

**THE 25 MOST ENVIRONMENTALLY
DAMAGING DIRT ROADS
IN BALDWIN COUNTY**



**The Baldwin County
Environmental Advisory Board
December, 1998**

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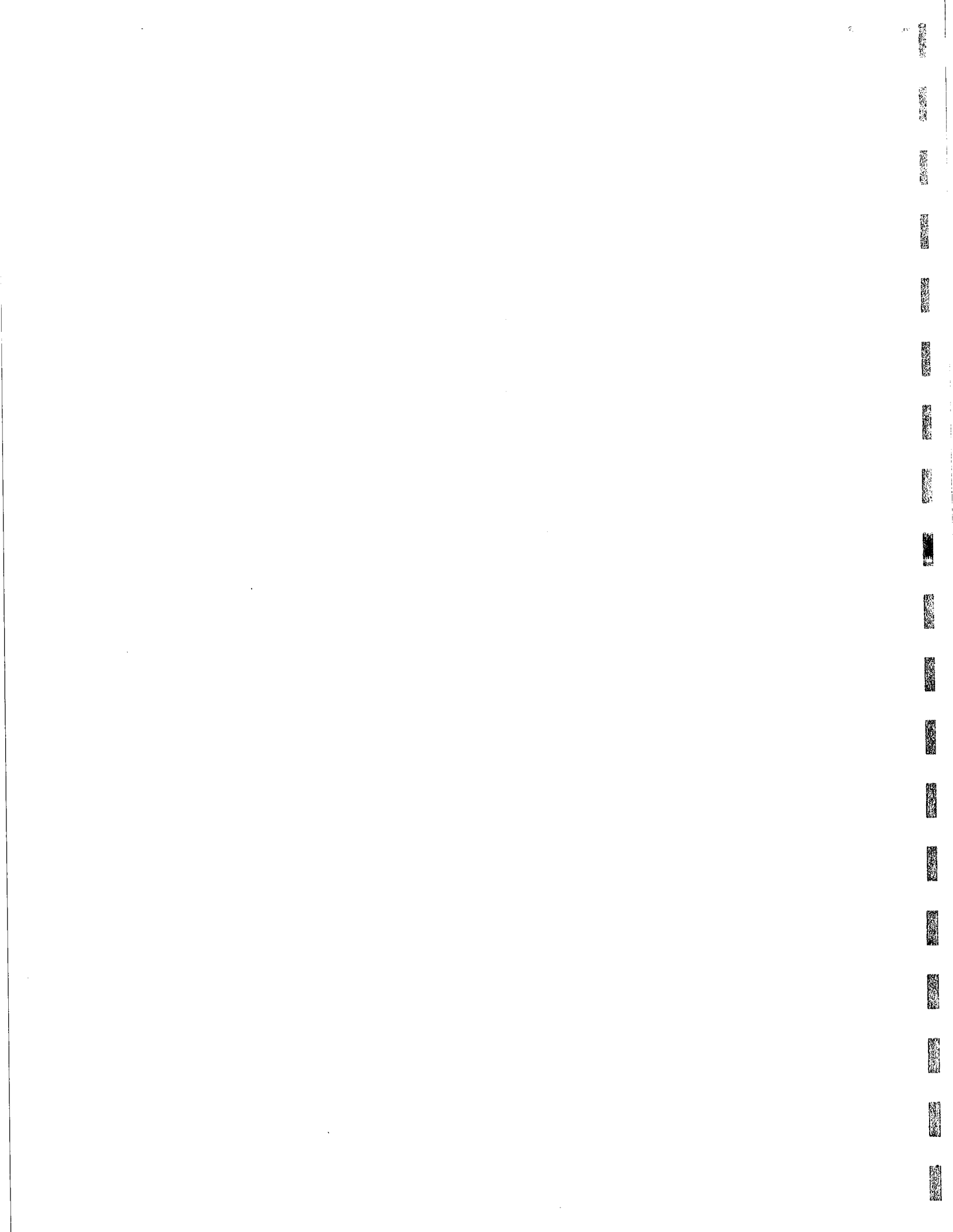
(Listed in order of severity of environmental impact with the most severe at the top of the list and the lesser at the bottom.)

Truck Trail 17
River Road (Styx River)
Buck Phillips Road
Bromley Road
Durbin Fork Road
T.J. Earl Road
Langford Road
John Bloch Road
Vaughn Road (Seminole)
Linholm Road
Newberry Bluff Road
Lajune (Old Styx River) Road
Crawford Road
Dyas Road
Scranage Road
Blakeley River Road
Duck Road (Barrineau Park)
Holley Creek Road
Blakeley Road
Still Road
Grigger Road
Sherwood Highland Road
Miller Pit Road
Old Battles Road
Beasely Road



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INTRODUCTION: This report was prepared by the Baldwin County Environmental Advisory Board at the request of the Baldwin County Commission. It lists what the Advisory Board believes to be the 25 worst dirt roads in Baldwin County from an environmental standpoint. It includes some general observations made during the study that pertain to the entire dirt road system of the County as well as a few recommendations concerning policy matters that the Commission may wish to consider. Also included are descriptions of each road listed along with some broad recommendations for treating environmental problems. Table 1 provides summary data for each road. Table 2 identifies the waters effected.

The project was undertaken by Jerome B. "Jerry" Knaebel, a Civil Engineer with over 35 years of experience directly related to dirt roads. Mr. Knaebel received his B.S. degree in Civil Engineering in 1958 and spent his entire career with the U.S. Forest Service. From 1982 to 1988 he was assigned to the Agency's headquarters in Washington D.C. where he was responsible for the planning, operation and maintenance of the Forest Service 355,000 mile transportation system. From 1988 until his retirement in 1993, he was the Director of Engineering for the Forest Service Southern Region headquartered in Atlanta. For many years Mr. Knaebel was actively involved with Forest Service research scientists and with the Transportation Research Board, an agency of the National Academy of Sciences, in studies aimed at reducing the environmental impact of roads. The objectives of most of these studies focused on reducing erosion and sediment from dirt roads. Mr. Knaebel now resides in Baldwin County

THE SITUATION: The Baldwin County road system includes approximately 975 individual dirt roads consisting of nearly 600 miles. This translates into nearly 2200 acres of bare, easily eroded material that is constantly churned by traffic, and is in an area of heavy rainfall, dense drainage patterns, and sensitive marine and estuary ecosystems. For this reason, dirt roads are thought to have some of the greatest potential for environmental damage in the county. Not only are they subject to severe erosion, but because they cross numerous streams and wetlands, any eroded material is discharged directly into the waters of the County.

GENERAL OBSERVATIONS: Following are a few general observations that became apparent during this project along with a few recommendations that the County may wish to consider:

1. It is apparent that most of the environmental problems with dirt roads occur along grades that approach live stream crossings. 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. Erosion becomes an immediate effect. Attempts to reduce the problem have been focused on maintenance factors rather than tackling the fundamental problem of controlling drainage. Most efforts include trying to stabilize the surface with crushed rock, pavement or other treatment, or attempting to reduce ditch erosion through the use of coarse rock lining or concrete headwalls. It became apparent during this study that treating one element of the road by itself generally failed. Where the road surface was treated, the ditch continued to fail thus destroying the surface treatment and vice versa. Success was only achieved when all elements of the road were treated so that one treatment reinforced and supported the other. That is, both the surface and the ditch were treated simultaneously, but not necessarily with the same technique. Where rock may be the most cost effective technique for the surface, the ditches may require widening,

flattening of slopes and vegetation. Good examples of treating the road surface and drainage as a composite exist throughout the County along its paved roads where the surface has been paved and the drainage stabilized.

In the discussion of each individual road that follows, some general recommendations are made, however a precise prescription for each site requires more detailed engineering evaluation. For example, one frequent recommendation is to "stabilize the road surface by the most cost effective means". Numerous techniques are available, however, it is beyond the scope of this study to make the engineering determinations necessary to find the best solution.

2. This study found the Perdido Bay estuary and its tributary watersheds to be the waters most heavily impacted by dirt roads in Baldwin County. Twelve of the listed roads fall within the drainage area of the Perdido Bay estuary. Seven of these are in the Styx River watershed which has the highest concentration of publicly maintained dirt roads. Both the Styx and the Perdido Rivers also have dense networks of private dirt roads. The majority of those are used for logging purposes and nearly all suffer from lack of proper maintenance. To make any inroads into improving the environmental situation will require a public/private venture with common objectives. The County should consider:

A. Becoming more proactive in implementing recommendations of the Perdido Basin Management Strategies provided by the Perdido Bay Cooperative Management Project. Since this effort involves both Alabama and Florida, it will be much more difficult, however, the dirt road aspect can be dealt with despite that fact, especially in the Styx River watershed.

B. Be the catalyst for a joint effort between those responsible for public and private transportation systems to develop and implement a common set of best management practices aimed at reducing the impact of the dirt road system in both the Styx and Perdido River watersheds.

C. Consider entering into cooperative maintenance schedules whereby joint maintenance work by the county and private timber companies could be used to improve the efficiency of their respective maintenance programs.

3. Vigorously enforce the County Subdivision Regulations which require developers to improve and pave existing dirt roads serving their subdivisions. During this review the problems which stem from the absence of this policy became abundantly clear. Environmental damage caused by dirt roads increases disproportionately with use. What was once a minor problem becomes major as a result of increased use. When permanent residences are established the use is no longer discretionary or limited to fair weather. The road must now provide service during the worst of conditions as well as during favorable ones. The demands of home owners for improved roads will be substantial in the future. The new subdivision regulations will prevent further problems only if they are strictly applied without exception.

4. The County should reexamine its standards for drainage requirements in private driveway approaches to County roads, as it appears the current standards are inadequate or are not fully complied with. A common problem throughout the County on both dirt and paved roads alike

involved culverts that were inadequate to handle the water volume they were subjected to. In many cases, they were plugged, or so small that the water was forced to pond above them until they ultimately failed. In some areas where several driveways were present, they all failed in a domino fashion. In other circumstances, the approach culverts handled the water, but increased its velocity enough to start heavy ditch erosion. Culvert size and standards for proper installation need to be addressed.

5. During the course of this study, we reviewed a number of roads leading to the banks of the Tensaw River. Individually only a few are major problems, however, cumulatively the effect of all unpaved roads is more substantial. In view of the fact that most individual roads would be fairly low in priority for paving or improvement as part of the County's road program, perhaps some other source might be available. The Corps of Engineers have expressed an interest in watershed improvement projects, and since this involves a potentially high profile river, they might consider a project that would encompass all the roads involved

6. The old CC Road used to provide a connection between US 90 and US 98. However, past flooding washed out the Blackwater River Bridge and it has never been replaced. Apparently there are no plans to do so in the future. A portion of the old road near the bridge site has been abandoned by the County. Even though closed by a locked gate on the south, vehicles have found their way around it. Additionally, the old road continues to be a major contributor of damage to the river. Although the bridge itself has washed out, the old piles remain in the river. Debris is beginning to accumulate against these piles and they are expected to become a major obstruction. As river flow is diverted by the obstruction, significant damage to the river banks and downstream property can be expected. Again this problem is beyond the reach of the County Road program, however, it may be another legitimate watershed improvement project. At the very least, the old piles should be removed from the river. Perhaps prison crews could be used for this part of the job.

THE PROCESS: To provide some way to compare the environmental situation of each road, several criteria were established. For the purposes of this study, we chose to define environmental impact in terms of the damage a road inflicted upon the open waters of the county. We felt that streams, wetlands, lakes, ponds and estuaries represented the most valuable as well as the most sensitive natural resource, and at the same time provided an opportunity where the problem could be measured in some definitive way.

With the extensive nature of dirt roads throughout the County, it was impractical to visit each individual road to assess its environmental situation. County Engineer Thomas Granger was very helpful in providing data that formed the basis for an initial screening of all County maintained dirt roads. Data covering a 26 month period including all of fiscal years 1996 and 1997 and the first two months of 1998 was provided through the County Road Maintenance Cost Records. By applying the information in those records to several of the criteria, it was possible to develop a preliminary list of potential problem roads

Following are the criteria used in this project along with a description of how they were measured:

CRITERIA 1: Amount of sediment produced measured in cubic yards. Although there is no practical way to measure the actual sediment produced by each road, the Maintenance Cost Records showed the actual cubic yards of material hauled on each road. It was reasonable to assume that where material was hauled in to replace lost material, that would be a good indicator of the amount of material lost through erosion and therefore a relative measure of sediment produced.

CRITERIA 2: Waters impacted. Available maps were used to identify those roads that appeared to have the potential for impacting streams, ponds or estuaries. Final determination was made during on-site visits where a visual evaluation was made of impacts on:

- Wetlands
- Intermittent Streams
- Perennial Streams
- Ponds or Lakes
- Estuaries

CRITERIA 3: Frequency of damage. The Maintenance Cost Record provided two ways to measure frequency. The first was the number of times the road was bladed each year, and the other identified those roads that required annual repairs.

CRITERIA 4: Maintenance and repair cost. Cost of maintenance provides an indicator of the severity of damage as well as the frequency with which repairs must be made. Cost data was obtained directly from the Maintenance Cost Record. Since costs can vary substantially from year to year, for the purposes of this project, it is expressed as an Average Annual Cost Per Mile.

By applying the data found in the Maintenance Cost Records to Criteria 1, 3 and 4 we were able to identify 168 roads that warranted further review. The list was further reduced to 50 roads by applying arbitrary limits to the criteria. For example, listing only those facilities that exceeded 500 cubic yards of material hauled in any one year. (Initially 111 roads exceeded that limit.)

At this point potentially damaging roads had been identified based only on data. This list was then reviewed with each of the area maintenance superintendents. Based on personal knowledge of these maintenance personnel, several roads were dropped and others added. As a result, 69 roads consisting of 141 miles were identified for field review. Each road was driven and a mile post-by-mile post visual survey was made of the conditions as they existed at the time. The final list of the 25 worst roads is based upon that field review coupled with the data developed in the initial phase.

Since the list of roads relied somewhat on visual comparisons made during site visits it reflects to some degree the opinion of the reviewer and is therefore, far from precise. One road's standing over another is certainly arguable. Undoubtedly other roads exist in the County which may have more environmental consequences than those presented here, however, the list

provided reflects the best judgment of the Baldwin County Environmental Advisory Board based upon the information and resources available to it.

Table 1 summarizes the data from the various criteria applied to each road and identifies the waters of the County immediately effected.

Table 2 identifies the estuaries along with the principal watershed effected by each road.

TABLE 1: SUMMARY DATA

RANK	ROAD NUMBER	ROAD NAME	LENGTH MILES	MNTC. AREA	MAP PAGE	CRIT 1 TOTAL CY	CRIT. 3 TOTAL BLADING	CRIT. 4 AVE ANN \$/MILE	# of Intrmt Streams Effected	CRITERIA 2 # of Live # of Pond			# Of Wetlands Effected	WATERS EFFECTED
										Streams Effected	Streams Effected	Or Lakes Effected		
1	4200	Truck Trail 17	11.340	A200	21D5	712	116	\$6,128	10	6	0	7	Styx River	
2	4225	River Rd	1.490	A200	22F2	1,438	54	\$15,714	2	2	0	1	Styx River	
3	2380	Buck Phillips Rd	3.160	A100	2H4	1,609	22	\$3,543	3	3	1	3	Duff Cr (Little Rvr)	
4	3255&3685	Bromley Rd	6.561	A100	20B4	2,139	84	\$3,879	4	1	0	1	Bay Minette Cr.	
5	3630	Durbin Fork Rd	1.239	A100	17E3	2,483	36	\$5,783	1	1	0	1	Styx River	
6	2325	T J Earl Road	6.013	A100	5B2	2,682	81	\$7,898	3	3	0	2	Alabama River	
7	5575	Langford Rd	1.497	A200	26F5	1,105	57	\$5,589	2	2	0	1	Fish River	
8	7185	John Bloch Road	1.239	A300	35H2	824	51	\$5,125	1	1	0	1	Palmeto Cr	
9	4525	Vaughn Rd (Seminole)	1.378	A200	29H4	744	48	\$20,210	2	2	0	1	Blackwater River	
10	4135	Linholm Rd	3.947	A200	22G5	879	96	\$2,828	1	3	0	2	Styx River	
11	3215	Newberry Bluff Rd	0.369	A100	15H5	433	16	\$13,731	2	2	0	1	Tensaw River	
12	3740	Lajune Road	0.926	A100	21A2	66	37	\$3,034	1	1	0	1	Styx River	
13	7085	Crawford Rd	0.748	A300	39B5	314	36	\$2,867	1	1	0	1	Wolf Bay	
14	1470	Dyas Rd	2.462	A100	13B6	435	70	\$2,422	1	1	0	3	Dyas Cr	
15	2415&2420	Scranage Rd	8.802	A100	5B5	881	43	\$1,353	1	1	0	2	Horseneck Cr	
16	3885	Blakeley River Rd	0.531	A100	49E5	13	4	\$11,300	1	1	0	1	Blakeley River	
17	4185	Duck Rd (Barrineau Park)	2.773	A200	23D6	754	41	\$2,131	1	1	0	1	Perdido River	
18	2310	Holley Creek Rd	5.621	A100	4D5	1,314	43	\$1,352	3	1	0	2	Holley Cr	
19	3250	Blakeley Rd	0.780	A100	19A6	802	21	\$5,873	1	1	0	1	Tensaw River	
20	3500&3505	Still Road	2.512	A100	17A4	615	47	\$2,884	1	1	0	1	Hollinger Cr	
21	4115	Grigger Rd	2.417	A200	22E6	601	59	\$2,153	1	1	0	1	Eightmile Creek	
22	5800	Sherwood Highland Rd	1.321	A200	32E3	1,399	56	\$4,584	2	0	1	1	Fish River	
23	8080	Miller Pit Rd	0.198	A300	32B6	0	19	\$1,158	1	0	0	1	Fish River	
24	5665	Old Battles Rd	0.980	A200	31A6	917	45	\$6,791	2	1	0	1	Point Clear Cr	
25	8205	Beasley Rd	1.513	A300	33F2	1,096	44	\$3,392	1	1	0	1	School House Branch	

Criteria 1: The total number of cubic yards of material hauled on the road during the 26 month period of the study.

Criteria 2: The number and type of waters effected.

Criteria 3: The number of times the road was bladed during the 26 month period of the study.

Criteria 4: The total of all recorded costs for maintenance and repair during the 26 month period of the study reduced to an average annual cost

TABLE 2. ESTUARIES EFFECTED

RANK	ROAD NUMBER	ROAD NAME	ESTUARY EFFECTED
1	4200	Truck Trail 17	Perdido Bay via Styx River
2	4225	River Rd	Perdido Bay Via Styx River
3	2380	Buck Phillips Rd	Mobile Bay via Little Rvr. & Alabama Rvr.
4	3255&3685	Bromley Rd	Bay Minette via Bay Minette Cr.
5	3630	Durbin Fork Rd	Perdido Bay via Styx River
6	2325	T.J. Earl Road	Mobile Bay via Alabama River
7	5575	Langford Rd	Weeks Bay via Fish River
8	7185	John Bloch Road	Perdido Bay via Palmeto Cr.
9	4525	Vaughn Rd (Seminole)	Perdido Bay via Blackwater River
10	4135	Linholt Rd	Perdido Bay via Styx River
11	3215	Newberry Bluff Rd	Mobile Bay via Tensaw River
12	3740	Lajune Road	Perdido Bay via Styx River
13	7085	Crawford Rd	Wolf Bay via Hammock Cr.
14	1470	Dyas Rd	Perdido Bay via Perdido River
15	2415&2420	Scranage Rd	Mobile Bay via Little Rvr. & Alabama Rvr.
16	3885	Blakeley River Rd.	Mobile Bay via Blakeley River
17	4185	Duck Rd (Barrineau Park)	Perdido Bay via Perdido River
18	2310	Holley Creek Rd	Mobile Bay via Alabama River
19	3250	Blakeley Rd	Mobile Bay via Blakeley River
20	3500&3505	Still Road	Perdido River via Styx River
21	4115	Grigger Rd	Perdido River via Styx River
22	5800	Sherwood Highland Rd	Weeks Bay via Fish River
23	8080	Miller Pit Rd	Weeks Bay via Fish River
24	5665	Old Battles Rd	Mobile Bay via Point Clear Cr.
25	8205	Beasley Rd	Weeks Bay via Magnolia River

DESCRIPTION OF INDIVIDUAL ROADS

ROAD NAME: TRUCK TRAIL 17

LENGTH: 11.340 miles

COUNTY INVENTORY NUMBER: 4200, 4201 & 4202

ENVIRONMENTAL RANKING: 1

GENERAL DESCRIPTION: Truck Trail 17 is by far the most environmentally damaging dirt road in Baldwin county because of its length and the number of sites directly impacted. In its 11.34 miles it directly impacts 6 perennial streams, 10 intermittent streams and 7 wetlands or flood plains. Eroded sediments are generated throughout its length and much of that material is deposited directly into streams and wetlands.

Truck Trail 17 begins at its junction with County Road 49 north of Loxley and runs in an easterly direction to its junction with County Road 64 near Gateswood. It is probably the only publicly owned dirt road in Baldwin County still functioning as an east-west, cross County connecting route. Its principal use has been for logging and farm access. A new subdivision is under development on the western end, and farming is the predominate use along the eastern end.

The western 2.2 miles have been totally relocated and reconstructed. It serves as access to a new subdivision and is to be paved with financial participation from the developer. The next 7.7 miles crosses timber lands and is used primarily for that purpose. No residences were present along this section of road, but some exist on roads tributary to it. The last 1.4 miles crosses farm land with two farm residences near the eastern end.

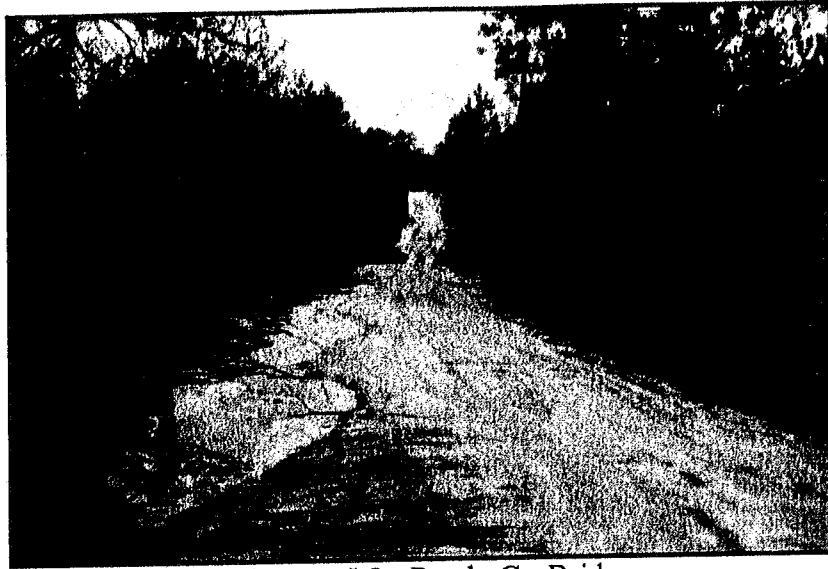
Most early dirt roads, particularly those used for logging purposes, were located on high ground and ran parallel with the drainage. In contrast, the east-west track of Truck Trail 17 cuts directly across the north-south drainage pattern of the Styx River watershed. This accounts for the large number of streams and wetlands effected. As the road approaches a stream, its increased grade contributes to excessive ditch and surface erosion. The resultant sediments are usually delivered directly to the stream crossings. Lead off ditches have been constructed to direct runoff away from streams, but these become ineffective in short order as they quickly fill with sediment.

LOCATION OF PROBLEM AREAS: Actually, the entire road can be called a trouble spot since erosion occurs along its entire length. Only the most severely impacted sites are described below.

Mile Post 2.6 - Roans Cr. Bridge: Road grade slopes directly to stream. Eroded material from road surface and ditches move directly to the stream and its flood plain. Large quantities of sediment are stored on the flood plain.

Mile Post 3.5 - Styx River Bridge: Extremely heavy ditch erosion occurs on both approaches to the river crossing. This site has been heavily impacted over the years. Lead off ditches are full of stored sediment and many terminate directly on the bank of the river. The Styx River flood plain at this location is approximately 0.3 mile wide and is totally covered with eroded material.

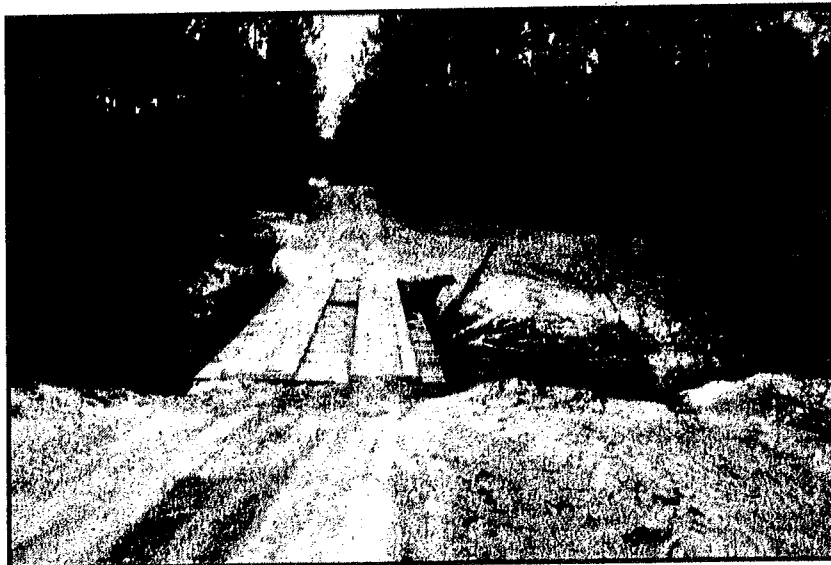
Mile Post 5.5 - Fork of Reedy Cr: Stream crossing is a plugged culvert. This site suffers from the same problem as previous sites.



Mile Post 5.8 - Reedy Cr. Bridge

Same problem exists at the Reedy Creek Crossing as at previous sites. Nearly 1/2 mile of severe ditch erosion was noted. This material all moves directly to Reedy Cr. Also noted in this general area were a number of logging roads tributary to Truck Trail 17, and which direct drainage to it, thus compounding the erosion problem.

Mile Post 6.9 - Crossing of Flat Cr: Typical of other impacted sites. The small bridge here was inadequate and the road was breached during a spring storm.



Mile Post 8.4 - Hollinger Cr. Bridge

Hollinger Creek is a severely impacted site with road grades and ditches discharging sediments directly in the stream and adjacent flood plain.

Mile Post 10.0 to 10.25: This section of road has worn down to the point where it is nothing more than a trench 4 to 6 feet deep. Since there is no where for water to drain, the ditches on each side have eroded another 2 to 3 feet. The road is so narrow at this point, that farmers most likely have difficulty maneuvering equipment through it.

Mile Post 11.1: Very serious ditch erosion. The ditch has eroded so badly that buried utility lines have become exposed.

RECOMMENDED CORRECTION OR REPAIRS: In summary, nothing short of relocation and reconstruction will cure the problems associated with this road. Currently the alignment is straight and rolls over the terrain. Relocation on a contour will flatten the road and ditch grades as they approach stream crossings. Stabilizing the roadway will do little without equal attention being paid to the ditches.

ROAD NAME: RIVER ROAD

LENGTH: 1.49 Miles

COUNTY INVENTORY NUMBER: 4225

ENVIRONMENTAL RANKING: 2

GENERAL DESCRIPTION: The River Road begins at its junction with County Road 68 Ext. (Brady Road) and runs westward paralleling the Styx River. It terminates in a small unnamed community. It is a troublesome road in that it lies in the flood plain of the Styx River and is inundated annually. Although the community is located on high ground, the flooded access road leaves residents stranded on a regular basis.

LOCATION OF PROBLEM AREAS: The first 0.7 miles is located entirely in the flood plain and is a source of sediment for its entire length. Frequent "lead-off" ditches have been cut through the stream bank to facilitate drainage of the road, however, they also serve as conduits for discharging sand and sediments directly in the river. These are located every few hundred feet along the first 0.7 miles.



Mile Post 0.3 - Flat Creek

The road crosses Flat creek at Mile Post 0.3 and shows signs of frequent breaching. Several bridges at this location have washed out, and since have been replaced with a culvert. It appears that this may be a very temporary fix.

RECOMMENDED CORRECTION OR REPAIRS: Total relocation of the road to higher ground would seem to be the only reasonable solution to this perennial sore spot.

ROAD NAME: BUCK PHILLIPS ROAD

LENGTH: 3.160 Miles

COUNTY INVENTORY NUMBER: 2380

ENVIRONMENTAL RANKING: 3

GENERAL DESCRIPTION: The Buck Phillips Road begins at its junction with State Highway 59 near the Little River Community. It then runs east, then south, then east again and dead ends near Whitney Mill Branch, a tributary of Little River. This route primarily accesses undeveloped timber land. The soil type is highly erosive, which when coupled with the rolling nature of the route results in severe erosion of ditches or any other place where water concentrates. In some areas concrete headwalls and catch basins have been placed at culvert heads to control the severe ditch erosion. For the most part, they have been relatively ineffective. Other efforts have been attempted such as the asphalt ford at Mile Post 2.6, but it too has met with limited success. In one location the ditch has been lined with rock. This was probably the most effective treatment, but still not totally successful.

LOCATION OF PROBLEM AREAS:

Mile Post 0.25 - Culvert crossing of unnamed stream: This is most likely an intermittent stream, however it is filled with sand that has eroded from the road surface and ditches. Several lead off ditches have been constructed in an attempt to divert runoff before it reaches the stream, however, these have all filled with sand and the material now moves directly to the stream and its flood plain.

Mile Post 0.6 - An example of extreme ditch erosion: The ditch has scoured 3' to 5' deep in this area. Although the road surface has been stabilized with gravel, the ditch was not adequately protected and remains a major problem. All eroded material moves through a cross drain and toward Duff Creek which is a tributary of Little River.

Mile Post 0.7: This is the section of road where large stone has been placed in approximately 0.1 mile of ditch along the left side. Although somewhat effective there is still active erosion especially in the ditch on the right side of the road and on the road surface. Eroded material is filling a small wetland at mile post 0.8 and on into Duff Cr. at mile post 0.9.

Mile Post 1.0: One of the concrete headwall/catch basins is located here, however, ditch erosion is still severe in both directions from it. Indications are that the structure has failed and most runoff is probably flowing past it.

Mile Post 1.3: Culvert cross drain in intermittent stream. Ditches in both directions from the culvert are filled with sand. The stream itself shows signs of down cutting which may be an indicator that the culvert is too small or that an outflow energy dissipater is needed.

Mile Post 2.5: An intermittent stream is located here. As is the case throughout this road, the ditches are filled with sand and the eroded material is all accumulating in the stream bed.

Mile Post 2.6: This is the location of the asphalt ford mentioned above. This site shows signs of repeated washouts.



Mile Post 0.6- Extreme ditch erosion.

RECOMMENDED CORRECTION OR REPAIRS: Solving the environmental problems on the Buck Phillips road will require a considerable investment. Because of the erosive nature of the soil, grades that result from the rolling terrain are the principle cause of most of the problems. Evidence suggests that structural measures such as the concrete headwalls and asphalt fords are basically ineffective and are themselves maintenance problems. The most positive effect can be gained by relocating sections of the road on a contour to eliminate grades. Although this may seem to be a drastic and expensive measure, it may prove to be the most economical and reliable in the long run.

ROAD NAME: BROMLEY ROAD

LENGTH: 6.561 Miles

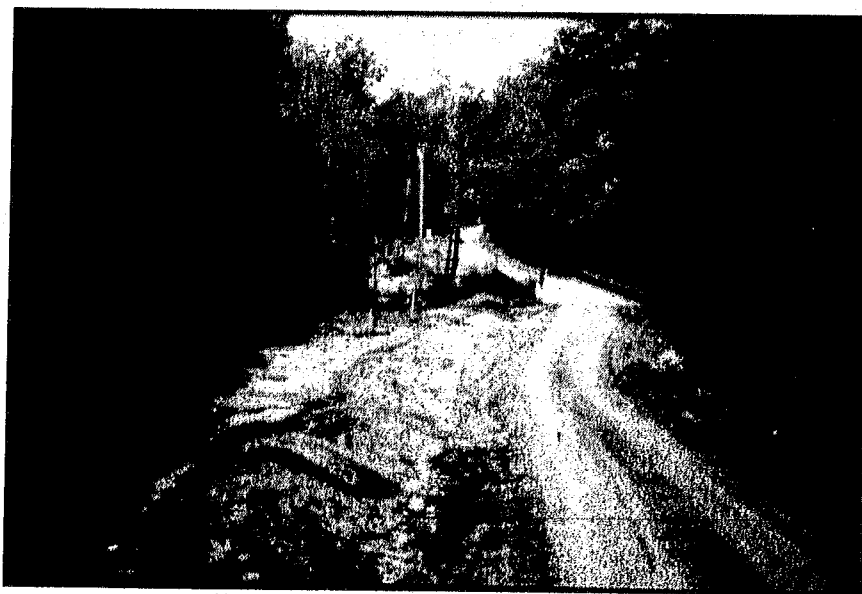
COUNTY INVENTORY NUMBER: 3255 & 3685

ENVIRONMENTAL RANKING: 4

GENERAL DESCRIPTION: The Bromley Road begins at its junction with State Highway 225 near Blakeley and travels east to its junction with U.S. Highway 31 at Stapleton. It provides access to the old community of Bromley at Mile Post 2 on the western end as well as to newer subdivisions on the eastern end. The road crosses rolling terrain which introduces grades that wash badly, particularly along the ditch lines. From Bromley heading east the road follows high ground and is away from live streams. It does, however, cross a number of dry draws and intermittent streams where ditch born sediments are stored. Since these draws form the head waters of tributaries to Bay Minette Cr., this sediment will eventually move to that stream.

LOCATION OF PROBLEM AREAS: The most severe problems occur in the western portion adjacent to Bay Minette Cr.

Mile Post 1.5 - Beginning of 0.1 mile grade dropping into Bay Minette Cr.: There is extremely heavy ditch erosion occurring along this section. In some places the ditch scour is 4 to 5 feet deep. All the eroded material is delivered directly to Bay Minette Cr.



Mile Post 1.6 - Bay Minette Cr. Bridge

Grades approach this stream crossing from both directions and severe erosion from both the road surface and ditches discharge sediment directly into Bay Minette Creek. Extensive deposits of sediment also cover the flood plain adjacent to the stream. This is the highest impact site on the Bromley Road.

Mile Post 2.3: At this point there is an old logging unit that has active gully erosion. This is impacting the road and contributes to excessive ditch erosion. A change in soil type is evident here.

Mile Post 3.0: Large deposit of eroded material is accumulating in the head of a dry draw. This is typical of at least four locations along the road.



Mile Post 3.7 - Ditch Erosion

Extreme ditch erosion occurs along 0.1 mile at this location. Eroded material is moving out into what appears to be the head of an intermittent stream.

RECOMMENDED CORRECTION OR REPAIRS: The first two miles should be a high priority for reconstruction and paving with equal attention to be paid to stabilizing the ditches. This would serve the community of Bromley well and cure the most severe environmental problems. Also, the last mile of dirt road on the east end would benefit from paving. This is a classic example of past weaknesses in the County subdivision regulations which permitted developers to subdivide land without upgrading the road system to meet the needs of the added use. Ditch stabilization and possibly limestone surface is recommended for the intervening 3.6 miles.

ROAD NAME: LANGFORD ROAD

LENGTH: 1.497 Miles

COUNTY INVENTORY NUMBER: 5575

ENVIRONMENTAL RANKING: 7

GENERAL DESCRIPTION: The Langford Road begins at its junction with County Road 48 and travels northward to State Highway 104 between Silverhill and Fairhope. Its junction with county Road 48 is within a few hundred feet of Fish River, and it crosses two streams that flow into Fish River. It has been previously identified as a major contributor of sediment in the Weeks Bay watershed. As is the case with most problem roads, inadequate drainage and heavily eroded ditches are the principal problems. Since there are several residences along the road, it should be a prime candidate for upgrading and paving.

LOCATION OF PROBLEM AREAS: The most severe problems are in the first 0.8 miles north of the County Road 48 junction.

Mile Post 0.0 to 0.1: Both road surface and ditch erosion are severe in this area. All eroded material moves directly to County Road 48, the into Fish River. This is a high impact site.

Mile Post 0.5 - Crossing of small stream: Extreme ditch erosion for 0.3 miles moves sediment directly to this small stream and its flood plain.

Mile Post 0.5 to 0.8: As mentioned above, this stretch of road experiences severe ditch erosion as well as erosion of the road surface. Two factors seem to contribute to the ditch cutting. The first is the narrow cross section of the ditch which confines water and increases its velocity. The other involves several private drives that cross the ditch with inadequate culverts. Being too small, they easily fill with sediment and are unable to carry runoff. They either fail or increase water velocity sufficiently to cause down stream erosion.

RECOMMENDED CORRECTION OR REPAIRS: Because of its impact and service to adjacent residents, this road should be a high priority for reconstruction and paving. Stabilizing the road surface will help, however, serious attention must be given to stabilizing the ditches. They should be widened and the side slopes flattened. Culverts in private drive approaches should be increased in size to accommodate runoff.

ROAD NAME: JOHN BLOCH ROAD

LENGTH: 1.239 Miles

COUNTY INVENTORY NUMBER: 7185

ENVIRONMENTAL RANKING: 8

GENERAL DESCRIPTION: The John Bloch Road begins at its junction with Leiterman Road and travels north to its junction with County Road 26. The northern 0.5 miles are paved. The southernmost 0.4 miles are dirt with the middle portion being gravel. Several farms and residences are all concentrated along the northern 0.8 miles.

LOCATION OF PROBLEM AREAS: The principal area of concern is the crossing of Palmetto Creek at mile post 0.4 and the 0.6 miles leading to it from the north. Palmetto Cr. forms an arm of Perdido Bay less than a mile below this crossing.

The crossing of Palmetto Cr. has been a problem area for years. Culverts have repeatedly failed and the crossing reverted to a ford for several years. Recently a new culvert was installed and the roadway over it was paved in an attempt to stabilize it. Even so, the road was still breached on the north side of the culvert.



Heavy ditch and surface erosion.



Eroded material fills Palmetto Cr. flood plain.

Contributing to the problem is the very severe ditch erosion that takes place along the 0.6 miles of road to the north. Although the roadway surface was stabilized with crushed limestone, the ditches continued to erode so heavily that it undercut the gravel and took the treated surface with it. In some areas the road shoulder was completely destroyed and the surface reduced to one lane. As a result drainage ceased to function and the roadway was breached. All this material has been deposited directly into Palmetto Cr. and its flood plain.

RECOMMENDED CORRECTION OR REPAIRS: Paving the remaining dirt section of John Bloch Road will certainly help, however, the ditches leading to Palmetto Cr. should be stabilized as well. They are the major contributor to the problem. The ditch cross section should be widened and the side slopes and bottom stabilized with rock or turf. Maintenance practices also need to be altered to prevent blading out any stabilization material.

ROAD NAME: VAUGHN ROAD (SEMINOLE)

LENGTH: 1.9 Miles (Note: The County inventory lists this road as 1.378 miles, however, the actual logged length was 1.9 miles.)

COUNTY INVENTORY NUMBER: 4525

ENVIRONMENTAL RANKING: 9

GENERAL DESCRIPTION: The Vaughn Road in Seminole begins at its junction with US 90 west of the Seminole community and runs south south easterly. The first mile serves several residences and has been stabilized with limestone. The grade generally follows ridge tops with quit a bit of ditch erosion in places, however, any eroded material flows out into fields on high ground and does not appear to reach live water. The remainder of the road follows a down grade through farm land where it dead ends near the Blackwater River.

LOCATION OF PROBLEM AREAS: The most severe environmental problem occurs near the end of the road at Mile Post 1.5. A bridge and live stream crossing are at this location and the road follows a down grade for approximately 1/4 mile. Even though the road surface has been stabilized with limestone, the ditch is badly eroded. Sediments are discharged directly into the stream which then empties into Blackwater River.

At milepost 1.65 there is another small stream and wetland that lie between the road and Blackwater River. It too has been heavily impacted by sediment coming from the eroded ditches.

RECOMMENDED CORRECTION OR REPAIRS: Stabilize the ditches by the most cost effective means. In this case that might be widening, flattening side slopes and stabilizing with vegetation. Maintenance practices should be altered to prevent stripping vegetation out of the ditch line once it has become stable.

ROAD NAME: LINHOLM ROAD

LENGTH: 3.947 Miles

COUNTY INVENTORY NUMBER: 4135

ENVIRONMENTAL RANKING: 10

GENERAL DESCRIPTION: The Linholm Road begins at its junction with County Road 87 approximately 2 1/2 miles north of Interstate 10 and runs west to County Road 64 just north of the Styx River community. Its principal use seems to be access to farm and timber lands, but it also provides access to residences along the north bank of Styx River via the Goat Cooper Road. As is the case with Truck Trail 17, it runs perpendicular to the drainage pattern and crosses 3 streams that are tributary to Styx River. As is the case with any sand road in this area, the grades approaching each stream crossing are sources of considerable erosion.

LOCATION OF PROBLEM AREAS: Although erosion occurs all along this road, frequent lead-off ditches generally direct sediment out into the surrounding timber land. The most significant environmental problems occur at the stream crossings. Two large borrow pits exist along the road at Mile Posts 1.2 and 2.7. These pits probably contribute considerable sediment as well.

Mile Post 1.1 - Crossing of Elam Creek: Grades approaching the stream crossing have eroded badly, especially the ditch lines. Eroded material is discharged directly into Elam Creek. Its flood plain is totally filled with sand.

Mile Post 2.6 - Crossing of Dry Branch: Although in better condition than the crossing of Elam Creek, this site suffers from the same conditions that plague most stream crossings on dirt roads in the County. Sediment filled ditches deliver sand directly to the stream and its flood plain.

Mile Post 3.1 - Crossing of Eightmile Creek: This is a typical high impact site with severe surface and ditch erosion. All lead-off ditches are filled with sand which is moving directly into Eightmile Creek. The adjacent flood plain is totally filled as well.

RECOMMENDED CORRECTION OR REPAIRS: The western most 1.1 miles would definitely benefit from paving with special attention being paid to stabilizing ditches. The bridge at Eightmile Creek should be replaced. It is inadequate from both the standpoints of its being able to handle the stream flow and the traffic. The bridge deck is severely worn with loose and rotting running planks. A load limit has also been posted. The bridge shows signs of previous washout attesting to its hydraulic deficiencies. The Elam Creek crossing should be stabilized by the most cost effective means, however, the ditches need the most serious attention. Once the ditches are stabilized maintenance practices need to be altered to ensure they remain so.

ROAD NAME: NEWBERRY BLUFF ROAD

LENGTH: 0.369 Miles

COUNTY INVENTORY NUMBER: 3215

ENVIRONMENTAL RANKING: 11

GENERAL DESCRIPTION: The Newberry Bluff Road begins at its junction with the Cloverleaf Road near the Blakeley community. It runs in a northerly direction and provides access to a small subdivision overlooking the Tensaw River.

LOCATION OF PROBLEM AREAS: Even though this road is very short, there are two sites that impact streams flowing directly into the Tensaw River.

Mile Post 0.1: There is a small stream at this location. It is at the bottom of a grade which starts at the Cloverleaf Road junction. Even though this is not a severe site there are signs of both road surface and ditch erosion with sediments being deposited in the stream.

Mile Post 0.3: This stream is much larger than the first, and the site exhibits much heavier impact. Apparently the road has been breached at times in the past. Both the stream and its flood plain are inundated with sediment. A new culvert has been installed and headwall rip rap added. If the culvert has been properly sized, the breaching problem may be solved, however, the road surface and adjoining ditches are still very vulnerable to erosion.

RECOMMENDED CORRECTION OR REPAIRS: Paving and ditch stabilization would definitely benefit this road and serve the residents as well.

ROAD NAME: LAJUNE (OLD STYX RIVER) ROAD

LENGTH: 0.926 Miles

COUNTY INVENTORY NUMBER: 3740

ENVIRONMENTAL RANKING: 12

GENERAL DESCRIPTION: The Lajune Road begins at the end of County Road 39 just east of Stapleton and travels east. It terminates at a locked gate and therefore is a dead end facility from the public standpoint. The first 1/4 mile has been reconstructed to improve alignment and grade and some limestone surfacing has been placed east of the fork of Juniper Creek crossing. The land adjacent to the road east of the crossing has been subdivided. This occurred prior to the County subdivision regulations being revised to require upgrading and paving of existing unpaved roads. Consequently what little reconstruction work that was done fell far short of providing an adequate facility.

LOCATION OF PROBLEM AREAS: Even though reconstructed, the first 0.3 miles remains a problem from both environmental and maintenance standpoints. The grade at mile post 0.1 was re-sloped on the south side of the road, but vertical back slopes remain on the north side. Sloughing and ditch erosion on that side is contributing to excessive sediment being delivered to the fork of Juniper Creek and adjacent wetland at mile post 0.25. Heavy ditch erosion also occurs along the grade on the east side of the crossing beyond mile post 0.3. This too is delivered directly to the stream.

Inadequate drainage in private drives of the subdivision are also contributing to the problem. Culverts placed in drive approaches to the main road are both inadequate in size and poorly installed. Some, especially those along the grade, have failed or have accelerated erosion in the ditch line.

RECOMMENDED CORRECTION OR REPAIRS: This road would definitely benefit from paving, however, the biggest improvement will be gained through flattening the north back slope near the stream crossing, stabilizing all back slopes in the reconstructed area with vegetation, stabilizing all ditches, and improving cross drains at driveway approaches.

ROAD NAME: CRAWFORD ROAD

LENGTH: 0.748 Miles

COUNTY INVENTORY NUMBER: 7085

ENVIRONMENTAL RANKING: 13

GENERAL DESCRIPTION: The Crawford Road begins at its junction with County Road 20 west of Mifflin and runs parallel with Hammock Creek which flows into Wolf Bay. It primarily crosses farm land, but accesses several residences at the end of the road. It is a continuing source of sediment due to inadequate drainage and severe ditch cutting.

LOCATION OF PROBLEM AREAS:

Mile Post 0.1: At this point a culvert carries a live stream (fork of Hammock Cr.) and shows signs of frequent washing around the inlet. Filling with red clay has been a frequent occurrence.

Mile Post 0.5: Heavy ditch erosion starts at this point which continues for another 0.2 miles. The ditch cross section along the entire road is quite narrow. Any run off from adjacent farm land and orchards in this narrow ditch has an immediate erosive effect.

Mile Post 0.7 - Crossing of a fork of Hammock Cr.: All of the ditch erosion taking place along Crawford Road ends up here in the fork of Hammock Cr. The flood plain and wetland adjacent to the stream has been severely impacted as well.

RECOMMENDED CORRECTION OR REPAIRS: Paving or stabilization with lime stone would certainly help minimize the frequent need for filling with red dirt. However, drainage seems to be the biggest problem. Ditches need to be widened, the side slopes flattened and the whole ditch section stabilized with rock or vegetation. Maintenance practices should be modified to eliminate disturbing the ditches once stabilized. Culvert cross drains need to be lengthened and adequate inlet basins constructed.

ROAD NAME: DYAS ROAD

LENGTH: 2.462 Miles

COUNTY INVENTORY NUMBER: 1470

ENVIRONMENTAL RANKING: 14

GENERAL DESCRIPTION: The Dyas Road begins on US 31 southwest of Perdido, Alabama. The first mile to the CSX railroad crossing is paved. For the purposes of this study and to be consistent with the County dirt road inventory record, mile posts start at the end of the pavement. This is also the junction with the Hollingsworth Road. Although there are a few residences along the road, it primarily accesses undeveloped timber land and provides linkages with other roads in the area. There are several residences along many of these other roads such as the Robert White and Hollingsworth Roads.

LOCATION OF PROBLEM AREAS:



Mile Post 0.25 - Crossing of a fork of Brushy Creek

This is a typical stream crossing along dirt roads in the County. It has been heavily impacted by erosion from the road and its drainage. Although the topography is relatively gentle in this area, the stream shows signs of frequent flooding which is probably the cause of most of the erosion from the road.

Mile Post 1.0 - Junction with Robert White Road: There is a small wetland here that is being impacted. Road ditches are filled with sand which is running out into the wetland.

Mile Post 1.5 - Crossing another branch of Brushy Creek: Sediment filled ditches are carrying material into the stream and the wetland adjacent to it. Lead off ditches have been constructed to move the drainage away from the road, but in so doing they are now serving as conduits for

moving eroded material into the streams. What served as an aid to the road surface now seems to be having adverse effects on the environmental conditions.

Mile Post 2.0 - Large borrow pit: Soil erosion from the pit is moving down the road and into some low timber land. No live water is effected at this spot.

RECOMMENDED CORRECTION OR REPAIRS: Stabilizing the road by the most cost effective means would certainly help, however, most attention needs to be directed to stabilizing drainage, Because of the more gentle topography wider, flatter ditches stabilized with vegetation may be the most effective.

ROAD NAME: SCRANAGE ROAD

LENGTH: 8.8 Miles

COUNTY INVENTORY NUMBER: 2415 and 2420

ENVIRONMENTAL RANKING: 15

GENERAL DESCRIPTION: The Scranage Road is in northern Baldwin County. It begins at its junction with State Highway 59 between the communities of Blacksher and Little River and travels east to Escambia County Road 1. It primarily serves undeveloped timber land with some farmland on the eastern end. Access to the east end is from Escambia County.

LOCATION OF PROBLEM AREAS:

As with other dirt roads in the County, surface and ditch erosion is evident throughout its length. Ditches are filled with sand which then is deposited in every low spot.

Mile Post 1.5: There is an intermittent stream here. The culvert is totally filled with sand as are the approaching ditches.

Mile Post 5.3 - Horseneck Creek Bridge: As is so common at stream crossings, the ditches leading to the bridge site are all filled with eroded sediments and being discharged directly into the stream or its adjacent flood plain. Horseneck Cr. is another tributary of Little River.

Mile post 6.6 - Another unnamed intermittent stream with the usual filled ditches and sediment laden stream bed. There is also considerable erosion from adjacent farm land at this location.

RECOMMENDED CORRECTION OR REPAIRS: Although traffic appears to be relatively light on this route, the environmental problems warrant some attention. The road would benefit from some surface stabilization by the most cost effective means commensurate with use. Attention to stabilizing the ditches by widening, reducing side slopes and establishing a vegetative cover is of equal importance.

ROAD NAME: BLAKELEY RIVER ROAD

LENGTH: .531 Miles

COUNTY INVENTORY NUMBER: 3885

ENVIRONMENTAL RANKING: 16

GENERAL DESCRIPTION: The Blakeley River Road is found on the western edge of Spanish Fort. It is an extension of Cannonade Boulevard and provides access to several older homes along the bank of the Blakeley River. The first 100 feet are paved with the remainder being dirt and gravel.

LOCATION OF PROBLEM AREAS: The principal trouble spot is at Milepost 0.2. This is a live stream that shows signs of frequent washouts. A paved surface and concrete curbing has been placed on the road at the crossing to help alleviate washing. In essence this functions as a paved ford during periods of high runoff. The biggest environmental problem appears to result from excessive runoff from the subdivision above the road which flushes large quantities of sand and gravel down the stream. When it reaches the road it spreads out onto adjacent property and into the yard of a residence.

RECOMMENDED CORRECTION OR REPAIRS: Very little can be done to the road to prevent further damage to the adjacent property or the stream. Any corrective measures need to be directed to controlling the runoff from the subdivision above the road.

ROAD NAME: DUCK ROAD (BARRINEAU PARK)

LENGTH: 2.773 Miles

COUNTY INVENTORY NUMBER: 4185

ENVIRONMENTAL RANKING: 17

GENERAL DESCRIPTION: The Duck Road begins at its junction with State Highway 112 between The Gateswood community and the Florida line. It runs in a north easterly direction to the Perdido River where it crosses into Florida. There are no residences along this road. It accesses undeveloped timber land along its full length in Alabama. It is paved on the Florida end where it connects to the Escambia County, Florida, road system at Barrineau Park.

LOCATION OF PROBLEM AREAS: Most of the road crosses high ground with only the usual ditch and surface erosion problems caused by traffic over a lightly maintained road. The only real trouble spot occurs at the Perdido River crossing at Mile Post 2.8. A grade approximately 0.1 mile in length is a constant source of erosion. All the eroded material discharges directly into Perdido River. There is evidence of frequent filling with red dirt to replace eroded material.

RECOMMENDED CORRECTION OR REPAIRS: Stabilize the road surface and the ditch lines on both sides of the road for 0.1 to 0.2 miles approaching the bridge site.

ROAD NAME: HOLLEY CREEK ROAD

LENGTH: 5.621 Miles

COUNTY INVENTORY NUMBER: 2310

ENVIRONMENTAL RANKING: 18

GENERAL DESCRIPTION: The Holley Creek Road begins at its junction with State Highway 59 between the communities of Tensaw and Blacksher. It runs in a westerly direction and ends at the Holley Creek Landing Road near Fort Mims. It crosses undeveloped land and provides access to several side roads. For the most part the road follows flat terrain. The soil has a high clay content which is prone to rutting when wet. The road is maintained with an exaggerated crown to allow for drainage during wet conditions.

LOCATION OF PROBLEM AREAS: There are numerous cross drains along the entire road. Since the road grade is quite flat, the drainage is fairly stable. Several culverts were blocked or had plugged inlets, and in these cases some ditch erosion was noted. At least two had been damaged in the process of blading the ditch.

At Mile Post 1.8 the road crosses a fork of Holley Creek through two culverts. Considerable erosion and sediment was noted at this location. This is due to both ditch scour and over topping of the culverts. The road surface at this location has worn down to the point where the top of the culvert is exposed in the roadway.

RECOMMENDED CORRECTION OR REPAIRS: The entire road would benefit from stabilization with gravel. This would aid trafficability over the clay dirt and should reduce the need for maintaining the roadway with an exaggerated crown. Culvert cross drains need to be cleaned. The stream crossing at Mile Post 1.8 should be evaluated. There are indications that the existing culverts may be too small to handle peak runoff. The road grade should also be raised to provide sufficient cushion over the pipes.

ROAD NAME: BLAKELEY ROAD

LENGTH: 0.78 Miles

COUNTY INVENTORY NUMBER: 3250

ENVIRONMENTAL RANKING: 19

GENERAL DESCRIPTION: The Blakeley Road begins at its junction with State Highway 225 near the Blakeley Historic Site and terminates at the Historic Site fence. Apparently it was at one time the principal access to the old Blakeley Cemetery. This route, although a dead end road, ties in with several other roads including the Williams Road and River Road, both of which serve a number of residences in the area. It shows signs of significant use.

LOCATION OF PROBLEM AREAS: Being a typical sand/dirt road, this facility shows erosion problems along its full length. Very heavy ditch erosion occurs at Mile Post 0.1, and sediment filled cross drains are found at Mile Posts 0.4 and 0.55. The former also has a small wetland associated with it that has been impacted.

RECOMMENDED CORRECTION OR REPAIRS: Actually the whole network of roads in this area including Blakeley, Williams and River Roads would benefit from paving and ditch stabilization. Of the three, the Blakeley road seems the worst, and at the very least should be stabilized with limestone with special attention being paid to stabilizing the ditches..

ROAD NAME: STILL ROAD

LENGTH: 2.512 Miles

COUNTY INVENTORY NUMBER: 3500 and 3505

ENVIRONMENTAL RANKING: 20

GENERAL DESCRIPTION: The County inventory carries the Still Road as two separate roads, one being south of State highway 112 and the other north of it. For the purpose of this study it is considered one road and begins at its junction with Old Brady Road near the Pine Grove Fire Station and running north to its junction with the Horseneck Road. It serves a mixture of farm and undeveloped lands with few if any residences.

LOCATION OF PROBLEM AREAS: At mile post 0.8 the road crosses Hollinger Creek which is a major tributary of Styx River. The biggest problem at the crossing proper comes from illegal dumping, however the ditch has eroded heavily for 0.1 miles north of the crossing. The eroded material has filled in the flood plain on the north side of the stream and is beginning to impact the stream as well.

A steep grade at mile post 1.65 approaches the junction with State Highway 112 and is the source of heavy surface and ditch erosion. No live waters are effected here as the sediment moves out into the surrounding terrain, however, this is a continuous maintenance problem.

Heavy surface and ditch erosion was noted at Mile Post 2.15. Although no live water was being effected, this draw appears to be the headwaters of Horseneck Creek, and intermittent flow undoubtedly creates some impact.

RECOMMENDED CORRECTION OR REPAIRS: The most benefit would be gained by stabilizing the surface and ditches on that section of road south of State Highway 112. Because of relatively light use, this could be done by the most cost effective means not only to improve the environmental situation, but to reduce maintenance cost. The environment would benefit though vigorous enforcement of illegal dumping prohibitions.

ROAD NAME: GRIGGER ROAD

LENGTH: 2.417 Miles

COUNTY INVENTORY NUMBER: 4115

ENVIRONMENTAL RANKING: 21

GENERAL DESCRIPTION: The Grigger Road begins at its junction with County Road 64 about mid way between Interstate 10 and Gateswood, then runs in a north easterly direction to the Arlie Minchew Road near New Hope Church. There are no residences along the Grigger Road. It serves farm land on each end, but primarily accesses timber land. It is a typical sand road with surface and ditch erosion on all grades. The eastern one mile is gravel and very stable.

LOCATION OF PROBLEM AREAS: The first mile of this road on the western end is the biggest problem area. It crosses a branch of Eightmile Creek at Mile Post 0.5 and grades leading down to the crossing for nearly one half mile in either direction show evidence of constant erosion. The half mile to the east is particularly bad with very severe ditch cutting. This branch of Eightmile Creek, another tributary to the Styx River, has been heavily impacted over the years.

RECOMMENDED CORRECTION OR REPAIRS: Ditch stabilization should be the primary treatment, especially on the first mile. Surface stabilization by the most cost effective means will be needed to ensure the protection of ditch treatments.

ROAD NAME: SHERWOOD HIGHLAND ROAD

LENGTH: 1.321 Miles

COUNTY INVENTORY NUMBER: 5800

ENVIRONMENTAL RANKING: 22

GENERAL DESCRIPTION: The Sherwood Highland Road (also referred to as the Sherwood Heights Road on the County inventory) begins at County Road 27 approximately 0.7 miles north of US 98. It runs roughly 1/2 mile east then turns north for 0.8 miles to its junction with County Road 24. It accesses both residences and farms.

LOCATION OF PROBLEM AREAS: This is a typical sand road that erodes badly along any grades. The most troublesome area runs from about mile post 0.4 to 0.8. Two grades along this reach suffer from severe ditch erosion. Turkey Branch of Fish river is in close proximity to the Sherwood Highland Road, however, it was not evident that it was being directly effected. Pasture land adjoins the road and any drainage appears to flow into one of several old ponds. Nearly 1400 cubic yards of red dirt was hauled on this road over a 26 month period. This would seem to indicate that substantial erosion has occurred, and the eroded material went somewhere.

RECOMMENDED CORRECTION OR REPAIRS: Because of close proximity to Fish River and Weeks Bay, paving coupled with ditch stabilization is advisable.

ROAD NAME: MILLER PIT ROAD

LENGTH: 0.198

COUNTY INVENTORY NUMBER: 8080

ENVIRONMENTAL RANKING: 23

GENERAL DESCRIPTION: This is a very short road that begins on County Road 9 and runs east to some private residences and a large dirt pit.

LOCATION OF PROBLEM AREAS: The problem area is at the beginning of the road. The grade approaching the CR9 junction is badly eroded and heavily washed along the CR9 ditch to a dry culvert crossing. Although this is not a perennial stream it does flow intermittently and washes the sediment toward Fish river.

RECOMMENDED CORRECTION OR REPAIRS: Paving would be appropriate for the Miller Pit Road, however, the most critical need is for ditch stabilization.

ROAD NAME: OLD BATTLES ROAD

LENGTH: 0.98 Miles

COUNTY INVENTORY NUMBER: 5665

ENVIRONMENTAL RANKING: 24

GENERAL DESCRIPTION: The Old Battles Road begins at its junction with County Road 3 and runs east to US 98. The eastern 1/4 mile is rocked and serves several residences. The remaining 3/4 mile crosses farm and undeveloped land.

LOCATION OF PROBLEM AREAS: The biggest problem is along the western 1/4 mile where the road grade drops down to the County Road 3 junction. Although the surface is eroded, the worst condition involves heavy ditch erosion. The eroded material is running down along CR3 and out into a dry draw that forms the headwaters of a fork of Point Clear Creek. Portions of the road have been rocked, but as is so often the case, the ditches remain the source of most erosion and sediment production.

RECOMMENDED CORRECTION OR REPAIRS: Supplement surface rocking with ditch protection by the most cost effective means.

ROAD NAME: BEASLEY ROAD

LENGTH: 1.513 Miles

COUNTY INVENTORY NUMBER: 8205

ENVIRONMENTAL RANKING: 25

GENERAL DESCRIPTION: The Beasley Road begins at its junction with County Road 49 north of Magnolia Springs and travels east to its junction with County Road 55. It crosses primarily undeveloped land with a large dirt pit located at Mile Post 1.3. No permanent residences were noted along this road.

LOCATION OF PROBLEM AREAS: Although ditch erosion is a problem in a few areas along its entire length, the principal problem spot is the crossing of Schoolhouse Cr. at Mile Post 1.2. As is so common with most dirt roads in Baldwin County, road ditches leading up to the stream crossing have failed and sediment has been deposited directly into the stream and its flood plain. Since there are no residences along this section of road, there also is little in the way of maintenance and this too contributes to the problem.

RECOMMENDED CORRECTION OR REPAIRS: Stabilize ditches. Vegetative cover along disturbed areas may help, however, maintenance practices must be altered to prevent disturbing it once established.

