Descriptive Summary of the Changes in the Mermentau River Basin, Louisiana, October 30, 1992, to February 17, 1996

Cultivated lands dominated the landscape of Louisiana with more than 1.6 million acres (approximately 34 percent of the land) in cultivation. Forested lands were next, with over 900,000 acres (approximately 20 percent of the land) covered by evergreen, mixed, deciduous, and wetland forests. At more than 85,000 acres, forestry transitions constituted the greatest change detected by the C-CAP land cover analysis in Louisiana. These transitions represented a cyclic silviculture process, which involves the harvest and reforestation of evergreen tree stands. Evergreen farming is a monoculture farming practice common to the Southeast region of the United States. This process was clearly illustrated by the initial change of evergreen forest to bare land following the clearing of a forest, after which grasses colonized the area, transforming the land cover to grassland. Finally, after the reforestation of seedlings, this grassland started to develop into scrub/shrub, eventually reverting to mature evergreen forest. This was evidenced in the data set with over 55,000 acres of evergreen forest converting to grassland, 81,000 acres of grassland in a transitional state changing to scrub/shrub, and 17,000 acres of grassland and 47,000 acres of scrub/shrub reverting to mature evergreen forest.

Unlike forestry practices in other areas of the southeast, silviculture practices in Louisiana did not suffer large losses to the components of human development. However, some warehouse real estate has been practiced in Louisiana. Warehouse real estate refers to land bought in the past that is clear-cut and resold for residential development. This practice was particularly evident in the northwest section of the Louisiana data set. Many Pacific Northwest timber companies have land holdings in Louisiana, and with the reduction and down sizing of these operations in the Pacific Northwest, many switched their harvesting focus to old pine plantations in Louisiana. In addition it is thought that some cypress stands (palustrine forested) were lost to timber harvesting in this region, although verification was difficult due to the restricted nature of the areas in question.

Aggregated wetland loss for the Louisiana data set equated to over 39,000 acres. In any other C-CAP area this would have indicated a significant loss in wetland cover. However, 32,000 acres of this wetland loss belonged to palustrine aquatic beds (floating vegetation), which changed to water. This type of wetland cover is ephemeral, nonpersistent, and varies significantly from year to year as well as on a seasonal basis and is not indicative of the type of wetland loss that would be found in other C-CAP study regions such as South Carolina or Georgia. Although it was classified as a wetland cover, it could as easily have been classified as open water and is not a significant or highly stressed land cover. When actual change to wetland cover and change from wetland cover was examined, just over 1,000 acres of wetland loss was documented.

Below are three tables. The first two tables contain a data summary for the time 1 and time 2 images. These images were used to create the change image and their tables

include; land cover classes, the number of pixels present in each class, and their corresponding values in acres.

The third table is a complete change matrix for time 1 and time 2 images and includes a smaller, generalized table, which groups similar classes together. Table three compares each class from time 1 to time 2 and illustrates the change that took place between classes. The table presents the total acres for each class, the total percent that each class represents, the total acres that changed, and the percent of change they represent.

Tabular Summary: Mermentau River Basin, Louisiana, October 30, 1990

	CLASS	PIXELS	ACRES	PERCENT
1	Unclassified	0	0	0.00%
2	High Intensity Developed	145243	22431	0.47%
3	Low Intensity Developed	314967	48644	1.02%
4	Cultivated Land	10640853	1643376	34.29%
5	Grassland	2855649	441027	9.20%
6	Deciduous Forest	24144	3729	0.08%
7	Evergreen Forest	2500743	386215	8.06%
8	Mixed Forest	425624	65733	1.37%
9	Scrub/Shrub	1025792	158424	3.31%
10	Palustrine Forested Wetland	3235404	499677	10.43%
11	Palustrine Scrub/Shrub Wetland	136411	21067	0.44%
12	Palustrine Emergent Wetland	2313869	357354	7.46%
13	Estuarine Forested Wetland	0	0	0.00%
14	Estuarine Scrub/Shrub Wetland	0	0	0.00%
15	Estuarine Emergent Wetland	1922491	296910	6.20%
16	Unconsolidated Shore	15039	2323	0.05%
17	Bare Land	27210	4202	0.09%
18	Water	5192873	801989	16.73%
19	Palustrine Aquatic Bed	254631	39325	0.82%
20	Estuarine Aquatic Bed	0	0	0.00%
21	Tundra	0	0	0.00%
22	Snow/Ice	0	0	0.00%
	TOTALS	**31030943**	**4792426**	**100.00%**

Tabular Summary: Mermentau River Basin, Louisiana, February 17, 1996

	CLASS	PIXELS	ACRES	PERCENT
1	Unclassified	0	0	0.00%
2	High Intensity Developed	145233	22430	0.47%
3	Low Intensity Developed	316569	48891	1.02%
4	Cultivated Land	10593545	1636070	34.14%
5	Grassland	2806940	433504	9.05%
6	Deciduous Forest	22894	3536	0.07%
7	Evergreen Forest	2484651	383730	8.01%
8	Mixed Forest	310380	47935	1.00%
9	Scrub/Shrub	1242932	191959	4.01%
10	Palustrine Forested Wetland	3245284	501202	10.46%
11	Palustrine Scrub/Shrub Wetland	114539	17689	0.37%
12	Palustrine Emergent Wetland	2303168	355702	7.42%
13	Estuarine Forested Wetland	0	0	0.00%
14	Estuarine Scrub/Shrub Wetland	0	0	0.00%
15	Estuarine Emergent Wetland	1938412	299369	6.25%
16	Unconsolidated Shore	37346	5768	0.12%
17	Bare Land	28307	4372	0.09%
18	Water	5399407	833886	17.40%
19	Palustrine Aquatic Bed	40630	6275	0.13%
20	Estuarine Aquatic Bed	0	0	0.00%
21	Tundra	0	0	0.00%
22	Snow/Ice	0	0	0.00%
	TOTALS	**31030237**	**4792317**	**100.00%**

Change Matrix and Tabular Summary: Mermentau River basin, Louisiana, October 30, 1990 to February 17, 1996

	FROM / TO	High Intensity Developed	Low Intensity Developed	Cultivated Land	Grassland	Deciduous Forest	Evergreen Forest	Mixed Forest	Scrub/Shrub	Palustrine Forested Wetland	Palustrine Scrub/Shrub Wetland	Palustrine Emergent Wetland	Estuarine Forested Wetland	Estuarine Scrub/Shrub Wetland	Estuarine Emergent Wetland	Unconsolidated Shore	Bare Land	Water	Palustrine Aquatic Bed	Estuarine Aquatic Bed	Tundra	Snow/Ice	Total Acres	Changed	
2	High Intensity Developed	22420	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	**22,422**	**2**	High Intensity Developed
3	Low Intensity Developed	0	48613	0	2	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	**48,623**	**10**	Low Intensity Developed
4	Cultivated Land	0	6	1631330	4408	76	59	11	5858	29	15	15	0	0	2	3	96	759	2	0	0	0	**1,642,668**	**11,338**	Cultivated Land
5	Grassland	0	107	961	339795	38	17418	266	81658	53	4	7	0	0	2	3	100	424	0	0	0	0	**440,836**	**101,041**	Grassland
6	Deciduous Forest	0	15	39	170	3223	137	2	128	3	0	0	0	0	1	0	7	2	0	0	0	0	**3,727**	**504**	Deciduous Forest
7	Evergreen Forest	0	25	564	55329	24	318296	127	11159	66	3	3	0	0	0	0	164	287	0	0	0	0	**386,048**	**67,752**	Evergreen Forest
8	Mixed Forest	0	8	936	12151	38	84	47453	4874	29	1	0	0	0	0	0	96	36	0	0	0	0	**65,705**	**18,252**	Mixed Forest
9	Scrub/Shrub	0	46	1355	20947	128	47398	48	88117	49	1	2	0	0	0	0	241	23	0	0	0	0	**158,355**	**70,238**	Scrub/Shrub
10	Palustrine Forested Wetland	0	2	19	119	1	133	6	52	497368	13	9	0	0	0	0	57	1681	0	0	0	0	**499,460**	**2,092**	Palustrine Forested Wetland
11	Palustrine Scrub/Shrub Wetland	0	0	7	15	0	1	0	11	3318	17642	0	0	0	1	1	32	30	0	0	0	0	**21,058**	**3,416**	Palustrine Scrub/Shrub Wetland
12	Palustrine Emergent Wetland	0	0	10	12	0	2	0	2	4	1	353088	0	0	22	2	0	4056	1	0	0	0	**357,200**	**4,112**	Palustrine Emergent Wetland
13	Estuarine Forested Wetland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	Estuarine Forested Wetland
14	Estuarine Scrub/Shrub Wetland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	Estuarine Scrub/Shrub Wetland
15	Estuarine Emergent Wetland	0	0	1	0	0	0	0	0	0	0	13	0	0	295265	2	0	1500	0	0	0	0	**296,781**	**1,516**	Estuarine Emergent Wetland
16	Unconsolidated Shore	0	0	0	0	0	0	0	0	0	0	104	0	0	51	760	3	1401	3	0	0	0	**2,322**	**1,561**	Unconsolidated Shore
17	Bare Land	0	46	17	120	5	1	0	11	0	0	0	0	0	2	7	3556	435	0	0	0	0	**4,201**	**645**	Bare Land
18	Water	0	2	125	246	2	34	1	6	65	2	2216	0	0	3840	4245	17	790347	386	0	0	0	**801,533**	**11,186**	Water
19	Palustrine Aquatic Bed	0	0	1	3	0	0	0	0	0	0	92	0	0	53	743	0	32536	5879	0	0	0	**39,308**	**33,429**	Palustrine Aquatic Bed
20	Estuarine Aquatic Bed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	Estuarine Aquatic Bed
21	Tundra	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	Tundra
22	Snow/Ice	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	Snow/Ice
	Total Acres	**22,420**	**48,870**	**1,635,365**	**433,317**	**3,534**	**383,564**	**47,914**	**191,876**	**500,985**	**17,682**	**355,548**	**0**	**0**	**299,239**	**5,765**	**4,370**	**833,525**	**6,272**	**0**	**0**	**0**	**3,999,900**		**Total Acres**
	Percent of Total	**0.56%**	**1.22%**	**40.89%**	**10.83%**	**0.09%**	**9.59%**	**1.20%**	**4.80%**	**12.52%**	**0.44%**	**8.89%**	**0.00%**	**0.00%**	**7.48%**	**0.14%**	**0.11%**	**20.84%**	**0.16%**	**0.00%**	**0.00%**	**0.00%**			**Percent of Total**
	Total Acres that Changed (Y2-Y1)	**-2**	**247**	**-7,303**	**-7,519**	**-193**	**-2,484**	**-17,791**	**33,521**	**1,525**	**-3,376**	**-1,652**	**0**	**0**	**2,458**	**3,444**	**169**	**31,992**	**-33,036**	**0**	**0**	**0**		**327,095**	**Total Acres that Changed**
	Percent Change	**-0.01%**	**0.51%**	**-0.44%**	**-1.71%**	**-5.18%**	**-0.64%**	**-27.08%**	**21.17%**	**0.31%**	**-16.03%**	**-0.46%**	**0**	**0**	**0.83%**	**148.33%**	**4.03%**	**3.99%**	**-84.04%**	**0**	**0**	**0**		**8.18%**	**Percent Change**

FROM / TO	Developed	Cultivated	Grassland	Forested	Scrub/Shrub	Wetlands	Bare	Water	Total Acres	Changed	
Developed	71,033	0	2	0	0	0	0	9	71,044	**11**	**Developed**
Cultivated	6	1,631,330	4,408	175	5,873	60	98	759	1,642,710	**11,380**	**Cultivated**
Grassland	107	961	339,795	17,775	81,662	66	103	424	440,893	**101,098**	**Grassland**
Forested	49	1,559	67,769	866,990	16,230	107	324	2,006	955,033	**88,044**	**Forested**
Scrub/Shrub	46	1,362	20,961	50,942	105,770	3,371	274	53	182,781	**77,010**	**Scrub/Shrub**
Wetlands	2	37	146	143	65	1,172,769	837	39,803	1,213,802	**41,033**	**Wetlands**
Bare	46	17	120	7	11	157	4,326	1,836	6,519	**2,193**	**Bare**
Water	2	125	120	102	8	6,508	4,262	790,347	801,474	**11,127**	**Water**
Total Acres	**71,292**	**1,635,390**	**433,322**	**936,134**	**209,619**	**1,183,038**	**10,225**	**835,236**	**3,999,900**	**331,896**	**Total Acres**
Percent of Total (Y2/Total)	**1.78%**	**40.89%**	**10.83%**	**23.40%**	**5.24%**	**29.58%**	**0.26%**	**20.88%**		**8.30%**	
Total Change (Y2-Y1)	**248**	**-7,320**	**-7,571**	**-18,899**	**26,838**	**-30,764**	**3,706**	**33,762**		**331,896**	
Percent Change	**0.35%**	**-0.45%**	**-1.72%**	**-1.98%**	**14.68%**	**-2.53%**	**56.85%**	**4.21%**		**8.30%**	