# The 25 Most Environmentally Damaging Dirt Roads 3rd Publication



Holly Grove Road, Bay Minette

# 2022 Baldwin County Environmental Advisory Committee

# **Executive Summary**

Listed below, and in **Table 3** of the full report are, in the opinion of the Baldwin County Environmental Advisory Committee Dirt Road Subcommittee, the 25 most environmentally damaging County maintained dirt roads in Baldwin County. Maps displaying the 25 roads in each Highway Maintenance Area are attached at the end of the report.

- Bay Road East
- Brady/Old Brady Road
- Hartung Road
- Hinote Glass Road
- Holly Creek Road
- · Holly Grove Road
- Hughen St @Kendrick
- Kings Landing Road
- Kleinschmidt Road
- Lehman Road
- Malkoskie Road
- Mannich Lane
- Newman Road
- Norris Lane
- Paul Cleverdon Road
- Peter Morris Road
- River Road West CR 68 (Flat Creek)
- River Road N (Bon Secour River)
- Scranage Road
- Sonnie Lynn Lane
- Still Road
- TJ Earl Road
- Truck Route (Trail) 17
- Woerner Road
- Wolf Field Road

With the exception of Holly Creek Road, Holly Grove Road, River Road (CR68) and Truck (Route) Trail 17 which standout above any of the other segments, the roads are listed in no particular order and no "ranking" is implied.

Due to plans for future paving, Lipscomb Road is not included in this study.

Table 1 - The 25 Most Damaging Dirt Roads in Baldwin County Studies

Study - 1998	Study - 2010	Study - 2022
Beasley Road	Barrineau Park Road	Bay Road East
Blakeley River Road	Brady Road	Brady Road
Blakeley Road	Bretz Lane	Hartung Road (connects Norris)
Bromley Road	County Road 26	Hinote Glass Road
Buck Phillips Road	Ewing Farm Road	Holly Creek Road
Crawford Road	Goat Cooper Road	Holly Grove Road
Duck Lane	Griggers Road	Hughen St @ Kendrick
Durbin Fork Road	Hagendorfer Road	Kings Landing Road Seminole
Dyas Road	Holly Creek Road	Kleinschmidt Road
Grigger Road	Kilcrease Road	Lehman Road
Holly Creek Road	Linholm Road	Malkoskie Road
John Bloch Road	Lipscomb Road	Mannich Lane S4
Langford Road	Malkoskie Road	Newman Road
Lajune (Old Styx River) Road	Mannich Lane S2	Norris Lane
Linholm Road	Mannich Lane S4	Paul Cleverdon Road
Miller Pit Road	Nolte Creek Drive	Peter Morris Road
Newberry Bluff Road	Norris Lane	River Road North
Old Battles Road	Paul Cleverdon Road	River Road CR 68 to end
River Road CR 68 to end	Peter Morris Road	Scranage Road
Scranage Road	River Road CR 68 to end	Sonnie Lynn Lane
Sherwood Highland Road	Sawmill Road	Still Road
Still Road	Sherman Road	T.J. Earl Road
T. J. Earl Road	Spring Creek Drive	Truck Route (Trail) 17
Truck Route (Trail) 17	Truck Route (Trail) 17	Woerner Road
Vaughn Road	Wolf Field Road	Wolf Field Road

Paved	Listed in Two Studies
Scheduled To Be Paved	Listed in All Three Studies

### Introduction

This report was prepared by members of a subcommittee appointed by the Baldwin County Environmental Advisory Committee (BCEAC). This is the third (3rd) Dirt Road Report (1998, 2010 and 2022). **Table 1** lists the top 25 dirt roads from each study and details which roads have been paved.

The Committee would like to recognize the Highway Department for the great strides it has made in stabilizing the road listed in the previous reports. There is no doubt that these improvements have improved water quality and quality of life in Baldwin County.

The report was submitted to the full BCEAC during its October 4, 2022, meeting and is intended solely for use by the Baldwin County Commission (BCC) and Baldwin County Highway Department (BCHD). The intent of the effort was to update the latest BCEAC report entitled The 25 Most Environmentally Damaging Dirt Roads in Baldwin County prepared by the BCEAC (March 2010), although the process of elimination utilized in the latest report was modified as described below. Utilizing the 2010 report's list of the 25 most environmentally damaging dirt roads, the County was able to focus Highway Department resources to implement improvements and reduce impacts to wetlands and waterways. Sixteen of the twenty-five dirt roads listed in the 2010 report have received some level of treatment. Those roads that only received a partial treatment were again included in this review. Holly Creek Road, River Road (CR68 to End) and Truck Route (Trail) 17 were listed on all three (3) reports, but each has received partial treatment to minimize environmental impacts.

It is intended that this report be utilized, along with the various other socio-economic factors, by the County to target its existing and future Highway Department resources to achieve the most public good and environmental benefit.

# **Background**

Baldwin County is blessed with an abundance of natural resources, particularly wetland and water resources, and abundant rainfall (50-60 inches per year). However, it is also located in an area of the country with one of the highest "rainfall factors" (>600). This rainfall factor is a numeric expression of the amount of kinetic energy in the rainfall (e.g., rainfall intensity) and the higher the number the more erosive the rainfall events can be to exposed soil. Baldwin County soils are also fairly conducive to erosion, being generally low in clay and gravel content. This particular combination of natural environmental conditions means exposed surface soils are highly susceptible to erosion, which results in significant quantities of sediment being delivered to area wetlands and waterways. As noted in the original report: "the soils of Baldwin County are consistently erosive and even slight grades cause the velocity of runoff water to exceed the critical velocity of soil particles."

The potential environmental and socio-economic impacts associated with excessive sedimentation in wetlands and waterways are well documented and include loss of habitat, channel modification, flooding, and various water quality issues (turbidity, swimability, etc.). Several stream segments in Baldwin County have been placed on Alabama's 303(d)0F list by the Alabama Department of Environmental Management (ADEM) due to impacts associated with sediment loading.

The public road system in Baldwin County currently includes two hundred and thirteen (213) named dirt road segments totaling about one hundred and seventy (170) linear miles compared to the 2010 Report which had three hundred and sixty-nine (369) named dirt road segments totaling about two hundred and seventy (270) linear miles. The average County dirt road segment length is approximately one (1) mile with a range of 0.01 miles to 7.44 miles (note that segment length is often defined by maintenance area or commission district line. For example, Brady Road is actually 13.43 miles but is listed in three segments). Only about 29% (69) of these roads are greater than one mile in length. Each mile of dirt road translates into roughly 3.5 acres of exposed soils that can easily be eroded and washed into nearby wetlands and streams. (Road data derived from ARC GIS tables.)

It should be noted that there are likely just as many private dirt roads within the County that are currently not under County maintenance and were not part of this review. Undoubtedly, some of these private dirt roads are having environmental impacts similar to, or greater than, those reviewed in this report.

### **Review Process**

Since some degree of environmental impact is associated with any dirt road, the process of determining the "25 most environmentally damaging" is essentially a process of elimination. Focusing primarily on sediment impacts to wetlands and waterways, there are a number of physical factors that influence sediment delivery from dirt roads, such as proximity to the wetland or waterway, surface soil type of the road, slope steepness and length, vegetative cover, and drainage.

The evaluation included the two most relevant factors for this effort: "Environmental Concerns (EC)" (primary sort criteria with 2/3 of the evaluation score) and "Maintenance Difficulty (MD)" (secondary sort criteria with 1/3 of the evaluation score). The Environmental Concern rankings were based on the opinion of the BCEAC Dirt Road Subcommittee to the respective areas considering similar environmental factors used in the original reports (e.g., stream crossing, wetlands, etc.). The Maintenance Difficulty (MD) ranking, on a scale of 1 (best) to 10 (worst), was based on the opinion of the BCHD staff assigned to the respective areas considering similar factors used in the original reports (e.g., costs, frequency of maintenance, discharges to waterways, etc.).

The BCEAC Dirt Road Subcommittee was made up of five BCEAC members. Two of the members also served on the 2010 dirt road evaluation team.

# **Observations and Findings**

Of Baldwin County's two hundred and thirteen (213) dirt roads, eighty-three (83) dirt roads (**Table 2**) were evaluated in the field during this study. Summaries of the field observations for each of the top 25 listed segments follow this narrative. In lieu of a "ranking" that implies a defensible rationale for placing one road segment ahead of another, the authors have developed this list with no particular relative rankings, with one or two worthy exceptions as noted. For each of the 25 road segments there is a general description, listing and location of problem areas, and general discussion. One or more representative photographs are usually included with each description.

<sup>1</sup> The 303(d) list is a listing of waterbodies, promulgated by ADEM and EPA pursuant to section 303(d) of the Clean Water Act-Federal Water Pollution Control Act, that are not meeting applicable state water quality standards.

Table 2 - Dirt Roads Evaluated

Area 100	Area 200	Area 300
Holly Grove Road	River Road CR 68 to End	Norris Lane
Brady Road	Truck Route (Trail) 17	Lehman Road
Holly Creek Road	Hughen St @Kendrick	Mannich Lane
Still Road	Sonnie Lynn Lane	Bishop Trace
Scranage Road	Hinote Glass Road	Malkoski Road
TJ Earle Road	Peter Morris Road	Hartung Road
Union Town Road	Kings Landing Road Seminole	Paul Cleverdon Road
Ralph Gantt Road	River Road N Area 300	Bay Road East
Buck Phillips Road	Timber Company Road	Kleinschmidt Road
Couglan Road	Archie Minchew Road	Woerner Road
Dan Hadley Road	King Road Robertsdale	Newman Road
Clubhouse Road	Pursley Road	Wolf Field Road
Pat Haywood Road	River Road @ Myrtle Street	Grantham Road
Whidbee Road	Harms Road	Specs Lane
Southfield Road	Monsanto Road	Lipscomb Road
Catrett Road	County Road 55	Sherman Road
County Road 47 North	Giles Lane	Etta Smith Road
Dairy Cut Off Road	Griggers Road	John Bauer Road
Earl Phillips Road	King Road Barnwell	Rosalia Avenue
H L Meyers Road	Tew Lane	Fell Road
James Lane	Harris Lane	River Road South
Ray Road	Hubbard Road	Annie Cooper Lane S
Ronald Sanks Road	Jackson Lane	Guys Burns Road
Wash Branch Road		Hillcrest Drive
Jones Road Ext.		Pilgrim Road
Silas Ganey Road		Quail Lane
Carney Road		Seibert Rd
		Wynn Road
		Third Street
		River Road North
		Joe Norris Lane
		Roy Waters Road
		Weeks Road

# **Summary and Recommendations**

**Table 3** lists the final 25 dirt road segments considered by the authors to be the most environmentally damaging. Obviously, based on the subjective nature of the review, other reviewers could logically and defensibly derive a different list. Undoubtedly, as noted in the original report, there are road segments in the County other than those listed that are causing, or contributing to, significant environmental impacts. This review represents the authors' best effort given the data and resources available.

The Baldwin County Commission and Baldwin County Highway Department have made significant progress in reducing, minimizing, or eliminating the environmental impacts related to erosion and sedimentation from County maintained dirt roads over the past twelve (12) years. During the course of the review, the authors visited several of the road treatments implemented since the original review. These treatments, with some exceptions, appear to have been effective, but were often in need of maintenance.

The 25 road segments highlighted in this report total 63.5 miles in length and are distributed throughout the County as follows:

Maintenance Area 100	6 Segments	<b>33.2 miles</b>
Maintenance Area 200	7 Segments	13.8 miles
Maintenance Area 300	12 Segments	16.6 miles

Similar to the 2010 Report, County maintained dirt roads are fairly evenly distributed over two of the three Maintenance Areas (MA) 100 and 200: but, nearly 50% of all segments are located in MA 300. Likewise, segments with environmental concerns in MA 300 were notably higher, representing ~50% of the 25, but having the fewest actual miles. (Road data derived from ARC GIS tables.)

### Based on this review, the authors make the following general recommendations:

- The County should not accept for maintenance dirt roads unless there is a clear public benefit, including the opportunity to correct a significant environmental problem. It is recommended that the Environmental Advisory Dirt Road Subcommittee review and comment on the roads submitted for adoption.
- "Turn outs" should be located in areas that will not discharge directly to a wetland or stream, where possible, and be designed and installed with a sediment trap which should be periodically maintained with the removal of accumulated sediments particularly where they discharge near wetlands or steams. Where turnouts currently discharge into wetlands and stream, consider relocating the turnout.
- The County should avoid the use of "staining" fill material in proximity to wetlands and waterways. These areas should be graveled.
- Outlet (and in some cases, inlet) protection should be provided at stream crossings to provide roadway and culvert protection and energy dissipation to reduce erosion downstream.
- The County should consider using GOMESA or other grant funding to conduct environmental restoration work in areas where significant stream and/or wetland impacts have occurred, especially along Holly Creek, Holy Grove Road, River Road west of CR 68 and Truck Route (Trail) 17.
- The County should consider abandonment and restoration of certain road segments where the environmental impacts are significant and there is little or no use by the travelling public or where alternate routes are readily available.

A number of the "General Observations" stated in the original report (Knaebel, 1998) are still applicable today. The treatment measures to control erosion and sedimentation associated with dirt roads are as varied as the causes of the problems. However, one thing has been demonstrated, only treating one aspect of the problem instead of all contributing factors is sure to fail. Although asphalt is often considered the ultimate answer, it comes with its own environmental price – increased runoff volumes and velocities, additional "non-sediment" pollutant loading (oils, tire wear particles, etc.), and increased development. To minimize urban sprawl into rural areas, the EAC recommends that the County continue to explore treatment alternatives other than asphalt where appropriate.

Some general recommendations have been made here and additional recommendations may appear within the individual segment reviews, but precise prescriptions will require additional focused study and engineering on each segment which are beyond the scope of this review.

Table 3 - 25 Most Environmentally Damaging Dirt Roads of Baldwin County

Road Name	BCHD Maintenance Area	
Bay Road East	300	
Brady Road	100	
Hartung Road (connects Norris)	300	
Hinote Glass Road	200	
Holly Creek Road	100	
Holly Grove Road	100	
Hughen St @ Kendrick	200	
Kings Landing Road Seminole	200	
Kleinschmidt Road	300	
Lehman Road	300	
Malkoskie Road	300	
Mannich Lane	300	
Newman Road	300	
Norris Lane	300	
Paul Cleverdon Road	300	
Peter Morris Road	200	
River Road CR 68 to End	200	
River Road North	300	
Scranage Road	100	
Sonnie Lynn Lane	200	
Still Road	100	
TJ Earle Road	100	
Truck Route (Trail) 17	200	
Woerner Road	300	
Wolf Field Road	300	

### **Dirt Road Evaluations**

Road Name: Bay Road East Length: 2.1 miles Maintenance Area: 300
Area: Foley Planning District: 21-Zoned

Watershed: Nolte Creek & Weeks Creek - Magnolia River-Weeks Bay Watershed

Stream Crossings: 2 Wetland Crossings: 3

Photo(s):







**Bay Road East at Creek Crossing** 

**General Description:** The unpaved section of Bay Road East runs east from Vernant Park Road to Magnolia Springs Highway (County Road 49). It crosses two (2) streams and three (3) wetlands. It is located in the Magnolia River Watershed which is a sub-watershed of Weeks Bay. The improvement of the road is listed in the Weeks Bay Watershed Management plan as a management measure to improve water quality. The primary use for the road is access to residential homes and agriculture fields.

<u>Observation:</u> The road is relatively flat but does discharge to Nolte and Weeks Creeks and its wetlands and tributaries. Sediment impacts were noted in the creek. During the evaluation, it was noted that new red clay was recently placed along the road near the creek. It was also noted that there were minimal vegetated buffers between the farm fields and the road right-of-way.

- 1. Contact the NRCS regarding recommendations or incentives for the farmers to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Due to its location and the multi road connectivity, the road be paved.

3. If paving is not feasible, stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Road Name: Brandy Road Length: 12.2 miles Maintenance Area: 100

Area: Bay Minette Planning District: 12-Zoned, 5-Unzoned, 7 Un-Zoned

Watershed: Flat Creek-Reedy Creek-Styx River- Perdido River Watershed

Stream Crossings: 1 Wetland Crossings: 6 (\*Crossing Derived from GIS Data)

Photo(s):



Stormwater Turnout Directed to Wetland



**Sediment Noted in Wetland** 

General Description: Brady Road runs from County Road 68 Extension to Truck Route (Trail) 17, thence northward, crossing Truck Route (Trail) 17, to Old Brady Road. The road is covered by red sandy clay and has numerous wetland crossings. There are three segments of Brady Road listed by the County. The first is in Maintenance Area 200 and is 2.16 miles in length. There were no significant environmental problems observed on this first segment and it is not included in the review. The second segment is in Maintenance Area 100 and is 6.75 miles in length. The third segment is in Maintenance Area 100 and is 3.3 miles in length. The BCHD demarcation between the second and third segment is the Commission district line which was unclear in the field so the two were combined for this report. The sections of Brady Road that were reviewed for this study run along a ridge between Flat Creek and Reedy Creek crossing many wetland bottoms. This road is located in the Styx River Sub watershed which discharges to the Perdido River Watershed. Currently, there is not a watershed management plan for Perdido River. The primary use for the road is access to hunting and silviculture (forestry) land.

**Observation:** Since, the 2010 Report, the BCHD has graveled large portions of Brady Road which has helped minimize sediment impacts along the wetlands and stream crossing. Impacts were noted to several wetlands, associated with sediment discharges from turnouts.

- 1. Contact the Alabama Forestry Commission regarding recommendations or incentives for the foresters to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts be relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

When the Baldwin Beach Express Phase II expansion follows this route, most of the problems will be eliminated or addressed.

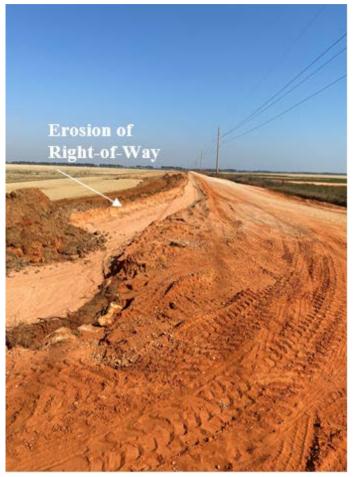
Maintenance Area: 300 Road Name: Hartung Road Length: 1.5 miles Planning District: 21-Zoned

Area: Folev

Watershed: Weeks Creek-Magnolia River-Weeks Bay Watershed

**Stream Crossings: 1** Wetland Crossings: 3

Photo(s):





**Erosion noted along Right-of-Way** 

**Sediment in Weeks Creek** 

General Description: Hartung Road begins west of Grantham Road in Foley and continues to run west southwest to Norris Lane. The road accesses three homes and numerous farm fields. The road is located in the Weeks Bay Watershed and discharges to Weeks Creek. The improvement of the road is listed as a management measure to improve water quality in the Watershed Management Plan. The primary use for the road is access to residential homes and agriculture fields.

Observation: Hartung Road has been heavily impacted by farming activities. The headwaters of an unnamed Tributary to Weeks Creek is no longer a creek. It is an eroding ditch.

- 1. Contact the NRCS regarding recommendations or incentives for the farmers to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited, to sediment traps, additional upland turn outs, etc.

Road Name: Hinote Glass Road Length: 1.3 miles Maintenance Area: 200

Area: Loxley Planning District: 12-Zoned & 31-Zoned

Watershed: Blackwater River-Perdido River

Stream Crossings: 1 Wetland Crossings: 1

Photo(s):



**Erosion Near Road Culvert Flows to Wetlands and Stream** 



**Road Culvert Discharges to Down Stream Wetlands and Stream** 

**General Description:** The paved portion of Hinote Glass Road starts on the east side of Hwy 59 and continues to run east to Cabinet Shop Road where it transitions to gravel. Once it crosses over Monsanto Road it continues to County Road 65. Between CR 65 and Monsanto, the road has two culverts that appear to over-top during rain events. The road is located in the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido River Watershed. The primary use for the road is access to residential homes and agriculture fields.

**Observation:** Erosion was noted at each culvert and sediment was noted in the Un-named Tributary to Blackwater River.

- 1. Contact the NRCS regarding recommendations or incentives for the farmers to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Road Name: Holly Creek Road Maintenance Area: 200 Length: 5.1 miles Planning District: 21-Zoned

Area: Stockton

Watershed: Holly Creek-Alabama River-Upper Tensaw Watershed

**Stream Crossings: 1 Wetland Crossings:** Majority of Road Crosses Wetlands

Photo(s):



**Sediment Impacts to Wetlands** 

General Description: Holly Creek Road travels from Hwy 59 to the end of pavement. The surface is sandy clay with gravel mix. It is relatively flat. From Hwy 59, Holly Creek parallels the road for 2 ½ miles. The road crosses Holly Creek and its tributaries in eleven locations. Holly Creek Road has great potential for environmental impacts due to the numerous stream and wetland crossings. The road is located in the Upper Tensaw Watershed. The Mobile Bay National Estuary Program is in the process of developing the watershed management plan. The primary use for the road is access to residential homes, silviculture (forestry) and hunting land.

**Observation:** The road is a major dumping ground. Erosion was noted along the length of the road leading to wetland impacts, especially at turnouts and near culvert outfalls.

- 1. Contact the Alabama Forestry Commission regarding recommendations or incentives for the foresters to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

4. Baldwin County EAC & HD work with the County Solid Waste Department to address illegal dumping.

Road Name: Holly Grove Road Length: 3.5 miles Maintenance Area: 100

Area: Bay Minette Planning District: 5-Unzoned

Watershed: Dreddin Branch-Perdido River Watershed

Stream Crossings: 2 Wetland Crossings: 6

Photo(s):



**General Description:** Holly Grove Road starts on the east side of County Road 112 and continues to Perdido River. The road is located in the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido river Watershed. The primary use for the road is access to silviculture (forestry) land. It crossed six wetlands and two streams that flow to the Perdido River.

**Observation:** Portions of the road have been graveled. The road is impacting numerous wetlands and two stream. The USDA NRCS has conservation easements along the road.

- 1. Contact the Alabama Forestry Commission regarding recommendations or incentives for the foresters to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.
- 4. The USDA NRCS and The Nature Conservancy (TNC) be contacted regarding a partnership to reduce the environmental impact from the road.

Road Name: Hughen Street Length: .25 miles Maintenance Area: 200
Area: Robertsdale Planning District: 5-Unzoned

Watershed: Rock Creek-Blackwater River-Perdido River Watershed

Stream Crossings: 0-Discharges to Rock Creek

Photo(s):

Wetland Crossings: 1



Roadside Right-of-Way Erosion-Flows to Channel



Sediment Noted in Wetland Ditch That Flows to Rock Creek

**General Description:** Hughen Street is north of Hwy 90. It lies between Robertsdale's City Limits and County Planning District 31. Hughen Street meets Kendrick Road in a 90-degree curve which is adjacent to a wetland along Rock Creek. The road is located in the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido River Watershed. The primary use for the road is access to residential homes and agriculture fields.

**Observation:** The dirt section of Hughen and Kendrick Road is experiencing severe right-of-way erosion resulting in impacts to a unnamed tributary to Rock Creek and its wetlands.

- 1. Due to its location and the multi-road connectivity, the road be paved.
- 2. If not feasible, stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Road Name: Kings Landing Road Length: 1.09 miles Maintenance Area: 200
Area: Seminole Planning District: 13-Un-zoned

Watershed: Blackwater River-Perdido River Watershed

Stream Crossings: 0-Discharges to River Wetland Crossings: 1 - Large Wetland

Photo(s):



**Sediment in Ditch Flows to Blackwater River** 



**Sediment Noted in Ditch Outfall Discharges to Blackwater River** 

**General Description:** Kings Landing Road is located in Seminole west of Three Rivers Road. The road crosses a large wetland complex and terminates in the flood zone of Blackwater River. The road is located in the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido River Watershed. The primary use for the road is access to residential homes.

**Observation:** Kings Landing Road has been partially graveled and appears to be in good shape. However, over the years, the natural drainage of the road has been altered by private landowners. Instead of the stormwater from the north flowing south, it has been forced to flow in a small ditch to the west. The ditch cannot handle the stormwater from large rain events. The ditch is overwhelmed and has resulted in the road being washout into the river several times.

- 1. The EAC seek grant funds to purchase the property or land donations to allow the offsite drainage to be routed back to the original flow pattern. The land could be placed in a conservation easement and given to a local land trust.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Maintenance Area: 300 Road Name: Kleinschmidt Road Length: 1.0 miles Planning District: 22-Zoned

Area: Elberta

Watershed: Miflin Creek-Wolf Bay Watershed

Stream Crossings: 1 Wetland Crossings: 1

Photo(s):



Sediment in Wetlands at Road Culvert

General Description: Kleinschmidt Road begins at County Road 83 and continues west to County Road 87. The road crosses over Miflin Creek which is part of the Wolf Bay Watershed. The improvement of the road is listed in the watershed management plan as a management measure to improve waters quality. The primary use is access for agriculture fields.

**Observation:** The road crosses Miflin Creek which is a headwater of Wolf Bay Watershed. Substantial sediment was noted in the wetland adjacent to the stream.

- 1. Contact the NRCS regarding recommendations or incentives for the farmers to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Road Name: Lehman Road Length: .48 miles Maintenance Area: 300 Planning District: 13-Unzoned

Watershed: Negro Creek-Blackwater River-Perdido River Watershed

Stream Crossings: 1 Wetland Crossings: 1

Photo(s):



**Damage of Culvert System During Hurricane Sally** 

**General Description:** Lehman Road starts at Harms Road and runs west to the Baldwin County Beach Express. The road culvert system received extension damage during Hurricane Sally. The culvert replacement is scheduled for 2022. The road is located in the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido River Watershed. The primary use for the road is access to residential homes and agriculture fields.

**Observation:** Lehman Road crosses over an un-named Tributary to Negro Creek. The County recently repaired the culvert wash out and covered the road at the culverts with gravel for a distance to the east and west.

- 1. Contact the NRCS regarding recommendations or incentives for the farmers to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

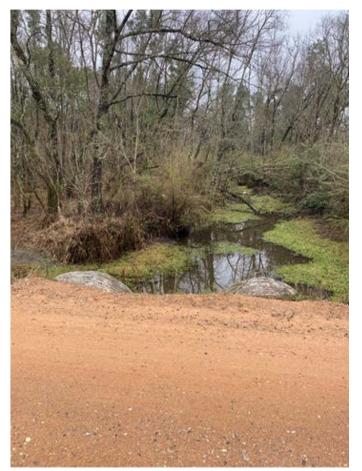
Maintenance Area: 300 Road Name: Malkoskie Road Length: 2.0 miles Planning District: 22-Zoned

Area: Elberta

Watershed: Narrow Gap Creek-Blackwater River-Perdido River Watershed

Stream Crossings: 2 Wetland Crossings: 5 (Derived from GIS Data)

Photo(s):



**Malkoskie Road Creek Crossing** 

General Description: Malkoskie Road runs from County Road 95 east to its terminus. The road is located in the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido River Watershed. It primary use is access to residential homes and agricultural fields.

Observation: The road surface is red clay. It crosses an unnamed tributary to Three-mile Creek and an unnamed tributary to Narrow Gap Creek. There are also numerous wetland crossings.

**Recommendation:** The BCEAC Dirt Road Subcommittee recommends the following:

Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

**Maintenance Area: 300** Length: 1.5 miles Road Name: Mannich Lane Planning District: 11-Unzoned

**Area:** Foley

Watershed: Eslava Branch-Magnolia River-Weeks Bay Watershed

**Stream Crossings: 1** Wetland Crossings: 3

Photo(s):



Sediment and Trash in Headwaters of Eslava Branch



**Red Clay Base Road** 

**General Description:** This segment of Mannich Lane is between Lipscomb Road and County Road 9 (Woodhaven Road). The road's primary use is access to residential homes and agriculture fields. The road is located in the Magnolia River Watershed and its improvement is listed in the Watershed Management Plan as a management measure to improve water quality.

**Observation:** The surface is primarily red sandy material with some gravel surface treatment. The road is a major dumping ground. Erosion was noted along the length of the road leading to impacts to Eslava Branch and its wetlands.

- 1. Due to its location and road connectivity, pave the road.
- 2. If not feasible, stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.
- 3. It is recommended that the BCEAC & BCHD work with the County Solid Waste Department to address illegal dumping.

Road Name: Newman Road Length: .39 miles Maintenance Area: 300 Planning District: 21-Zoned

Watershed: Baker Branch-Pole Cat Creek-Fish River-Weeks Bay Watershed

Stream Crossings: 0 Wetland Crossings: 2

Photo(s):



Sediment Impacts to Wetlands Adjacent to Baker Branch

**General Description:** Newman Road runs from County Road 55 to a single-family residence. The primary use for the road is access to residential homes and agriculture fields. Newman Road is in the Weeks Bay Watershed and stabilizing this road is listed in the Watershed Management Plan as a management measure to improve water quality in watershed.

**Observation**: Newman Road has some gravel for stabilization but continues to erode into the wetland area that discharges to Baker Branch.

**Recommendation:** The BCEAC Dirt Road Subcommittee recommends the following:

Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Maintenance Area: 300 Road Name: Norris Lane Length: 2.2 miles Planning District: 21-Zoned

Area: Foley

Watershed: Weeks Creek-Magnolia River-Weeks Bay Watershed

Stream Crossings: 1 Wetland Crossings: 4 (Derived from GIS Data)

Photo(s):







Trash and Sediment Noted in Headwaters of Weeks Creek

General Description: The segment of Norris Road that was evaluated for this study was the section Norris Lane that starts at Laurant Road and runs to County Road 12. The road continues south to County Road 16. The primary use for this road is access to residential homes and agricultural fields. The road is located in the Weeks Bay Watershed and stabilizing this road is listed in the Watershed Management Plan as a management measure to improve water quality in the watershed.

**Observation:** Significant amounts of sediment were present in the stream crossings including Weeks Creek. This road segment appears to require constant maintenance to the roadway and ditches, resulting in continued impacts to the streams. Sediment and trash were noted in the stream channel and wetlands.

- 1. Turnouts relocated such that they discharge to upland areas where possible.
- 2. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.
- 3. It is recommended that the BCHD work with the County Solid Waste Department to address illegal dumping

Road Name: Paul Cleverdon Road Length: 1.5 miles Maintenance Area: 300 Planning District: 18-Unzoned

Watershed: Baker Branch-Pole Cat Creek-Fish River-Weeks Bay Watershed

Stream Crossings: 1 Wetland Crossings: 1

Photo(s):



**General Description**: Paul Cleverdon Road starts at County Road 34 (Hoffman Road) and runs south terminating at CR 32, for a distance of 1.5 miles. The surface material is sandy clay with reddish sandy clay being used for fill and repair. The road primarily serves agricultural land (sod farms) and some residential. The road is located in the Weeks Bay Watershed and stabilizing this road is listed in the Watershed Management Plan as a management measure to improve water quality in the watershed.

**Observation:** This segment has two stream crossings (tributaries to Baker Branch) and one large wetland crossing. Erosion was present at the culvert crossing and sediment plumes were observed downstream. No significant impacts to wetlands were identified.

- 1. Due to its location and road connectivity, the road be paved.
- 2. If not feasible, stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Road Name: Peter Morris Road Length: 3.1 miles Maintenance Area: 200
Area: Robertsdale Planning District: 13-Unzoned

Watershed: Dry Branch-Elam Creek-Styx River-Perdido River Watershed

Stream Crossings: 0 Wetland Crossings: 6-Adjaent-Wetlands Parallel Road

Photo(s):



**Road Eroding into Wetland Bottom** 

**General Description:** Peter Morris Road runs north from Linholm Road to Arlie Minchew Road and primarily provides access to timberlands. The road is mostly imported red clay with several wetland drainage crossings. As usual, the primary concerns are where the roadway crosses or is adjacent to wetland areas. The road runs between Dry Branch and Elam Creek which flow to Styx River. The road is located in the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido River Watershed.

**Observation:** Erosion was noted along the length of the road leading to wetland impacts, especially at turnouts and near culvert outfalls.

- 1. Contact the Alabama Forestry Commission regarding recommendations or incentives for the foresters to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Road Name: River Road CR 68 Length: 1.5 miles Maintenance Area: 200
Area: Robertsdale Planning District: 12-Zoned

Watershed: Reedy Creek-Styx River-Perdido River Watershed

Stream Crossings: 1 Wetland Crossings: 1

Photo(s):



**Erosion Noted at Reedy Creek Culvert** 

**General Description:** River Road runs west paralleling Styx River from its intersection with County Road 68 Extension to its terminus. The road crosses Flat Creek just south of where it joins Reedy Creek. The first 0.5-0.75 miles of the road lies within the floodplain of Styx River and appears to be frequently inundated. The road is located in the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido River Watershed. The primary use is access to residential homes and Styx River.

**Observation:** The road covering is a sandy-clay material and gravel. The road essentially serves as a channel for stormwater runoff from the area, delivering sediment to the stream and river. Water diversions discharge (terminate) directly to, or in close proximity to, the stream or river. River Road ranked high in the previous studies.

- 1. Relocation of the road to higher ground or significant engineering (fill, drainage, stabilization) will be required to eliminate the environmental concerns.
- 2. Temporary measures to reduce impacts could include removal of accumulated sediment, vegetative stabilization of exposed soils in the area surrounding the stream crossing.
- 3. Remove excess sediment located in turnouts which are located on each side of the stream crossing.

Maintenance Area: 300 Road Name: River Road North Length: .50 miles Planning District: 35-Zoned

Area: Foley

Watershed: Reedy Creek-Styx River-Perdido River Watershed

Stream Crossings: 0 Wetland Crossings: 1-Adjacent

Photo(s):



**Trash Noted on River Road North** 

General Description: The paved section of River Road North begins at County Road 12 and continues south to where it becomes a dirt road. This red base dirt road is located between two tributaries of Bon Secour River. The road is a frequent trash dump site. The road is located in the Bon Secour Watershed.

Observation: Sediment was noted in the wetland adjacent to River Road North which discharges to a tributary of Bon Secour River.

- 1. Due to its location and road connectivity, the road be paved.
- 2. If not feasible, stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.
- 3. It is recommended that the BC EAC & BCHD work with the County Solid Waste Department to address illegal dumping.

Road Name: Scranage Road Length: 6.4 miles Maintenance Area: 100
Area: Little River Planning District: 1-Unzoned

Watershed: Little River-Upper Tensaw River Watershed

Stream Crossings: 4 (Derived from GIS Data)

Photo(s):



**Turnout Discharges to Wetlands** 



**Road Adjacent to Wetlands** 



Illegal Dump on Road

**General Description:** Scranage Road is located in Little River and begins on State Hwy 59 and runs east 6.4 miles to where it becomes asphalt just east of Hill Road. The road runs between wetlands for the majority of its length.

**Observation:** Erosion was noted along the road leading to wetland impacts, especially at turnouts and near culvert outfalls.

- 1. Contact the Alabama Forestry Commission regarding recommendations or incentives for the foresters to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts, may include but are not limited to, sediment traps, additional upland turn outs, etc.
- 4. It is recommended that the BCHD work with the County Solid Waste Department to address illegal dumping

Maintenance Area: 200 Road Name: Sonnie Lynn Lane Length: .88 miles Planning District: 13-Unzoned

Area: Robertsdale

Watershed: Cowpen Creek-Styx River-Perdido River Watershed

Wetland Crossings: 3 Stream Crossings: 0

Photo(s):



Sonnie Lynn Lane

General Description: Sonnie Lynn runs north from U.S. Hwy 90 to a dead-end road. The road is located in the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido River Watershed. The primary use for the road is access to residential homes, silviculture, and hunting properties.

**Observation:** The road crosses three wetlands. Sediment was noted in wetlands.

**Recommendation:** The BCEAC Dirt Road Subcommittee recommends the following:

Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts, may include but are not limited to, sediment traps, additional upland turn outs, etc.

Road Name: Still Road

Area: Bay Minette

Length: 2.1 miles

Maintenance Area: 100

Planning District: 5-Unzoned

Watershed: Hollinger Creek-Styx River-Perdido River Watershed

Stream Crossings: 1 Wetland Crossings: 1

Photo(s):



Road Turn Out Directed to Wetlands Adjacent to Hollinger Creek



**Sediment in Wetlands Adjacent to Hollingers Creek** 

**General Description:** Still Road begins at Old Brady Road and runs towards County Road 112. The road crosses Hollinger Creek which flows to the Styx River which is part of the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido River Watershed. The roads primary use is access to silviculture (forestry) properties.

**Observation:** The section of road near County Road 112 is steep resulting in erosion issues. Erosion was noted along the roadside ditches. The turnouts were directed to the wetlands. The wetlands along Hollinger Creek are heavily impacted by sediment.

**Recommendation:** The BCEAC Dirt Road Subcommittee recommends the following:

- 1. Contact the Alabama Forestry Commission regarding recommendations or incentives for the foresters to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts, may include but are not limited to, sediment traps, additional upland turn outs, etc.

When the Baldwin Beach Express Phase II is extended through this route, most of the problems can be eliminated or addressed.

Maintenance Area: 100 Road Name: TJ Earl Road Length: 3.9 miles Planning District: 1-Unzoned

**Area:** Little River

Watershed: Brickyard Creek, Flat Branch, Holly Creek, & Turkey Creek-Upper Tensaw Watershed **Wetland Crossings:** Multiple Crossings and Adjacent Wetlands **Stream Crossings: 4** 

Photo(s):



**Erosion at Culvert to Creek** 

General Description: TJ Earl Road begins at Highway 59 and runs north to Dixie Landing Road. A large portion of the road is within a flood zone. The road crosses four (4) creeks and numerous wetlands. The primary use of this road is access to hunting land and silviculture activities.

**Observation:** TJ Earl Road crosses four streams and numerous wetlands.

- 1. Contact the Alabama Forestry Commission regarding recommendations or incentives for the foresters to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Road Name: Truck Route (Trail) 17 Length: 5.6 miles Maintenance Area: 200 Planning District: 12-Zoned

Watershed: Flat Creek, Eight Mile Creek, Hollinger Creek-Styx River-Perdido River Watershed

Stream Crossings: 5 (Derived from GIS Data)

Photo(s):



**Sediment Noted in Wetlands** 



**Sediment Noted on Bridge** 

General Description: Truck Route (Trail) 17 consists of 2.74 miles of paved surface (from County Road 49 eastward to Steelwood) and 5.6 miles of County maintained unimproved surface. The road serves timber lands, hunting, agricultural, and a few residential properties on the east end. The road surface is primarily sandy clay with gravel treatment in several areas. The road crosses streams in at least eight locations including Styx River, Reedy Creek, Flat Creek, Hollinger Creek, and Eightmile Creek. It also crosses numerous wetlands in other locations. Truck Route (Trail) 17 scored high in previous reports. It was the #1 environmentally damaging road in the 2010 report. The road is located in the Perdido River Watershed. Currently, there is not a watershed management plan for the Perdido River Watershed.

**Observation:** The Truck Route (Trail) 17 covering is a sandy-red clay material. Erosion was noted along the road and ditches. Impacts were noted in the creek and wetlands.

- 1. Contact the Alabama Forestry Commission regarding recommendations or incentives for the foresters to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including roadway and ditch with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings five hundred feet or a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Maintenance Area: 300 Length: 2.3 miles Road Name: Woerner Road Planning District: 22-Zoned

Area: Elberta

Watershed: Miflin Creek-Gulf Frontal Watershed & Three Mile-Black-Water-Perdido Bay Watershed Wetland Crossings: 4 **Stream Crossings: 2** 

Photo(s):



**Sediment Noted in Creek** 



**Sediment in Wetlands** 

**General Description:** Woerner Road begins at County Road 87 and runs west crossing County Road 83 passing Haber Road then turns north and dead ends. The road crosses Miflin and Three Mile Creek and their wetlands. The roads primary use is for access to residential homes and sod farms.

**Observation:** Woerner Road has been graveled at the intersections of CR 87 & 83. This helps prevent tracking onto the paved roads. However, the creek and wetland crossing have a clay surface. Erosion was noted along the ditches, and sediment was noted in wetlands and the creek.

- 1. Contact the NRCS regarding recommendations or incentives for the farmers to allow for additional vegetated buffers along the right-of-way especially near creeks and wetlands.
- 2. Turnouts relocated such that they discharge to upland areas where possible.
- 3. Stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts may include, but are not limited to, sediment traps, additional upland turn outs, etc.

Maintenance Area: 300 Road Name: Wolf Field Road Length: 1.0 miles Planning District: 32-Zoned

Area: Elberta

Watershed: Spring Branch-Perdido Bay Watershed

Wetland Crossings: 2 Stream Crossings: 2

Photo(s):



**Coastal Wetlands Adjacent to Road** 

General Description: Wolf Field Road stretches from Josephine Drive north to its terminus. The road surface is covered by red clay with some gravel treatment. It serves residential and vacant properties. At its northern end it crosses Spring Branch. There is also a crossing of an unnamed tributary of Roberts Bayou with adjacent wetlands. The southern end of the road drains directly into Roberts Bayou.

Observation: Wolf Field Road is relatively flat. The BCHD has placed gravel along the northern and southern portion of the roads which has reduced impacts to paved connector roads, the creek and wetlands. However, sediment was noted in the adjacent wetlands.

**Recommendation:** The BCEAC Dirt Road Subcommittee recommends the following:

Due to the close proximity to coastal wetlands and streams, stabilize the entire right-of-way including the roadway and ditches, with appropriately sized rock. If not feasible, stabilize the rights-of-way on each side of the stream and wetland crossings for a distance to be determined by engineering analysis. Possible solutions to be considered to minimize stream and wetland impacts, may include but are not limited to, sediment traps, additional upland turn outs, etc.

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### **Acronyms**

**ADEM** Alabama Department of Environmental Management

**ALDOT** Alabama Department of Transportation

**BCC** Baldwin County Commission

**BCEAC** Baldwin County Environmental Advisory Committee

**BCHD** Baldwin County Highway Department

**BMP** Best Management Practice

**CEA** Certified Environmental Auditor

**CPESC** Certified Professional in Erosion and Sediment Control

**CIAP** Coastal Impact Assistance Program

**CWA** Clean Water Act - aka - Federal Water Pollution Control Act

**EPA** U.S. Environmental Protection Agency

**GIS** Geographic Information System

NRCS Natural Resources and Conservation Service

**QCI** Qualified Credentialed Inspector (an ADEM designation)

REPA Registered Environmental Property AssessorNPDES National Pollutant Discharge Elimination System

**USDA** United States Department of Agriculture

### **Subcommittee Members**

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