NEXT STEPS**

Potential Repair Candidate? Yes [ ] No [ ] Other:

Contact: DPW [ ] Landowner [ ] HOA [ ] Other:

Site Name: ___________________________
**REPAIR/IMPROVEMENT CONCEPT**

**Narrative:**

**Sketch:**

**Initial Feasibility and Construction Considerations/Design or Delivery Notes:**

**Thoughts on Maintenance Burden:** □ Low □ Medium □ High
### Existing Condition

<table>
<thead>
<tr>
<th>SHAPE:</th>
<th>MATERIAL:</th>
<th>ALIGNMENT:</th>
<th>DIMENSIONS: (if variable, sketch)</th>
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<tbody>
<tr>
<td>☑ Circular</td>
<td>☑ Metal</td>
<td>☑ Flow-aligned</td>
<td>Barrel diameter:</td>
</tr>
<tr>
<td>☑ Bottomless</td>
<td>☑ Other</td>
<td>☑ Not flow-aligned</td>
<td>Height: (ft)</td>
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<tr>
<td>☑ Elliptical</td>
<td>☑ Other</td>
<td>☑ Do not know</td>
<td></td>
</tr>
<tr>
<td>☑ Other</td>
<td>☑ Concrete</td>
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<table>
<thead>
<tr>
<th>CONDITION: (Evidence of...)</th>
<th>CULVERT SLOPE:</th>
<th>IS IT FLOWING?</th>
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<tbody>
<tr>
<td>☑ In good condition</td>
<td>☑ Flat</td>
<td>☑ No</td>
</tr>
<tr>
<td>☑ Cracking/chipping/corrosion</td>
<td>☑ Slight (2 – 5%)</td>
<td>☑ Yes</td>
</tr>
<tr>
<td>☑ Sediment deposition</td>
<td>☑ Steeper</td>
<td></td>
</tr>
<tr>
<td>☑ Blockage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☑ Threatened infrastructure</td>
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<table>
<thead>
<tr>
<th>BLOCKAGE SEVERITY:</th>
<th>Potential barrier to aquatic species?</th>
<th>Is it acting as grade control?</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ complete</td>
<td>☑ Yes</td>
<td>☑ No</td>
</tr>
<tr>
<td>☑ none</td>
<td>☑ No</td>
<td>☑ Yes</td>
</tr>
<tr>
<td>☑ minor</td>
<td>☑ Unknown</td>
<td>☑ Unknown</td>
</tr>
<tr>
<td>☑ partial</td>
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<th>SURFACE:</th>
<th>STEEPNESS:</th>
<th>ACCESS/USE:</th>
<th>POTENTIAL FOR SEDIMENT LOADING TO RESOURCE AREA:</th>
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<td>☑ Concrete</td>
<td>☑ Pretty flat</td>
<td>☑ Private</td>
<td>☑ High</td>
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<tr>
<td>☑ Asphalt</td>
<td>☑ Slight (around 5:1, 20%)</td>
<td>☑ Public</td>
<td>☑ Med</td>
</tr>
<tr>
<td>☑ Unpaved: &gt;gravel</td>
<td>☑ Steep (more like 2:1, 50%)</td>
<td>☑ Unknown</td>
<td>☑ Low</td>
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<tr>
<td>☑ Unpaved: &gt;dirt</td>
<td>☑ Big time steep (≥ 75%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>☑ Other</td>
<td></td>
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<tr>
<th>Road Segments:</th>
<th>Surface:</th>
<th>Drain Inlets/Catch basins:</th>
<th>Waterbars/dips/cross drains:</th>
<th>Ditches:</th>
<th>Discharge locations:</th>
<th>SEVERITY OF PROBLEM:</th>
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<tbody>
<tr>
<td>☑ good condition</td>
<td>☑ minor maintenance needed</td>
<td>☑ clean</td>
<td>☑ functioning</td>
<td>☑ none</td>
<td>☑ Stable</td>
<td>☑ High</td>
</tr>
<tr>
<td>☑ maintaining</td>
<td>☑ large gullies and potholes</td>
<td>☑ blocked</td>
<td>☑ need maintenance</td>
<td>☑ shallow</td>
<td>☑ some erosion</td>
<td>☑ Med</td>
</tr>
<tr>
<td>☑ other</td>
<td>☑ other</td>
<td>☑ other</td>
<td></td>
<td>☑ well-defined</td>
<td>☑ eroded</td>
<td>☑ Low (Explain):</td>
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<table>
<thead>
<tr>
<th>DESCRIPTION OF EXISTING CONDITIONS:</th>
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<tbody>
<tr>
<td>12&quot; CMP - appears completely blocked</td>
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<table>
<thead>
<tr>
<th>NEXT STEPS</th>
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<tbody>
<tr>
<td>Potential Repair Candidate?</td>
</tr>
<tr>
<td>CONTACT</td>
</tr>
<tr>
<td><strong>REPAIR/IMPROVEMENT CONCEPT</strong></td>
</tr>
<tr>
<td>--------------------------------</td>
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<tr>
<td><strong>Narrative:</strong></td>
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<td><strong>Sketch:</strong></td>
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<tr>
<td><strong>Initial Feasibility and Construction Considerations/ Design or Delivery Notes:</strong></td>
</tr>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Thoughts on Maintenance Burden:</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
### Existing Condition

**Shape:**
- Arch  [ ] Bottomless  [ ]
- Box  [ ] Elliptical  [ ]
- Circular  [X]  Other:  [ ]

**No. Barrels:**
- Single  [X]  Double  [ ]
- Triple  [ ]  Other:  [ ]

**Material:**
- Concrete  [ ]  Metal  [X]
- Other:  [PVC]  [ ]

**Alignment:**
- Flow-aligned  [ ]  Not flow-aligned  [ ]
- Do not know  [ ]

**Dimensions:** (if variable, sketch)
- Barrel diameter:  2 1/4" (ft)
- Height:  _______(ft)
- Culvert length:  _______(ft)
- Width:  _______(ft)
- Roadway elevation:  _______(ft)

**Condition:** (Evidence of...)
- In good condition  [X]
- Cracking/chipping/corrosion  [ ]
- Downstream scour hole  [ ]
- Sediment deposition  [ ]
- Blockage  [ ]
- Threatened infrastructure  [ ]
- Other (describe):  [ ]

**Culvert Slope:**
- Flat  [ ]  Slight (2 – 5%)  [ ]
- Steeper  [ ]

**Is it flowing?**
- No  [ ]  Yes  [ ]

**Blockage Severity:**
- None  [ ]  Minor  [ ]  Partial  [ ]
- Significant  [ ]  Complete  [ ]

**Potential barrier to aquatic species?**
- No  [ ]  Yes  [ ]  Unknown  [ ]

**Is it acting as grade control?**
- No  [ ]  Yes  [ ]  Unknown  [ ]

**Road Segments**

**Surface:**
- Concrete  [ ]  Asphalt  [ ]
- Unpaved: >gravel  [ ]  >dirt  [ ]  Other  [ ]

**Steepness:**
- Pretty flat  [ ]  Slight (around 5:1, 20%)  [ ]
- Steep (more like 2:1, 50%)  [ ]  Big time steep (≥ 75%)  [ ]

**Access/Use:**
- Private  [ ]  Public  [ ]  Unknown  [ ]

**Total ROW Width:**  _______(ft)
- Drive lane:  _______(ft)
- Shoulder:  _______(ft)
- Length of interest:  _______

**Severity of Problem:**
- High  [X]  Med  [ ]  Low (Explain):  [ ]

**Description of Existing Conditions:**

2 PVC pipes- unknown source (6"")
- Septic smell

**Potential for Sediment Loading to Resource Area:**
- High  [ ]  Med  [ ]  Low  [ ]

**Next Steps**

**Potential Repair Candidate?**
- Yes  [X]  No  [ ]  Other:  [ ]

**Contact**
- DPW:  [X]  Landowner  [ ]  HOA:  [ ]  Other:  [ ]
**REPAIR/IMPROVEMENT CONCEPT**

**Narrative:**

**Sketch:**

**Initial Feasibility and Construction Considerations/ Design or Delivery Notes:**

**Thoughts on Maintenance Burden:** ☐ Low ☐ Medium ☐ High

Site Name _____________________________