# New Jersey Digital Land Dataset Comparison and Integration Analysis

January 2003









NJ Department of Environmental Protection Division of Science, Research & Technology





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Dear Reader:

Attached is a copy of the research project report *New Jersey Digital Land Dataset Comparison and Integration Analysis*. The primary objectives of this study were: 1) to conduct an analysis of five statewide projects undertaken to classify and map New Jersey's ever-changing landscape to understand how these data sets compare and can augment one another and 2) to provide guidance to data users and environmental managers to aid in the application of these digital data sets. The New Jersey Department of Environmental Protection, Division of Science, Research and Technology (NJDEP, DSRT) supported this study through a mini-grant from the New Jersey Center for Environmental Indicators, a collaboration of the New Jersey Department of Environmental Protection, Rutgers University, and the University of Medicine and Dentistry of New Jersey.

As a pioneer in the development of digital geographic information systems, New Jersey is quite data rich with respect to digital geographic data sets for quantitative analyses and environmental management. The expanding capacity of such systems, based upon different technologies and classification systems for specific natural resource and environmental management objectives, has created a unique opportunity to examine how these data may be used in concert with one another.

The five data sets analyzed include: NJDEP's Land Use/Land Cover data (based primarily on air photos); Rutgers University's Center for Remote Sensing and Spatial Analysis Land Cover data (based primarily on satellite imagery); NJDEP's GAP Analysis data (based primarily on satellite imagery and videography); NJDEP's ECOMAP (based primarily on soils maps and digital elevation modeling); and NJDEP's Critical Wildlife Habitat Mapping (based primarily on the Rutgers land cover mapping and NJDEP's wildlife species locational data).

The research was conducted by Dr. John Hasse, Rowan University and Dr. Richard Lathrop, Rutgers University, in collaboration with scientists from the various NJDEP programs that developed or supported development of these data. Dr. Lathrop developed the satellite-based land cover data layer that is included in this analysis. Both Dr. Hasse and Dr. Lathrop have worked in partnership with NJDEP over the past several years to characterize landscape change in New Jersey.

The study provides multiple analyses: statewide, regional, watershed, and municipal, depending upon data availability and applicability. Information is also provided as to how the data may be useful for developing environmental indicators; for municipal planning; and for natural vegetation community mapping. Recommendations are made regarding the additive values of the geographic coverages; the strengths of the coverages (as well as information regarding their limits); and recommendations for future improvements. It is important to note that each data set was designed with specific objectives and goals. Although the technologies and classification systems employed are not the same for all projects, the various projects can certainly inform one another, as outlined in this report. A detailed matrix of each data set for rapid comparison purposes is included.

In addition to this project, DSRT has provided significant support to the development of the data sets included in this study. DSRT is continuing its collaboration with our study partners through updates to the land cover classification data. We would like to thank our colleagues in the Bureau of Geographic Information and Analysis, Division of Fish and Wildlife and Division of Parks and Forestry for their assistance with this research. For additional copies or technical information relating to this study, please contact the New Jersey Department of Environmental Protection, Division of Science, Research and Technology at (609) 984-6071, or visit our website at <u>www.state.nj.us/dep/dsr</u>.

Sincerely,

Marta Doe

Martin Rosen, Director

Division of Science, Research and Technology

# New Jersey Digital Land Dataset Comparison and Integration Analysis

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#### Acknowledgements

The project was developed through needs identified by scientists in various NJDEP programs who recognized the value of comparing these data sets and analyzing their complementary nature. Contributors to project design and analysis included members of the NJDEP Project Team:

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## New Jersey Digital Land Dataset Comparison and Integration Analysis Report

#### **Problem Statement/Need for Project**

Land use/land cover maps are a critical information source for environmental and natural resource management and protection as well as local and regional and use planning. Accordingly, the New Jersey Department of Environmental Protection (NJDEP) has been in the forefront in creating land use/land cover maps and information to enable its own operations as well as aid local and regional efforts. Recently there have been several different statewide projects to classify and map New Jersey's diverse and changing landscape. Each of these efforts have had somewhat different goals and objectives and have employed different technologies, methods, and classification schemes. All of these projects have or will produce digital maps capable of incorporation into a geographic information system (GIS). All of these GIS map coverages are now or will soon be available to the public. To aid in the use and application of these digital mapped data sets, a comparative analysis with additional guidance and background has been developed. This project is our attempt to meet this stated need.

The principal data sets examined were:

NJDEP Land Use/Land Cover - LU/LC 1995 Rutgers University Center for Remote Sensing & Spatial Analysis - CRSSA LC 1995 GAP – NJ ECOMAP-NJ New Jersey's Critical Wildlife Habitat Mapping (Landscape Project).

For more information on these data sets and related topics, Appendix A provides a synopsis as well as links to agency websites.

#### Objectives

An analysis was performed to compare these various mapping products to each other in order to determine how they can be used together, and what is the value added by using the GIS coverages in concert with one another. This report provides insight into how each coverage can contribute to various land management activities as well as how future updates might benefit from cross analysis of the datasets. The analysis was performed statewide for the applicable datasets as well as several geographic areas in the state. Recommendations are made concerning; 1) the additive value of using these coverages in concert; 2) strengths of each coverage 3) recommendations for future improvements to mapping to improve the quality and integration of each.

#### Methods

<u>Quantitative:</u> Datasets were merged into statewide coverages and georectified to match the spatial extent and scale of the CRSSA LC. Datasets were integrated at various geographic level and extents. Areal cross-tabulations were made between multiple combinations of data and at various levels of classification. Statistical summaries were generated between various dataset combinations and levels of classification.

<u>Qualitative:</u> A number of selected localities were analyzed for each of the datasets to gain insight into the usability and complementarities of each.

# **Dataset Short Description**

The following table provides thumbnail descriptions of the five datasets analyzed in this report. Appendix A provides a more substantial one-page summary for each dataset including each data's most pertinent descriptive information, where the data can be acquired and where metadata describing each dataset can be accessed.

	NJ DEP LULC 95	A statewide vector based land use/land cover dataset delineated using expert photo-interpretation of digital orthophotography. This dataset contains 66 categories of land use land cover, estimates of impervious surface cover, and land use land cover change between 1986 and 1995.
	<u>CRSSA LC 95</u>	A statewide raster-based land cover classification of New Jersey based on Landsat TM satellite imagery enhanced with other ancillary data. This dataset classifies 40 categories of land covers as distinguishable through image classification techniques. The data provided the base mapping for the NJ Critical Wildlife Habitat Mapping data set described below.
	<u>GAP – NJ</u>	A statewide vector-based map of vegetation community types based on satellite imagery, aerial videography and other ancillary data. The dataset provides a description for 57 categories of various forest types, upland, lowland and wetland/marsh land types. Urban and agricultural land covers are not differentiated beyond a generalized category.
3	ECOMAP-NJ	A vector-based series of maps that delineate regional landforms and ecological land types (ELT's). The data is based on unique combinations of soil characteristics, hydrology and topographic position information. Each ELT is supported with a description of the ecological communities typical for the hydrological and forest fertility of each mapped area. Land use and land cover is ignored in determining the potential natural vegetation of each ELT.
	<u>NJ CRITICAL</u> <u>WILDLIFE HABITAT</u> <u>MAPPING</u>	A vector-based series of data layers (also known as NJ's Landscape Project) that identify, delineate and rank important habitat patches for threatened, endangered and other rare wildlife species. The data was derived by overlaying rare species locational information with raster-based land cover data derived from classifying Landsat TM satellite imagery (CRSSA LC95).

This report does not purport to assess the absolute accuracy of the individual mapping products. While field checking was undertaken as part of all of these other mapping efforts, the only quantitative accuracy assessment available was for the CRSSA LC 95 data set. Over 1,700 field sites in New Jersey were visited to serve as post-classification accuracy assessment ground reference sites. Results of the accuracy assessment suggests that the CRSSA Level I land cover map is approximately 93% correct, while the more detailed Level II land cover map is correct approximately 85% of the time (Lathrop, 2000).

#### **Dataset Cross-Analysis**

Four of the five New Jersey datasets were analyzed and cross-compared. Particular emphasis was placed on comparing the NJDEP LULC95 dataset with the CRSSA LC95 dataset due to the important similarities and significant differences between these datasets so that a clearer understanding of the compatibility, complementary potential and appropriate uses for each could be recommended. The GAP data was analyzed against both DEP and CRSSA datasets to provide insight into how the GAP data, which focuses on vegetative communities, correlates with land use and land cover data. A selection of the available portion of the NJ ECOMAP was also analyzed against the DEP and CRSSA datasets. The NJ Critical Wildlife Habitat Mapping (*The Landscape Project*) was added to the analysis after the original scope of this report was initiated. While the Landscape Project data was not analytically cross-compared, it is a derivative dataset of CRSSA LC95 and inferences can be made from the CRSSA summaries.

# DEP LULC95 versus CRSSA LC95

An extensive comparative analysis was performed between the DEP LULC95 dataset and the CRSSA LC 95. Although both datasets provide highly useful 1995 landscape information for New Jersey, they are fundamentally different in nature in a number of significant aspects.

1) The DEP LULC95 is a <u>vector-based</u> data format versus the <u>raster-based</u> CRSSA LC95. Raster layers are based on a regularly spaced grid, the rectangular cells of which are all the exact same size. Analysis of raster data therefore, involves analyzing numbers of pixels which share the same value. The square cells cannot be divided. Vector-based data is represented by individual points and the line segments that join them. Each point or vertex that makes up a line segment can have an x and y coordinate value, so that the line segments joining them can also have x and y locations and directions. The line segments can form shapes of varying areas and can be points, polygons, or lines. Vector-based data has benefits of topological capabilities as well as database functionality advantageous to regulation, planning and management. Raster-based data has advantages for landscape modeling, rapid updating and the ability to depict gradations of change over a landscape.

2) The DEP LULC95 was created from expert visual photo-interpretation of aerial imagery versus the satellite-based image classification delineation of CRSSA LC95. Visual image photo-interpretation is able to utilize shape, pattern and context to accurately delineate land features in detail but is more costly and time intensive than satellite classification. Satellite classification utilizes spectral reflectance values to differentiate land covers. Many complicating factors including climatic conditions, seasonal variation and heterogeneity of spectral signatures for particular land covers results in generally lower accuracy for satellite classification versus expert image interpretation. However, satellite classification is significantly less costly and facilitates rapid update.

3) There are important distinctions between the land classification systems employed. DEP's LULC95 classifies land use and land cover according to Anderson et. al 1976. Of the 66 level 3 classes, roughly half are land use and half land cover. CRSSA uses a land cover classification that places emphasis on the physical material covering the surface of the earth. This can result in the same area being classified differently in the two systems. For example, lawn areas in parks are considered *developed* by the DEP LULC95 delineation whereas the CRSSA LC95 classification would consider lawns as *grassland*.

4) The two datasets differ in how they treat *wetlands* resulting in differences of categorization for similar land types. For example, agricultural wetlands are considered *wetlands* by the DEP LULC95 due to its regulated status whereas the CRSSA LC95 classification considers agricultural wetlands as *cultivated lands* due to the actual land cover (e.g. crops).

5) DEP LULC95 is in NJ State Plane coordinates versus the Universal Transverse Mercator (UTM) projection utilized by CRSSA LC 95. UTM is often utilized for regional-based analysis whereas New Jersey State Plane is the official survey base for the state. Users may project between systems but projections may introduce slight errors.

Most systems of land classification are organized into a hierarchy of increasing detail similar to the way biologists classify biota into a taxonomical hierarchy of kingdom, phylum, genus, and species. The most general land classification label is designated as *level 1* and represents the broadest category of a particular land type. For example in the DEP LULC95 dataset there are six level 1 categories into which all land is divided. These include *URBAN*, *AGRICULTURE*, *FOREST*, *WATER*, *WETLANDS*, and *BARREN*. At a level 2 classification, each general category is further divided into subcategories. DEP LULC95 divides URBAN into subcategories including *RESIDENTIAL*, *COMMERCIAL*, *INDUSTRIAL*, etc. Level 3 classification provides even further detail. DEP *LULC95* level 3 subdivides level 2 *RESIDENTIAL* into multiple categories including *MIXED RESIDENTIAL*, *RESIDENTIAL HIGH DENSITY*, *RESIDENTIAL SINGLE UNIT*, *RESIDENTIAL RURAL*, etc.

Land classification systems often employ a numeric code to efficiently depict the categorical hierarchy. Each digit in the code represents the categorical classification for each level. For example, the DEP LULC95 numeric code for *MIXED RESIDENTIAL* is 1150 where the left most digit "1" represents *level 1 "urban*", the second left most digit "1" represents *level 2 "residential"*, and the third most left digit "5" represents *level 3 "mixed"*. The numeric code for *RESIDENTIAL RURAL* is 1140 and for *RESIDENTIAL HIGH DENSITY* is 1110. CRSSA LC95 employs a different three digit numeric code that also follows a hierarchical classification system. The classification systems employed for DEP LULC95 and CRSSA LC95 are substantially different and comparison of the two datasets at various levels of classification provides insight into how the datasets both differ and are potentially complimentary to one another.

# DEP LULC95 Level 1 Versus CRSSA LC95 Level 1

The differences in classification system between DEP LULC95 and CRSSA LC95 required a reconfiguration of classification categories for comparison at level 1 (Table 1). Differences in wetland classification were handled through an expansion of the DEP level 1 *wetlands* category. Wetlands with a level 3 label of 1461(*wetlands rights of way -modified*), 1750(*managed wetland in maintained lawn greenspace*), and 1850(*managed wetland in built-up maintained rec area*) were grouped into *urban wetlands*. Wetlands with a level 3 label of 2140(*agricultural wetlands-modified*) and 2150(*former agricultural wetland-becoming shrubby, not built-up*) were grouped into *agricultural wetlands*. Wetlands with a 7430 label (*disturbed wetlands-modified*) were classified as *disturbed wetlands*. All remaining DEP *wetlands* categories (6110 thru 6500) were reclassified as *natural wetlands*.

The expanded DEP level 1 wetland categories facilitates a more consistent cross-comparison as the differentiated wetlands can be compared with the alternate CRSSA classification category under which it would more likely fall. Lands classified as DEP *urban wetlands* would be expected to fall under the

CRSSA *developed* or *cultivated/grass* category. DEP *agricultural wetlands* would likely fall under CRSSA *cultivated/grass* or *upland forest* category. DEP *disturbed wetlands* may likely be classified as CRSSA *bare land* and *unconsolidated shore*. With the urban, agricultural and disturbed wetlands removed, DEP's remaining "*natural wetlands*" were more consistent with CRSSA's categories of *estuarine emergent wetlands* and *palustrine emergent wetlands*.

Table 1 Reconfiguration of DE LULC95 and CRSSA LC95 re	P LULC95 level 1 categories. I quired the expansion of wetland	Differences in level 1 categories to facilita	l wetland classification between DEP ate level 1 cross-comparison.
DEP LULC95 Level 1	expanded DEP wetlands labels	areal comparison	CRSSA LC95 Level 1
URBAN			DEVELOPED
AGRICULTURE			CULTIVATED/GRASS
FOREST			UPLAND FOREST
WATER			WATER
WETLANDS	urban_wetlands agricultural_wetlands		ESTUARINE EMERGENT WETLANDS
×	natural_wetlands disturbed_wetlands		PALUSTRINE EMERGENT WETLANDS
BARREN			BARE LAND
			UNCOSOLIDATED SHORE

## **Statewide Level 1 Cross Comparison**

The statewide level 1 analysis shows general classification patterns and trends between DEP LULC95 and CRSSA LC95. The tabular summaries are provided in both directions to reveal how the level 1 categories are composed of the level 1 categories in the opposing dataset. Figures 1 & 2 and Table 2 demonstrate how the DEP level 1 dataset is composed of CRSSA level 1 categories. Figures 3 & 4 and Table 3 demonstrate how the CRSSA level 1 categories are composed of DEP level 1 categories.

The results demonstrate the general degree of congruency between the datasets at a statewide level. Out of a total of 548,788 hectares of *urban* land use/land cover classified by the DEP, 86.5% were classified as *developed* by CRSSA at level 1. The non-developed categories of CRSSA that most significantly make up lands labeled *urban* by DEP were *cultivated/grassland* at 6.6% and *upland forest* at 4.2%. The other level 1 categories of DEP LULC95 show similar degrees of congruency with CRSSA LC 95. DEP *agriculture* consisted of 85.5% of CRSSA *cultivated/grassland*. DEP *forest* consisted of 72.4% of CRSSA *upland forest*. These dissimilarities were understandable due to the differences in datasets previously mentioned.

Looking at the cross analysis in the opposite direction where CRSSA LC95 level 1 categories were depicted as components of DEP LULC95 (Table 3), the 577,605 hectares of CRSSA *developed* consists of 82.2% of what DEP classifies as *urban*, 9.8% *forest* and 4.0% *water*. The other categories of CRSSA level 1 including *cultivated*, *upland forest*, *estuarine wetlands* and *palustrine wetlands* were classified by the DEP dataset as 64.4% *agriculture*, 87.4% *forest*, 91.2% *natural wetlands* and 77.8% *natural wetlands* respectively.

#### **Statewide Level 1 Cross-Comparison**



Tab	ole 2 DEP LUL	_C95 le	vel 1 i	n hecta	ares ai	nd perce	ent of	CRSSA	LC95	level 1	categ	gorie	s							
		DEP L	ULC	95 LE\	/EL 1	(MOD	IFIED	))												
		URBAN		AGRICULI TURF		FOREST		WATER		NATURAL	_WET	NBAN	WET	AGRICULT	_WET		WET			total hectares CRSSA LC95
		ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha
Ë.	DEVELOPED	474965	86.5%	23242	8.6%	56447	8.1%	3271	0.7%	10353	1.5%	1196	16.6%	1268	3.5%	1367	12.4%	5498	21.3%	577605
Ξ<	CULTIVATED	36307	6.6%	230503	85.5%	41024	5.9%	1744	0.4%	10440	1.5%	1639	22.8%	28436	79.4%	1296	11.7%	6175	23.9%	357565
LE	UPLAND_FOR	23085	4.2%	8867	3.3%	502494	72.4%	1804	0.4%	34294	5.0%	475	6.6%	1810	5.1%	738	6.7%	1505	5.8%	575073
395	BARE_LAND	2657	0.5%	1030	0.4%	2712	0.4%	816	0.2%	1684	0.2%	200	2.8%	360	1.0%	1043	9.5%	7915	30.6%	18418
V LC	UNCONSOLID	495	0.1%	30	0.0%	325	0.0%	9463	2.1%	6376	0.9%	26	0.4%	17	0.0%	220	2.0%	1615	6.3%	18566
SA	ESTUARINE_	216	0.0%	43	0.0%	535	0.1%	6024	1.3%	74403	10.9%	96	1.3%	23	0.1%	103	0.9%	130	0.5%	81572
RS	PALUSTRINE	3897	0.7%	2804	1.0%	43850	6.3%	8986	2.0%	231785	33.8%	1708	23.7%	1874	5.2%	2883	26.1%	274	1.1%	298062
0	WATER	1279	0.2%	45	0.0%	793	0.1%	195927	43.7%	1741	0.3%	16	0.2%	63	0.2%	86	0.8%	348	1.3%	200298
	total hectares DEP_LULC95	548788		269486		693682		448437		685381		7204		35828		11027		25825		



Tal	ble 3 CRSSA LC	95 level	1 in hea	ctares and	l perce	nt of DEP	LULCS	95 level	1 cate	gories							
							C	RSSA	LC95	E LEVEL	_1	_					
		DEVEL	OPED	CULTIV	TED UPLAND_F		_FOR	BARE_LAND		UNCON	SOLID	ESTUARINE		PALUSTRINE		WATER	
		ha	%	ha	%	На	%	ha	%	ha	%	ha	%	ha	%	ha	%
L 1	URBAN	474965	82.2%	36307	10.2%	23085	4.0%	2657	14.4%	495	2.7%	216	0.3%	3897	1.3%	1279	0.6%
/EI	AGRICULTURE	23242	4.0%	230503	64.5%	8867	1.5%	1030	5.6%	30	0.2%	43	0.1%	2804	0.9%	45	0.0%
μ	FOREST	56447	9.8%	41024	11.5%	502494	87.4%	2712	14.7%	325	1.7%	535	0.7%	43850	14.7%	793	0.4%
51	WATER	3271	0.6%	1744	0.5%	1804	0.3%	816	4.4%	9463	51.0%	6024	7.4%	8986	3.0%	195927	97.8%
ULCS	NATURAL WETLANDS	10353	1.8%	10440	2.9%	34294	6.0%	1684	9.1%	6376	34.3%	74403	91.2%	231785	77.8%	1741	0.9%
)EP L	URBAN _WETLANDS	1196	0.2%	1639	0.5%	475	0.1%	200	1.1%	26	0.1%	96	0.1%	1708	0.6%	16	0.0%
	AGRICULT _WETLANDS	1268	0.2%	28436	8.0%	1810	0.3%	360	2.0%	17	0.1%	23	0.0%	1874	0.6%	63	0.0%
	DISTURBED _WETLANDS	1367	0.2%	1296	0.4%	738	0.1%	1043	5.7%	220	1.2%	103	0.1%	2883	1.0%	86	0.0%
	BARREN LAND	5498	1.0%	6175	1.7%	1505	0.3%	7915	43.0%	1615	8.7%	130	0.2%	274	0.1%	348	0.2%
	total hectares CRSSA LC95	577605		357565		575073		18418		18566		81572		298062		200298	

#### Statewide CRSSA level 3 versus DEP Level 1

Expanding the statewide cross comparison analysis to DEP level 1 versus CRSSA level 3 reveals further details into congruencies and incongruencies of the datasets. Figures 5 & 6 depict CRSSA level 3 categories as hectares and percentages of DEP level 1 respectively. Of the CRSSA developed categories (*111-Developed: Highly, 112-Developed: Moderately, 113-Developed: Lightly-wooded*, and *114-Developed: Lightly-unwooded* ) the most densely developed CRSSA category (*111*) demonstrated the most congruency with the DEP *urban* category. The other less densely developed CRSSA categories demonstrated more classification dissimilarities, which is understandable due to the vegetative signatures of the less-densely developed categories. Other CRSSA level 3 categories that demonstrated substantial inconsistencies with the DEP LULC95 level 1 categories included *120-Cultivated* and *131-Grassland: unmanaged*.



Table 4	4. CRSSA Level 3 description.	_	
CODE	DESCRIPTION	CODE	DESCRIPTION
111	Developed: Highly (>75% impervious surface)	160	Barren soil/rock (sand/gravel pits, barren < 25% vegetation)
112	Developed: Moderately (50-75% impervious surface)	201	Marine/Estuarine Unconsolidated shore: sand
113	Developed: Lightly - wooded (25-50% impervious surface)	202	Marine/Estuarine Unconsolidated shore: mud/organic
114	Developed: Lightly - unwooded (25-50% impervious surface)	211	Estuarine emergent marsh: low salt marsh - Spartina alterniflora dominant (>50%)
120	Cultivated (actively tilled, fallow and recently abandoned)	212	Estuarine emergent marsh: high salt marsh - Spartina patens dominant (>50%)
131	Grassland: unmanaged (grazed land, old fields, abandoned land)	213	Estuarine emergent marsh: high salt marsh - Phragmites australis dominant (>50%)
132	Grassland: managed (golf courses, residential/corporate lawn, parks)	214	Brackish tidal/fresh tidal marsh: mixed species
133	Grassland: airport	220	Riverine/lacustrine/palustrine unconsolidated shore: sand/mud/organic
141	Upland Forest: Coastal Plain Oak dominant (Oak > 75%)	230	Riverine/lacustrine/palustrine emergent marsh: mixed species
142	Upland Forest: Coastal Plain Oak-pine (Oak 50-75%)	241	Wetland Forest: Coastal Plain hardwood swamp (>66% deciduous)
143	Upland Forest: Coastal Plain Pine-oak (Pine 50-75%)	242	Wetland Forest: Coastal Plain pine lowland (>66% evergreen)
144	Upland Forest: Coastal Plain Pine dominant (Pine > 75%)	243	Wetland Forest: Coastal Plain mixed - hardwood/white cedar-pine- holly
145	Upland Forest: Highlands/Piedmont deciduous - mixed hardwoods dominant	244	Wetland Forest: Coastal Plain white cedar swamp (>66% evergreen)
146	Upland Forest: Highlands/Piedmont mixed deciduous/coniferous - hemlock/pine	245	Wetland Scrub/shrub: Coastal Plain mixed
147	Upland Forest: Highlands/Piedmont mixed deciduous/coniferous - red cedar/pine	246	Wetland Forest: Highlands/Piedmont hardwood swamp (>66% deciduous)
148	Upland Forest: Highlands/Piedmont coniferous - hemlock/pine dominant	247	Wetland Forest: Highlands/Piedmont mixed - hardwood/hemlock/white cedar/pine
149	Upland Forest: Highlands/Piedmont coniferous - red cedar/pine/plantation dominant	248	Wetland Forest: Highlands/Piedmont conifer swamp - hemlock/cedar/pine dominant (>66% evergreen)
151	Upland Scrub/Shrub: Coastal Plain mixed deciduous/coniferous	249	Wetland Scrub/shrub: Highlands/Piedmont mixed deciduous/evergreen
152	Upland Scrub/Shrub: Coastal Plain mixed deciduous/coniferous - maritime/dune	251	Marine/Estuarine Open water
153	Upland Scrub/Shrub: Highlands/Piedmont mixed deciduous/coniferous	252	Riverine/lacustrine/palustrine Open water

#### Statewide CRSSA Level 3 versus DEP Level 3

A level 3 versus level 3 cross analysis reveals details of both the similarities and differences between the datasets. Since there are 40 level 3 categories of CRSSA LC95 and 66 categories of DEP LULC95 there is a very large array of 2,640 possible classification outcomes between the datasets. The complete array of level 3 cross-classification between the datasets is provided in Appendix B. The following four graphs provide a profile of the four CRSSA *developed* categories. Figure 7 depicts the CRSSA level 3 category for *111* (*Developed: Highly* (>75% impervious surface)) in hectares of DEP level 3. The CRSSA *111* category represents 22.3% of the CRSSA *developed* class. *The* graph reveals the high level of congruence between the *111* category and various DEP categories with the *111* category capturing the *high density residential* areas (DEP 1100), *commercial* areas (DEP 1200), *industrial* areas (DEP 1300), *transportation/communication* (DEP 1400) and the *other urban or built-up land* category (DEP 1700). Small anomalies are evident in *transitional areas* (DEP 7500), *old field* (DEP 4410) and *deciduous forest* (DEP 4120).

Figure 8 depicts the CRSSA level 3 category for *112* (*Developed: Moderately* (50-75% impervious surface)) in hectares of DEP level 3. The CRSSA *112* category occupies 250,633 hectares which represents 50.3% of the CRSSA developed class. The graph reveals the large degree of consistency for this CRSSA class and the DEP residential classes (DEP 1110, 1120, 1130 and 1140). The CRSSA *112* class also captured some commercial (DEP 1200), other urban or built-up land (DEP 1700) and recreational lands (DEP 1800). Some of the anomalies of the CRSSA 112 class were cropland and pastureland (DEP 2100), old field (DEP 4410) and deciduous forest (DEP 4120). Figure 9 depicts the CRSSA level 3 category for *113* (*Developed: Lightly – wooded (25-50% impervious surface)*) in hectares of DEP level 3. The CRSSA *111* category represents 25.5% of the CRSSA developed class. The graph reveals a signature for lower density residential areas capturing a large number hectares of DEP single unit residential categories of medium density (DEP 1120), low density (DEP 1130), and rural (DEP 1140). The most substantial anomaly for the CRSSA 113 category was deciduous forest (DEP 4120). Other DEP forest categories also were minor anomalies.

In both the CRSSA 112 and CRSSA 113 categories, these forest anomalies can be largely attributed to edge pixels between land types in the CRSSA LC95 dataset and the corresponding DEP LULC95 vector-based delineation between land types as well as the differences in classification system for each dataset. These classification differences for the wooded labels are consistent with the differences in the classification methodological approach taken by the two datasets. CRSSA *113* includes more pixels in this developed category with forest spectral signatures that the DEP dataset segregates into forest and urban categories.

Figure 10 depicts the CRSSA level 3 category for *114* (*Developed: Lightly – unwooded (25-50% impervious surface*)) in hectares of DEP level 3. The CRSSA *114* category represents 17.7% of the CRSSA *developed* class. As in the previous category, the *114* graph indicates that the category captures a large number hectares of DEP single unit residential categories of *medium density* (DEP 1120), and *low density* (DEP 1130). The CRSSA 114 category most dramatically picks up the *residential rural single unit* (DEP 1140) class as well as a substantial amount of *other urban or built-up land* (DEP 1700) and *recreational land* (DEP 1800). The most substantial anomaly for the CRSSA 114 category is *cropland and pastureland* (DEP 2100). Other anomalies include *other agricultural lands* (DEP 2400) and a number of forested categories. Again, these anomalies for the CRSSA *114* are consistent with the methodological differences between the datasets.



Table	5. DEP LULC95 level 3 category labels		
CODE	LABEL 95	CODE	LABEL 95
1110	RESIDENTIAL, HIGH DENSITY, MULTIPLE DWELLING	4410	OLD FIELD (< 25% BRUSH COVERED)
1120	RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	4420	DECIDUOUS BRUSH/SHRUBLAND
1130	RESIDENTIAL, SINGLE UNIT, LOW DENSITY	4430	CONIFEROUS BRUSH/SHRUBLAND
1140	RESIDENTIAL, RURAL, SINGLE UNIT	4440	MIXED DECIDUOUS/CONIFEROUS BRUSH/SHRUBLAND
1150	MIXED RESIDENTIAL	4500	SEVERE BURNED UPLAND VEGETATION
1200	COMMERCIAL/SERVICES	5100	STREAMS AND CANALS
1211	MILITARY RESERVATIONS	5200	NATURAL LAKES
1214	NO LONGER MILITARY, USE TO BE DETERMINED	5300	ARTIFICIAL LAKES
1300	INDUSTRIAL	5410	TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS
1400	TRANSPORTATION/COMMUNICATIONS/UTILITIES	5411	OPEN TIDAL BAYS
1461	WETLAND RIGHTS-OF-WAY (MODIFIED)	5420	DREDGED LAGOON
1500	INDUSTRIAL/COMMERCIAL COMPLEXES	5430	ATLANTIC OCEAN
1600	MIXED URBAN OR BUILT-UP LAND	6110	SALINE MARSHES
1700	OTHER URBAN OR BUILT-UP LAND	6120	FRESHWATER TIDAL MARSHES
1750	MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE	6130	VEGETATED DUNE COMMUNITIES
1800	RECREATIONAL LAND	6210	DECIDUOUS WOODED WETLANDS
1804	ATHLETIC FIELDS (SCHOOLS)	6220	CONIFEROUS WOODED WETLANDS
1850	MANAGED WETLAND IN BUILT-UP MAINTAINED REC AREA	6221	ATLANTIC WHITE CEDAR SWAMP
2100	CROPLAND AND PASTURELAND	6231	DECIDUOUS SCRUB/SHRUB WETLANDS
2140	AGRICULTURAL WETLANDS (MODIFIED)	6232	CONIFEROUS SCRUB/SHRUB WETLANDS
	FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT		
2150	BUILT-UP)	6233	MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)
2200	ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS	6234	MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)
2300	CONFINED FEEDING OPERATIONS	6240	HERBACEOUS WETLANDS
2400	OTHER AGRICULTURE	6251	MIXED FORESTED WETLANDS (DECIDUOUS DOM.)
4110	DECIDUOUS FOREST (10-50% CROWN CLOSURE)	6252	MIXED FORESTED WETLANDS (CONIFEROUS DOM.)
4120	DECIDUOUS FOREST (>50% CROWN CLOSURE)	6500	SEVERE BURNED WETLANDS
4210	CONIFEROUS FOREST (10-50% CROWN CLOSURE)	7100	BEACHES
4220	CONIFEROUS FOREST (>50% CROWN CLOSURE)	7200	BARE EXPOSED ROCK, ROCK SLIDES, ETC.
4230	PLANTATION	7300	EXTRACTIVE MINING
	MIXED FOREST (>50% CONIFEROUS WITH 10%-50% CROWN		
4311	CLOSURE)	7400	ALTERED LANDS
4312	MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	7430	DISTURBED WETLANDS (MODIFIED)
4321	MIXED FOREST (>50% DECIDUOUS WITH 10-50% CROWN CLOSURE)	7500	TRANSITIONAL AREAS
4322	MIXED FOREST (>50% DECIDUOUS WITH >50% CROWN CLOSURE)	7600	UNDIFFERENTIATED BARREN LANDS



Figure 8. CRSSA LC95 category 112- Developed: Moderately, in hectares of DEP LULC95



Figure 9. CRSSA LC95 category 113- Developed: Lightly - wooded, in hectares of DEP LULC95



# CRSSA LC95 versus DEP LULC95 by Watershed Management Area

The previous statewide level 3 analysis provides detailed insight into the differences, similarities and complementary nature of the DEP LULC95 and CRSSA LC95 datasets for the entire extent of the data. The diverse nature of New Jersey's geography warrant investigation into how the datasets compare by physical location. Figure 12 depicts six selected cross tabulations of the DEP LULC95 level 1 and the CRSSA LC95 level 1 datasets by New Jersey's 20 watershed management areas (WMA's) (Figure 11). The maps depict selected combinations of DEP categories and CRSSA categories that reveal interesting spatial differences in the classification systems. The entire DEP LULC95 versus CRSSALC95 level 1 cross-tabulation is provided in Appendix C.

Figure 12(a-f) provides selected level 1 comparisons of DEP versus CRSSA differentiated by WMA. The percent of congruence for each of the selected categories provides insight into the nature of the data cross tabulation differences and inconsistencies. Figure 12-a demonstrates the percentage of congruence between CRSSA *developed* and DEP *urban* categories. While the overall statewide congruency between these categories was 82.2%, individual watersheds had congruencies as high as 94.4% and as low as 68.7%. The geographic location of the watersheds helps to explain the variation. Watershed management areas with higher urban densities had the greatest agreement between the dataset categories. Areas with lower urban densities and rural development patterns exhibited less congruence between datasets due to the different methodologies employed. The development that occurs in more rural areas is more apt to exhibit characteristics that the two classification methods approached differently. For example large-lot residential development with extensive lawn areas generally have a larger "developed" footprint in the DEP data than in the CRSSA data due to the airphoto interpreter using fence lines and other land use clues to include the "yard" in the development delineation. The CRSSA data methodology would generally classify the "yard" as *cultivated/grasslands*. A similar analogy can be inferred for low-density development in forested areas.

Another factor to consider in the regional differentiation of classification between the CRSSA *developed* and DEP *urban* categories is the proportion of actual developed land within each watershed management area. WMA's with larger proportions of urban land areas are less affected on a percentage basis by incongruent pixels than WMA's with lower proportions of urban land areas. To illustrate the point, consider a watershed with 10 pixels of incongruent classification and 90 pixels of congruent *urban* to *developed* classification. The congruency between the categories would be 90%. Another watershed with 10 incongruent pixels and 10 congruent pixels would have a 50% congruency even though the same area of land was incongruent between the two datasets. In essence, the cross-analysis of land use/land cover between any two categories in different datasets must consider the proportion of the land area that is occupied by the given category. Most of the cross-comparison charts and tables provided in this report present the results in both hectares of congruence and percentage of congruence.

Figure 12-b depicts the percent of CRSSA *developed* category classified as *agriculture* in the DEP dataset. The WMA's that exhibited the greatest amount of CRSSA developed classified as DEP agriculture were the watersheds with the greatest proportions of agricultural lands. The magnitude of these classification inconsistencies was minor and to a degree can be explained by inclusion of agricultural building and other structural features in the DEP *agriculture* class that were classified as *developed* in CRSSA. In spite of the agricultural watersheds demonstrating more inconsistent classification of *cultivated/grass* and *urban*, Figure 12-e demonstrates that these same agricultural watersheds also have the greatest degree of congruence between CRSSA *cultivated/grass* and DEP *agriculture*. Again, when comparing land classifications between two datasets the amount of land included in the classes needs to be considered when interpreting the percentage results. In essence there

are fewer total acres of urbanized land and significantly more acres of agricultural lands in these rural watersheds and therefore the proportion of misclassified pixels between the datasets will be skewed by the proportion of land in each category from region to region.

Figure 12-c demonstrates the degree to which CRSSA *developed* was classified as DEP *forest*. The pattern follows the more heavily forested watershed management areas of the New Jersey Pinelands and forested regions of northern New Jersey. The incongruency of the low-density mixed forest/residential land areas is most evident in the more substantially forested WMA's.

The CRSSA land cover category that was least congruent with the corresponding DEP land use/land cover category was CRSSA *cultivated/grass* versus the DEP *agriculture*. Figures 11-d, 11-e, and 11-f provide insight into the spatial differentiation that explains a measure of the incongruency. Many of the DEP urban land categories such as managed lawns would be classified as CRSSA *cultivated/grass* in the more rural WMA's (Figure 12-d). The most congruent WMA's for CRSSA *cultivated/grass* versus DEP *agriculture* were in the regions of the state with the largest proportion of agricultural lands (Figure 12-e). The regions in which the largest percentage of CRSSA *cultivated/grass* was classified as DEP *forest* occurred in the areas of the state most heavily forested including the Pinelands in southern New Jersey and the Highlands in the north. These anomalies could be attributed in part to edge pixel differences as well as small grassland and agricultural patches in these predominantly forested watersheds. Once again the proportional areal differences of land categories from watershed to watershed has the tendency to skew the percentage category comparisons and must be considered when interpreting the graphs.

The geographic differentiation of the CRSSA – DEP cross-comparison depicted in Figure 12-(a-f) help to explain the relationship and land characterization differences between the datasets. However, each WMA exhibits a substantially different pattern and mix of land use and land cover. Comparisons and conclusions between the datasets for each WMA must consider the particular makeup and landscape of the specific area of interest. Both the percentage make up and the number of hectares need to be considered when interpreting a cross comparison analysis. Appendix B contains a full listing of the CRSSA-DEP level 1 cross-comparison for each watershed management area.





#### Analysis of the NJ GAP Vegetation Dataset

The NJ GAP dataset is a vector-based coverage of vegetative community types produced by the Maryland Department of Natural Resources in association with the New Jersey Natural Heritage Program, Office of Natural Lands Management, Division of Parks and Forestry. This NJ- GAP project is part of a larger national GAP mapping effort conducted by the U.S Geological Survey. At the time of this analysis, a final GAP data set was not available and so a draft data set was used. The GAP data was derived from Landsat Thematic Mapper satellite imagery and other ancillary datasets. The classification system focuses on existing vegetation cover types emphasizing natural vegetation community types and follows the Natural Heritage Program classification system (Breden et al., 2001). NJ GAP contain 57 categories of land description with the majority of differentiation in "natural" forested and wetland vegetation communities, whereas human dominated land types such as urban and agriculture fall under a few generalized categories.

Cross-comparing NJ GAP with DEP LULC95 and CRSSA LC95 provides a view into degree to which the GAP, DEP and CRSSA datasets complement, support, enhance or provide useful ancillary information for one another.

Figure 13 depicts the 57 categories of NJ GAP in hectares of DEP LULC95 level 1 categories. The generalized categories of *water* (400), *row crops* (402), *urban* (427) and *pasture/hay* (453) constitute large swaths of land area. These generalized GAP categories exhibit a significant mixture of land use/land cover for the DEP data. The GAP *pasture/hay* (453) exhibits an especially mixed cross tabulation with DEP LULC95 level 1 containing *urban*, *wetlands* and *forested* classifications as delineated by DEP datasets. Both the DEP and CRSSA datasets provide a more detailed description of land types for these human-modified land categories than the NJ GAP data.

The remaining GAP categories are more detailed in their description of the different ecological communities and exhibit a corresponding mix of DEP level 1 categories. It is notable that most of the GAP vegetation categories contain a substantial range of human modified (i.e. DEP *urban* and *agriculture*) land ranging from 5 - 30% of the category land area (Figure 14).



Table	e 6. NJGAP Label Code Lookup T	able			
400	Water	421	Coastal Plain Beech - Oak Forest	443	Freshwater Tidal Emergent Marsh
401	Tidal Shallow/Turbid	423	Sweetgum Forest	444	Redcedar Woodland
			Sycamore - Mixed Hardwood Riverside		
402	Row Crops	424	Forest	445	Piedmont Beech - Oak Forest
	Tidal Herbaceous Beach				
403	Community	425	Red Maple - Pumpkin Ash Swamp	446	Tidal Atlantic White-cedar Forest
					Shortneedled Pine - Mixed Dry
404	Tidal High Marsh	426	Bald Cypress Tidal Swamp	447	Oak Forest (Pine Barrens)
405	Tidal Marsh	427	Urban	448	Pitch Pine Wet Woodland
					Highbush Blueberry - Leatherleaf
406	Tidal Tall Grass Marsh	428	Lowland Mixed Oak Forest	449	Shrub Swamp
407	Lowland Pine Woodland	429	Bare/Exposed/Manmade Features	450	Inland Graminoid Marsh
					Hemlock - Mixed Hardwoods
408	Mixed Grass/Low Shrubs	430	Clearcut/Transitional	451	Forest
409	Tidal Maritime Shrublands	431	Beachgrass Shrublands	452	Urban Recreational Grasses
410	Coastal Lowland Pine Forest	432	Dwarf Beach Shrublands	453	Pasture/Hay
412	Non-tidal Flooded Herbaceous	433	Tidal Cattail Marsh	454	Dune Grassland
413	Bare Sand	434	Mixed Pines Forest	455	Non-tidal Tall Grass Marsh
414	Cultivated Trees	436	Red Oak - White Oak Forest	456	Non-tidal Mixed Grass/Low Shrub
			Non-tidal Sparsely Vegetated Beach		
416	Virginia Pine Forest	437	Alliances	457	Non-tidal Maritime Shrublands
417	Virginia Pine - Mixed Oak Forest	438	Chestnut Oak Forest	458	Red Maple - Green Ash Swamp
	Coastal Plain Pine - Mixed				Non-tidal Mixed Hardwood -
418	Hardwood Lowland Forest	440	High Mountain Shrub Swamp	459	Conifer Swamp
419	Sweetgum Swamp	441	Mixed Oak - Sugar Maple Forest	460	Non-tidal Cattail Marsh
420	Mixed Wet Oak Forest	442	Rich Northern Hardwood Forest	461	Non-tidal Atlantic



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Table	e 6. NJGAP Label Code Lookup I	able		-	
400	Water	421	Coastal Plain Beech - Oak Forest	443	Freshwater Tidal Emergent Marsh
401	Tidal Shallow/Turbid	423	Sweetgum Forest	444	Redcedar Woodland
			Sycamore - Mixed Hardwood Riverside		
402	Row Crops	424	Forest	445	Piedmont Beech - Oak Forest
	Tidal Herbaceous Beach				
403	Community	425	Red Maple - Pumpkin Ash Swamp	446	Tidal Atlantic White-cedar Forest
					Shortneedled Pine - Mixed Dry
404	Tidal High Marsh	426	Bald Cypress Tidal Swamp	447	Oak Forest (Pine Barrens)
405	Tidal Marsh	427	Urban	448	Pitch Pine Wet Woodland
					Highbush Blueberry - Leatherleaf
406	Tidal Tall Grass Marsh	428	Lowland Mixed Oak Forest	449	Shrub Swamp
407	Lowland Pine Woodland	429	Bare/Exposed/Manmade Features	450	Inland Graminoid Marsh
					Hemlock - Mixed Hardwoods
408	Mixed Grass/Low Shrubs	430	Clearcut/Transitional	451	Forest
409	Tidal Maritime Shrublands	431	Beachgrass Shrublands	452	Urban Recreational Grasses
410	Coastal Lowland Pine Forest	432	Dwarf Beach Shrublands	453	Pasture/Hay
412	Non-tidal Flooded Herbaceous	433	Tidal Cattail Marsh	454	Dune Grassland
413	Bare Sand	434	Mixed Pines Forest	455	Non-tidal Tall Grass Marsh
414	Cultivated Trees	436	Red Oak - White Oak Forest	456	Non-tidal Mixed Grass/Low Shrub
			Non-tidal Sparsely Vegetated Beach		
416	Virginia Pine Forest	437	Alliances	457	Non-tidal Maritime Shrublands
417	Virginia Pine - Mixed Oak Forest	438	Chestnut Oak Forest	458	Red Maple - Green Ash Swamp
	Coastal Plain Pine - Mixed				Non-tidal Mixed Hardwood -
418	Hardwood Lowland Forest	440	High Mountain Shrub Swamp	459	Conifer Swamp
419	Sweetgum Swamp	441	Mixed Oak - Sugar Maple Forest	460	Non-tidal Cattail Marsh
420	Mixed Wet Oak Forest	442	Rich Northern Hardwood Forest	461	Non-tidal Atlantic

# GAP Analysis with Selected Categories of CRSSA LC95 Level 3

Focusing on vegetative communities, the NJ-GAP dataset differentiates many categories of non-human modified landscapes. Since the DEP LULC95 dataset at level 3 focuses more on "land use" with the greatest categorical differentiation occurring in the *URBAN* land classes and NJ-GAP groups all developed lands into its 427 *URBAN* category, a level 3 cross-analysis with DEP LULC95 contained little additional information than the level 1 analysis for the human modified categories. However, the CRSSA LC95 dataset at level 3 contains a number of upland and wetland categories that were more appropriate to compare with NJ-GAP and were cross-compared to investigate similarities and differences in selected vegetative community classifications.

Figure 17 depicts the Atlantic White Cedar categories of CRSSA (243-Wetland forest: Coastal Plain mixed-hardwood/white cedar-pine-holly) and CRSSA (244-Wetland forest: Coastal Plain white cedar swamp). The NJ-GAP data set has a category labeled 446: Tidal Atlantic White-cedar Forest that has only negligible area (Figure 17). A majority of the cedar dominated wetlands (CRSSA category 244) were mapped as 447: Shortneedled Pine-Mixed Dry Oak forest and 448: Pitch Pine Wet Woodland in the NJ-GAP data set.

Figure 18 depicts the Hemlock categories of CRSSA (146-Upland forest:Highlands/Piedmont mixed deciduous/coniferous-hemlock/pine) and CRSSA (148-Upland forest:Highlands/Piedmont coniferous-hemlock/pine dominant). Hemlock dominated forest is classified as category 451:Hemlock-Mixed Hardwoods Forest in the NJ-GAP map. Figure 18 shows a closer congruence between the CRSSA LC95 and the NJ-GAP data sets for this category.

Figure 19 depicts the tidal marsh categories of CRSSA (211-Estuarine emergent marsh:low salt marsh - Spartina alterniflora dominant[>50%]), CRSSA (212 -Estuarine emergent marsh:high salt marsh - Spartina patens dominant[>50%]), CRSSA (213-Estuarine emergent marsh:high salt marsh - Phragmites australis dominant[>50%]) and CRSSA (214-Brackish tidal/fresh tidal marsh: mixed species. There is a general congruence between coastal emergent wetland categories between the CRSSA LC95 and the NJ-GAP maps at an aggregated level (i.e. at Level 1) but a greater difference across the individual Level III categories.

Figure 20 depicts the Pinelands categories of CRSSA (142-Upland Forest: Coastal Plain Oak-pine [Oak 50-75%]) CRSSA (143-Upland Forest: Coastal Plain Pine-oak [Pine 50-75%]) and CRSSA (144-Upland Forest: Coastal Plain Pine dominant [Pine > 75%]). The NJ-GAP data set maps a large majority of the upland portions of the Pine Barrens as a single category, 447: Shortneedled Pine-Mixed Dry Oak forest. Figure 20 shows the comparative breakdown of this composite category into the relative cover percentages of oak vs. pine as mapped in the CRSSA LC95.





### Analysis of the New Jersey ECOMAP Dataset

The New Jersey ECOMAP is a dataset produced by the New Jersey Forest Service as part of larger national effort spearheaded by the U.S. Forest Service. Unlike the previous datasets which characterize the actual patterns of existing land use/land cover of a landscape, ECOMAP describes the inherent land qualities, natural conditions and ecological potentials of a landscape utilizing soils, geology and landscape position and elevation information. ECOMAP describes natural potentials of the site whereas the other datasets analyzed in this report represent actual existing conditions of landscape.

Since ECOMAP is fundamentally different in its approach to land characterization, a real cross-tabulation is more meaningful for investigating the ability to utilize the dataset in conjunction with one another rather than to analyze the consistencies and inconsistency of categories within the datasets. The cross tabulation of ECOMAP with DEP LULC95 and CRSSA LC95 provides a window into how the data may be handled in developing landscape models that combine ECOMAP with other datasets. ECOMAP is only completed for a portion of northern New Jersey and the cross-tabulations depicted in Figures 21 - 24 are for one small Land Type Association (LTA) subsection of the completed dataset. The cross-tabulations and graphs are not representative of the entire ECOMAP dataset but only representative of the specific LTA analyzed (i.e. the Kittatinny Mountain Land Type Association). Cross-comparisons of other LTA within the datasets as well as for datasets for other regions of the state will result in vastly different cross tabulations. ECOMAP produces much more detailed information about a site than identified by gross land cover or land use mapping. Comparisons should be evaluated as tools that provide supportive information to identify or narrow possibilities. For instance, ECOMAP could identify the sites where you potentially could find Pitch Pine or Atlantic white-cedar growing in the Kittatinny- Shawangunk Ridge and Valley Subsection. ECOMAP could help further delineate the upland forest - coniferous classification into species types such as white pine versus cedar.

#### **ECOMAP ELT Labels**

Each ELT is a descriptive index of Moisture and Fertility and varies across the landscape. An ELT (ex. 21) in a northern Land Type Association (LTA) will vary considerably in an LTA in the southern part of the state because of the parent soil material and many other factors. The potential vegetation will also be very different, not only because of soil differences, but also because of influences of climate and elevation. There are 5 LTA's identified in the Hudson Valley Section of New Jersey. Below is an example of ELTs of the Kittatinny Mountain Land Type Association. Figures 21 and 22 depict the crosstabulation of the ELT's and the CRSSA LC95. Figures 23 and 24 depict the crosstabulation of the ELT's and the NJDEP LU/LC 95.



Table 7	ECO MAP lookup codes
ELT	ELT DESCRIPTION
ELT_00	WATER
ELT_12	VERY POORLY DRAINED CARBONATE-BEARING SANDSTONE TERRACES
ELT_13	VERY POORLY DRAINED SANDSTONE-CONGLOMERATE TILL FLATS
ELT_16	VERY POORLY DRAINED FLAT PEATLANDS
ELT_21	POORLY DRAINED LIMESTONE TILL SLOPES
ELT_22	POORLY DRAINED CARBONATE-BEARING SANDSTONE TERRACES
ELT_23	POORLY DRAINED SANDSTONE-SLATE TERRACES
ELT_33	SOMEWHAT POORLY DRAINED SANDSTONE-CONGLOMERATE TILL SLOPES
ELT_41	MODERATELY WELL DRAINED LIMESTONE TILL FLATS
ELT_43	MODERATELY WELL DRAINED SANDSTONE-CONGLOMERATE TILL FLATS
ELT_51	WELL DRAINED LIMESTONE TILL SLOPES
ELT_52	WELL DRAINED CARBONATE-BEARING SANDSTONE TERRACES
ELT_53	WELL DRAINED DEEP SANDSTONE-CONGLOMERATE TILL SLOPES
ELT_54	WELL DRAINED SHALLOW ROCKY SANDSTONE-CONGLOMERATE TILL SLOPES
ELT_61	EXCESSIVELY DRAINED STEEP ROCKY LIMESTONE TILL SLOPES
ELT_63	EXCESSIVELY DRAINED STEEP ROCKY SHALE TILL SLOPES
ELT_64	EXCESSIVELY DRAINED SANDSTONE-CONGLOMERATE ROCK OUTCROPS
ELT_82	SEASONALLY FLOODED LOAMY ALLUVIAL PLAINS
ELT_99	ALTERED LAND
	EXCEPTION



-	
Table 7.	ECO MAP lookup codes
ELT	ELT DESCRIPTION
ELT_00	WATER
ELT_12	VERY POORLY DRAINED CARBONATE-BEARING SANDSTONE TERRACES
ELT_13	VERY POORLY DRAINED SANDSTONE-CONGLOMERATE TILL FLATS
ELT_16	VERY POORLY DRAINED FLAT PEATLANDS
ELT_21	POORLY DRAINED LIMESTONE TILL SLOPES
ELT_22	POORLY DRAINED CARBONATE-BEARING SANDSTONE TERRACES
ELT_23	POORLY DRAINED SANDSTONE-SLATE TERRACES
ELT_33	SOMEWHAT POORLY DRAINED SANDSTONE-CONGLOMERATE TILL SLOPES
ELT_41	MODERATELY WELL DRAINED LIMESTONE TILL FLATS
ELT_43	MODERATELY WELL DRAINED SANDSTONE-CONGLOMERATE TILL FLATS
ELT_51	WELL DRAINED LIMESTONE TILL SLOPES
ELT_52	WELL DRAINED CARBONATE-BEARING SANDSTONE TERRACES
ELT_53	WELL DRAINED DEEP SANDSTONE-CONGLOMERATE TILL SLOPES
ELT_54	WELL DRAINED SHALLOW ROCKY SANDSTONE-CONGLOMERATE TILL SLOPES
ELT_61	EXCESSIVELY DRAINED STEEP ROCKY LIMESTONE TILL SLOPES
ELT_63	EXCESSIVELY DRAINED STEEP ROCKY SHALE TILL SLOPES
ELT_64	EXCESSIVELY DRAINED SANDSTONE-CONGLOMERATE ROCK OUTCROPS
ELT_82	SEASONALLY FLOODED LOAMY ALLUVIAL PLAINS
ELT_99	ALTERED LAND
	EXCEPTION

## Locality-Level Qualitative Analysis

A number of locality-level examinations were made of the datasets throughout various regions of the State to gain qualitative insight into their complimentary nature. The data were overlayed onto 1995 orthographic quarter quads at screen scales of between 1:2,000 and 1:30,000. The findings were incorporated into the recommendations and conclusion sections of this report. An example of one of the visual examinations is provided below.

The color infrared (CIR) orthophoto (Figure 25) depicts a region of Woolwich Township, in southern Gloucester County. This site depicts a once traditionally agricultural region of the State that is beginning to experience substantial ex-urban residential growth. Figure 26 portrays the DEP LULC95 data for the same extent as the orthophoto in Figure 25. The accuracy of the LULC delineation can be observed by changing the solid land use polygons of Figure 26 to a "hollow fill" pattern which allows the orthophoto to display beneath the polygon boundaries (Figure 27).



Figure 25. 1995 Orthophoto of a region of Woolwhich Township, Gloucester County.





Figure 27. NJDEP LULC95 overlay as "hollow fill" polygons on the orthophoto.

Figure 28 demonstrates the CRSSA LC95 classification for the same area. Evident is the blocky nature of the features inherent in the raster data format employed by CRSSA LC95. Figure 29 overlays the NJDEP LU/LC 95 polygons on the CRSSA LC95. Differences between classification system are apparent between the DEP and CRSSA datasets at this scale.



Figure 30 Demonstrates the GAP dataset for the same region. Although the data is a vector product, the "stair-step" boundaries of the polygons are a relic of the raster-based source data utilized by the dataset. GAP data is developed for vegetative analysis and therefore contains detailed categories of vegetative communities while the agricultural and urbanized categories are substantially more generalized. At the large scale displayed by the images of this example site, the GAP data appears to exhibit some misalignment with the landscape patches visible in the orthophoto (Figure 31). The Maryland Department of Natural Resources has determined that there was a data shift on this draft

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Figure 29 CRSSA LC95 overlaid with NJDEP LULC95 polygons.

of the GAP data set. It will be corrected on the final version of the data set. This misalignment may have contributed to some of the incongruencies between GAP and DEP LULC95 and CRSSA LC95 that were discussed earlier.





Figure 31 NJ GAP as "hollow fill" polygons overlaid on the orthophoto.

## Discussion

The five datasets covered in this report contain a wealth of land information data for the New Jersey environmental management community. Each dataset provides a substantially different characterization of landscape information with each exhibiting unique qualities and traits that hold robust potential for multiple land management and research applications. All datasets also have inherent limitations and inaccuracies. A firm understanding of the parameters and approach of each dataset will foster the best path to appropriate usage for landscape analysis, modeling, management and planning. Utilized individually, the datasets will provide excellent base data for multiple applications. Utilized in combination, the datasets hold even greater potential for providing a digital land resource base that will support multiple stakeholders for a wide variety of land issues in New Jersey.

# The Application of Land Use/Land Cover Mapping as Environmental Indicators

1. -How can these data be used together to help understand the DEP Strategic Planning Goals and NEPPS Goals for Healthy Ecosystems, Clean and Plentiful Water, Abundant Open Space, Wetlands, Forests, Headwaters and Riparian Corridors, Biodiversity, Aquatic Life Designated Uses, Patterns in Land Development and NJ Lands?

Since 1995, the NJDEP has embraced a results-based management system that relies on indicators to ascertain progress toward environmental goals (Kaplan and McGeorge, 2001). Human land use is a major factor affecting New Jersey's environmental quality, in both a direct and indirect fashion. The above mentioned land use/land cover mapping efforts provide valuable information on the status of New Jersey's environment and relate to the following NJDEP Strategic Planning and NEPPS goals and indicators:

- Healthy Ecosystems
- Clean and Plentiful Water
- Abundant Open Space
- Wetlands
- Forests
- Headwaters and Riparian Corridors
- Biodiversity
- Aquatic Life Designated Uses
- Patterns in Land Development and NJ Lands

The state government has gone even further and supported the Sustainable State Project with the goal of achieving an efficient economy, a healthy environment and a just society to achieve a sustainable state for future generations (NJ Future, 1999; 2001). In trying to move New Jersey towards a sustainable future, the first step was articulation of 11 goals ranging from promoting economic vitality, public health and social equity to efficient land use, and protecting ecological integrity and natural resources. To gauge progress in achieving these goals, 41 different statewide indicators were selected ranging from income levels to high school graduation rates to beach closings to hectares of farmland lost (NJ Future, 2001). Three statewide indicators adopted by the NJ Sustainable State initiative deal directly with land use/cover change:

- Hectares of freshwater wetland loss;
- Farmland loss; and
- Amount of preserved vs. developed land.

Many others are associated with land use patterns and urban sprawl (e.g., vehicle miles traveled and air pollution).

NJDEP employs a stressor-condition-response model of indicators which is coupled to adaptive management measures. Recognizing that human land use is one of the driving factors controlling water quality as well as related to aquifer recharge and baseflow to streams (i.e., water quantity), the NJDEP can use measures of land use and land cover change as environmental indicators to assess the degree to which the state is meeting its goals for land, natural resources, and water related key issue areas. Many of the NJDEP and Sustainable State measures are statewide, yet where applicable, are stratified to finer watershed scales (NJDEP 2000, 2001a, 2001b). For example, land use/land cover change data can be used to assess whether the state is meeting its milestone of a net increase in wetlands quantity or no net loss of forested land statewide, as well as, for each of the state's watershed management areas (WMAs). Impervious surface cover is also used as an additional indicator of the intensity of urban/built-up land use due to its relationship to water quality (Kaplan and Ayers, 2000). Impervious surface cover can be examined at watershed and even finer geographic scales. Additional geographic information system-based analyses can be undertaken to examine changes within mapped riparian zones or corridors.

The DEP LULC95 data set includes detailed information on human land use such as the categories of development (i.e., residential vs. commercial). Within the residential classification additional categories based on housing unit density are further delineated. Similarly the general agriculture class is broken down into a number of more specialized categories. This level of detail is useful in municipal and regional planning or agriculture resource management, as well as characterizing the NJDEP Strategic Planning and NEPPS goals and indicators. However, many of these goals and indicators are based more on evaluating end points of land cover. In those cases, either the NJDEP LULC95 or CRSSA LC95 classifications can be used to derive the indicator. Due to differences in the two classifications, the quantitative results (e.g., acreage of forest) will not match exactly. However, as the results of our analyses show that at watershed scales the two data sets display similar trends and patterns.

The two data sets complement each other and depending on the question, one or the other may be more appropriate. For example, one might be interested in knowing what type of the suburban greenspace (i.e., grass or tree/shrub cover) dominated a low density residential area. The two data sets could be used in combination to answer the question. The NJDEP LULC95 to map out low density residential and the CRSSA LC95 to inform which areas were predominantly grass or tree covered (i.e., low density developed: tree covered or low density developed: grass covered). The NJDEP LULC95 land use/land cover polygons also include an estimate of impervious surface cover. This estimate represents an average across the polygon. However, for large homogeneous urban polygons, it may be useful to know more about the spatial distribution of the impervious surface within that polygon. In these situations the grid cell based CRSSA LC95 can
often be used to provide a more detailed depiction of the spatial distribution and area coverage of different densities of development.

### LU/LC in Municipal Planning

#### 2- How can municipal planners use these different data sets to inform planning?

Many land use management decisions in New Jersey occur at the municipal level. The data sets compared in this analysis hold invaluable potential for informing planning at the municipal level with possible applications in master planning, zoning, environmental management, open space planning, farmland preservation, watershed protections and more. Municipalities can utilize the datasets for land use trend analysis (i.e. sprawl), delineations of land resources, watershed analysis and any application or analysis that requires detailed information about current land conditions.

The data sets can be employed to evaluate environmental quality in relationship to environmental indicators of land and water. The NJDEP LULC95 and CRSSA LC95 data can be used to evaluate the distribution of impervious surface and relate that data to water quality and municipal stormwater management. Used in conjunction, the five data sets can support habitat analysis for fragmentation, acquisition, and protection. Together with other data sets such as Natural Heritage Priority Sites and Natural Heritage Grid Maps, the data sets can assist in the identification of opportunities for open space acquisition by locating undeveloped land, defining appropriate corridors, and identifying possible target lands for acquisition based on existing habitat composition and/or sites with characteristics for potential habitat restoration.

Used in conjunction, the data sets provide an invaluable resource for NJ municipalities in the development of environmental resource inventories, master plan creation, open space planning, riparian corridor protection, greenway planning, down zoning and land use decision making. As New Jersey municipalities strive to incorporate principals of Smart Growth in local land management, these digital land datasets provide critical resources for many Smart Growth endeavors.

#### Natural Vegetation Community Mapping and Monitoring

3. - How can the GAP Analysis Vegetation Map augment the critical area mapping for the Landscape Project grounded in the LC data from satellite imagery and trained with the airphoto LULC data?

The NJDEP LULC95, CRSSA LC95 and NJGAP data sets provide useful information concerning the status of natural vegetation communities. The NJDEP LULC95 adopts a physiognomic classification that breaks down natural vegetation into upland vs. wetland and major physiognomic class (e.g., forest, shrub, herbaceous) and evergreen vs. deciduous or mixed. The NJDEP LULC95 data set is especially useful for identifying abandoned agriculture fields that are starting to undergo ecological succession.

The Level III CRSSA LC95 similarly classifies major vegetation community types but goes a step further by differentiating Piedmont/Highland vs. Coastal Plain/Pine Barrens forest types. The NJDEP LULC95 polygons delineate comparatively homogenous regions of land cover. However, for large and/or spatially heterogenous polygons, it may be useful to know more about the spatial distribution of the vegetation types within that polygon. The grid cell based CRSSA LC95 can be used to provide a more detailed information on the spatial distribution and area coverage of different types of vegetation communities at a local scale.

The NJDEP LULC95 and CRSSA LC95 use a similar classification system for wetlands. However, the NJDEP LULC95 also includes more detailed wetland category type using the Cowardin classification system (based on 1986 aerial photo interpretation/mapping). Due to the coarser spatial resolution, the CRSSA LC95 data type is not as suitable as the NJDEP LULC95 is for delineating and classifying small, patchy or narrow freshwater wetlands. On the other hand, the CRSSA LC95 classification delineates and maps categories of tidal salt marsh community types of general interest to ecologists (e.g., "high" vs. "low "salt marsh and phragmites dominated brackish marsh).

The NJGAP data set follows the National Vegetation Classification system adapted to New Jersey conditions by the New Jersey Natural Heritage Program (Breden et al., 2001). This classification system is more floristically oriented and provides much greater detail on the species composition of natural vegetation communities with over fifty different vegetation communities mapped. This greater specificity of vegetation community category is useful in delineating certain unique or specific community types. This level of detail could be useful in augmenting the critical area mapping of the Endangered & Nongame Species Program Landscape Project if more detailed habitat information beyond that already provided by the CRSSA LC95 is needed. A drawback to NJGAP data set is that it has been further coarsened to a minimum mapping unit of 2 hectares which will limit its usefulness for some applications. Comparison of this data set with the NJDEP LULC95 and the CRSSA LC95 shows some discrepancies that need further field checking to resolve. A misalignment in the GAP data set identified in this analysis will be corrected in the final version of the data set.

The various LU/LC data sets could be used in combination with NJ-GAP. For example, the greater spatial resolution of the NJDEP LULC95 or CRSSA LC95 could be used to display the locational boundaries of major habitat tracts and the NJGAP community type data could be used to provide supplementary habitat information.

#### **Conservation/Restoration Applications**

# 4.- Can these various mapping products be integrated to help identify areas for conservation or restoration?

The NJ ECOMAP is quite different than the other mapping efforts described above in that the ECOMAP data set does not map the existing land use/land cover but rather the underlying site conditions. The ECOMAP polygons delineate ecological land types by combining indices representative of hydrological characteristics and soil/fertility characteristics. These site level conditions are comparatively stable over time (i.e., on the

order of millennia) whereas the land cover is quite dynamic (on the order of decades). This kind of information can be useful in a variety of natural resource management, conservation and ecological restoration applications. The NJDEP LULC95, CRSSA LC95 and NJGAP tells the user what kinds of vegetation community is there right now, the ECOMAP tells the user what type of vegetation community could (or should) be there either in the past or in the future.

To illustrate the complementary nature of these data sets several example applications are presented. Previous aerial photo forest type mapping had shown that Atlantic whitecedar wetlands were greatly reduced in Outer Coastal Plain region of the New Jersey. To try to reverse this trend, the NJDEP Parks and Forestry instituted a program to manage and where possible restore whitecedar wetlands. They applied the ECOMAP approach to identify locations that have the most suitable soil/site conditions for the restoration of Atlantic whitecedar wetlands. In Bass River State Forest the NJFS conducted an intensive field survey of existing cedar forest stands, and sites capable of supporting cedar, as identified by ECOMAP. The results demonstrated that the area of cedar could be expanded from the current 200 acres to approximately 1500 acres if forest management techniques were implemented. The ten-year plan for restoring cedar on sites ECOMAP identified as capable of supporting cedar was an excellent example of applying ECOMAP data in forest restoration. Likewise in northern New Jersey, an introduced pest hemlock wooly adelgid is wiping out the state's eastern hemlock (Tsuga canadensis) forests. A consortium of state and federal agencies is trying to develop an Integrated Pest Management approach to combat this decline of hemlock. The ECOMAP information on terrain/site conditions should be useful in helping to stratify the landscape and select the best sites for the introduction of control insects. Assuming that the adelgid can be controlled, the ECOMAP data will also be useful in selecting the most suitable sites for future planting and restoration.

The ECOMAP publication is to be used as a reference to the GIS data. The descriptions must be studied to gain a full understanding of each ecological land type identified across the landscape by the mapping. Each ELT description identifies the vegetation found, from ground cover species to tree cover, as a result of hundreds of field inventories. The ELTs modeled by the GIS application also have characteristics too complex to identify in GIS tables. Other applications of ECOMAP could include:

- Determining the potential range and extent of a given plant species based upon the ELT it is found on. Identify sites to search for plants and animals closely related to sites.
- Determining the potential spread of an invasive species based upon the site characteristics it requires to flourish.
- Determining the need to acquire the last remaining site of a vanishing land type.
- Determine the base line distribution levels of land types spatially and quantitatively, to support restoration or acquisition recommendations.

#### Recommendations

1. Land Use/Land Cover data provide essential information on the state of New Jersey's environment. Due to its dynamic landscape, it is critical that New Jersey DEP update its land use/land cover on ideally a five year basis. The time lag between imagery acquisition and the release of derived land use mapping products needs to be decreased to under two years.

2. Newer high resolution satellite based imaging technologies should be investigated as a complementary image source to aerial photo based digital orthophotographs. Computer aided interpretation and classification can increasingly be used to provide accurate information on land cover mapping and impervious surface estimation. However, land use delineations will continue to rely on visual interpretation by human analysts at least into the foreseeable future. Additional research on computer aided land use change detection and mapping should be conducted to help streamline the land use mapping process.

3. The ECOMAP program should be continued and expanded to cover the entire state of New Jersey.

4. Additional efforts should be made to field check the GAP mapping and incorporate the Natural Heritage vegetation classification efforts into the larger land use/land cover mapping process.

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### **APPENDIX A: Dataset Quick Comparison Matrix**

The following tables summarize the five datasets in language that is accessible to most levels of potential user. The tables also provide relevant links where a user can find more information on these and related topics.

#### -- NJDEP LULC 95

1	What is the title of the data set?	NUDED 1005/07 Land use/Land cover Undete
	What is the fife of the data set?	Land use/Land dover impervious surfage, land use land sover change
	What goographic area does the data set	Statewide coverage of New Jersey
	cover?	Statewide coverage of New Jersey
	What is the date that the data	Data contains land use land cover description for 1986 and 1995/97
	describes?	
	How does the data set represent	Features are represented by vector-based polygons (i.e. map features are traced in a "connect-the-
	geographic features?	dots" digital map model)
	How are geographic features stored in	Data is stored in ESRI shapefile format
	the data set?	New Leven State Days Fast Marth American Datum 1092
	what coordinate system is used to represent geographic features?	New Jersey State Plane Feet, North American Datum 1983
	How does the data set describe	Polygons delineate over 60 different land use/land cover categories for land features greater than 1-
	geographic features?	acre as identified by expert photo-interpretation of digital aerial photography.
	What are the types of features present?	Features are grouped into 6 general categories including urban, agriculture, forest, water, wetlands,
	Who produced the data set?	The data were produced for the New Jersey Department of Environmental Protection on contract
	the produced the data set	with AIS INC. Redlands, CA.
	To whom should users address	New Jersey Department of Environmental Protection
	questions about the data?	
	Why was the data set created?	The data was created for trend analysis of land use/land cover change in NJ, watershed analysis,
	What is the recommand use for the	The date set will provide information for regulators, planners, and others interacted in LU/LC
	data?	changes and allow them to quantify those changes over time using GIS. The use of the undated
	untu .	1995/97 LU/LC layer and impervious surface (IS) code in change analysis studies will provide a
		means of monitoring "the health of the citizens and ecosystems of New Jersey" through the use of
		diverse environmental applications.
		This data set is intended to serve as a resource for analysis rather than regulatory delineations.
	What are aspects of concern for a non-	A general understanding of the concepts of land use land cover are required and are provided in the material (available to the company this CIS dataset
	How was the data set created?	Expert interpretation of aerial photography using "heads-un" delineation techniques to digital aerial
	now was the data set created.	imagery.
	Were the source data compiled at a	Digital imagery produced at 1:12,000. "Heads-up" delineation captured at scales as large as 2,400.
	particular scale?	
	How reliable are the data; what	While all data have inherent limitations, this dataset was compiled to a high level of accuracy. A
	problems remain in the data set?	the description of the data accuracy and limitations is provided in the metadata available at:
	What can you say about the accuracy of	Although accuracy was not performed per sellover 40 000 ground site visits were made. Impervious
	the observations?	surface coding accuracy has been measured at above 95%.
	How can someone get a copy of the data	Data are freely downloadable by watershed management area (WMA):
	set?	http://www.state.nj.us/dep/gis/
	Are there legal restrictions on access or	Yes, although this dataset is freely available to the public, there are a number of restrictions for its
	use of the data?	use for which the user must agree. For example, data must not be reproduced or redistributed without permission of the NIDEP and all secondary maps that utilize this dataset must provide a
		proscribed source statement. These and other restrictions are fully described in the metadata
		available at: http://www.state.nj.us/dep/gis/
	Who distributes the data?	Data is distributed via the internet by the New Jersey Department of Environmental Protection,
		Office of Information Resources Management, GIS Unit
	How can people download or order the	http://www.state.nj.us/dep/gis/
	In what formats are the data available?	Data is available in ESRI Inc. shapefile format
	What hardware or software do people	Data can be utilized as is by all ESRI. Inc. GIS softwares including Arcview 3.x. ArcINFO. ArcGIS
	need in order to use the data set?	Arc Explorer (a free GIS viewer available at www.esri.com.) and any other GIS software that can
		read or reformat ESRI shapefiles.
	What are some suggested uses of the	I he data can be utilized for many applications including; local and regional planning, analysis of land use transfer (approximate) landscape modeling, watershed analysis, and any application or
	communities of user?	analysis that requires detailed information about the current land conditions
	Potential applications:	The NJDEP LULC95 data can be employed to evaluate environmental quality in relationship to
	(environmental management)	environmental indicators of land and water.
	Potential applications:	The NJDEP LULC95 data can be employed in environmental analysis for any region or area of
	(regional planning)	interest including watershed analysis/characterization, build out scenarios, developable land, etc.
	Potential applications:	The NJDEP LULC95 data can be used to evaluate the distribution of impervious surfacing and
	Potential applications:	The NIDEP LULC95 data can support habitat analysis for fragmentation acquisition and
	(habitat analysis)	protection.
	Potential applications:	The NJDEP LULC95 data can assist in the identification of opportunities for open space acquisition
	(open space preservation)	by locating undeveloped land, defining corridors, and target acquisitions based on habitat compos
		composition.

### -- CRSSA LC95

	What is the title of the date set?	Now Jarsov 1005 Level 2 Land Cover Classification
-	what is the title of the data set?	New Jersey 1995 Level 3 Land Cover Classification
	what does the data set describe?	Land Cover (i.e. physical material covering the surface of the earth)
	What geographic area does the data set	Statewide coverage of New Jersey
	cover?	
	What is the date that the data	Data contains land cover descriptions for 1995
	describes?	
	How does the data set represent	Features are represented by raster-based grid cells (i.e. map features are depicted by coded pixels
	geographic features?	within a "checker board" digital map model)
	How are geographic features stored in	Data is stored in ESRI GRID format
	the data set?	
	What coordinate system is used to	Universal Transverse Mercator UTM zone 18, North American Datum 1983
	represent geographic features?	
	How does the data set describe	Land features are depicted by groups of contiguous raster cells with the same classification code.
	geographic features?	
	What are the types of features present?	Features are grouped into 8 general categories of land cover including developed, cultivated,
		grasslands, upland forest, upland scrub/shrub, barren, water, and wetlands.
	Who produced the data set?	The data was produced by the Grant F. Walton Center for Remote Sensing and Spatial Analysis
		(CRSSA), Rutgers University.
	To whom should users address	Grant F. Walton Center for Remote Sensing and Spatial Analysis (CRSSA), Rutgers University.
	questions about the data?	
	Why was the data set created?	The data was created to provide a standardized information base on land cover of New Jersey for
		CRSSA's Landscape Change Research Project.
	What is the recommend use for the	The data set may be of use to regulators, planners, research scientist and others interested in LU/LC
	data?	changes occurring in New Jersey throughout the 1970's, 1980's and 1990's. This data set is intended
		to serve as a resource for analysis rather than regulatory delineations.
	What are aspects of concerned for a	Data represents <i>land cover</i> Although related to land use, land cover characterizes the physical
	non-specialist to interpret the data?	material covering the surface of the earth rather than the legal and functional characteristics of
		depicted by a land use map.
	How was the data set created?	Expert enhanced classification of Landsat satellite imagery.
	Were the source data compiled at a	The data was produced as a single statewide coverage with a 28 meter grid cell size.
	particular scale?	
	How reliable are the data; what	While all data have inherent limitations, this dataset was compiled to a high level of accuracy. A
	problems remain in the data set?	full description of the data accuracy and limitations is provided in the metadata available at:
		http://crssa.rutgers.edu/projects/lc
	What can you say about the accuracy of	The overall accuracies for the Level I classification was greater than 90% and Level II was 85%
	the observations?	correct. Full accuracy assessment analysis is provided in the metadata available at:
		http://crssa.rutgers.edu/projects/ic
	How can someone get a copy of the data	Data are freely downloadable at:
-	set:	<u>http://crssa.rulgers.edu/projects/ic</u>
	Are there legal restrictions on access or	Y es, although this dataset is freely available to the public, there are a number of restrictions for its
	use of the data:	use for which the user must agree. For example, data must not be reproduced or redistributed
		without permission of the CR35A and an secondary maps that utilize this dataset must provide a
		available at: http://crssa.rutgers.edu/projects/lc
	Who distributes the data?	Data is distributed via the internet by the Grant F. Walton Center for Remote Sensing and Spatial
	who distributes the data.	Analysis Rutgers University
	How can people download or order the	http://crssa.rutgers.edu/projects/lc
	data?	<u>ntp://tissu.rutgis.odu/projous/to</u>
	In what formats are the data available?	Data is available in ESRI Inc. GRID format
	What hardware or software do people	Data can be utilized by a number of GIS applications including Arcview 3 x (with Spatial Analyst
	need in order to use the data set?	extension), ArcINFO, and ArcGIS.
	What are some suggested uses of the	The data can be utilized for many applications including; regional planning, analysis of land use
	Data for New Jersey's various	trends, landscape modeling and more
	communities of user?	
	Potential applications:	CRSSA LC95 can be utilized for delineation of important natural land resources including various
	(environmental management)	forest areas, wetlands, grasslands, and corridors of connection between landscape patches and the
		associated ecological communities. Land use trends and impervious surface estimates derived from
		the classification categories can be utilized in watershed flood and water quality monitoring and
		management.
	Potential applications:	Regional applications include growth trend analysis, identification of lands for future growth and
	(regional planning)	land preservation among others.
	Potential applications:	Data can be utilized as a land cover base map for master planning, open space planning and
	(local planning)	development of a natural resource inventory (NRI).
	Potential applications:	Data is excellent for landscape analysis and modeling, identification of habitat patches and corridors
	(habitat analysis)	and dynamic landscape change analysis.
	Potential applications:	Dataset provides landscape information to identify lands of significant value as parklands,
	(open space preservation)	farmlands, watershed lands, habitat patches and corridors for potential open space acquisition.

### -- NJ GAP

How does the data set represent	Fastures are represented by vector based polycopy (i.e. man fastures are digitally traced in a
How does the data set represent geographic features?	Features are represented by vector-based polygons (i.e. map features are digitally traced in a "connect the dots" manner)
How are geographic features stored in the data set?	Data is stored in ESRI shapefile format
What coordinate system is used to represent geographic features?	New Jersey State Plane North American Datum 1983
How does the data set describe geographic features?	Polygons delineate over 62 different land cover categories for land features focusing particularly on vegetation types.
What are the types of features present?	Numerous categories of forest or vegetative type are delineated by the dataset whereas non- vegetative habitat land cover types including <i>urban</i> and <i>agricultural</i> are delineated with no further detail than the general label.
Who produced the data set?	The data was produced for the Maryland Department of Natural Resources, Wildlife and Heritage Division.
To whom should users address questions about the data?	Maryland Department of Natural Resources, Wildlife and Heritage Division; www.gap.uidaho.edu/gap/
Why was the data set created?	The data was created to provide information on the geographic distribution of land cover (primarily vegetation types) for the purpose of mapping vertebrate species habitat associations.
What is the recommend use for the data?	Along with species habitat mapping, this dataset may be used for a variety of coarse (regional) scale landscape analysis/management purposes pertaining to land cover.
What are aspects of concerned for a non-specialist to interpret the data?	The final report of the Mid Atlantic Gap Analysis Project will provide more context for interpreting the mapping data set.
How was the data set created?	Satellite classification of Landsat TM imagery enhanced with a variety of ancillary data sources including aerial videography.
Were the source data compiled at a particular scale?	Imagery was 30 m pixels, compiled originally to 3 X 3 pixel minimum mapping units, later compiled to 5 X 5 pixel mapping units.
How reliable are the data; what problems remain in the data set?	All data have inherent limitations. This dataset was compiled to a high level of accuracy. A full description of the data accuracy and limitations is provided in the metadata available at: <a href="https://www.gap.uidaho.edu/gap/">www.gap.uidaho.edu/gap/</a>
What can you say about the accuracy of	Minimum map unit was 2 hectares. Horizontal accuracy should be within 30 meters, however slight
the observations?	shift errors attributable to resampling of ancillary data layers could result in additional random offset. Attribute error was calculated at 31.3% (absolute) and 67.6% fuzzy accuracy
the observations? How can someone get a copy of the data set?	shift errors attributable to resampling of ancillary data layers could result in additional random offset. Attribute error was calculated at 31.3% (absolute) and 67.6% fuzzy accuracy. Visit <u>http://www.gap.uidaho.edu/projects/data/.asp</u> for information on availability.
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### -- ECOMAP-NJ

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	What is the title of the data set?	New Jersey Ecomap
	What does the data set describe?	Land Type Associations (LTA), and Ecological land types (ELT)
	What geographic area does the data set cover?	Hudson Valley Section of Northern New Jersey
	What is the date that the data describes?	1991-2001
	How does the data set represent	Features are represented by vector-based polygons resulting from 50'x 50' grid cell analysis. (i.e.
	geographic features?	map units are representative of landscape features.
	How are geographic features stored in	Data is stored in ESRI shapefile format
	the data set?	
	represent geographic features?	New Jersey State Plane North American Datum 1983
	How does the data set describe	Polygons delineate ecological land types by classifying soil characteristics of hydrological and
	geographic features?	forest fertility with indices which are influenced by landscape position and elevation.
	What are the types of features present?	Features are grouped by their soil and geological characteristics.
	Who produced the data set?	The New Jersey Forest Service.
	To whom should users address	New Jersey Forest Service - Trenton New Jersey
	questions about the data?	
	Why was the data set created?	The data was created for the NJ Forest Service Ecomap project (National Hierarchy of Ecological Units) which maps natural land types and site potential.
	What is the recommend use for the	Forest and land management planning
	data?	
	What are aspects of concerned for a	Requires the complete Publication to understand the extent of ELT distribution and text descriptions
	non-specialist to interpret the data?	to interpret the potential of the ELT map units.
	How was the data set created?	Created from NRCS SSURGO soil maps and digital elevation model
	Were the source data compiled at a	Soils units were compiled at 1:24000. 30 meter DEMS were resampled at 50 x 50 feet and used to
	particular scale?	generate slope and elevation values.
	How reliable are the data; what	The data is a representative model of the landscape, which is based on data available at the time.
	problems remain in the data set?	Actual changes on the landscape, if drastic enough, will influence the potential of the site.
	What can you say about the accuracy of	Extensive Vegetation Sampling was conducted on each soils series across the landscape to identify
	the observations?	the potential natural vegetation. This data combined with field visits after modeling helped
		determine cut off values of ELTS at various elevations. Determining an accuracy value may not be
		achievable.
	How can someone get a copy of the data set?	The NJ Forest Service distributes the data on CD in combination with the Publication for a fee.
	Are there legal restrictions on access or	All digital data, maps, reports produced as a result of this project may be reproduced of redistributed
	use of the data?	for nonprofit use by crediting the New Jersey Forest Service as the source. NJFS holds no liability
		for use of the data.
	Who distributes the data?	The NJ FS distributes the data. The publication is available in pdf format
		http://www.na.fs.fed.us/sustainability/hudson.pdf
	How can people download or order the data?	Contact the NJ Forest Service at 609-292-2531
	In what formats are the data available?	Data is available on CD in ESRI Inc. shapefile format, as ArcInfo Export files, and is also packaged
		in an Arc Explorer project
	What hardware or software do people	Data can be utilized by a number of GIS applications including Arcview 3.2, ArcINFO, ArcGIS and
	need in order to use the data set?	Arc Explorer which is a free GIS viewer available at www.esri.com.
	What are some suggested uses of the	The data can be used to identify the distribution and quantitative information of land types with in a
	Data for New Jersey's various	given area of interest. The characteristics of a site on the landscape change much slower in time
	communities of user?	than the land use or land cover. This data provides a basis to develop long range plans and to
		evaluate change.
1	Potential applications:	The primary use of the data is to provide options to land management planners and managers by
	(environmental management)	providing the potential of a site rather than the current condition of a site.
	Potential applications:	The data puts into perspective the distribution of land types across the landscape. ELTs can be
	(regional planning)	combined with land cover information to provide current conditions and options
	Potential applications:	On the local level a community can determine the scope of its land types as it applies to the region.
	(local planning)	A particular town may contain the greatest % of a particular land type.
	Potential applications:	Close correlation's of plant and animal species occurrences should exist with the land types. The NJ
	(habitat analysis)	Forest Service identified ELTs capable of supporting Atlantic White Cedar and used them to
		identity areas void of cedar. These areas were targeted for cedar restoration quite successfully.
	Potential applications:	Once a correlation between specie habitats and ELTs is, made land acquisition programs can target
	(open space preservation)	the areas representing the characteristics of areas in need of restoration or protection.

### -- NJ Critical Wildlife Habitat

	What is the title of the data set?	New Jersey's Critical Wildlife Habitat
	What does the data set describe?	Habitat critical to threatened, endangered and other rare wildlife
	What geographic area does the data set cover?	Statewide coverage of New Jersey
	What is the date that the data describes?	2001
	How does the data set represent geographic features?	Features are represented by vector-based polygons resulting from 30-meter grid cells
	How are geographic features stored in the data set?	Data is stored in ESRI shapefile format
	What coordinate system is used to represent geographic features?	New Jersey State Plane North American Datum 1983
	How does the data set describe geographic features?	Polygons delineate polygons by habitat type that that are important to the long-term viability of threatened, endangered and other rare wildlife in NJ
	What are the types of features present?	Critical grassland, forest, forested wetlands, emergent wetlands and beach/dune habitat.
	Who produced the data set?	New Jersey Divisision of Fish & Wildlife, Endangered and Nongame Species Program
	To whom should users address questions about the data?	New Jersey Divisision of Fish & Wildlife, Endangered and Nongame Species Program
	Why was the data set created?	This data set was created to provide users with a comprehensive set of land use planning and wildlife conservation tools.
	What is the recommend use for the data?	Land use planning and regulation, endangered species management
	What are aspects of concerned for a non-specialist to interpret the data?	An occupied (by and E & T) polygon presumes suitability and does not substitute for comprehensive survey work.
	How was the data set created?	Created by overlaying rare species location data with 1995 land cover data.
	Were the source data compiled at a particular scale?	Land cover base data was produced using statewide TM imagery (28-meter grid cell size)
	How reliable are the data; what	While all data have inherent limitations, the base data (CRSSA land cover) used to create habitat
	problems remain in the data set?	polygons was compiled to a high level of accuracy. A full description of the data accuracy and
		limitations is provided in the metadata available at: <u>http://crssa.rutgers.edu/projects/lc</u>
	What can you say about the accuracy of	Digital whune data was complete at a variety of scales and data capture techniques.
	the observations?	
	How can someone get a copy of the data	The data (including metadata) can be obtained via download at
	set?	www.njfishandwildlife.com/ensp/landscape/index.htm. Alternatively, a CD ROM can be obtained by writing or calling the states Maps and Publications
		Office.
	Are there legal restrictions on access or use of the data?	All digital data, maps, reports produced as a result of this project may be reproduced of redistributed for nonprofit use by crediting the New Jersey Division of Fish & Wildlife. NJDFW holds no liability for use of the data. Please see the metadata for more details.
	Who distributes the data?	Data is distributed via the internet by the NJ Division of Fish & Wildlife or by contacting the state Office of Maps and Publications
	How can people download or order the	The data (including metadata) can be obtained via download at
	data?	www.njfishandwildlife.com/ensp/landscape/index.htm
		Alternatively, a CD ROM can be obtained by writing or calling the states Office of Maps and Publications.
	In what formats are the data available?	ESRI shapefile
	What hardware or software do people	Data can be utilized by a number of GIS applications including Arcview 3.2, ArcINFO, ArcGIS and
	What are some suggested uses of the	The data can be used to identify the location, abundance and distribution, of rare species wildlife
	Data for New Jersey's various communities of user?	habitat statewide
	Potential applications: (environmental management)	The data can be used to provide options to land managers, as well as scientific bases for regulatory decisions regarding rare species
	Potential applications:	Critical Habitat mapping can aid in the development of environmental resource inventories, master
	(regional planning)	plan creation, open space planning, riparian corridor protection, greenway planning, down zoning and land use decision making.
	Potential applications:	Critical Habitat mapping can aid in the development of environmental resource inventories, master
	(local planning)	plan creation, open space planning, riparian corridor protection, greenway planning, down zoning and land use decision making.
	Potential applications:	Knowing the location, size, distribution and species composition will greatly enhance habitat
	(habitat analysis)	analysis.
	Potential applications:	Critical Habitat mapping can be used to target conservation and restoration oriented open space
1	(open space preservation)	acquisitions

#### APPENDIX B: CRSSA LC95 AND DEP LULC95 LEVEL 3 AREAL CROSS-TABULATION

CRSSA Label –       LEVEL_111 = Developed: Highly (>75% impervious surface)         LEVEL_112 = Developed: Moderately (50-75% impervious surface)         LEVEL_113 = Developed: Lightly - wooded (25-50% impervious surface)										
	LEVEL_114 = Developed: Lightly - unwooded (25-50)	% impervio	us surfa							
LU95 DEP_LABEL		20,006	19.99/	EVEL_112	10.6%	LEVEL_113	1 50/	_EVEL_114	1.20/	
1110 RESIDENTIAL, HIGH		7,140	6.4%	91.612	36.6%	32,362	25.5%	7.375	8.3%	
1130 RESIDENTIAL, SING		902	0.8%	24,990	10.0%	25,042	19.7%	11,059	12.5%	
1140 RESIDENTIAL, RUF	RAL. SINGLE UNIT	1,071	1.0%	23,276	9.3%	25,020	19.7%	27,835	31.5%	
1150 MIXED RESIDENTIA	AL	16	0.0%	329	0.1%	31	0.0%	21	0.0%	
1200 COMMERCIAL/SER	VICES	28,416	25.5%	14,865	5.9%	1,565	1.2%	1,728	2.0%	
1211 MILITARY RESERV	ATIONS	1,164	1.0%	1,137	0.5%	240	0.2%	158	0.2%	
1214 NO LONGER MILIT	ARY, USE TO BE DETERMINED	116	0.1%	59	0.0%	1	0.0%	4	0.0%	
1300 INDUSTRIAL		19,736	17.7%	4,577	1.8%	329	0.3%	410	0.5%	
1400 TRANSPORTATION	I/COMMUNICATIONS/UTILITIES	10,655	9.6%	5,956	2.4%	589	0.5%	914	1.0%	
1461 WEILAND RIGHTS		108	0.0%	44	0.0%	15	0.0%	4	0.0%	
1600 MIXED LIRBAN OR		356	0.3%	180	0.1%	17	0.0%	9	0.0%	
1700 OTHER URBAN OR	BUILT-UP LAND	7,482	6.7%	15,086	6.0%	2,414	1.9%	10,911	12.4%	
1750 MANAGED WETLAN	ND IN MAINTAINED LAWN GREENSPACE	85	0.1%	283	0.1%	154	0.1%	264	0.3%	
1800 RECREATIONAL LA	ND	2,417	2.2%	5,342	2.1%	2,614	2.1%	4,037	4.6%	
1804 ATHLETIC FIELDS	(SCHOOLS)	623	0.6%	1,010	0.4%	147	0.1%	928	1.1%	
1850 MANAGED WETLAN	ND IN BUILT-UP MAINTAINED REC AREA	38	0.0%	101	0.0%	70	0.1%	118	0.1%	
2100 CROPLAND AND PA	ASTURELAND	681	0.6%	5,920	2.4%	1,315	1.0%	6,968	7.9%	
2140 AGRICULTURAL W	ETLANDS (MODIFIED)	00	0.1%	414	0.2%	123	0.1%	468	0.5%	
2150 FORMER AGRICUL	TURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)	0 175	0.0%	691	0.0%	40 164	0.0%	593	0.1%	
		34	0.0%	124	0.0%	47	0.0%	54	0.1%	
2400 OTHER AGRICULT	IRE	430	0.4%	2,869	1.1%	609	0.5%	2,566	2.9%	
4110 DECIDUOUS FORE	ST (10-50% CROWN CLOSURE)	209	0.2%	1,145	0.5%	1,269	1.0%	494	0.6%	
4120 DECIDUOUS FORE	ST (>50% CROWN CLOSURE)	926	0.8%	6,510	2.6%	15,662	12.3%	2,676	3.0%	
4210 CONIFEROUS FOR	EST (10-50% CROWN CLOSURE)	67	0.1%	280	0.1%	218	0.2%	81	0.1%	
4220 CONIFEROUS FOR	EST (>50% CROWN CLOSURE)	336	0.3%	1,524	0.6%	1,888	1.5%	638	0.7%	
4230 PLANTATION		6	0.0%	33	0.0%	101	0.1%	26	0.0%	
4311 MIXED FOREST (>5	50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)	18	0.0%	107	0.0%	142	0.1%	42	0.0%	
4312 MIXED FOREST (>5	50% CONIFEROUS WITH >50% CROWN CLOSURE)	150	0.1%	702	0.3%	1,403	1.1%	390	0.4%	
4321 MIXED FOREST (>5	50% DECIDUOUS WITH 10-50% CROWN CLOSURE)	164	0.0%	727	0.1%	1 839	1.4%	508	0.6%	
4322 MIXED FOREST (>3	BRUSH COVERED)	1.202	1.1%	3.240	1.3%	1,000	0.8%	1.681	1.9%	
4420 DECIDUOUS BRUS	H/SHRUBLAND	451	0.4%	1,721	0.7%	1,230	1.0%	694	0.8%	
4430 CONIFEROUS BRU	SH/SHRUBLAND	107	0.1%	616	0.2%	566	0.4%	372	0.4%	
4440 MIXED DECIDUOUS	S/CONIFEROUS BRUSH/SHRUBLAND	172	0.2%	1,018	0.4%	965	0.8%	640	0.7%	
4500 SEVERE BURNED	UPLAND VEGETATION	1	0.0%	5	0.0%	2	0.0%	1	0.0%	
5100 STREAMS AND CA	NALS	130	0.1%	202	0.1%	97	0.1%	17	0.0%	
5200 NATURAL LAKES		54	0.0%	70	0.0%	29	0.0%	10	0.0%	
5300 ARTIFICIAL LAKES		400	0.4%	170	0.2%	203	0.2%	11	0.1%	
5410 TIDAL RIVERS, INL	AND BAYS, AND OTHER TIDAL WATERS	-30	0.0%	4	0.0%	- 50	0.0%	0	0.0%	
5420 DREDGED LAGOOL	N	480	0.4%	79	0.0%	19	0.0%	2	0.0%	
5430 ATLANTIC OCEAN		4	0.0%	0	0.0%	-	0.0%	0	0.0%	
6110 SALINE MARSHES		158	0.1%	343	0.1%	51	0.0%	37	0.0%	
6120 FRESHWATER TID	AL MARSHES	10	0.0%	37	0.0%	19	0.0%	12	0.0%	
6130 VEGETATED DUNE	COMMUNITIES	35	0.0%	26	0.0%	1	0.0%	5	0.0%	
6210 DECIDUOUS WOOL	DED WETLANDS	228	0.2%	1,700	0.7%	3,231	2.5%	816	0.9%	
6220 CONIFEROUS WOO	DDED WETLANDS	15	0.0%	71	0.0%	181	0.1%	46	0.1%	
6221 ATLANTIC WHITE C		- 64	0.0%	340	0.0%	392	0.0%	185	0.0%	
6231 DECIDOUUS SCRU		1	0.0%	11	0.0%	18	0.0%	5	0.0%	
6233 MIXED SCRUB/SHE	RUB WETLANDS (DECIDIOUS DOM.)	11	0.0%	41	0.0%	70	0.1%	27	0.0%	
6234 MIXED SCRUB/SHF	RUB WETLANDS (CONIFEROUS DOM.)	5	0.0%	21	0.0%	60	0.0%	23	0.0%	
6240 HERBACEOUS WE	TLANDS	129	0.1%	429	0.2%	285	0.2%	218	0.2%	
6251 MIXED FORESTED	WETLANDS (DECIDUOUS DOM.)	18	0.0%	105	0.0%	335	0.3%	71	0.1%	
6252 MIXED FORESTED	WETLANDS (CONIFEROUS DOM.)	16	0.0%	76	0.0%	232	0.2%	66	0.1%	
6500 SEVERE BURNED	WETLANDS	0	0.0%	-	0.0%	-	0.0%	-	0.0%	
7100 BEACHES		104	0.1%	20	0.0%	1	0.0%	4	0.0%	
7200 BARE EXPOSED RO	UCK, RUCK SLIDES, ETC.	28 294	0.0%	176	0.0%	23	0.0%	30	0.0%	
		265	0.2%	331	0.1%	40	0.0%	62	0.1%	
7430 DISTURBED WETL	ANDS (MODIFIED)	366	0.3%	566	0.2%	178	0.1%	256	0.3%	
7500 TRANSITIONAL AR	EAS	1,437	1.3%	1,735	0.7%	149	0.1%	474	0.5%	
7600 UNDIFFERENTIATE	ED BARREN LANDS	162	0.1%	117	0.0%	15	0.0%	21	0.0%	
TOTAL HECTA	ARS	111,489		250,633		127,142		88,341		

#### CRSSA Label

6500 SEVERE BURNED WETLANDS

7300 EXTRACTIVE MINING

7500 TRANSITIONAL AREAS

7400 ALTERED LANDS

7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC.

7430 DISTURBED WETLANDS (MODIFIED)

7600 UNDIFFERENTIATED BARREN LANDS

TOTAL HECTARS

7100 BEACHES

LEVEL\_120 = Cultivated (actively tilled, fallow and recently abandoned)

· · · · · · · · · · · · · · · · · · ·	LEVEL_135 - Grassianu. airpoit						_		
LU95 DEP_LABEL		LEVEL_120		LEVEL_131		LEVEL_132		LEVEL_133	
1110 RESIDENTIAL, F		42	0.0%	187	0.3%	49	0.4%	-	0.0%
120 RESIDENTIAL, S		158	0.1%	493	0.9%	140	1.0%	0	0.0%
1130 RESIDENTIAL, 3		5 158	1.8%	452	0.0%	230	0.7%	2	0.07
150 MIXED RESIDE		5,150	0.0%	1,007	0.0%	230	0.1%	2	0.17
		396	0.0%	557	1.0%	88	0.1%	2	0.07
211 MILITARY RESE	EVATIONS	3	0.1%	118	0.2%	10	0.1%	35	1.80
214 NO LONGER MI		-	0.0%	9	0.0%	0	0.1%	-	0.09
1300 INDUSTRIAL		156	0.1%	410	0.7%	8	0.0%	4	0.2%
1400 TRANSPORTAT	ION/COMMUNICATIONS/UTILITIES	811	0.3%	2.016	3.5%	70	0.5%	82	4.29
1461 WETLAND RIGH	ITS-OF-WAY (MODIFIED)	16	0.0%	97	0.2%	2	0.0%	1	0.09
500 INDUSTRIAL/CO	MMERCIAL COMPLEXES	0	0.0%	2	0.0%	0	0.0%	-	0.0%
600 MIXED URBAN	OR BUILT-UP LAND	1	0.0%	1	0.0%	0	0.0%	-	0.09
700 OTHER URBAN	OR BUILT-UP LAND	3,028	1.1%	3,530	6.2%	370	2.8%	1,269	64.8%
750 MANAGED WET	LAND IN MAINTAINED LAWN GREENSPACE	169	0.1%	560	1.0%	19	0.1%	52	2.7%
800 RECREATIONAL	LAND	1,256	0.4%	1,053	1.8%	8,444	63.2%	8	0.4%
804 ATHLETIC FIELI	DS (SCHOOLS)	264	0.1%	1,408	2.5%	1,434	10.7%	-	0.0%
850 MANAGED WET	LAND IN BUILT-UP MAINTAINED REC AREA	95	0.0%	198	0.3%	431	3.2%	-	0.09
100 CROPLAND ANI	D PASTURELAND	200,886	70.4%	7,222	12.7%	713	5.3%	118	6.09
140 AGRICULTURAL	WETLANDS (MODIFIED)	26,099	9.1%	879	1.5%	128	1.0%	13	0.79
150 FORMER AGRIC	CULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)	1,208	0.4%	101	0.2%	10	0.1%	0	0.0%
200 ORCHARDS/VIN	IEYARDS/NURSERIES/HORTICULTURAL AREAS	16,721	5.9%	568	1.0%	37	0.3%	-	0.0%
300 CONFINED FEE	DING OPERATIONS	41	0.0%	5	0.0%	1	0.0%	-	0.0%
400 OTHER AGRICU	ILTURE	3,649	1.3%	468	0.8%	73	0.5%	1	0.0%
110 DECIDUOUS FC	REST (10-50% CROWN CLOSURE)	793	0.3%	1,009	1.8%	38	0.3%	6	0.3%
120 DECIDUOUS FC	REST (>50% CROWN CLOSURE)	4,607	1.6%	7,069	12.4%	250	1.9%	17	0.9%
210 CONIFEROUS F	OREST (10-50% CROWN CLOSURE)	97	0.0%	283	0.5%	10	0.1%	9	0.5%
220 CONIFEROUS F	OREST (>50% CROWN CLOSURE)	428	0.2%	1,167	2.1%	48	0.4%	14	0.7%
230 PLANTATION		73	0.0%	62	0.1%	2	0.0%	1	0.1%
311 MIXED FOREST	(>50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)	25	0.0%	59	0.1%	3	0.0%	0	0.0%
312 MIXED FOREST	(>50% CONIFEROUS WITH >50% CROWN CLOSURE)	227	0.1%	666	1.2%	23	0.2%	13	0.7%
321 MIXED FOREST	(>50% DECIDUOUS WITH 10-50% CROWN CLOSURE)	52	0.0%	144	0.3%	13	0.1%	5	0.2%
322 MIXED FOREST	(>50% DECIDUOUS WITH >50% CROWN CLOSURE)	263	0.1%	872	1.5%	45	0.3%	16	0.8%
410 OLD FIELD (< 25	5% BRUSH COVERED)	6,999	2.5%	5,722	10.1%	93	0.7%	85	4.3%
420 DECIDUOUS BR	RUSH/SHRUBLAND	1,765	0.6%	2,178	3.8%	45	0.3%	7	0.3%
430 CONIFEROUS E	RUSH/SHRUBLAND	1,204	0.4%	1,171	2.1%	18	0.1%	11	0.6%
440 MIXED DECIDU	OUS/CONIFEROUS BRUSH/SHRUBLAND	1,434	0.5%	1,783	3.1%	32	0.2%	14	0.7%
500 SEVERE BURNE	ED UPLAND VEGETATION	0	0.0%	52	0.1%	0	0.0%	-	0.0%
100 STREAMS AND	CANALS	79	0.0%	110	0.2%	9	0.1%	2	0.19
200 NATURAL LAKE	S	33	0.0%	144	0.3%	5	0.0%	-	0.0%
300 ARTIFICIAL LAK	ES	711	0.2%	478	0.8%	44	0.3%	2	0.19
410 TIDAL RIVERS,	INLAND BAYS, AND OTHER TIDAL WATERS	13	0.0%	94	0.2%	2	0.0%	-	0.0%
411 OPEN TIDAL BA	YS	-	0.0%	5	0.0%	-	0.0%	-	0.0%
420 DREDGED LAG	OON	-	0.0%	2	0.0%		0.0%		0.0%
430 ATLANTIC OCE	AN	-	0.0%	12	0.0%	-	0.0%	-	0.0%
110 SALINE MARSH	ES	46	0.0%	283	0.5%	5	0.0%	-	0.0%
120 FRESHWATER	TIDAL MARSHES	35	0.0%	13	0.0%	1	0.0%	-	0.0%
130 VEGETATED DU	JNE COMMUNITIES	-	0.0%	134	0.2%	-	0.0%	-	0.0%
210 DECIDUOUS W	OODED WETLANDS	2,152	0.8%	2,400	4.2%	157	1.2%	9	0.59
220 CONIFEROUS V	VOODED WETLANDS	106	0.0%	36	0.1%	4	0.0%	1	0.19
221 ATLANTIC WHIT	E CEDAR SWAMP	35	0.0%	8	0.0%	0	0.0%	-	0.0
231 DECIDUOUS SC	RUB/SHRUB WETLANDS	670	0.2%	738	1.3%	26	0.2%	16	0.89
232 CONIFEROUS S	CRUB/SHRUB WETLANDS	142	0.0%	21	0.0%	1	0.0%	0	0.0%
233 MIXED SCRUB/	SHRUB WETLANDS (DECIDUOUS DOM.)	64	0.0%	45	0.1%	2	0.0%	1	0.0%
234 MIXED SCRUB/S	SHRUB WETLANDS (CONIFEROUS DOM.)	40	0.0%	27	0.0%	3	0.0%	0	0.0%
240 HERBACEOUS	WETLANDS	796	0.3%	1,854	3.3%	49	0.4%	88	4.5%
251 MIXED FOREST	ED WETLANDS (DECIDUOUS DOM.)	113	0.0%	108	0.2%	8	0.1%	0	0.0%
252 MIXED FOREST	ED WETLANDS (CONIFEROUS DOM.)	93	0.0%	106	0.2%	4	0.0%	2	0.19

- 0.0%

- 0.0%

3 0.0%

169 0.1%

170 0.1%

295 0.1%

817 0.3%

60 0.0%

285,347

0 0.0%

67 0.1%

19 0.0%

2,124 3.7%

1,463 2.6%

951 1.7%

976 1.7%

251 0.4%

56,910

- 0.0%

- 0.0%

- 0.0%

5 0.0%

12 0.1%

19 0.1%

16 0.1%

2 0.0%

13,351

- 0.0%

- 0.0%

- 0.0%

3 0.2%

1 0.1%

30 1.5%

7 0.3%

10 0.5%

1,957

LEVEL_142         Upland Forest: Coastal Plain Dine-oak (Pine 50.75%)           LEVEL_143         Upland Forest: Coastal Plain Pine-oak (Pine 50.75%)           Level_144         Upland Forest: Coastal Plain Pine-oak (Pine 50.75%)           Level_144         Upland Forest: Coastal Plain Pine oak (Pine 50.75%)           Level_144         Upland Forest: Coastal Plain Pine oak (Pine 50.75%)           Level_144         Upland Forest: Coastal Plain Pine oak (Pine 50.75%)           Level_144         Upland Forest: Coastal Plain Pine oak (Pine 50.75%)           Level_145         Uevel_144         Uev
LEVEL_144         Ups DEP_LABEL         LEVEL_141         LEVEL_142         LEVEL_143         LEVEL_144           L195 DEP_LABEL         LEVEL_141         LEVEL_142         LEVEL_143         LEVEL_144         0.0%           1110 RESIDENTIAL, HIGH DENSITY, MULTIPLE DWELLING         28         0.0%         51         0.0%         142         0.2%         15         0.0%           1130 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY         151         0.2%         636         0.6%         231         0.3%         33         0.1%           1140 RESIDENTIAL, SINGLE UNIT, LOW DENSITY         169         0.5%         636         0.6%         10.0%         0.0%
LOBS DEP LABEL         LEVEL 1/2         LEVEL 1/2         LEVEL 1/3         LEVEL 1/4           LOBS DEP TALL, HIGH DENSITY, MULTIPLE DWELLING         28         0.0%         51         0.0%         14         0.0%         4         0.0%           1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY         389         0.5%         656         0.6%         231         0.3%         33         0.1%           1140 RESIDENTIAL, SINGLE UNIT, LOW DENSITY         399         1.5%         1.50         1.1%         370         0.5%         57         0.2%           1150 MIZED RESIDENTIAL         0         0.0%         1         0.0%         1         0.0%         0.0%         51         0.0%           1200 COMMERCIAL/SERVICES         120         0.1%         113         0.1%         30         0.0%         0.0%         0.0%         0.0%           1214 NO LONGER MILTARY, USE TO BE DETERMINED         1         0.0%         0         0.0%         0         0.0%         0         0.0%         0         0.0%         100           1214 NO LONGER MILTARY, USE TO BE DETERMINED         1         0.0%         0         0.0%         0         0.0%         0         0.0%         10.0%         10.0%         10.0%         10.0% </th
1120       RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY       151       0.2%       387       0.4%       142       0.2%       15       0.0%         1130       RESIDENTIAL, SINGLE UNIT, LOW DENSITY       399       0.5%       636       0.6%       231       0.3%       33       0.1%         1140       RESIDENTIAL, SINGLE UNIT       995       1.150       1.1%       370       0.5%       57       0.2%         1200       COMMERCIAL/SERVICES       120       0.1%       113       0.0%       18       0.0%       5       0.0%         1214       NOLONGER MILITARY, USE TO BE DETERMINED       1       0.0%       0.0%       0       0.0%       0       0.0%       10       0.0%
1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY       369       0.5%       636       0.6%       221       0.3%       33       0.1%         1140 RESIDENTIAL, RURAL, SINGLE UNIT       995       1.2%       1.150       1.1%       370       0.5%       57       0.2%         1150 MIXED RESIDENTIAL       0       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       0.0%       0       0.0%       1
1140 RESIDENTIAL, RURAL, SINGLE UNIT       999       1.2%       1.1%       1.1%       3.70       0.3%       90       0.2%         1150 MIXED RESIDENTIAL       0       0.0%       1       0.0%       1       0.0%       0       0.0%         1200 COMMERCIAL/SERVICES       120       0.1%       113       0.1%       3.0       0.0%       2       0.0%         1211 MILITARY RESERVATIONS       37       0.0%       31       0.0%       12       0.0%       0       0.0%       12       0.0%       30       0.0%       12       0.0%       12       0.0%       140       0.0%       12       0.0%       30       0.0%       12       0.0%       30       0.0%       12       0.0%       30       0.0%       12       0.0%       30       0.0%       12       0.0%       30       0.0%       12       0.0%       30       0.0%       130       0.0%       12       0.0%       30       0.0%       12       0.0%       30       0.0%       12       0.0%       30       0.0%       140       140       140       140       140       140       0.0%       10       0.0%       10.0%       10.0%       10.0%       10.0%       10.0%<
Instruct of MACD Free Name       120       0.1%       113       0.1%       30       0.0%       5       0.0%         1200       COMMERCIAL/SERVICES       120       0.1%       113       0.1%       13       0.0%       12       0.0%       10       0.0%       10       0.0%       10       0.0%       10       0.0%       10       0.0%       10       0.0%       10       0.0%       10       0.0%
1211 MILITARY RESERVATIONS       37       0.0%       31       0.0%       18       0.0%       2       0.0%         1214 NO LONGER MILITARY, USE TO BE DETERMINED       1       0.0%       0       0.0%       0       0.0%       0       0.0%       10       0.0% <t< td=""></t<>
1214 NO LONGER MILITARY, USE TO BE DETERMINED       1       0.0%       0       0.0%       0       0.0%         1300 INDUSTRIAL       65       0.1%       33       0.0%       12       0.0%       33       0.0%         1400 TRANSPORTATION/COMMUNICATIONS/UTILITIES       1.140       1.4%       913       0.9%       372       0.5%       65       0.2%         1461 WETLAND RIGHTS-OF-WAY (MODIFIED)       59       0.1%       24       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%       10.0%       0.1%       0.0%
1300 INDUSTRIAL       63       0.1%       33       0.0%       12       0.0%       3       0.0%         1400 TRANSPORTATION/COMMUNICATIONS/UTILITIES       1.140       1.4%       913       0.9%       372       0.5%       65       0.2%         1461 WETLAND RIGHTS-OF-WAY (MODIFIED)       59       0.1%       24       0.0%       8       0.0%       0       0.0%         1500 INDUSTRIAL/COMMERCIAL COMPLEXES       1       0.0%       0       0.0%       0       0.0%       0       0.0%       100       0.0%       10.0%       0       0.0%       10.0%       0.0%       10.0%       0       0.0%       10.0%
Hot Name Of Name Of Name Of Name (Notified Notified N
1500 INDUSTRIAL/COMMERCIAL COMPLEXES       1       0.0%       0       0.0%       0       0.0%       0       0.0%         1600 MIXED URBAN OR BUILT-UP LAND       0       0.0%       0       0.0%       0       0.0%       0       0.0%         1700 OTHER URBAN OR BUILT-UP LAND       445       0.6%       366       0.3%       121       0.2%       19       0.1%         1750 MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE       39       0.0%       36       0.0%       11       0.0%       1       0.0%         1800 RECREATIONAL LAND       164       0.2%       149       0.1%       75       0.1%       18       0.1%         1804 ATHLETIC FIELDS (SCHOOLS)       46       0.1%       22       0.0%       8       0.0%       1       0.0%         1800 RCREATIONAL LAND       0161 DASTURELAND IN BUILT-UP MAINTAINED REC AREA       5       0.0%       7       0.0%       2       0.0%       1       0.0%         1800 RCRULTURAL WETLAND (MODIFIED)       673       8.%       350       0.3%       82       0.1%       11       0.0%         2100 CONFILAND AND PASTURELAND (BECOMING SHRUBBY, NOT BUILT-UP)       217       0.3%       167       0.2%       52       0.1%       6
1600 MIXED URBAN OR BUILT-UP LAND       0       0.0%       0       0.0%       0       0.0%       0       0.0%       0       0.0%       -       0.0%         1700 OTHER URBAN OR BUILT-UP LAND       445       0.6%       366       0.3%       121       0.2%       19       0.1%         1750 MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE       39       0.0%       36       0.0%       11       0.0%       1       0.0%         1800 RECREATIONAL LAND       164       0.2%       149       0.1%       75       0.1%       18       0.1%         1804 ATHLETIC FIELDS (SCHOOLS)       46       0.1%       22       0.0%       8       0.0%       1       0.0%         1800 CROPLAND AND PASTURELAND       5       0.0%       7       0.0%       2       0.0%       1       0.0%         2100 CROPLAND AND PASTURELAND       6285       2.8%       1.219       1.2%       330       0.4%       40       0.1%         2140 AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)       217       0.3%       167       0.2%       52       0.1%       6       0.0%         2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS       383       0.5%       376       0.4%       172
1700 OTHER ORBAN OR BUILT-UP LAND       443 0.0%       306 0.3%       121 0.2%       19 0.1%         1750 MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE       39 0.0%       36 0.0%       11 0.0%       1 0.0%         1800 RECREATIONAL LAND       164 0.2%       149 0.1%       75 0.1%       18 0.1%         1804 ATHLETIC FIELDS (SCHOOLS)       46 0.1%       22 0.0%       8 0.0%       1 0.0%         1850 MANAGED WETLAND IN BUILT-UP MAINTAINED REC AREA       5 0.0%       7 0.0%       2 0.0%       1 0.0%         1800 RCCPLAND AND PASTURELAND       2.285       2.8%       1,219       1.2%       330       0.4%       40       0.1%         2100 CROPLAND AND PASTURELAND       673 0.8%       350 0.3%       82 0.1%       11       0.0%         2140 AGRICULTURAL WETLANDS (MODIFIED)       673 0.8%       350 0.3%       82 0.1%       11       0.0%         2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)       217 0.3%       167 0.2%       52 0.1%       6 0.0%         2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS       383 0.5%       376 0.4%       172 0.2%       41 0.1%       0.0%         2400 OTHER AGRICULTURE       116 0.1%       85 0.1%       24 0.0%       3 0.0%       0.0%         4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)
1100 MARGED WETLAND       164       0.2%       149       0.1%       75       0.1%       18       0.1%         1800 RECREATIONAL LAND       164       0.2%       149       0.1%       75       0.1%       18       0.1%         1804 ATHLETIC FIELDS (SCHOOLS)       46       0.1%       22       0.0%       8       0.0%       1       0.0%         1800 RECREATIONAL LAND       NULL-UP MAINTAINED REC AREA       5       0.0%       7       0.0%       2       0.0%       1       0.0%         1800 RECREATIONAL AND PASTURELAND       2.285       2.8%       1,219       1.2%       330       0.4%       40       0.1%         2100 CROPLAND AND PASTURELAND       673       0.8%       350       0.3%       82       0.1%       11       0.0%         2140 AGRICULTURAL WETLANDS (MODIFIED)       673       0.8%       350       0.3%       82       0.1%       11       0.0%         2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)       217       0.3%       167       0.2%       52       0.1%       6       0.0%         2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS       383       0.5%       376       0.4%       172       0.2%       41       0.1%<
1804 ATHLETIC FIELDS (SCHOOLS)       46       0.1%       22       0.0%       8       0.0%       1       0.0%         1850 MANAGED WETLAND IN BUILT-UP MAINTAINED REC AREA       5       0.0%       7       0.0%       2       0.0%       1       0.0%         2100 CROPLAND AND PASTURELAND       2.285       2.8%       1.219       1.2%       330       0.4%       40       0.1%         2140 AGRICULTURAL WETLANDS (MODIFIED)       673       0.8%       350       0.3%       82       0.1%       11       0.0%         2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)       217       0.3%       167       0.2%       52       0.1%       6       0.0%         2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS       383       0.5%       376       0.4%       172       0.2%       41       0.1%         2300 CONFINED FEEDING OPERATIONS       5       0.0%       4       0.0%       1       0.0%       2       0.0%       3       0.0%         2400 OTHER AGRICULTURE       116       0.1%       85       0.1%       24       0.0%       3       0.0%         2410 DECIDUOUS FOREST (10-50% CROWN CLOSURE)       1.933       2.4%       2.600       2.5%       3.84       <
1850 MANAGED WETLAND IN BUILT-UP MAINTAINED REC AREA       5       0.0%       7       0.0%       2       0.0%       1       0.0%         2100 CROPLAND AND PASTURELAND       2.285       2.8%       1.219       1.2%       330       0.4%       40       0.1%         2140 AGRICULTURAL WETLANDS (MODIFIED)       673       0.8%       350       0.3%       82       0.1%       11       0.0%         2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)       217       0.3%       167       0.2%       52       0.1%       6       0.0%         2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS       383       0.5%       376       0.4%       172       0.2%       41       0.1%         2300 CONFINED FEEDING OPERATIONS       5       0.0%       4       0.0%       1       0.0%       0.0%         2400 OTHER AGRICULTURE       116       0.1%       85       0.1%       24       0.0%       3       0.0%         4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)       1,933       2.4%       2,600       2.5%       384       0.5%       20       0.1%         4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)       1,081       1.3%       3,892       3,7%       3,879       5.2%       42.40<
2100 CROPLAND AND PASTURELAND       2.263       1,219       1,279       1.276       330       0.4%       40       0.1%         2140 AGRICULTURAL WETLANDS (MODIFIED)       673       0.8%       350       0.3%       82       0.1%       11       0.0%         2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)       217       0.3%       167       0.2%       52       0.1%       10       0.0%         2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS       383       0.5%       376       0.4%       172       0.2%       41       0.1%         2300 CONFINED FEEDING OPERATIONS       5       0.0%       4       0.0%       1       0.0%       -       0.0%         2400 OTHER AGRICULTURE       116       0.1%       85       0.1%       24       0.0%       3       0.0%         4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)       1,933       2.4%       2,600       2.5%       384       0.5%       20       0.1%         4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)       39,029       48.3%       23,420       22.3%       2,017       2.7%       121       0.4%         4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)       1,081       1.3%       3,892       3.7%       3,879
2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)       217       0.3%       167       0.2%       52       0.1%       6       0.0%         2200 ORCHARDS/INEYARDS/INURSERIES/HORTICULTURAL AREAS       383       0.5%       376       0.4%       172       0.2%       41       0.1%         2300 CONFINED FEEDING OPERATIONS       5       0.0%       4       0.0%       1       0.0%       -       0.0%         2400 OTHER AGRICULTURE       116       0.1%       85       0.1%       24       0.0%       3       0.0%         2400 OTHER AGRICULTURE       116       0.1%       85       0.1%       24       0.0%       3       0.0%         4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)       1,933       2.4%       2,600       2.5%       384       0.5%       20       0.1%         4120 DECIDUOUS FOREST (10-50% CROWN CLOSURE)       39,029       48.3%       23,420       22.3%       2,017       2.7%       121       0.4%         4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)       1,081       1.3%       3,892       3.7%       3,879       5.2%       874       2.8%         4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)       10.81       1.3%       3,892       3.7%       3,879       <
2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS         383         0.5%         376         0.4%         172         0.2%         41         0.1%           2300 CONFINED FEEDING OPERATIONS         5         0.0%         4         0.0%         1         0.0%         -         0.0%           2400 OTHER AGRICULTURE         116         0.1%         85         0.1%         24         0.0%         3         0.0%           4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)         1,933         2.4%         2.600         2.5%         384         0.5%         20         0.1%           4120 DECIDUOUS FOREST (10-50% CROWN CLOSURE)         39,029         48.3%         23,420         22.3%         2,017         2.7%         121         0.4%           4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)         1,081         1.3%         3,892         3.7%         3,879         5.2%         84         2.8
2300 CONFINED FEEDING OPERATIONS       5       0.0%       4       0.0%       1       0.0%       -       0.0%         2400 OTHER AGRICULTURE       116       0.1%       85       0.1%       24       0.0%       3       0.0%         4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)       1,933       2.4%       2.600       2.5%       384       0.5%       20       0.1%         4120 DECIDUOUS FOREST (10-50% CROWN CLOSURE)       39,029       48.3%       23,420       2.3%       2,017       2.7%       121       0.4%         4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)       1,081       1.3%       3,892       3.7%       3,879       5.2%       874       2.8%
2400 OTHER AGRICULTURE       116       0.1%       85       0.1%       24       0.0%       3       0.0%         4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)       1,933       2.4%       2,600       2.5%       384       0.5%       20       0.1%         4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)       39,029       48.3%       23,420       2.3%       2,017       2.7%       121       0.4%         4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)       1,081       1.3%       3,892       3.7%       3,879       5.2%       874       2.8%
4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)       39,029 48.3%       23,420       22.3%       2,017       2.7%       121       0.4%         4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)       39,029 48.3%       23,420       22.3%       2,017       2.7%       121       0.4%         4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)       1,081       1.3%       3,892       3.7%       3,879       5.2%       874       2.8%         4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)       10,465       10,465       10,066       24,005       78,389
4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE) 1,081 1.3% 3,892 3.7% 3,879 5.2% 874 2.8%
4220 CONIFEROUS FOREST (>50% CROWN CLOSURE) 9/3 1.2% 10,400 10,0% 30,173 31.0% 24,030 70.3%
4230 PLANTATION 11 0.0% 91 0.1% 368 0.5% 369 1.2%
4311 MIXED FOREST (>50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)         222         0.0%         0.0%         0.0%         0.0%         20         0.1%           4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)         2,240         2.8%         17,727         16.9%         13,391         17.9%         1,208         3.9%
4321 MIXED FOREST (>50% DECIDUOUS WITH 10-50% CROWN CLOSURE) 861 1.1% 1,479 1.4% 316 0.4% 13 0.0%
4322 MIXED FOREST (>50% DECIDUOUS WITH >50% CROWN CLOSURE) 13,022 16.1% 22,505 21.5% 3,978 5.3% 239 0.8%
4410 OLD FIELD (< 25% BRUSH COVERED)         1,575         1.9%         1,008         1.0%         274         0.4%         53         0.2%           VMD FIELD (< 25% BRUSH COVERED)
4420 DECIDUOUS BRUSH/SHRUBLAND 4,021 3.7 % 2,031 2.0 % 205 0.4 % 37 0.1 %
440 MIXED DECIDUOUS/CONIFEROUS BRUSH/SHRUBLAND 2,273 2.8% 4,284 4.1% 1,541 2.1% 163 0.5%
4500 SEVERE BURNED UPLAND VEGETATION 34 0.0% 217 0.2% 1,504 2.0% 1,081 3.5%
5100 STREAMS AND CANALS         8         0.0%         11         0.0%         2         0.0%           14         0.0%         26         0.0%         11         0.0%         2         0.0%
5200 NATURAL LAKES 14 0.0% 20 0.0% 11 0.0% 3 0.0%
5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS 12 0.0% 27 0.0% 15 0.0% 15 0.0%
5411 OPEN TIDAL BAYS 0 0.0% 0 0.0% - 0.0%
5420 DREDGED LAGOON 0 0.0% 1 0.0% 2 0.0% 2 0.0% 0 0.0%
5430 ATLANTIC OCEAN 0 0.0% - 0.0% - 0.0% - 0.0% - 0.0% - 0.0%
6120 FRESHWATER TIDAL MARSHES 32 0.0% 29 0.0% 13 0.0% 4 0.0%
6130 VEGETATED DUNE COMMUNITIES 6 0.0% 36 0.0% 20 0.0% 2 0.0%
6210 DECIDUOUS WOODED WETLANDS         2,882         3.6%         3,012         2.9%         580         0.8%         66         0.2%
6220 CONIFEROUS WOODED WETLANDS 31 0.0% 214 0.2% 445 0.6% 301 1.0%
6221 ATLANTIC WHITE CEDAR SWAMP         10         0.1%         00         0.1%         10         0.2%           6231 DECIDUOUS SCRUB/SHRUB WETLANDS         426         0.5%         489         0.5%         150         0.2%         34         0.1%
6232 CONIFEROUS SCRUB/SHRUB WETLANDS 9 0.0% 51 0.0% 88 0.1% 48 0.2%
6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.) 44 0.1% 129 0.1% 91 0.1% 25 0.1%
6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)         17         0.0%         111         0.1%         22         0.1%           321         0.4%         266         0.3%         82         0.1%         22         0.1%
6251 MIXED FORESTED WETLANDS (DECIDIIOUS DOM.) 380 0.5% 580 0.6% 318 0.4% 79 0.3%
6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)         124         0.2%         437         0.4%         459         0.6%         175         0.6%
6500 SEVERE BURNED WETLANDS 0 0.0% 3 0.0% 14 0.0% 9 0.0%
7100 BEACHES         1         0.0%         1         0.0%         0         0.0%           7000 BEACHES         0.0%
7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC 0.0% -
7400 ALTERED LANDS 119 0.1% 46 0.0% 13 0.0% 3 0.0%
7430 DISTURBED WETLANDS (MODIFIED) 173 0.2% 116 0.1% 37 0.0% 11 0.0%
7500 TRANSITIONAL AREAS 82 0.1% 45 0.0% 10 0.0% 2 0.0%
TOTAL HECTARS         80,855         104,910         74,806         30.755

LEVEL 14	5 = Upland Forest:	Highlands/Piedmont deciduou	us - mixed hardwoods dominant
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-			0						
LEVEL	_146 = Upland	Forest:	Highlands/I	Piedmont	mixed	deciduous	s/coniferou	s - hemlo	ck/pine
LEVEL	_147 = Upland	Forest:	Highlands/I	Piedmont	mixed	deciduous	s/coniferou	s - red ce	dar/pine
LEVEL	_148 = Upland	Forest:	Highlands/I	Piedmont	conife	rous - herr	lock/pine	dominant	
					11		1		11 a

	_		-	
LEVEL	_ 148 =	Upland	Forest: Highlands/Piedmont coniferous - he	е

CRSSA Label –

	IEVEL 145		LEVEL 146	mant	LEVEL 147		IEV/FI 148	
LU95 DEP_LABEL	54	0.0%	2	0.0%	50	0.3%	0.11_1111	0.0%
1110 RESIDENTIAL, HIGH DENSITY, MULTIPLE DWELLING	707	0.0 %	2	0.0%	479	0.5%	1	0.070
1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	1 245	0.5%	00	0.0%	470	2.0%	2	0.1%
1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	1,243	1 50/	100	1 70/	450	2.470	5	0.2 /0
1140 RESIDENTIAL, RURAL, SINGLE UNIT	3,001	0.0%	100	1.7%	002	4.0%	0	0.0%
1150 MIXED RESIDENTIAL	0	0.0%	-	0.0%	-	0.0%	-	0.0%
1200 COMMERCIAL/SERVICES	248	0.1%	10	0.1%	/1	0.4%	0	0.0%
1211 MILITARY RESERVATIONS	23	0.0%	1	0.0%	0	0.0%	-	0.0%
1214 NO LONGER MILITARY, USE TO BE DETERMINED	-	0.0%	-	0.0%	-	0.0%	-	0.0%
1300 INDUSTRIAL	109	0.0%	1	0.0%	20	0.1%		0.0%
1400 TRANSPORTATION/COMMUNICATIONS/UTILITIES	2,047	0.9%	44	0.4%	160	0.9%	2	0.2%
1461 WETLAND RIGHTS-OF-WAY (MODIFIED)	101	0.0%	1	0.0%	8	0.0%	-	0.0%
1500 INDUSTRIAL/COMMERCIAL COMPLEXES	1	0.0%	-	0.0%	0	0.0%	-	0.0%
1600 MIXED URBAN OR BUILT-UP LAND	1	0.0%	0	0.0%	-	0.0%	-	0.0%
1700 OTHER URBAN OR BUILT-UP LAND	753	0.3%	26	0.2%	181	1.0%	2	0.1%
1750 MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE	82	0.0%	2	0.0%	23	0.1%	-	0.0%
1800 RECREATIONAL LAND	383	0.2%	16	0.1%	112	0.6%	2	0.2%
1804 ATHLETIC FIELDS (SCHOOLS)	33	0.0%	2	0.0%	10	0.1%	-	0.0%
1850 MANAGED WETLAND IN BUILT-UP MAINTAINED REC AREA	19	0.0%	1	0.0%	16	0.1%	-	0.0%
2100 CROPLAND AND PASTURELAND	2,687	1.1%	67	0.6%	342	1.9%	4	0.3%
2140 AGRICULTURAL WETLANDS (MODIFIED)	157	0.1%	3	0.0%	23	0.1%	-	0.0%
2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)	38	0.0%	0	0.0%	3	0.0%	-	0.0%
2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS	97	0.0%	3	0.0%	37	0.2%	0	0.0%
2300 CONFINED FEEDING OPERATIONS	2	0.0%	-	0.0%	0	0.0%	-	0.0%
	162	0.1%	5	0.0%	26	0.1%	0	0.0%
	5.470	2.3%	185	1.7%	611	3.3%	2	0.2%
	174,159	73.4%	2.816	26.3%	5.452	29.8%	57	5.5%
	86	0.0%	30	0.3%	94	0.5%	2	0.2%
	2 046	0.9%	3 404	31.8%	897	4.9%	592	57.5%
4220 CONFEROUS FOREST (>30% CROWN CLOSURE)	2,040	0.0%	107	1.0%	360	2.0%	107	10.4%
	147	0.1%	10	0.2%	62	0.3%	3	0.3%
4311 MIXED FOREST (>50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)	3 159	1 30/	1 664	15.6%	1 016	5.5%	113	10.0%
4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	3,130	0.10/	1,004	0.20/	1,010	0.5%	115	0.10/
4321 MIXED FOREST (>50% DECIDUOUS WITH 10-50% CROWN CLOSURE)	201 E 166	0.1%	1 154	10.2%	566	0.5%	27	0.1%
4322 MIXED FOREST (>50% DECIDUOUS WITH >50% CROWN CLOSURE)	5,150	2.2%	1,154	10.6%	000	3.1%	37	3.0%
4410 OLD FIELD (< 25% BRUSH COVERED)	3,796	1.6%	55	0.5%	274	1.5%	2	0.2%
4420 DECIDUOUS BRUSH/SHRUBLAND	5,873	2.5%	52	0.5%	427	2.3%	2	0.2%
4430 CONIFEROUS BRUSH/SHRUBLAND	1,382	0.6%	201	1.9%	1,646	9.0%	56	5.4%
4440 MIXED DECIDUOUS/CONIFEROUS BRUSH/SHRUBLAND	4,246	1.8%	112	1.0%	1,717	9.4%	8	0.8%
4500 SEVERE BURNED UPLAND VEGETATION	-	0.0%	-	0.0%	-	0.0%	-	0.0%
5100 STREAMS AND CANALS	374	0.2%	11	0.1%	90	0.5%	4	0.3%
5200 NATURAL LAKES	196	0.1%	17	0.2%	14	0.1%	2	0.2%
5300 ARTIFICIAL LAKES	338	0.1%	23	0.2%	51	0.3%	3	0.2%
5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS	12	0.0%	-	0.0%	3	0.0%	-	0.0%
5411 OPEN TIDAL BAYS	-	0.0%	-	0.0%	-	0.0%	-	0.0%
5420 DREDGED LAGOON	-	0.0%	-	0.0%	-	0.0%	-	0.0%
5430 ATLANTIC OCEAN	-	0.0%	-	0.0%	-	0.0%	-	0.0%
6110 SALINE MARSHES	96	0.0%	-	0.0%	5	0.0%	-	0.0%
6120 FRESHWATER TIDAL MARSHES	-	0.0%	-	0.0%	-	0.0%	-	0.0%
6130 VEGETATED DUNE COMMUNITIES	-	0.0%	-	0.0%	-	0.0%	-	0.0%
6210 DECIDUOUS WOODED WETLANDS	13,785	5.8%	104	1.0%	1,626	8.9%	4	0.4%
6220 CONIFEROUS WOODED WETLANDS	71	0.0%	95	0.9%	13	0.1%	11	1.0%
6221 ATLANTIC WHITE CEDAR SWAMP	0	0.0%	0	0.0%	-	0.0%	0	0.0%
6231 DECIDUOUS SCRUB/SHRUB WETLANDS	1,500	0.6%	30	0.3%	210	1.1%	1	0.1%
6232 CONFERQUES SCRUB/SHRUB WETLANDS	12	0.0%	3	0.0%	12	0.1%	0	0.0%
6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)	43	0.0%	5	0.0%	25	0.1%	0	0.0%
6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)	24	0.0%	1	0.0%	13	0.1%	0	0.0%
6240 HERBACEOUS WETLANDS	1.153	0.5%	9	0.1%	109	0.6%	1	0.1%
	119	0.1%	22	0.2%	33	0.2%	1	0.1%
6252 MIXED FORESTED WETLANDS (DECIDOOUS DOM.)	31	0.0%	19	0.2%	6	0.0%	2	0.1%
	-	0.0%	-	0.0%	-	0.0%	-	0.0%
2400 DEACHED		0.0%		0.0%	_	0.0%		0.0%
	57	0.0%	3	0.0%	1	0.0%		0.0%
	165	0.1%	1	0.0%	F	0.0%		0.0%
	105	0.1%	1	0.0%	3	0.0%	-	0.076
7400 ALTERED LANDS	300	0.0%	1	0.0%	3 26	0.0%	1	0.170
(430 DISTURBED WEILANDS (MODIFIED)	159	0.1%	3	0.0%	20	0.1%	0	0.0%
7500 TRANSTITIONAL AREAS	100	0.1%	2	0.0%	13	0.1%	0	0.0%
7600 UNDIFFERENTIATED BARREN LANDS	25	0.0%	1	0.0%	1	0.0%	0	0.0%
TOTAL HECTARS	237,213		10,700		18,319		1,030	

LEVEL\_149 = Upland Forest: Highlands/Piedmont coniferous - red cedar/pine/plantation dominant LEVEL\_151 = Upland Scrub/Shrub: Coastal Plain mixed deciduous/coniferous LEVEL\_152 = Upland Scrub/Shrub: Coastal Plain mixed deciduous/coniferous - maritime/dune LEVEL\_153 = Upland Scrub/Shrub: Highlands/Piedmont mixed deciduous/coniferous

Displace Data         Displace Data         Displace Data         Displace Data         Displace Data           Displace Data	LEVEL_153 = Opland Scrub/Shrub: Highlands/Piedn		aecial	JOUS/CONITE	rous	LEV/EL 152		1 5/51 153	1
1100       RESIDENTIAL INCID CONTRIPUE DWALLENSITY       10       0.00       0.	LU95 DEP_LABEL	1 LEVEL_149	0.00/	LEVEL_101	0.40/	LEVEL_152	0.40/	LEVEL_100	0.0%
Table HABBAR MAL, SNALE UNI, LONDARDY         Col.	1110 RESIDENTIAL, HIGH DENSITY, MULTIPLE DWELLING	1	0.0%	40	0.1%	5	0.1%	41	2.0%
1100 RESIDENTIAL SINGLE UNAL SINGLE ONT         0	1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	10	0.4%	40	0.0%	2	0.3%	100	3.0%
1100       0.000	1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	10 E2	1.00/	20	0.4%	2	0.2%	109	2.4% 5.6%
1100       1100       100       0	1140 RESIDENTIAL, RURAL, SINGLE UNIT	55	0.00/	0	0.4%	4	0.3%	200	0.0%
2200 COMMERYAL/DEBY/CES       -       0.074       1       0       1       0       1       0	1150 MIXED RESIDENTIAL	- 2	0.0%	0	0.0%	-	0.0%	122	2.0%
1211 MULTAY NESERVATIONS       -       0.078       1       0.078       1       0.078       0       0.076       0       0.076 <td< td=""><td>1200 COMMERCIAL/SERVICES</td><td>2</td><td>0.1%</td><td>ZI 54</td><td>0.4%</td><td>4</td><td>0.1%</td><td>7</td><td>2.9%</td></td<>	1200 COMMERCIAL/SERVICES	2	0.1%	ZI 54	0.4%	4	0.1%	7	2.9%
1214 NO.LONGER MULTIARY, USE TO SE DETERMINED       -       0.05       -       0.075       1       0.175       0.0       0.075       0.075       0.0       0.075       <	1211 MILITARY RESERVATIONS	-	0.0%	51	0.7%	1	0.1%	1	0.1%
1300         DOUSTRAL         0        0        0         0	1214 NO LONGER MILITARY, USE TO BE DETERMINED	-	0.0%	-	0.0%	0	0.0%	0	0.0%
Hade TRANSPORTATIONSCOMMUNICATIONSUMTITIES         P         0.03         1         0.05         0         0.05         0         0.05         0         0.05         0         0         0         0         0         0         0         0         0	1300 INDUSTRIAL	0	0.0%	14	0.2%	1	0.1%	104	2.3%
1411 WEILAND REHTS-OF WAY MCDIFIED)       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       1 </td <td>1400 TRANSPORTATION/COMMUNICATIONS/UTILITIES</td> <td>0</td> <td>0.3%</td> <td>1</td> <td>0.9%</td> <td>14</td> <td>0.0%</td> <td>217</td> <td>4.0%</td>	1400 TRANSPORTATION/COMMUNICATIONS/UTILITIES	0	0.3%	1	0.9%	14	0.0%	217	4.0%
1000         D003         0.008         0	1461 WETLAND RIGHTS-OF-WAY (MODIFIED)	-	0.0%	1	0.0%	-	0.0%	0	0.1%
Ison Marke URBAN OR BUILT-UP LAND         -         0.07	1500 INDUSTRIAL/COMMERCIAL COMPLEXES	-	0.0%	-	0.0%	-	0.0%	0	0.0%
1700       01700	1600 MIXED URBAN OR BUILT-UP LAND	-	0.0%	-	0.0%	-	0.0%	1	0.0%
1730 MAAGED VETLAND IN MAINTAINED LAW GREENSPACE       1       0.074       3       0.075       3       0.275         1804 ATHLETIC FIELDS ISCHOOLS)       1       0.075       3       0.275       3       0.275         1804 ATHLETIC FIELDS ISCHOOLS)       1       0.075       3       0.275       0.075       3       0.275         1804 ATHLETIC FIELDS ISCHOOLS)       1       0.075       3       0.275       0.075       3       0.275         2100 CROPLAND AND PASTURELAND       1       0.075       1       0.175       2.075       0.075       1       0.075       1       0.075       1       0.075       1       0.075       1       0.075       0.07	1700 OTHER URBAN OR BUILT-UP LAND	1	0.4%	230	3.0% 0.0%	0	0.4%	0	3.2% 0.2%
1800 ERCEATIONAL LAND       100       0.44       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.24       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       0       0.05       1       0.05       0       0.05       1       0.05       0       0.05       0       0.05       0       0.05       0       0.05       0       0.05       0       0.05       0       0.05       1       0.05       1       0.05       0       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1       0.05       1 <t< td=""><td>1750 MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE</td><td>10</td><td>0.0%</td><td>3</td><td>0.0%</td><td>2</td><td>0.1%</td><td>9</td><td>1.2%</td></t<>	1750 MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE	10	0.0%	3	0.0%	2	0.1%	9	1.2%
1804       ANALED (FIELDS (SCHOOLS)       1       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       1       0.00       0       0.00       1       0.00       0       0.00       1       0.00       0       0.00       1       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       0       0.00       1.00       0.00       1.00       0.00       1.20       0.00       1.20       0.00       1.20       0.00       1.20       0.00       1.20       0.00       1.20       0.00       1.20       0.00       1.20       0.00       1	1800 RECREATIONAL LAND	10	0.4%	0	0.2%	3	0.2%	0	0.2%
1880       MAXAGED WETLAND IN BUILT-UP MAITANED REQ AREA       1       0.078       3       0.18       1       0.08       2       0.078       3       0.078       1       0.078 <t< td=""><td>1804 ATHLETIC FIELDS (SCHOOLS)</td><td>1</td><td>0.0%</td><td>0</td><td>0.0%</td><td>-</td><td>0.0%</td><td>0</td><td>0.2%</td></t<>	1804 ATHLETIC FIELDS (SCHOOLS)	1	0.0%	0	0.0%	-	0.0%	0	0.2%
2100 CROPLAND AND PASTURELAND       19       0.78       2.84       0.0%       1       0.78       2.83       0.284         2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILTUP)       0.0%       0.0%       0.0%       7       0.0%       7       0.0%       7       0.0%       7       0.0%       7       0.0%       2.80       0.0%       7       0.0%       7       0.0%       2.80       0.0%       2.80       0.0%       7       0.0%       2.90       0.0%       2.90       0.0%       1       0.0%       2.90       0.0%       2.90       0.0%       1       0.0%       2.90       0.0%       1       0.0%       2.90       0.0%       1       0.0%       2.90       0.0%       1       0.1%       1.2       0.5%       1.90       0.1%       1.2       0.5%       1.90       0.1%       1.2       0.5%       1.90       0.1%       1.2       0.5%       1.90       0.1%       1.2       0.5%       1.90       0.5%       1.90       0.5%       1.90       0.5%       1.90       0.5%       1.90       0.5%       1.90       0.5%       1.90       0.5%       1.90       0.5%       1.90       0.5%       1.90       1.5%       1.80 <td< td=""><td>1850 MANAGED WETLAND IN BUILT-UP MAINTAINED REC AREA</td><td>10</td><td>0.0%</td><td>9</td><td>0.1%</td><td>-</td><td>0.0%</td><td>4</td><td>0.1%</td></td<>	1850 MANAGED WETLAND IN BUILT-UP MAINTAINED REC AREA	10	0.0%	9	0.1%	-	0.0%	4	0.1%
2140 ASPICULTURAL WEILANDS (MCDIFIED)       1       0.0%       10       0.0%       1       0.0%         2200 CORNERD SERUCUTURAL WEILAND (BECOMMS SHRUBBY, NOT BUILT-UP)       0.0%       0.0%       -       0.0%       10.0%       0.0%       0.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       11.0%       10.0%       10.0%       11.0%       10.0%       10.0%       11.0%       10.0%       10.0%       10.0%       10.0%       11.0%       10.0%       10.0%       11.0%       10.0%       10.0%       11.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       10.0%       12.0%	2100 CROPLAND AND PASTURELAND	19	0.7%	30	0.5%	0	0.1%	239	5.2% 0.0%
2160 FORMER AGRICULTURAL WETLAND, GECOMING SHRUBBY, NOT BUILTUP)       0.0%       0       0.0%       1       0.0%       1       0.0%         200 ORCHARDSDWINEVARDSDMUSESRIESHONTCURVENCE       -       0.0%       -       0.0%       0       0.0%       0       0.0%       2       0.0%       0       0.0%       2       0.0%       0       0.0%       2       0.0%       0       0.0%       2       0.0%       0       0.0%       2       0.0%       0       0.0%       2       0.0%       0.0%       0       0.0%       2       0.0%       0       0.0%       2       0.0%       1 </td <td>2140 AGRICULTURAL WETLANDS (MODIFIED)</td> <td>1</td> <td>0.0%</td> <td>10</td> <td>0.2%</td> <td>0</td> <td>0.0%</td> <td>11</td> <td>0.2%</td>	2140 AGRICULTURAL WETLANDS (MODIFIED)	1	0.0%	10	0.2%	0	0.0%	11	0.2%
2200 CRCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS         0         0.2%         7         0.1%         -         0.0%         7         0.0%         7         0.0%         7         0.0%         7         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         2         0.0%         1         0.1%         10	2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)	0	0.0%	0	0.0%	-	0.0%	-	0.0%
2300 CONFINED FEEDING OPERATIONS       -       0.0%       -       0.0%       -       0.0%       0       0.0%         2300 OTHER ACRULTURE       10       0.0%       -       0.0%       1       0.0%       -       0.0%       2         4110 DECIDUOUS FOREST (0.50% CROWN CLOSURE)       19       0.1%       2400       2.0%       3       0.4%       2.0%       1       0.0%       -       0.0%       2       2.5%       5       0.4%       9       2.2%       1       0.4%       0.0%       -       0.0%       6       0.4%       9       2.2%       2.4%       4       0.0%       6       0.4%       0.0%       6       0.4%       0.0%       4       0.1%       0       0.0%       4       0.1%       0       0.0%       4       0.1%       0       0.0%       4       0.1%       0       0.0%       4       0.1%       0       0.0%       4       0.1%       0       0.0%       4       0.1%       0       0.0%       1       0.0%       0       0.0%       1       0.0%       0       0.0%       1       0.0%       0       0.0%       1       0.0%       0       0.0%       1       0.0%       0	2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS	0	0.2%	1	0.1%	-	0.0%	7	0.2%
2400 OTHER AGRICULTURE       1       0.0%       4       0.0%       -       0.0%       29       0.0%         1410 DECIDUOUS FOREST (-50%, CROWN CLOSURE)       139       5.1%       188       2.2%       0.3%       1       0.7%       4       0.1%       114       2.5%       0.4%       1.25       2.7%         4210 CONFERCUS FOREST (-50%, CROWN CLOSURE)       581       2.0%       2.0%       2.2%       0.1%       0.0%       -       0.0%       4       0.1%       0.0%	2300 CONFINED FEEDING OPERATIONS	-	0.0%	-	0.0%	-	0.0%	0	0.0%
1110       DECIDUOUS FOREST (10-50% CROWN CLOSURE)       19       0.1%       2.7       0.3%       1       0.1%       2.7       0.3%       1       0.1%       2.7       0.3%       1       0.1%       2.2%       5       1       0.4%       1       0.1%       2.2%       0.1%       0.4%       0.1%       0.4%       0.1%       0.4%       0.1%       0.4%       0.4%       0.4%       0.4%       0.4%       0.0%       4.40       0.1%       0.4%       0.0%       4.40       0.1%       0.0%       4.40       0.1%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       0.0%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01%       4.01% <td>2400 OTHER AGRICULTURE</td> <td>1</td> <td>0.0%</td> <td>4</td> <td>0.0%</td> <td>-</td> <td>0.0%</td> <td>29</td> <td>0.0%</td>	2400 OTHER AGRICULTURE	1	0.0%	4	0.0%	-	0.0%	29	0.0%
1420 DECDUOUS FOREST (~50% CROWN CLOSURE)       139       5.1%       198       2.4%       1.0%       1.0%       2.1%       3       0.2%       4       0.1%         2420 CONFERCUS FOREST (~50% CROWN CLOSURE)       634       2.0%       5.0%       0.0%       4       0.1%         230 PLANTATION       651       20.4%       0       0.0%       4       0.1%       0       0.0%       4       0.1%         321 MIXED FOREST (~50% CONFEROUS WITH +0%-50% CROWN CLOSURE)       3       0.1%       6       0.5%       40       0.5%       2       0.1%       9       0.2%         321 MIXED FOREST (~50% COLDUOUS WITH +50% CROWN CLOSURE)       3       1.4%       68       0.0%       2       0.1%       9       0.2%         322 MIXED FOREST (~50% DECIDUOUS WITH +50% CROWN CLOSURE)       3       1.4%       68       0.0%       2       0.1%       1       0.1%       2       0.1%       1       0.1%       2       0.1%       1       0.1%       3       0.6%       1       0.2%       420       1.0%       2       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       <	4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	19	0.7%	27	0.3%	1	0.1%	114	2.5%
4210 CONFERCUS FOREST (F0.60% CROWN CLOSURE)       6.3       1.0%       2.40%       3       0.2%       4       0.1%         4220 CONFERCUS FORC CROWN CLOSURE)       50       0.4%       9       2.2%         4230 ELANTATION       501       20.4%       0.0%       -       0.0%       18       0.4%         4231 IMXED FOREST (-56% CONFERCUS WITH 10%-60% CROWN CLOSURE)       166       6.0%       40       0.5%       1       0.1%       63       1.4%         4321 IMXED FOREST (-56% CONFERCUS WITH 10%-60% CROWN CLOSURE)       9       0.3%       56       0.7%       2       0.2%       43       1.4%         4321 IMXED FOREST (-56% DECIDUOUS WITH 10%-50% CROWN CLOSURE)       9       0.3%       56       0.7%       2       0.2%       43       1.4%         4220 DECIDUOUS BRUSHARELAND       12       0.4%       62       1.9%       2.0       0.1%       2.0       2.4%       4.9%         4400 DECIDUOUS BRUSHARELAND       12       0.4%       12       0.4%       13       0.6%       13       0.6%       142       3.1%       220       4.9%       2.0       0.1%       10.1%       2.0       0.5%       14.9%       14.9%       14.9%       14.9%       10.1%       14.9% <td< td=""><td>4120 DECIDUOUS FOREST (&gt;50% CROWN CLOSURE)</td><td>139</td><td>5.1%</td><td>198</td><td>2.5%</td><td>5</td><td>0.4%</td><td>1,205</td><td>21.1%</td></td<>	4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	139	5.1%	198	2.5%	5	0.4%	1,205	21.1%
4220 CONFERCUS FOREST (-560% CROWN CLOSURE)         654         2.0% 5/0         11.3% 5         0.4% 5         9         2.4%           4311 MIXED FOREST (-560% CONFERCUS WITH 10%-50% CROWN CLOSURE)         3         0.1% 5         0.1% 5         1         0.1% 5         6         1.4%         0         1.5% 5         1         0.1% 5         63         1.4%         63         0.1% 5         1         0.1% 5         63         1.4%         63         0.1% 5         1         0.1% 5         63         1.4%         63         0.1% 5         1         0.1% 5         63         1.4%           4121 MIXED FOREST (-560% CONFEROUS WITH 10%-50% CROWN CLOSURE)         3         1.4% 63         0.9% 4         0.9% 4         0.0%         1.0%         0.2%         42         0.1%         2         0.4%         1.0%	4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)	20	1.0%	2,490	32.0%	3 F	0.2%	4	0.1%
4230       PLANTATION       30       10.1%       9       0.00%       1       0.00%       1       0.00%       1       0.1%         4211       MIXED FOREST (-50% CONFEROUS WITH 10%-50% CROWN CLOSURE)       16       6.0%       40       0.5%       1       0.1%       5       0.0%       4       0.1%         4212       MIXED FOREST (-50% COLDUOUS WITH 10%-50% CROWN CLOSURE)       18       1.4%       68       0.9%       2       0.2%       43       3.1%       20       4.8%         4221       MIXED FOREST (-50% CECIDUOUS WITH 10%-50% CROWN CLOSURE)       12       0.4%       192       2.5%       43       3.1%       20       4.8%         420       DECIDUOUS BRUSH-SHRUELAND       12       0.4%       192       2.5%       43       3.1%       24       4.9%         420       DECIDUOUS BRUSH-SHRUELAND       74       2.85%       1.77       2.8%       1       0.1%       5       0.1%       4.9%       4.9%         420       DECIDUOUS BRUSH-SHRUELAND       7       0.2%       5       0.1%       1       0.0%       5       0.1%       4.9%       4.9%       4.9%       4.9%       4.9%       4.9%       4.9%       4.9%       4.9%       4.9% <td>4220 CONIFEROUS FOREST (&gt;50% CROWN CLOSURE)</td> <td>661</td> <td>20.40/</td> <td>0/0</td> <td>0.00/</td> <td>5</td> <td>0.4%</td> <td>10</td> <td>2.270</td>	4220 CONIFEROUS FOREST (>50% CROWN CLOSURE)	661	20.40/	0/0	0.00/	5	0.4%	10	2.270
4311       MIXED FORES (*05% CONNERCOUS WITH 10%-50% CROWN CLOSURE)       5       0.1%       5       0.0%       4       0.1%       5       0.0%       4       0.2%       42       0.1%       5       0.0%       4       0.2%       4       0.1%       5       0.0%       4       0.2%       4       0.0%       5       0.0%       1       0.0%       5       0.0%       1       0.0%       5       0.0%       1       0.0%       5       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0% <t< td=""><td>4230 PLANTATION</td><td>3</td><td>0.1%</td><td>0</td><td>0.0%</td><td>0</td><td>0.0%</td><td>10</td><td>0.4%</td></t<>	4230 PLANTATION	3	0.1%	0	0.0%	0	0.0%	10	0.4%
4312 MIXED FOREST (56% DECIDUOUS WITH 30% CROWN CLOSURE)       9       0.3%       56       0.7%       2       0.2%         4322 MIXED FOREST (56% DECIDUOUS WITH 30% CROWN CLOSURE)       38       1.4%       68       0.9%       2       0.2%         4320 MIXED FOREST (56% DECIDUOUS WITH 30% CROWN CLOSURE)       12       0.4%       192       2.5%       43       3.1%       20       4.8%         4420 DECIDUOUS BRUSH/SHRUELAND       12       0.4%       192       2.8%       1       0.1%       2       4.8%         4430 CCOLIDOUS BRUSH/SHRUELAND       12       0.4%       29       3.8%       26       1.0%       24       4.9%         4440 MIXED ECIDUOUS CONFERCOUS BRUSH/SHRUELAND       128       4.6%       769       9.0%       8       0.6%       142       3.1%         500 NATURAL LAKES       1       0.0%       50       0.6%       1       0.0%       5       0.3%       15       1.1%       67       1.5%       1.1%       67       1.5%       1.1%       67       1.5%       1.1%       67       1.5%       1.5%       1.1%       67       1.5%       1.5%       1.5%       1.5%       1.5%       1.5%       1.5%       1.5%       1.5%       1.5%       1.5% </td <td>4311 MIXED FOREST (&gt;50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)</td> <td>166</td> <td>6.0%</td> <td>40</td> <td>0.1%</td> <td>1</td> <td>0.070</td> <td>- 63</td> <td>1.4%</td>	4311 MIXED FOREST (>50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)	166	6.0%	40	0.1%	1	0.070	- 63	1.4%
421       MARD POREST (FGW DECIDIOUS WITH INSUM CROWN CLOSURE)       3       0.3%       2       0.1%       2       0.1%       2       0.1%       2       0.1%       3       0.1%       2       0.1%       1       0.1%       2       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1       0.1%       1 <td>4312 MIXED FOREST (&gt;50% CONIFEROUS WITH &gt;50% CROWN CLOSURE)</td> <td>9</td> <td>0.0%</td> <td>56</td> <td>0.3%</td> <td>2</td> <td>0.1%</td> <td>0.0 Q</td> <td>0.2%</td>	4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	9	0.0%	56	0.3%	2	0.1%	0.0 Q	0.2%
4322       MAED POREST (280% BUE) COUCEND       12       0.4%       142       3.1%       224       4.9%         4400 MIXED DECIDUOUS(CONFEROUS BRUSH/SHRUBLAND       128       4.6%       769       9.0%       8       0.0%       14       0.0%       5       0.0%       2       0.0%       5       0.0%       10.0%       5       0.0%       10.0%       5       0.0%       10.0%       5       0.0%       10.0% <td< td=""><td>4321 MIXED FOREST (&gt;50% DECIDUOUS WITH 10-50% CROWN CLOSURE)</td><td>38</td><td>1.4%</td><td>68</td><td>0.9%</td><td>2</td><td>0.1%</td><td>47</td><td>1.0%</td></td<>	4321 MIXED FOREST (>50% DECIDUOUS WITH 10-50% CROWN CLOSURE)	38	1.4%	68	0.9%	2	0.1%	47	1.0%
1110 DD1 FLD0 (VBRUSH)/SHOUT NOLLD)       12       0.4%       299       3.8%       28       1.9%       163       3.6%         1420 DECIDUOUS BRUSH/SHRUBLAND       764       28.5%       1.777       22.8%       1       0.1%       224       4.9%         4440 MIXED DECIDUOUS/CONFEROUS BRUSH/SHRUBLAND       128       4.6%       769       9.9%       8       0.6%       1.42       3.1%         4400 SEVERE BURNED UPLAND VEGETATION       -       0.0%       2       0.0%       -       0.0%       50       0.6%       -       0.0%       5       0.3%         5200 NATURAL LAKES       1       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       2 <td>4322 WINED FOREST (~30% DECIDOOUS WITH ~30% CROWN GLOSORE)</td> <td>12</td> <td>0.4%</td> <td>192</td> <td>2.5%</td> <td>43</td> <td>3.1%</td> <td>220</td> <td>4.8%</td>	4322 WINED FOREST (~30% DECIDOOUS WITH ~30% CROWN GLOSORE)	12	0.4%	192	2.5%	43	3.1%	220	4.8%
Hass Debuoted using HRUBLAND       784       28.5%       1,777       22.8%       1       0.1%       224       4.9%         4430 CONFEROUS BRUSHSHRUBLAND       128       4.0%       769       9.9%       8       0.0%       12       3.1%         4500 SEVERE BURNED UPLAND VEGETATION       -       0.0%       50       0.6%       -       0.0%       25       0.6%         5100 STREAMS AND CANALS       1       0.0%       5       0.1%       1       0.9%       15       1.1%       67       1.5%         5300 ARTIFICIAL LAKES       1       0.0%       3       0.0%       15       1.1%       67       1.5%         5411 ODEN TIDAL BAYS       -       0.0%       -       0.0%       1       0.0%       -       0.0%         5420 DREDGED LAGOON       -       0.0%       -       0.0%       -       0.0%       -       0.0%         5430 ATLANTIC OCEAN       -       0.0%       1       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       20.0%       -       0.0%       20.0%       -       0.0%       20.0%		12	0.4%	299	3.8%	26	1.9%	163	3.6%
HTM DICOLOG MICH CONSTRUCT       128       4.6%       769       9.9%       8       0.6%       142       3.1%         440       MIXED DECIDIOUS/CONFEROUS BRUSH/SHRUBLAND       -       0.0%       50       0.6%       -       0.0%       5       0.0%       -       0.0%       5       0.0%		784	28.5%	1,777	22.8%	1	0.1%	224	4.9%
Number Decomposition         0.0%         50         0.6%         -         0.0%         2         0.0%           5100 STREAMS AND CANALS         4         0.2%         2         0.0%         5         0.6%           5200 NATURAL LAKES         1         0.0%         5         0.1%         1         0.0%         25         0.6%           5200 ARTIFICIAL LAKES         7         0.2%         9         0.1%         15         1.1%         67         1.5%           5411 OTEAL LAKES         0         0.0%         3         0.0%         1         0.0%         -         0.0%           5411 OPEN TIDAL BAYS         -         0.0%         -         0.0%         0         0.0%         -         0.0%           5420 DREDGED LAGOON         -         0.0%         1         0.0%         -         0.0%           5430 ATLANTIC OCEAN         -         0.0%         1         0.0%         12         0.0%         -         0.0%           6102 FRESHWATER TIDAL MARSHES         0         0.0%         13         0.2%         0.0%         620         0.0%         620         0.0%         620         0.0%         620         0.0%         6210         0.0%		128	4.6%	769	9.9%	8	0.6%	142	3.1%
3000 STEAMS AND CANALS       4       0.2%       2       0.0%       -       0.0%       25       0.8%         5200 NATURAL LAKES       1       0.0%       5       0.1%       1       0.0%       15       0.3%         5300 ARTIFICIAL LAKES       7       0.2%       9       0.1%       15       1.1%       67       1.5%         5410 TIDAL BAYS       -       0.0%       3       0.0%       17       1.2%       3       0.1%         5410 TIDAL BAYS       -       0.0%       -       0.0%       0       0.0%       -       0.0%         5420 DREDGED LAGOON       -       0.0%       -       0.0%       -       0.0%       -       0.0%         5430 ATLANTIC OCEAN       -       0.0%       -       0.0%       -       0.0%       -       0.0%         6110 SALINE MARSHES       0       0.0%       13       0.2%       331       2.3.9%       7       0.2%         6120 DECIDUOUS WOODED WETLANDS       -       0.0%       -       0.0%       2       0.0%       -       0.0%       2       0.0%       623       0.2%       0.0%       623       0.2%       0.0%       623       0.2%       0.0%<	4500 SEVERE BURNED UPLAND VEGETATION	-	0.0%	50	0.6%	-	0.0%	-	0.0%
3200 NATURAL LAKES       1       0.0%       5       0.1%       1       0.0%       15       0.3%         5300 AATURAL LAKES       7       0.2%       9       0.1%       15       1.1%       67       1.5%         5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS       0       0.0%       3       0.0%       17       1.2%       3       0.1%         5410 OPEN TIDAL BAYS       -       0.0%       - <td>5100 STREAMS AND CANALS</td> <td>4</td> <td>0.2%</td> <td>2</td> <td>0.0%</td> <td>-</td> <td>0.0%</td> <td>25</td> <td>0.6%</td>	5100 STREAMS AND CANALS	4	0.2%	2	0.0%	-	0.0%	25	0.6%
5300 ARTIFICIAL LAKES       7       0.2%       9       0.1%       15       1.1%       67       1.5%         5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS       0       0.0%       3       0.0%       17       1.2%       3       0.1%         5411 OPEN TIDAL BAYS       -       0.0%       -       0.0%       1       0.0%       -       0.0%         5420 DREDGED LAGCON       -       0.0%       -       0.0%       -       0.0%       -       0.0%         5430 ATLANTIC OCEAN       -       0.0%       -       0.0%       -       0.0%       -       0.0%         6110 FREINMARSHES       0       0.0%       13       0.2%       331       23.9%       7       0.2%         6120 FRESHWATER TIDAL MARSHES       -       0.0%       0       0.0%       28.9       2.8%       -       0.0%         6120 FRESHWATER TIDAL MARSHES       -       0.0%       1.3       0.2%       31       23.9%       7       0.2%         6120 FRESHWATER TIDAL MARSHES       -       0.0%       1.3       0.2%       2.0%       -       0.0%         6210 DECIDUOUS WOODED WETLANDS       8       0.3%       8       0.1%       1	5200 NATURAL LAKES	1	0.0%	5	0.1%	1	0.0%	15	0.3%
5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS       0       0.0%       3       0.0%       17       1.2%       3       0.1%         5411 OPEN TIDAL BAYS       -       0.0%       -<	5300 ARTIFICIAL LAKES	7	0.2%	9	0.1%	15	1.1%	67	1.5%
5411 OPEN TIDAL BAYS       -       0.0%       -       0.0%       1       0.0%       -       0.0%         5420 DREDGED LAGOON       -       0.0%       -       0.0%       0       0.0%       -       0.0%         5430 ATLANTIC OCEAN       -       0.0%       -       0.0%       310       2.3%       7       0.2%         6110 SALINE MARSHES       0       0.0%       12       0.9%       -       0.0%         6120 FRESHWATER TIDAL MARSHES       -       0.0%       -       0.0%       289       2.8%       -       0.0%         6120 DECIDUOUS WOODED WETLANDS       6       1.3%       132       1.7%       11       0.8%       283       6.2%         6221 ATLANTIC WHITE CEDAR SWAMP       -       0.0%       13       0.2%       3.1%       2.2%       0.0%         6231 DECIDUOUS SCRUB/SHRUB WETLANDS       5       0.2%       2.3       0.3%       110       7.9%       55       1.2%         6232 ALXANTIC WHITE CEDAR SWAMP       -       0.0%       1       0.0%       3.10       0.4%       1.2%       0.0%         6233 MIXED SCRUB/SHRUB WETLANDS       1       0.0%       7       0.1%       140       0.1%       4 <td>5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS</td> <td>0</td> <td>0.0%</td> <td>3</td> <td>0.0%</td> <td>17</td> <td>1.2%</td> <td>3</td> <td>0.1%</td>	5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS	0	0.0%	3	0.0%	17	1.2%	3	0.1%
5420 DREDGED LAGOON       -       0.0%       0.0%       0.0%       0.0%       0.0%       0.0%         5430 ATLANTIC OCEAN       -       0.0%       -       0.0%	5411 OPEN TIDAL BAYS	-	0.0%	-	0.0%	1	0.0%	-	0.0%
5430 ATLANTIC OCEAN       -       0.0%       -       0.	5420 DREDGED LAGOON	-	0.0%	-	0.0%	0	0.0%	-	0.0%
6110       SALINE MARSHES       0       0.0%       13       0.2%       331       23.9%       7       0.2%         6120       FRESHWATER TIDAL MARSHES       -       0.0%       -       0.0%       280       0.0%       0.0%         6130       VEGETATED DUNE COMMUNITIES       -       0.0%       331       11       0.8%       20.8%       -       0.0%         6210       DECIDUOUS WOODED WETLANDS       36       1.3%       132       1.7%       11       0.8%       283       6.2%         6221       ATLANTIC WHITE CEDAR SWAMP       -       0.0%       1       0.0%       3       0.2%       -       0.0%         6231       DECIDUOUS SCRUB/SHRUB WETLANDS       5       0.2%       23       0.3%       110       7.9%       5       1.2%         6232       CONFEROUS SCRUB/SHRUB WETLANDS       4       0.1%       4       0.1%       3       0.2%       1       0.0%       623       1.2%       <	5430 ATLANTIC OCEAN	-	0.0%	-	0.0%	-	0.0%	-	0.0%
6120       FRESHWATER TIDAL MARSHES       -       0.0%       0       0.0%       12       0.9%       -       0.0%         6130       VEGETATED DUNE COMMUNITIES       -       0.0%       1       0.0%       289       2.8%       -       0.0%         6210       DECIDUOUS WOODED WETLANDS       36       1.3%       132       1.7%       11       0.8%       26       0.0%         6220       CONIFEROUS WOODED WETLANDS       8       0.3%       8       0.1%       5       0.3%       2       0.0%         6221       ATLANTIC WHITE CEDAR SWAMP       -       0.0%       1       0.0%       3       0.2%       -       0.0%         6231       DECIDUOUS SCRUB/SHRUB WETLANDS       5       0.2%       23       0.3%       110       7.9%       55       1.2%         6232       CONIFEROUS SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)       1       0.0%       4       0.1%       4       0.1%       65       1.9%       4       0.8%         6234       MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)       1       0.0%       1       0.0%       1       0.0%       1       0.0%       1       0.0%       0       0.0%       0       0.0%	6110 SALINE MARSHES	0	0.0%	13	0.2%	331	23.9%	7	0.2%
6130       VEGETATED DUNE COMMUNITIES       -       0.0%       -       0.0%       289       20.8%       -       0.0%         6210       DECIDUOUS WOODED WETLANDS       36       1.3%       132       1.7%       11       0.8%       283       6.2%         6220       CONFERCOUS WOODED WETLANDS       8       0.3%       8       0.1%       5       0.3%       2       0.0%         6211       DECIDUOUS SCRUB/SHRUB WETLANDS       5       0.2%       23       0.3%       110       7.9%       5       1.2%         6232       CONFEROUS SCRUB/SHRUB WETLANDS       6       0.1%       4       0.1%       3       0.2%       0       0.0%         6234       MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)       1       0.0%       4       0.1%       14       0.1%       4       0.1%         6234       MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)       1       0.0%       4       0.1%       31       0.4%       0.6%       0.0%	6120 FRESHWATER TIDAL MARSHES	-	0.0%	0	0.0%	12	0.9%	-	0.0%
6210 DECIDUOUS WOODED WETLANDS       36       1.3%       132       1.7%       11       0.8%       283       6.2%         6220 CONIFEROUS WOODED WETLANDS       8       0.3%       8       0.1%       5       0.3%       2       0.0%         6221 ATLANTIC WHITE CEDAR SWAMP       -       0.0%       1       0.0%       3       0.2%       -       0.0%         6231 DECIDUOUS SCRUB/SHRUB WETLANDS       5       0.2%       23       0.3%       110       7.%       55       1.2%         6232 CONIFEROUS SCRUB/SHRUB WETLANDS       4       0.1%       4       0.1%       3       0.2%       0       0.0%         6234 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)       1       0.0%       4       0.1%       34       0.1%         6240 HERBACEOUS WETLANDS (DECIDUOUS DOM.)       1       0.0%       4       0.1%       34       0.8%         6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6250 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1% <td>6130 VEGETATED DUNE COMMUNITIES</td> <td>-</td> <td>0.0%</td> <td>-</td> <td>0.0%</td> <td>289</td> <td>20.8%</td> <td>-</td> <td>0.0%</td>	6130 VEGETATED DUNE COMMUNITIES	-	0.0%	-	0.0%	289	20.8%	-	0.0%
6220 CONIFEROUS WOODED WETLANDS       8       0.3%       8       0.1%       5       0.3%       2       0.0%         6221 ATLANTIC WHITE CEDAR SWAMP       -       0.0%       1       0.0%       3       0.2%       -       0.0%         6231 DECIDUOUS SCRUB/SHRUB WETLANDS       5       0.2%       23       0.3%       110       7.9%       55       1.2%         6232 CONIFEROUS SCRUB/SHRUB WETLANDS       4       0.1%       4       0.1%       3       0.2%       0       0.0%         6233 MIXED SCRUB/SHRUB WETLANDS       4       0.1%       4       0.1%       3       0.2%       0       0.0%         6234 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)       1       0.0%       4       0.1%       93       6.7%       1       0.0%         6240 HERBACEOUS WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6250 SEVERE BURN	6210 DECIDUOUS WOODED WETLANDS	36	1.3%	132	1.7%	11	0.8%	283	6.2%
6221 ATLANTIC WHITE CEDAR SWAMP       -       0.0%       1       0.0%       3       0.2%       -       0.0%         6231 DECIDUOUS SCRUB/SHRUB WETLANDS       5       0.2%       23       0.3%       110       7.9%       55       1.2%         6232 CONIFEROUS SCRUB/SHRUB WETLANDS       4       0.1%       4       0.1%       3       0.2%       0       0.0%         6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)       1       0.0%       7       0.1%       140       10.1%       4       0.1%         6240 HERBACEOUS WETLANDS (DECIDUOUS DOM.)       1       0.0%       4       0.1%       34       0.8%         6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6252 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         7100 BEACHES	6220 CONIFEROUS WOODED WETLANDS	8	0.3%	8	0.1%	5	0.3%	2	0.0%
6231 DECIDUOUS SCRUB/SHRUB WETLANDS       5       0.2%       23       0.3%       110       7.9%       55       1.2%         6232 CONIFEROUS SCRUB/SHRUB WETLANDS       4       0.1%       4       0.1%       3       0.2%       0       0.0%         6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)       1       0.0%       7       0.1%       140       10.1%       4       0.1%         6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)       1       0.0%       4       0.1%       93       6.7%       1       0.0%         6240 HERBACEOUS WETLANDS (DECIDUOUS DOM.)       1       0.0%       4       0.1%       11       0.0%       6.7%       1       0.0%         6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         7100 BEACHES       FORE WETLANDS       6000 SEVERE BURNED WETLANDS       6       0.0%       1       0.0% <td< td=""><td>6221 ATLANTIC WHITE CEDAR SWAMP</td><td>-</td><td>0.0%</td><td>1</td><td>0.0%</td><td>3</td><td>0.2%</td><td>-</td><td>0.0%</td></td<>	6221 ATLANTIC WHITE CEDAR SWAMP	-	0.0%	1	0.0%	3	0.2%	-	0.0%
6232 CONIFEROUS SCRUB/SHRUB WETLANDS       4       0.1%       3       0.2%       0       0.0%         6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)       1       0.0%       7       0.1%       140       10.1%       4       0.1%         6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)       1       0.0%       4       0.1%       93       6.7%       1       0.0%         6240 HERBACEOUS WETLANDS       (DECIDUOUS DOM.)       1       0.0%       4       0.1%       93       6.7%       1       0.0%         6240 HERBACEOUS WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6250 SEVERE BURNED WETLANDS       CONIFEROUS DOM.       2       0.0%       -       0.0%       -       0.0%       0       0.0%       0       0.0%       0       0.0%       0       0.0%       0       0.0%       1       0.0%       0       0.0% <t< td=""><td>6231 DECIDUOUS SCRUB/SHRUB WETLANDS</td><td>5</td><td>0.2%</td><td>23</td><td>0.3%</td><td>110</td><td>7.9%</td><td>55</td><td>1.2%</td></t<>	6231 DECIDUOUS SCRUB/SHRUB WETLANDS	5	0.2%	23	0.3%	110	7.9%	55	1.2%
6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)       1       0.0%       7       0.1%       140       10.1%       4       0.1%         6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)       1       0.0%       4       0.1%       93       6.7%       1       0.0%         6240 HERBACEOUS WETLANDS       (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6500 SEVERE BURNED WETLANDS       (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6500 SEVERE BURNED WETLANDS       (CONIFEROUS DOM.)       2       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -	6232 CONIFEROUS SCRUB/SHRUB WETLANDS	4	0.1%	4	0.1%	3	0.2%	0	0.0%
6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)       1       0.0%       4       0.1%       93       6.7%       1       0.0%         6240 HERBACEOUS WETLANDS       4       0.1%       31       0.4%       165       11.9%       34       0.8%         6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6500 SEVERE BURNED WETLANDS       CONIFEROUS DOM.       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6500 SEVERE BURNED WETLANDS       CONIFEROUS DOM.       2       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       1       0.1%       0.4%       1       0.1%       0.1%       0.1%       0.1%       0.1%       0.1%       0.1%       0.1%       0.1%       0.1%       0.1	6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)	1	0.0%	7	0.1%	140	10.1%	4	0.1%
6240 HERBACEOUS WETLANDS       4       0.1%       31       0.4%       165       11.9%       34       0.8%         6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6500 SEVERE BURNED WETLANDS       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       -       0.0%       18       0.4%         7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC.       -       0.0%       11       0.1%       -       0.0%       48       1.0%         7400 ALTERED LANDS       0       0.0%       1       0.0%       5       0.4%       37       0.8%         7430 DISTURBED WETLANDS (MODIFIED)       1       0.0%       10       0.1%       2       0.6% <td>6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)</td> <td>1</td> <td>0.0%</td> <td>4</td> <td>0.1%</td> <td>93</td> <td>6.7%</td> <td>1</td> <td>0.0%</td>	6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)	1	0.0%	4	0.1%	93	6.7%	1	0.0%
6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)       7       0.2%       19       0.2%       7       0.5%       3       0.1%         6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6500 SEVERE BURNED WETLANDS       -       0.0%       -       0.0%       -       0.0%       -       0.0%         7100 BEACHES       -       0.0%       0       0.0%       9       0.7%       -       0.0%         7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC.       -       0.0%       -       0.0%       18       0.4%         7400 ALTERED LANDS       -       0.0%       11       0.1%       -       0.0%       48       1.0%         7400 ALTERED LANDS       0       0.0%       2       0.0%       5       0.4%       37       0.8%         7430 DISTURBED WETLANDS (MODIFIED)       1       0.0%       10       0.1%       28       2.0%       27       0.6%         7500 TRANSITIONAL AREAS       1       0.0%       10       0.1%       0       0.0%       39       0.9%         7600 UNDIFFERENTIATED BARREN LANDS       -       0.0%       8       0.1%       1	6240 HERBACEOUS WETLANDS	4	0.1%	31	0.4%	165	11.9%	34	0.8%
6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)       2       0.1%       20       0.3%       5       0.3%       0       0.0%         6500 SEVERE BURNED WETLANDS       -       0.0%       -       0.0%       -       0.0%       -       0.0%         7100 BEACHES       -       0.0%       0       0.0%       9       0.7%       -       0.0%         7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC.       -       0.0%       -       0.0%       18       0.4%         7300 EXTRACTIVE MINING       -       0.0%       11       0.1%       -       0.0%       48       1.0%         7400 ALTERED LANDS       0       0.0%       2       0.0%       5       0.4%       37       0.8%         7400 DISTURBED WETLANDS (MODIFIED)       1       0.0%       10       0.1%       28       2.0%       27       0.6%         7500 TRANSITIONAL AREAS       1       0.0%       10       0.1%       0       0.0%       39       0.9%         7600 UNDIFFERENTIATED BARREN LANDS       -       0.0%       8       0.1%       1       0.1%       0.2%	6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)	7	0.2%	19	0.2%	7	0.5%	3	0.1%
6500 SEVERE BURNED WETLANDS       -       0.0%       10       0.0%       10       0.0%       10       0.0% <td< td=""><td>6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)</td><td>2</td><td>0.1%</td><td>20</td><td>0.3%</td><td>5</td><td>0.3%</td><td>0</td><td>0.0%</td></td<>	6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)	2	0.1%	20	0.3%	5	0.3%	0	0.0%
7100 BEACHES       -       0.0%       0       0.0%       9       0.7%       -       0.0%         7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC.       -       0.0%       1       0.1%       -       0.0%       18       0.4%         7300 EXTRACTIVE MINING       -       0.0%       11       0.1%       -       0.0%       48       1.0%         7400 ALTERED LANDS       0       0.0%       2       0.0%       5       0.4%       37       0.8%         7430 DISTURBED WETLANDS (MODIFIED)       1       0.0%       10       0.1%       28       2.0%       27       0.6%         7500 TRANSITIONAL AREAS       1       0.0%       10       0.1%       0       0.0%       39       0.9%         7600 UNDIFFERENTIATED BARREN LANDS       -       0.0%       8       0.1%       1       0.1%       8       0.2%         7600 UNDIFFERENTIATED BARREN LANDS       2.754       7.781       1.388       4.561	6500 SEVERE BURNED WETLANDS	-	0.0%	-	0.0%	-	0.0%	-	0.0%
7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC.       -       0.0%       -       0.0%       18       0.4%         7300 EXTRACTIVE MINING       -       0.0%       11       0.1%       -       0.0%       48       1.0%         7400 ALTERED LANDS       0       0.0%       2       0.0%       5       0.4%       37       0.8%         7430 DISTURBED WETLANDS (MODIFIED)       1       0.0%       10       0.1%       28       2.0%       27       0.6%         7500 TRANSITIONAL AREAS       1       0.0%       8       0.1%       0       0.0%       39       0.9%         7600 UNDIFFERENTIATED BARREN LANDS       -       0.0%       8       0.1%       1       0.1%       8       0.2%	7100 BEACHES	-	0.0%	U	0.0%	9	0.7%	-	0.0%
7300 EXTRACTIVE MINING       -       0.0%       11       0.1%       -       0.0%       48       1.0%         7400 ALTERED LANDS       0       0.0%       2       0.0%       5       0.4%       37       0.8%         7430 DISTURBED WETLANDS (MODIFIED)       1       0.0%       10       0.1%       28       2.0%       27       0.6%         7500 TRANSITIONAL AREAS       1       0.0%       10       0.1%       0       0.0%       39       0.9%         7600 UNDIFFERENTIATED BARREN LANDS       -       0.0%       8       0.1%       1       0.1%       8       0.2%         TOTAL HECTARS       2.754       7.781       1.388       4.561	7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC.	-	0.0%	-	0.0%	-	0.0%	18	0.4%
7400 ALTERED LANDS       0       0.0%       2       0.0%       5       0.4%       37       0.8%         7430 DISTURBED WETLANDS (MODIFIED)       1       0.0%       10       0.1%       28       2.0%       27       0.6%         7500 TRANSITIONAL AREAS       1       0.0%       10       0.1%       0       0.0%       39       0.9%         7600 UNDIFFERENTIATED BARREN LANDS       -       0.0%       8       0.1%       1       0.1%       8       0.2%	7300 EXTRACTIVE MINING	-	0.0%	11	0.1%	-	0.0%	48	1.0%
7430 DISTURBED WEILANDS (MODIFIED)       1       0.0%       10       0.1%       28       2.0%       27       0.6%         7500 TRANSITIONAL AREAS       1       0.0%       10       0.1%       0       0.0%       39       0.9%         7600 UNDIFFERENTIATED BARREN LANDS       -       0.0%       8       0.1%       1       0.1%       8       0.2%         TOTAL HECTARS         2.754       7.781       1.388       4.561	7400 ALTERED LANDS	1	0.0%	∠ 10	0.0%	ບ ລວ	U.4%	31 27	0.0%
7500 TRANSITIONAL AREAS         1         0.0%         10         0.1%         0         0.0%         39         0.9%           7600 UNDIFFERENTIATED BARREN LANDS         -         0.0%         8         0.1%         1         0.1%         8         0.2%           TOTAL HECTARS         2.754         7.781         1.388         4.561	7430 DISTURBED WEILANDS (MODIFIED)	1	0.0%	10	0.1%	20	2.0%	39	0.0%
TOTAL HECTARS         2.754         7.781         1.388         4.561		-	0.0%	8	0.1%	1	0.1%	8	0.2%
		2.754	3.570	7.781		1.388	570	4.561	

CRSSA Label -

#### CRSSA Label -

LEVEL\_160 = Barren soil/rock (sand/gravel pits, barren < 25% vegetation) LEVEL\_201 = Marine/Estuarine Unconsolidated shore: sand LEVEL\_202 = Marine/Estuarine Unconsolidated shore: mud/organic

	LEVEL_211 = Estuarine emergent marsh	: low salt marsh - S	Spartina alterniflora	dominant (>50%)
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	IEVEL 160	illa all		LEVEL 202		IEVEL 211	
	228	1.2%	40 1	6% 12	0.1%	5	0.0%
	229	1.2%	26 1	0% 13	0.1%	10	0.0%
	70	0.4%	5 0	2% 3	0.0%	4	0.0%
1140 DESIDENTIAL SINGLE UNIT, LOW DENSITY	146	0.8%	2 0	1% 4	0.0%	7	0.0%
	2	0.0%	- 0	- 0%	0.0%	-	0.0%
	329	1.8%	9 0	3% 6	0.0%	1	0.0%
1211 MILITARY RESERVATIONS	65	0.4%	1 0	- 0%	0.0%	-	0.0%
1214 NO LONGER MILITARY LISE TO BE DETERMINED	-	0.0%	- 0	0% 3	0.0%	-	0.0%
	394	2.1%	- 0	0% 20	0.2%	0	0.0%
1400 TRANSPORTATION/COMMUNICATIONS/UTILITIES	300	1.6%	8 0	3% 40	0.3%	23	0.1%
1461 WETLAND RIGHTS-OF-WAY (MODIFIED)	8	0.0%	- 0	0% 1	0.0%	12	0.0%
1500 INDUSTRIAL/COMMERCIAL COMPLEXES	1	0.0%	- 0	- 0%	0.0%	-	0.0%
1600 MIXED URBAN OR BUILT-UP LAND	1	0.0%	- 0	- 0%	0.0%	-	0.0%
1700 OTHER URBAN OR BUILT-UP LAND	622	3.4%	5 0	2% 28	0.2%	7	0.0%
1750 MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE	137	0.7%	1 0	0% 0	0.0%	3	0.0%
1800 RECREATIONAL LAND	232	1.3%	15 0	6% 20	0.2%	6	0.0%
1804 ATHLETIC FIELDS (SCHOOLS)	40	0.2%	- 0	0% 0	0.0%	-	0.0%
1850 MANAGED WETLAND IN BUILT-UP MAINTAINED REC AREA	55	0.3%	0 0	0% 1	0.0%	0	0.0%
2100 CROPLAND AND PASTURELAND	743	4.0%	0 0	0% 4	0.0%	6	0.0%
2140 AGRICULTURAL WETLANDS (MODIFIED)	345	1.9%	- 0	0% 1	0.0%	2	0.0%
2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)	15	0.1%	- 0	0% 0	0.0%	0	0.0%
2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS	222	1.2%	- 0	- 0%	0.0%	0	0.0%
2300 CONFINED FEEDING OPERATIONS	5	0.0%	- 0	- 0%	0.0%	-	0.0%
2400 OTHER AGRICULTURE	61	0.3%	- 0	0% 0	0.0%	0	0.0%
4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	68	0.4%	0 0	0% 3	0.0%	5	0.0%
4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	377	2.0%	0 0	0% 5	0.0%	18	0.0%
4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)	86	0.5%	- 0	0% 0	0.0%	1	0.0%
4220 CONIFEROUS FOREST (>50% CROWN CLOSURE)	331	1.8%	- 0	0% 1	0.0%	3	0.0%
4230 PLANTATION	3	0.0%	- 0	- %0	0.0%	-	0.0%
4311 MIXED FOREST (>50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)	12	0.1%	- 0	- 0%	0.0%	1	0.0%
4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	96	0.5%	- 0	0% 0	0.0%	3	0.0%
4321 MIXED FOREST (>50% DECIDUOUS WITH 10-50% CROWN CLOSURE)	10	0.1%	- 0	0% 0	0.0%	2	0.0%
4322 MIXED FOREST (>50% DECIDUOUS WITH >50% CROWN CLOSURE)	124	0.7%	0 0	0% 1	0.0%	2	0.0%
4410 OLD FIELD (< 25% BRUSH COVERED)	956	5.2%	8 0	3% 66	0.5%	59	0.1%
4420 DECIDUOUS BRUSH/SHRUBLAND	172	0.9%	2 0	1% 13	0.1%	11	0.0%
4430 CONIFEROUS BRUSH/SHRUBLAND	304	1.7%	- 0	0% 1	0.0%	1	0.0%
4440 MIXED DECIDUOUS/CONIFEROUS BRUSH/SHRUBLAND	153	0.8%	- 0	0% 2	0.0%	2	0.0%
4500 SEVERE BURNED UPLAND VEGETATION	18	0.1%	- 0	- 0%	0.0%	-	0.0%
5100 STREAMS AND CANALS	26	0.1%	- 0	0% 3	0.0%	0	0.0%
5200 NATURAL LAKES	53	0.3%	0 0	0% 2	0.0%	1	0.0%
5300 ARTIFICIAL LAKES	671	3.6%	0 0	0% 59	0.5%	8	0.0%
5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS	46	0.3%	155 6	1% 6,311	51.1%	3,641	8.0%
5411 OPEN TIDAL BAYS	-	0.0%	40 1	6% 95	0.8%	105	0.2%
5420 DREDGED LAGOON	20	0.1%	1 0	0% 107	0.9%	29	0.1%
5430 ATLANTIC OCEAN	0	0.0%	283 11	1% 10	0.1%	-	0.0%
6110 SALINE MARSHES	122	0.7%	47 1	8% 5,000	40.5%	41,052	90.4%
6120 FRESHWATER TIDAL MARSHES	20	0.1%	- 0	0% 169	1.4%	28	0.1%
6130 VEGETATED DUNE COMMUNITIES	6	0.0%	495 19	4% 6	0.1%	8	0.0%
6210 DECIDUOUS WOODED WETLANDS	527	2.9%	- 0	0% 10	0.1%	19	0.0%
6220 CONIFEROUS WOODED WETLANDS	38	0.2%	- 0	0% 1	0.0%	9	0.0%
6221 ATLANTIC WHITE CEDAR SWAMP	13	0.1%	- 0	0% 1	0.0%	2	0.0%
6231 DECIDUOUS SCRUB/SHRUB WETLANDS	268	1.5%	15 0	6% 19	0.2%	30	0.1%
6232 CONIFEROUS SCRUB/SHRUB WETLANDS	15	0.1%	- 0	0% 2	0.0%	8	0.0%
6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)	37	0.2%	3 0	1% 2	0.0%	16	0.0%
6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)	36	0.2%	1 0	1% 1	0.0%	18	0.0%
6240 HERBACEOUS WETLANDS	474	2.6%	28 1	1% 73	0.6%	132	0.3%
6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)	68	0.4%	1 0	0% 1	0.0%	10	0.0%
6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)	60	0.3%	- 0	0% 2	0.0%	12	0.0%
6500 SEVERE BURNED WETLANDS	0	0.0%	- 0	- 0%	0.0%	-	0.0%
7100 BEACHES	25	0.1%	1,348 52	8% 81	0.7%	58	0.1%
7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC.	4	0.0%	- 0	- 0%	0.0%	-	0.0%
7300 EXTRACTIVE MINING	5,962	32.4%	1 0	0% 4	0.0%	-	0.0%
7400 ALTERED LANDS	1,094	5.9%	8 0	3% 103	0.8%	5	0.0%
7430 DISTURBED WETLANDS (MODIFIED)	1,043	5.7%	5 0	2% 36	0.3%	16	0.0%
7500 TRANSITIONAL AREAS	635	3.4%	0 0	J% 6	0.1%	4	0.0%
7600 UNDIFFERENTIATED BARREN LANDS	195	1.1%	0 0	J% 5	0.0%	0	0.0%
TOTAL HECTARS	18,418		2,554	12,354		45,403	

LEVEL\_212 = Estuarine emergent marsh: high salt marsh - Spartina patens dominant (>50%) LEVEL\_213 = Estuarine emergent marsh: high salt marsh - Phragmites australis dominant (>50%) LEVEL\_214 = Brackish tidal/fresh tidal marsh: mixed species LEVEL\_220 = Riverine/lacustrine/palustrine unconsolidated shore: sand/mud/organic

	I EVEL 212	e. sai		anic	LEVEL 214	I EVEL 220	
	2	0.0%	2	0.0%	0.0	0% 12	0.3%
	-	0.0%	- 9	0.0%	1 0	0% 14	0.4%
1120 RESIDENTIAL, SINGLE UNIT, MEDIOM DENSITY	2	0.0%	2	0.0%	1 0.	0% 5	0.1%
1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	2	0.0%	- 7	0.0%	2 0	0% 7	0.2%
1140 RESIDENTIAL, RURAL, SINGLE UNIT	-	0.0%	-	0.0%	- 0.	0% -	0.0%
	2	0.0%	2	0.0%	1 0	0% 37	1.0%
		0.0%	-	0.0%	- 0	0% 2	0.1%
	0	0.0%	2	0.0%	3.0	0% -	0.0%
1214 NO LONGER MILITARY, USE TO BE DETERMINED	2	0.0%	2	0.0%	5 0.	1% 34	0.0%
	- 8	0.0%	33	0.2%	20 0	3% 65	1.8%
	6	0.1%	64	0.4%	5 0	1% 3	0.1%
		0.1%	-	0.4%	- 0	0%	0.1%
		0.0%	-	0.0%	- 0.	0%	0.0%
1600 MIXED URBAN OR BUILT-UP LAND	6	0.0%	11	0.0%	- 0.	2% 45	1.2%
	0	0.0%	4	0.1%	0.0	2 /0 43 0% 18	0.5%
1750 MANAGED WEILAND IN MAINTAINED LAWN GREENSPACE	3	0.0%	7	0.0%	3 0	0% 17	0.5%
	-	0.0%	0	0.0%	0.0	0% 1	0.0%
1804 ATHLETIC FIELDS (SCHOOLS)		0.0%	1	0.0%	1 0	0% 3	0.0%
1850 MANAGED WEI LAND IN BUILT-UP MAINTAINED REC AREA	2	0.0%	28	0.0%	6.0	1% 3	0.1%
2100 CROPLAND AND PASTURELAND	2	0.0%	20	0.2/0	0 0.	176 20 0% 16	0.070
2140 AGRICULTURAL WETLANDS (MODIFIED)		0.0%	10	0.1%	2 0.	0% 0	0.4%
2150 FORMER AGRICULTURAL WEITAND (BECOMING SHRUBBY, NOT BUILT-UP)		0.0%	1	0.0%	0 0.	0% 0	0.070
2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS	-	0.0%	0	0.0%	0 0.	0% 2	0.1%
2300 CONFINED FEEDING OPERATIONS	-	0.0%	-	0.0%	- 0.	0% 0	0.0%
2400 OTHER AGRICULTURE	-	0.0%	0	0.0%	0 0.	U% 3	0.1%
4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	3	0.0%	10	0.1%	5 0.	1% 16	0.4%
4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	9	0.1%	25	0.1%	11 0.	2% 117	3.2%
4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)	1	0.0%	3	0.0%	0 0.	U% 3	0.1%
4220 CONIFEROUS FOREST (>50% CROWN CLOSURE)	2	0.0%	10	0.1%	1 0.	0% 10	0.3%
4230 PLANTATION		0.0%	0	0.0%	- 0.	0% 2	0.0%
4311 MIXED FOREST (>50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)	1	0.0%	2	0.0%	0 0.	0% 0	0.0%
4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	2	0.0%	5	0.0%	2 0.	0% 7	0.2%
4321 MIXED FOREST (>50% DECIDUOUS WITH 10-50% CROWN CLOSURE)	1	0.0%	3	0.0%	- 0.	0% 2	0.1%
4322 MIXED FOREST (>50% DECIDUOUS WITH >50% CROWN CLOSURE)	1	0.0%	4	0.0%	2 0.	0% 4	0.1%
4410 OLD FIELD (< 25% BRUSH COVERED)	34	0.3%	134	0.8%	37 0.	6% 35	1.0%
4420 DECIDUOUS BRUSH/SHRUBLAND	11	0.1%	57	0.3%	28 0.	5% 18	0.5%
4430 CONIFEROUS BRUSH/SHRUBLAND	2	0.0%	10	0.1%	1 0.	0% 2	0.1%
4440 MIXED DECIDUOUS/CONIFEROUS BRUSH/SHRUBLAND	1	0.0%	10	0.1%	2 0.	0% 5	0.1%
4500 SEVERE BURNED UPLAND VEGETATION	-	0.0%	-	0.0%	- 0.	0% 0	0.0%
5100 STREAMS AND CANALS	0	0.0%	1	0.0%	7 0.	1% 97	2.6%
5200 NATURAL LAKES	1	0.0%	13	0.1%	1 0.	0% 102	2.8%
5300 ARTIFICIAL LAKES	8	0.1%	71	0.4%	19 0.	3% 1,390	38.0%
5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS	250	2.0%	720	4.1%	1,109 18.	5% 804	22.0%
5411 OPEN TIDAL BAYS	1	0.1%	0	0.0%	- 0.	0% 0	0.0%
5420 DREDGED LAGOON	3	0.0%	19	0.1%	- 0.	0% 4	0.1%
5430 ATLANTIC OCEAN	-	0.0%	-	0.0%	- 0.	U% -	0.0%
6110 SALINE MARSHES	11,833 5	0.00/	11,928	67.1%	2,960 49.	7% 37 0% 92	1.0%
6120 FRESHWATER TIDAL MARSHES	с 24	0.0%	2,064	0.40/	1,42123.	9% 62	2.3%
6130 VEGETATED DUNE COMMUNITIES	34	0.3%	23	0.1%	- 0.	U% 0	0.2%
6210 DECIDUOUS WOODED WETLANDS		0.1%	109	1.1%	23 0.	4% 100	4.0%
6220 CONIFEROUS WOODED WETLANDS	7	0.1%	45	0.3%	2 0.	U% 3	0.1%
6221 ATLANTIC WHITE CEDAR SWAMP	2	0.0%	111	0.6%	1 0.	U% 3	0.1%
6231 DECIDUOUS SCRUB/SHRUB WETLANDS	25	0.2%	554	3.1%	66 1.	1% 52	1.4%
6232 CONIFEROUS SCRUB/SHRUB WETLANDS	1	0.0%	12	0.1%	0 0.	0% 1	0.0%
6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)	10	0.1%	167	0.9%	2 0.	0% 4	0.1%
6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)	13	0.1%	70	0.4%	1 0.	0% Z	0.0%
6240 HERBACEOUS WETLANDS	66	0.5%	1,082	0.1%	172 2.	9% 117	3.2%
6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)	9	0.1%	50	0.4%	2 0.	U% 13	0.4%
6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)	9	0.1%	59	0.3%	ь О.	170 11	0.3%
6500 SEVERE BURNED WETLANDS	-	0.0%	-	0.0%	- 0.	070 -	0.0%
7100 BEACHES	22	0.2%	21	0.1%	0 0.	0%	0.1%
7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC.	-	0.0%	-	0.0%	- 0.	0% 1	0.0%
7300 EXTRACTIVE MINING	-	0.0%	0	0.0%	0 0.	U% 21	0.6%
7400 ALTERED LANDS	7	U.1%	6	0.0%	2 0.	U% 14	0.4%
7430 DISTURBED WETLANDS (MODIFIED)	10	0.1%	68	0.4%	8 0.	170 180	4.9%
7500 TRANSITIONAL AREAS	2	0.0%	0	0.0%	0 0.	0% 14	0.4%
7600 UNDIFFERENTIATED BARREN LANDS	0	0.0%	1	0.0%	0 0.	0 % 4	0.1%
IOTAL HECTARS	12,448		17,768		5,952	3,658	

CRSSA Label -

#### CRSSA Label -

LEVEL\_230 = Riverine/lacustrine/palustrine emergent marsh: mixed species LEVEL\_241 = Wetland Forest: Coastal Plain hardwood swamp (>66% deciduous) LEVEL\_242 = Wetland Forest: Coastal Plain pine lowland (>66% evergreen) LEVEL\_243 = Wetland Forest: Coastal Plain mixed - hardwood/white cedar-pine-holly

LEVEL_242 = Wetland Forest:	Coastal Plain pine	lowland (>66% evergreen)
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LEVEL_243 = Wetland Forest: Coastal Plain mixed - h		white c	cedar-pine-	holly		1	1 =\/=1 242	
LU95 DEP_LABEL	EVEL_230	0.10/	LEVEL_241	0.00/	LEVEL_242	0.00/	LEVEL_243	0.0%
1110 RESIDENTIAL, HIGH DENSITY, MULTIPLE DWELLING	21	0.1%	12	0.0%	21	0.0%	102	0.0%
1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	65	0.2%	43	0.1%	21	0.0%	123	0.1%
1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	159	0.2 /0	83	0.1%	45	0.0 %	245	0.1%
1140 RESIDENTIAL, RURAL, SINGLE UNIT	156	0.4%	02	0.1%	40	0.1%	240	0.3%
1150 MIXED RESIDENTIAL	22	0.0 /0	10	0.0%	6	0.0%	27	0.0%
1200 COMMERCIAL/SERVICES	32	0.1%	10	0.0%	1	0.0%	37	0.0%
1211 MILITARY RESERVATIONS	14	0.0%	4	0.0%	1	0.0%	1	0.0%
1214 NO LONGER MILITARY, USE TO BE DETERMINED	-	0.0%	- 10	0.0%	-	0.0%	-	0.0%
1300 INDUSTRIAL	24	0.1%	10	0.0%	200	0.0%	21	0.0%
1400 TRANSPORTATION/COMMUNICATIONS/UTILITIES	276	0.7%	203	0.4%	209	0.4%	663	0.7%
1461 WETLAND RIGHTS-OF-WAY (MODIFIED)	364	0.9%	394	0.7%	39	0.1%	265	0.3%
1500 INDUSTRIAL/COMMERCIAL COMPLEXES	0	0.0%	-	0.0%	-	0.0%	0	0.0%
1600 MIXED URBAN OR BUILT-UP LAND	0	0.0%	-	0.0%	-	0.0%	0	0.0%
1700 OTHER URBAN OR BUILT-UP LAND	160	0.4%	58	0.1%	24	0.0%	128	0.1%
1750 MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE	195	0.5%	41	0.1%	12	0.0%	59	0.1%
1800 RECREATIONAL LAND	/5	0.2%	17	0.0%	22	0.0%	65	0.1%
1804 ATHLETIC FIELDS (SCHOOLS)	3	0.0%	3	0.0%	1	0.0%	5	0.0%
1850 MANAGED WETLAND IN BUILT-UP MAINTAINED REC AREA	62	0.2%	4	0.0%	/	0.0%	18	0.0%
2100 CROPLAND AND PASTURELAND	1,016	2.6%	345	0.6%	65	0.1%	715	0.8%
2140 AGRICULTURAL WETLANDS (MODIFIED)	1,009	2.6%	189	0.3%	37	0.1%	236	0.3%
2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY, NOT BUILT-UP)	50	0.1%	21	0.0%	8	0.0%	38	0.0%
2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS	76	0.2%	30	0.1%	30	0.1%	131	0.1%
2300 CONFINED FEEDING OPERATIONS	1	0.0%	0	0.0%	-	0.0%	0	0.0%
2400 OTHER AGRICULTURE	30	0.1%	13	0.0%	4	0.0%	27	0.0%
4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	216	0.6%	115	0.2%	64	0.1%	633	0.7%
4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	1,576	4.0%	1,155	2.0%	177	0.3%	4,690	5.1%
4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)	65	0.2%	22	0.0%	1,012	1.8%	560	0.6%
4220 CONIFEROUS FOREST (>50% CROWN CLOSURE)	123	0.3%	80	0.1%	10,655	19.4%	3,009	3.2%
4230 PLANTATION	3	0.0%	1	0.0%	18	0.0%	5	0.0%
4311 MIXED FOREST (>50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)	10	0.0%	9	0.0%	66	0.1%	153	0.2%
4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	62	0.2%	91	0.2%	1,469	2.7%	1,749	1.9%
4321 MIXED FOREST (>50% DECIDUOUS WITH 10-50% CROWN CLOSURE)	21	0.1%	12	0.0%	52	0.1%	190	0.2%
4322 MIXED FOREST (>50% DECIDUOUS WITH >50% CROWN CLOSURE)	119	0.3%	175	0.3%	491	0.9%	2,154	2.3%
4410 OLD FIELD (< 25% BRUSH COVERED)	525	1.3%	103	0.2%	70	0.1%	349	0.4%
4420 DECIDUOUS BRUSH/SHRUBLAND	360	0.9%	144	0.3%	54	0.1%	557	0.6%
4430 CONIFEROUS BRUSH/SHRUBLAND	87	0.2%	33	0.1%	642	1.2%	604	0.7%
4440 MIXED DECIDUOUS/CONIFEROUS BRUSH/SHRUBLAND	152	0.4%	68	0.1%	266	0.5%	994	1.1%
4500 SEVERE BURNED UPLAND VEGETATION	5	0.0%	1	0.0%	125	0.2%	8	0.0%
5100 STREAMS AND CANALS	737	1.9%	240	0.4%	48	0.1%	160	0.2%
5200 NATURAL LAKES	251	0.6%	43	0.1%	15	0.0%	49	0.1%
5300 ARTIFICIAL LAKES	3,406	8.7%	158	0.3%	147	0.3%	411	0.4%
5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS	1,028	2.6%	92	0.2%	15	0.0%	121	0.1%
5411 OPEN TIDAL BAYS	-	0.0%	-	0.0%	0	0.0%	-	0.0%
5420 DREDGED LAGOON	-	0.0%	0	0.0%	1	0.0%	2	0.0%
5430 ATLANTIC OCEAN	-	0.0%	-	0.0%	-	0.0%	-	0.0%
6110 SALINE MARSHES	175	0.4%	325	0.6%	64	0.1%	535	0.6%
6120 FRESHWATER TIDAL MARSHES	1,448	3.7%	466	0.8%	5	0.0%	190	0.2%
6130 VEGETATED DUNE COMMUNITIES	2	0.0%	-	0.0%	0	0.0%	1	0.0%
6210 DECIDUOUS WOODED WETLANDS	9,627	24.6%	34,759	60.9%	1,954	3.5%	24,082	26.0%
6220 CONIFEROUS WOODED WETLANDS	142	0.4%	591	1.0%	13,5992	24.7%	6,958	7.5%
6221 ATLANTIC WHITE CEDAR SWAMP	351	0.9%	279	0.5%	5,184	9.4%	2,980	3.2%
6231 DECIDUOUS SCRUB/SHRUB WETLANDS	4,008	10.3%	5,224	9.2%	1,279	2.3%	6,728	7.3%
6232 CONIFEROUS SCRUB/SHRUB WETLANDS	140	0.4%	91	0.2%	1,520	2.8%	1,241	1.3%
6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)	267	0.7%	790	1.4%	1,270	2.3%	3,344	3.6%
6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)	93	0.2%	293	0.5%	1,613	2.9%	2,584	2.8%
6240 HERBACEOUS WETLANDS	8,040	20.6%	1,995	3.5%	609	1.1%	2,104	2.3%
6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)	395	1.0%	5,735	10.0%	2,208	4.0%	10,556	11.4%
6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)	208	0.5%	2,019	3.5%	9,605	17.4%	11,566	12.5%
6500 SEVERE BURNED WETLANDS	41	0.1%	0	0.0%	77	0.1%	17	0.0%
7100 BEACHES	0	0.0%	-	0.0%	0	0.0%	2	0.0%
7200 BARE EXPOSED ROCK ROCK SLIDES ETC	-	0.0%	-	0.0%	-	0.0%	-	0.0%
7300 EXTRACTIVE MINING	21	0.1%	7	0.0%	4	0.0%	16	0.0%
7400 ALTERED LANDS	110	0.3%	9	0.0%	4	0.0%	21	0.0%
7430 DISTURBED WETLANDS (MODIFIED)	1,541	3.9%	424	0.7%	104	0.2%	401	0.4%
7500 TRANSITIONAL AREAS	12	0.0%	7	0.0%	2	0.0%	14	0.0%
7600 UNDIFFERENTIATED BARREN LANDS	9	0.0%	1	0.0%	3	0.0%	8	0.0%
TOTAL HECTARS	39,076		57,081		55.048		92.673	

#### CRSSA Label -

LEVEL_244 = Wetland Forest: Coastal Plain white cedar swamp (>66% evergreen)
LEVEL 245 = Wetland Scrub/shrub: Coastal Plain mixed
<b>LEVEL_246</b> = Wetland Forest: Highlands/Piedmont hardwood swamp (>66% deciduous)
LEVEL_247 = Wetland Forest: Highlands/Piedmont mixed - hardwood/hemlock/white cedar/pine

LU95 DEP_LABEL	LEVEL_244	000	LEVEL_245		LEVEL_246		LEVEL_247	
1110 RESIDENTIAL, HIGH DENSITY, MULTIPLE DWELLING	- 0	0.0%	2	0.1%	5	0.0%	3	0.1%
1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	- 0	0.0%	10	0.2%	50	0.2%	19	0.7%
1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	0 0	0.0%	9	0.2%	55	0.2%	13	0.5%
1140 RESIDENTIAL, RURAL, SINGLE UNIT	1 0	0.0%	13	0.3%	102	0.3%	19	0.7%
1150 MIXED RESIDENTIAL	- 0	0.0%	-	0.0%	-	0.0%	-	0.0%
	- 0	0.0%	4	0.1%	20	0.1%	5	0.2%
1211 MILITART RESERVATIONS	- 0	0.0%	9	0.2%	2	0.0%	-	0.0%
1300 INDUSTRIAL	- 0	0.0%	3	0.1%	13	0.0%	2	0.1%
1400 TRANSPORTATION/COMMUNICATIONS/UTILITIES	11 0	0.2%	48	1.0%	83	0.3%	7	0.3%
1461 WETLAND RIGHTS-OF-WAY (MODIFIED)	2 0	0.0%	31	0.7%	94	0.3%	8	0.3%
1500 INDUSTRIAL/COMMERCIAL COMPLEXES	- 0	0.0%	0	0.0%	0	0.0%	-	0.0%
1600 MIXED URBAN OR BUILT-UP LAND	- 0	0.0%	0	0.0%	0	0.0%	-	0.0%
1700 OTHER URBAN OR BUILT-UP LAND	0 0	0.0%	25	0.6%	40	0.1%	9	0.3%
1750 MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE	- 0	0.0%	16	0.3%	21	0.1%	6	0.2%
1800 RECREATIONAL LAND	1 0	0.0%	10	0.2%	22	0.1%	9	0.3%
1804 ATHLETIC FIELDS (SCHOOLS)	- 0	0.0%	0	0.0%	1	0.0%	0	0.0%
	- 0	0.0%	5	0.1%	150	0.0%	/	0.3%
2100 CROFLAND AND FASTORELAND 2140 AGRICULTURAL WETLANDS (MODIFIED)	2 0	0.0%	54 63	1.4%	100	0.3%	11	0.0%
2150 FORMER AGRICULTURAL WETLAND (BECOMING SHRUBBY NOT BUILT-UP)	0.0	0%	14	0.3%	17	0.5%	2	0.4%
2200 ORCHARDS/VINEYARDS/NURSERIES/HORTICULTURAL AREAS	2 0	0.0%	16	0.3%	3	0.0%	0	0.0%
2300 CONFINED FEEDING OPERATIONS	- 0	0.0%	-	0.0%	1	0.0%	-	0.0%
2400 OTHER AGRICULTURE	- 0	0.0%	2	0.0%	5	0.0%	2	0.1%
4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	1 0	0.0%	18	0.4%	213	0.7%	12	0.4%
4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	1 0	0.0%	75	1.6%	3,931 1	2.9%	172	6.6%
4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)	19 0	0.3%	41	0.9%	4	0.0%	2	0.1%
4220 CONIFEROUS FOREST (>50% CROWN CLOSURE)	199 3	8.4%	110	2.4%	61	0.2%	103	3.9%
4230 PLANTATION	0 0	0.0%	0	0.0%	5	0.0%	4	0.1%
4311 MIXED FOREST (>50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)	0 0	0.0%	3	0.1%	4	0.0%	1	0.0%
4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	8 0	0.1%	24	0.5%	85	0.3%	35	1.4%
4321 MIXED FOREST (>50% DECIDUOUS WITH 10-50% CROWN CLOSURE)	0 0	J.U%	3	0.1%	/	0.0%	1	0.0%
4322 MIXED FOREST (250% DECIDOOUS WITH 250% CROWN CLOSURE) 4410 OLD FIELD (< 25% BRUSH COVERED)	1 0	0.1%	20 54	1.2%	90	0.3%	20 14	0.5%
4420 DECIDUOUS BRUSH/SHRUBLAND	- 0	0%	42	0.9%	194	0.4%	21	0.5%
4430 CONIFEROUS BRUSH/SHRUBLAND	4 0	0.1%	37	0.8%	45	0.1%	17	0.6%
4440 MIXED DECIDUOUS/CONIFEROUS BRUSH/SHRUBLAND	0 0	0.0%	71	1.6%	98	0.3%	14	0.5%
4500 SEVERE BURNED UPLAND VEGETATION	1 0	0.0%	13	0.3%	-	0.0%	-	0.0%
5100 STREAMS AND CANALS	26 0	).4%	18	0.4%	608	2.0%	91	3.5%
5200 NATURAL LAKES	3 0	0.0%	18	0.4%	58	0.2%	17	0.7%
5300 ARTIFICIAL LAKES	48 0	0.8%	356	7.8%	294	1.0%	127	4.9%
5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS	2 0	0.0%	60	1.3%	3	0.0%	1	0.0%
5411 OPEN TIDAL BAYS	- 0	0.0%	-	0.0%	-	0.0%	-	0.0%
5420 DREDGED LAGOON	- 0	0.0%	1	0.0%	-	0.0%	-	0.0%
5430 ATLANTIC OCEAN	- 0	0.0%	- 216	0.0%	-	0.0%	-	0.0%
6120 ERESHWATER TIDAL MARSHES	2 0	0.0%	57	1.2%	3	0.0%	-	0.0%
6130 VEGETATED DUNE COMMUNITIES	- 0	0%	- 51	0.0%	-	0.0%	_	0.0%
6210 DECIDUOUS WOODED WETLANDS	113 1	.9%	757	16.5%	19.646	64.4%	969	37.2%
6220 CONIFEROUS WOODED WETLANDS	399 6	6.8%	183	4.0%	112	0.4%	277	10.7%
6221 ATLANTIC WHITE CEDAR SWAMP	4,307 73	8.0%	129	2.8%	1	0.0%	2	0.1%
6231 DECIDUOUS SCRUB/SHRUB WETLANDS	123 2	2.1%	443	9.7%	2,428	8.0%	156	6.0%
6232 CONIFEROUS SCRUB/SHRUB WETLANDS	29 0	).5%	114	2.5%	14	0.0%	38	1.5%
6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)	83 1	.4%	145	3.2%	37	0.1%	15	0.6%
6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)	26 0	0.4%	82	1.8%	8	0.0%	5	0.2%
6240 HERBACEOUS WETLANDS	64 1	.1%	522	11.4%	1,238	4.1%	162	6.2%
6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)	133 2	2.2%	164	3.6%	178	0.6%	68	2.6%
0202 WILLED FURESTED WETLANDS (CONIFEROUS DOM.)	2/5 4	F. 7 %	180	3.9%	82	0.3%	100	3.8%
7100 BEACHES	3 U n	) 0%	30	0.7%	-	0.0%	-	0.0% 0.0%
7200 BARE EXPOSED ROCK ROCK SLIDES ETC	- 0	0%	-	0.0%	-	0.0%	-	0.0%
7300 EXTRACTIVE MINING	0 0	0.0%	4	0.1%	2	0.0%		0.0%
7400 ALTERED LANDS	- 0	0.0%	5	0.1%	2	0.0%	0	0.0%
7430 DISTURBED WETLANDS (MODIFIED)	4 0	).1%	172	3.8%	137	0.4%	10	0.4%
7500 TRANSITIONAL AREAS	- 0	0.0%	2	0.0%	4	0.0%	0	0.0%
7600 UNDIFFERENTIATED BARREN LANDS	- 0	0.0%	2	0.0%	1	0.0%	0	0.0%
TOTAL HECTARS	5,900		4,587		30,498		2,602	

## <u>CRSSA Label</u> – evergreen)

LEVEL\_248 = Wetland Forest: Highlands/Piedmont conifer swamp - hemlock/cedar/pine dominant (>66%

LEVEL\_249 = Wetland Scrub/shrub: Highlands/Piedmont mixed deciduous/evergreen

LEVEL	251 = Marine/Estuarine Open water
LEVEL	252 = Riverine/lacustrine/palustrine Open water

LU95 DEP_LABEL	LEVEL_248	8	LEVEL_249	9	LEVEL_251		LEVEL_252	
1110 RESIDENTIAL, HIGH DENSITY, MULTIPLE DWELLING	0	0.1%	0	0.0%	175	0.1%	11	0.0%
1120 RESIDENTIAL, SINGLE UNIT, MEDIUM DENSITY	3	0.4%	3	0.0%	162	0.1%	105	0.4%
1130 RESIDENTIAL, SINGLE UNIT, LOW DENSITY	3	0.3%	8	0.1%	11	0.0%	37	0.1%
1140 RESIDENTIAL, RURAL, SINGLE UNIT	8	0.9%	14	0.1%	15	0.0%	35	0.1%
	-	0.0%	-	0.0%	-	0.0%	0 57	0.0%
1210 COMMERCIAL/SERVICES	2	0.2%	2	0.0%	5	0.0%	57	0.2%
1214 NO LONGER MILITARY, USE TO BE DETERMINED	-	0.0%		0.0%	3	0.0%	-	0.0%
1300 INDUSTRIAL	1	0.1%	2	0.0%	120	0.1%	59	0.2%
1400 TRANSPORTATION/COMMUNICATIONS/UTILITIES	4	0.5%	25	0.3%	135	0.1%	75	0.3%
1461 WETLAND RIGHTS-OF-WAY (MODIFIED)	1	0.1%	43	0.4%	5	0.0%	2	0.0%
1500 INDUSTRIAL/COMMERCIAL COMPLEXES	-	0.0%	-	0.0%	-	0.0%	-	0.0%
1600 MIXED URBAN OR BUILT-UP LAND	-	0.0%	-	0.0%	-	0.0%	0	0.0%
1700 OTHER URBAN OR BUILT-UP LAND	4	0.5%	7	0.1%	55	0.0%	57	0.2%
1750 MANAGED WETLAND IN MAINTAINED LAWN GREENSPACE	2	0.2%	5	0.1%	1	0.0%	6	0.0%
1800 RECREATIONAL LAND	4	0.4%	5	0.0%	56	0.0%	63	0.2%
1804 ATHLETIC FIELDS (SCHOOLS)	-	0.0%	-	0.0%	1	0.0%	0	0.0%
1850 MANAGED WETLAND IN BUILT-UP MAINTAINED REC AREA	2	0.2%	0	0.0%	1	0.0%	3	0.0%
2100 CROPLAND AND PASTURELAND	15	1.7%	62	0.6%	4	0.0%	37	0.1%
	8	0.9%	67	0.1%	2	0.0%	00	0.2%
2100 ORCHARDS//INEVARDS/NURSERIES/HORTICULTURAL AREAS	2	0.2%	1	0.1%	0	0.0%	2	0.0%
2300 CONFINED FEEDING OPERATIONS		0.1%	0	0.0%		0.0%	0	0.0%
2400 OTHER AGRICULTURE	1	0.1%	2	0.0%	-	0.0%	2	0.0%
4110 DECIDUOUS FOREST (10-50% CROWN CLOSURE)	8	0.9%	34	0.4%	4	0.0%	57	0.2%
4120 DECIDUOUS FOREST (>50% CROWN CLOSURE)	102	11.5%	1,287	13.3%	9	0.0%	399	1.4%
4210 CONIFEROUS FOREST (10-50% CROWN CLOSURE)	1	0.1%	0	0.0%	2	0.0%	7	0.0%
4220 CONIFEROUS FOREST (>50% CROWN CLOSURE)	54	6.1%	2	0.0%	1	0.0%	42	0.2%
4230 PLANTATION	3	0.4%	1	0.0%	-	0.0%	5	0.0%
4311 MIXED FOREST (>50% CONIFEROUS WITH 10%-50% CROWN CLOSURE)	0	0.0%	0	0.0%	0	0.0%	2	0.0%
4312 MIXED FOREST (>50% CONIFEROUS WITH >50% CROWN CLOSURE)	7	0.7%	5	0.0%	1	0.0%	26	0.1%
4321 MIXED FOREST (>50% DECIDUOUS WITH 10-50% CROWN CLOSURE)	0	0.0%	1	0.0%	1	0.0%	3	0.0%
4322 MIXED FOREST (>50% DECIDUOUS WITH >50% CROWN CLOSURE)	3	0.4%	13	0.1%	2	0.0%	24	0.1%
4410 OLD FIELD (< 25% BRUSH COVERED)	9	1.0%	43	0.4%	63	0.0%	54	0.2%
	8	0.9%	5	0.6%	19	0.0%	41	0.1%
	4	0.0%	16	0.0%	3	0.0%	14	0.0%
4500 SEVERE BURNED UPLAND VEGETATION	-	0.0%	-	0.0%	-	0.0%	-	0.0%
5100 STREAMS AND CANALS	37	4.2%	92	1.0%	43	0.0%	2,012	7.3%
5200 NATURAL LAKES	8	0.9%	18	0.2%	23	0.0%	2,686	9.7%
5300 ARTIFICIAL LAKES	80	9.0%	90	0.9%	144	0.1%	14,494	52.5%
5410 TIDAL RIVERS, INLAND BAYS, AND OTHER TIDAL WATERS	5	0.5%	0	0.0%	59,474	34.4%	6,398	23.2%
5411 OPEN TIDAL BAYS	-	0.0%	-	0.0%	45,042	26.1%	1	0.0%
5420 DREDGED LAGOON	-	0.0%	-	0.0%	310	0.2%	3	0.0%
5430 ATLANTIC OCEAN	-	0.0%	-	0.0%	65,296	37.8%	-	0.0%
6110 SALINE MARSHES	2	0.2%	1	0.0%	949	0.5%	47	0.2%
6120 FRESHWATER TIDAL MARSHES	-	0.0%	-	0.0%	45	0.0%	32	0.1%
6130 VEGETATED DUNE COMMUNITIES	-	0.0%	-	0.0%	23	0.0%	0	0.0%
6210 DECIDUOUS WOODED WETLANDS	179	20.1%	6,084	62.7%	8	0.0%	239	0.9%
6221 ATLANTIC WHITE CEDAR SWAMP	107	10.7%	0	0.1%	2	0.0%	6	0.0%
6231 DECIDIOUS SCRUB/SHRUB WETLANDS	38	4.2%	953	9.8%	17	0.0%	74	0.0%
6232 CONIFEROUS SCRUB/SHRUB WETLANDS	27	3.1%	1	0.0%	0	0.0%	5	0.0%
6233 MIXED SCRUB/SHRUB WETLANDS (DECIDUOUS DOM.)	2	0.2%	4	0.0%	4	0.0%	3	0.0%
6234 MIXED SCRUB/SHRUB WETLANDS (CONIFEROUS DOM.)	2	0.2%	0	0.0%	1	0.0%	4	0.0%
6240 HERBACEOUS WETLANDS	38	4.3%	629	6.5%	122	0.1%	122	0.4%
6251 MIXED FORESTED WETLANDS (DECIDUOUS DOM.)	6	0.6%	15	0.2%	1	0.0%	9	0.0%
6252 MIXED FORESTED WETLANDS (CONIFEROUS DOM.)	21	2.3%	3	0.0%	2	0.0%	13	0.0%
6500 SEVERE BURNED WETLANDS	-	0.0%	-	0.0%	-	0.0%	-	0.0%
7100 BEACHES		0.0%	-	0.0%	272	0.2%	0	0.0%
7200 BARE EXPOSED ROCK, ROCK SLIDES, ETC.	-	0.0%	-	0.0%	-	0.0%	1	0.0%
7300 EXTRACTIVE MINING	0	0.0%	1	0.0%	2	0.0%	49	0.2%
7400 ALTERED LANDS	0	0.0%	1	0.0%	6	0.0%	5	0.0%
7430 DISTURBED WETLANDS (MODIFIED)	5	0.5%	87	0.9%	14	0.0%	72	0.3%
	1	0.1%	1	0.0%	4	0.0%	4	0.0%
TOTAL HECTARS	800	100.0%	9 706	100.0%	172 600	100.0%	27 500	100.0%

### APPENDIX C : Watershed Management Area – Level 1 Cross-Tabulation





Table A-1 DEP LULC95 versus CRSSA LC95 level 1 cross-comparison for WMA 01 in hectares and percent																
WMA 01	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	19,626	71.7%	3,125	7.0%	3,000	3.1%	111	29.1%	10	4.9%	-	0.0%	184	1.1%	60	1.3%
AGRICULTURE	2,310	8.4%	32,240	71.8%	1,694	1.7%	44	11.6%	4	1.8%	-	0.0%	285	1.7%	17	0.4%
FOREST	4,789	17.5%	6,114	13.6%	88,624	91.0%	123	32.3%	26	12.2%	-	0.0%	2,612	15.8%	224	4.7%
WATER	217	0.8%	240	0.5%	448	0.5%	53	14.0%	127	60.7%	-	0.0%	1,080	6.5%	4,332	90.4%
NATURAL_WET	324	1.2%	790	1.8%	3,473	3.6%	14	3.7%	31	14.7%	-	0.0%	11,761	71.3%	146	3.0%
DISTURBED_WET	24	0.1%	60	0.1%	58	0.1%	24	6.3%	5	2.2%	-	0.0%	170	1.0%	5	0.1%
AGRICULTURAL_WET	71	0.3%	2,298	5.1%	67	0.1%	11	2.9%	7	3.1%	-	0.0%	341	2.1%	7	0.1%
URBAN_WET	24	0.1%	57	0.1%	34	0.0%	1	0.2%	1	0.4%	-	0.0%	52	0.3%	1	0.0%
BARREN LAND	210	0.8%	488	1.1%	185	0.2%	544	143.3%	1	0.4%	-	0.0%	7	0.0%	6	0.1%
total hectares CRSSA	27,385	100.0%	44,923	100.0%	97,399	100.0%	380	100.0%	210	100.0%	-	0.0%	16,485	100.0%	4,791	100.0%



Table A-2 DEP LULC95 versus CRSSA LC95 level 1 cross-comparison for WMA 02 in hectares and percent.																
WMA 02	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	6,027	73.3%	908	7.3%	823	3.4%	22	15.6%	4	5.6%	-	0.0%	65	0.9%	27	2.2%
AGRICULTURE	493	6.0%	7,401	59.2%	397	1.6%	22	15.7%	1	1.7%	-	0.0%	142	2.1%	4	0.3%
FOREST	1,428	17.4%	2,329	18.6%	21,574	88.2%	65	46.4%	6	7.6%	-	0.0%	888	12.9%	39	3.1%
WATER	84	1.0%	62	0.5%	103	0.4%	9	6.4%	43	58.6%	-	0.0%	288	4.2%	1,155	93.0%
NATURAL_WET	143	1.7%	464	3.7%	1,490	6.1%	3	1.9%	14	18.8%	-	0.0%	5,163	74.9%	11	0.9%
DISTURBED_WET	9	0.1%	34	0.3%	14	0.1%	13	9.3%	3	3.8%	-	0.0%	57	0.8%	2	0.1%
AGRICULTURAL_WET	32	0.4%	1,272	10.2%	40	0.2%	5	3.8%	3	3.5%	-	0.0%	265	3.8%	5	0.4%
URBAN_WETLANDS	11	0.1%	26	0.2%	8	0.0%	1	0.8%	0	0.5%	-	0.0%	21	0.3%	0	0.0%
BARREN LAND	30	0.4%	230	1.8%	45	0.2%	118	84.1%	-	0.0%	-	0.0%	1	0.0%	0	0.0%
total hectares CRSSA	8,227	100.0%	12,497	100.0%	24,448	100.0%	141	100.0%	74	100.0%	-	0.0%	6,890	100.0%	1,242	100.0%



Table A-3 DEP LULC95 versu	s CRS	SA LC9	5 level	1 cross	-compa	arison fo	or WM	A 03 in I	hectar	res and	berce	nt.				
WMA 03	DEVELOPED	%tot	CULTIVATED	%tot		%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	13,210	84.8%	402	34.6%	1,161	3.3%	26	25.0%	18	7.6%	-	0.0%	90	1.7%	54	1.6%
AGRICULTURE	104	0.7%	124	10.7%	21	0.1%	1	0.6%	1	0.4%	-	0.0%	4	0.1%	3	0.1%
FOREST	1,855	11.9%	372	32.0%	32,613	91.7%	28	27.3%	44	19.0%	-	0.0%	955	18.4%	84	2.5%
WATER	144	0.9%	64	5.5%	175	0.5%	24	23.5%	151	65.4%	-	0.0%	397	7.7%	3,183	94.5%
NATURAL_WETLANDS	217	1.4%	63	5.4%	1,535	4.3%	7	7.0%	13	5.4%	-	0.0%	3,652	70.4%	40	1.2%
DISTURBED_WETLANDS	28	0.2%	27	2.4%	37	0.1%	16	15.4%	5	1.9%	-	0.0%	57	1.1%	5	0.1%
AGRICULTURAL_WETLANDS	11	0.1%	79	6.8%	9	0.0%	0	0.4%	0	0.1%	-	0.0%	7	0.1%	-	0.0%
URBAN_WETLANDS	11	0.1%	31	2.7%	16	0.0%	1	0.9%	0	0.2%	-	0.0%	26	0.5%	0	0.0%
BARREN LAND	92	0.6%	57	4.9%	72	0.2%	145	140.3%	4	1.6%	-	0.0%	2	0.0%	0	0.0%
total hectares CRSSA	15,580	100.0%	1,162	100.0%	35,566	100.0%	103	100.0%	231	100.0%	-	0.0%	5,187	100.0%	3,368	100.0%



Table A-4 DEP LULC95	versus	CRSSA	LC95	level 1	cross-	compari	son foi	· WMA C	)4 in h	ectares	and pe	ercent.				
WMA 04	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	38,401	94.6%	1,204	70.2%	610	14.7%	19	29.9%	11	14.4%	4	3.7%	46	4.6%	64	8.6%
AGRICULTURE	30	0.1%	60	3.5%	3	0.1%	-	0.0%	-	0.0%	-	0.0%	1	0.1%	0	0.0%
FOREST	1,656	4.1%	279	16.3%	3,022	72.7%	22	34.8%	7	9.2%	10	9.1%	164	16.2%	17	2.4%
WATER	174	0.4%	32	1.9%	43	1.0%	9	14.0%	33	42.1%	4	3.6%	91	9.0%	584	79.3%
NATURAL_WET	254	0.6%	70	4.1%	451	10.9%	8	12.9%	19	24.0%	89	82.2%	690	68.2%	69	9.4%
DISTURBED_WET	31	0.1%	18	1.0%	19	0.5%	5	8.1%	8	9.8%	1	1.3%	15	1.5%	2	0.3%
AGRICULTURAL_WET	2	0.0%	6	0.3%	1	0.0%	-	0.0%	-	0.0%	-	0.0%	1	0.1%	-	0.0%
URBAN_WET	24	0.1%	47	2.8%	7	0.2%	0	0.3%	0	0.5%	-	0.0%	5	0.5%	0	0.0%
BARREN LAND	122	0.3%	94	5.5%	27	0.7%	109	173.8%	4	5.6%	1	1.0%	1	0.1%	2	0.3%
total hectares CRSSA	40,572	100.0%	1,715	100.0%	4,155	100.0%	63	100.0%	79	100.0%	109	100.0%	1,012	100.0%	737	100.0%



Table A-5 DEP LULC95	versus	CRSSA	LC95	level 1	cross-	compari	son foi	· WMA (	)5 in he	ectares	and pe	ercent.				
WMA 05	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	27,435	94.5%	1,281	60.8%	441	11.9%	65	53.1%	48	19.6%	41	2.7%	28	2.7%	169	3.7%
AGRICULTURE	34	0.1%	45	2.1%	4	0.1%	-	0.0%	0	0.0%	-	0.0%	1	0.1%	-	0.0%
FOREST	1,206	4.2%	467	22.2%	2,679	72.3%	13	10.4%	31	12.4%	93	6.2%	183	18.1%	28	0.6%
WATER	90	0.3%	77	3.7%	49	1.3%	35	28.6%	108	44.0%	125	8.3%	62	6.2%	4,270	93.9%
NATURAL_WET	240	0.8%	201	9.5%	521	14.1%	6	5.3%	56	22.8%	1,246	82.7%	720	71.4%	80	1.7%
DISTURBED_WET	9	0.0%	11	0.5%	8	0.2%	3	2.5%	3	1.1%	2	0.1%	11	1.0%	1	0.0%
AGRICULTURAL_WET	1	0.0%	4	0.2%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0	0.0%	-	0.0%
URBAN_WETLANDS	16	0.1%	20	1.0%	5	0.1%	0	0.1%	0	0.1%	-	0.0%	5	0.5%	1	0.0%
BARREN LAND	84	0.3%	119	5.7%	28	0.8%	135	111.2%	76	30.7%	6	0.4%	1	0.1%	5	0.1%
total hectares CRSSA	29,030	100.0%	2,105	100.0%	3,706	100.0%	122	100.0%	246	100.0%	1,506	100.0%	1,008	100.0%	4,547	100.0%



Table A-6 DEP LULC9	5 versus	CRSSA	LC95	level 1	cross-co	ompariso	on for	WMA 06	in he	ctares a	nd per	cent.				
WMA 06	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	35,759	86.8%	2,027	38.6%	2,250	7.8%	55	42.2%	27	15.5%	-	0.0%	270	1.8%	46	2.4%
AGRICULTURE	322	0.8%	1,456	27.7%	95	0.3%	1	1.1%	2	0.9%	-	0.0%	48	0.3%	0	0.0%
FOREST	4,253	10.3%	950	18.1%	24,342	84.2%	25	19.0%	18	10.4%	-	0.0%	1,839	12.1%	44	2.4%
WATER	163	0.4%	54	1.0%	119	0.4%	26	19.6%	90	51.4%	-	0.0%	538	3.5%	1,748	93.5%
NATURAL_WET	584	1.4%	254	4.8%	1,959	6.8%	6	4.6%	18	10.4%	-	0.0%	11,980	78.8%	25	1.3%
DISTURBED_WET	54	0.1%	82	1.6%	68	0.2%	15	11.2%	19	10.9%	-	0.0%	199	1.3%	4	0.2%
AGRICULTURAL_WET	17	0.0%	300	5.7%	15	0.1%	1	0.7%	0	0.2%	-	0.0%	85	0.6%	1	0.1%
URBAN_WETLANDS	51	0.1%	132	2.5%	52	0.2%	2	1.6%	1	0.3%	-	0.0%	244	1.6%	1	0.0%
BARREN LAND	244	0.6%	127	2.4%	144	0.5%	307	233.1%	5	3.2%	-	0.0%	12	0.1%	5	0.3%
total hectares CRSSA	41,204	100.0%	5,254	100.0%	28,899	100.0%	131	100.0%	174	100.0%	-	0.0%	15,202	100.0%	1,869	100.0%



Figure A-7 DEP LULC95 versus CRSSA LC95 level 1 cross-comparison for WMA 07 in hectares and percent.

Table A-7 DEP LULC9	5 versus	CRSSA	A LC9	5 level 1	cross	-compar	rison fo	or WMA	07 in l	hectares	and p	ercent.				
WMA 07	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	33,761	94.1%	1,343	69.3%	330	12.3%	165	57.3%	36	20.7%	4	1.8%	30	3.3%	115	2.8%
AGRICULTURE	24	0.1%	15	0.8%	2	0.1%	-	0.0%	-	0.0%	0	0.1%	-	0.0%	-	0.0%
FOREST	1,725	4.8%	312	16.1%	1,821	67.8%	83	29.0%	37	21.5%	12	4.8%	122	13.7%	25	0.6%
WATER	110	0.3%	25	1.3%	28	1.0%	7	2.3%	41	23.9%	24	10.1%	57	6.4%	3,949	95.8%
NATURAL_WET	201	0.6%	163	8.4%	474	17.6%	22	7.5%	38	22.2%	197	81.9%	655	73.2%	23	0.6%
DISTURBED_WET	33	0.1%	31	1.6%	18	0.7%	11	3.8%	19	10.9%	3	1.3%	15	1.7%	9	0.2%
AGRICULTURAL_WET	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%
URBAN_WETLANDS	31	0.1%	50	2.6%	15	0.5%	0	0.1%	1	0.7%	-	0.0%	16	1.7%	0	0.0%
BARREN LAND	117	0.3%	37	1.9%	16	0.6%	57	20.0%	20	11.4%	1	0.4%	0	0.1%	2	0.1%
total hectares CRSSA	35,886	100.0%	1,939	100.0%	2,687	100.0%	288	100.0%	173	100.0%	240	100.0%	894	100.0%	4,121	100.0%



Table A-8 DEP LULC95	versus	CRSSA	LC95 I	evel 1 ci	ross-coi	mparisor	ו for N	/MA 08 I	in hect	tares and	d perc	ent.				
WMA 08	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	26,156	76.2%	3,587	9.4%	2,559	6.4%	67	29.0%	5	3.1%	-	0.0%	101	1.7%	13	0.7%
AGRICULTURE	2,576	7.5%	26,882	70.4%	842	2.1%	23	10.0%	2	1.2%	-	0.0%	68	1.1%	3	0.2%
FOREST	4,985	14.5%	5,090	13.3%	32,929	82.9%	85	36.9%	11	6.2%	-	0.0%	805	13.5%	34	1.9%
WATER	77	0.2%	138	0.4%	120	0.3%	38	16.3%	141	82.2%	-	0.0%	282	4.7%	1,687	96.1%
NATURAL_WET	378	1.1%	841	2.2%	3,143	7.9%	6	2.6%	8	4.5%	-	0.0%	4,596	77.0%	13	0.7%
DISTURBED_WET	48	0.1%	67	0.2%	37	0.1%	7	3.2%	2	1.4%	-	0.0%	28	0.5%	1	0.0%
AGRICULTURAL_WET	58	0.2%	1,435	3.8%	44	0.1%	4	1.7%	2	1.2%	-	0.0%	48	0.8%	4	0.3%
URBAN_WETLANDS	43	0.1%	129	0.3%	44	0.1%	1	0.2%	1	0.3%	-	0.0%	42	0.7%	1	0.1%
BARREN LAND	409	1.2%	214	0.6%	76	0.2%	175	75.9%	3	1.7%	-	0.0%	2	0.0%	2	0.1%
total hectares CRSSA	34,322	100.0%	38,168	100.0%	39,717	100.0%	231	100.0%	172	100.0%	-	0.0%	5,972	100.0%	1,755	100.0%



Figure A-9 DEP LULCS	95 versu	s CRSS	SA LC9	5 level 1	cross-o	comparis	son foi	· WMA (	)6 in h	ectares	and pe	ercent.				
WMA 09	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	41,770	88.2%	2,930	22.9%	1,492	9.2%	239	44.5%	57	17.2%	10	1.0%	174	1.9%	42	2.7%
AGRICULTURE	886	1.9%	5,319	41.6%	149	0.9%	21	4.0%	4	1.1%	-	0.0%	41	0.4%	2	0.1%
FOREST	3,201	6.8%	1,725	13.5%	10,143	62.3%	130	24.1%	20	5.9%	18	1.9%	690	7.4%	30	1.9%
WATER	104	0.2%	75	0.6%	67	0.4%	45	8.4%	84	25.3%	64	6.8%	291	3.1%	1,417	90.5%
NATURAL_WET	981	2.1%	1,039	8.1%	4,199	25.8%	32	5.9%	92	27.9%	837	89.0%	7,870	84.3%	65	4.2%
DISTURBED_WET	186	0.4%	257	2.0%	99	0.6%	62	11.5%	66	20.0%	11	1.1%	102	1.1%	8	0.5%
AGRICULTURAL_WET	49	0.1%	1,187	9.3%	36	0.2%	4	0.7%	0	0.1%	-	0.0%	52	0.6%	0	0.0%
URBAN_WETLANDS	167	0.4%	266	2.1%	93	0.6%	5	0.9%	8	2.5%	1	0.1%	113	1.2%	2	0.1%
BARREN LAND	542	1.1%	500	3.9%	81	0.5%	721	134.1%	34	10.4%	1	0.2%	10	0.1%	4	0.2%
total hectares CRSSA	47,344	100.0%	12,797	100.0%	16,278	100.0%	537	100.0%	331	100.0%	940	100.0%	9,333	100.0%	1,565	100.0%



Table A-10 DEP LULC9	)5 versu	s CRSS	A LC95	level 1	cross-c	ompariso	on for	WMA 10	) in he	ctares a	nd per	cent.				
WMA 10	DEVELOPED	%tot	CULTIVATED	%tot		%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	18,965	81.9%	2,704	11.0%	943	5.6%	61	26.8%	12	16.3%	-	0.0%	111	1.5%	14	4.9%
AGRICULTURE	1,395	6.0%	16,131	65.4%	342	2.0%	61	27.1%	2	3.1%	-	0.0%	112	1.5%	3	0.9%
FOREST	2,094	9.0%	2,379	9.6%	11,237	67.2%	34	14.8%	5	7.5%	-	0.0%	424	5.8%	10	3.4%
WATER	76	0.3%	74	0.3%	79	0.5%	14	6.2%	14	20.0%	-	0.0%	330	4.5%	241	83.7%
NATURAL_WET	393	1.7%	884	3.6%	3,940	23.6%	13	5.6%	16	22.0%	-	0.0%	6,190	84.2%	15	5.3%
DISTURBED_WET	113	0.5%	131	0.5%	66	0.4%	35	15.4%	20	28.2%	-	0.0%	50	0.7%	3	1.0%
AGRICULTURAL_WET	59	0.3%	2,183	8.8%	49	0.3%	8	3.6%	1	0.9%	-	0.0%	76	1.0%	1	0.5%
URBAN_WETLANDS	67	0.3%	185	0.8%	61	0.4%	1	0.6%	1	2.0%	-	0.0%	58	0.8%	1	0.4%
BARREN LAND	635	2.7%	255	1.0%	50	0.3%	237	104.5%	3	3.9%	-	0.0%	2	0.0%	1	0.2%
total hectares CRSSA	23,162	100.0%	24,671	100.0%	16,717	100.0%	227	100.0%	72	100.0%	-	0.0%	7,352	100.0%	288	100.0%



Table A-11 DEP LULCS	)5 versu	s CRSS	A LC95	level 1	cross-c	ompariso	on for	WMA 11	in he	ctares a	nd pei	cent.				
WMA 11	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	<b>BARE_LAND</b>	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	15,086	80.8%	2,100	7.8%	882	4.9%	36	26.5%	5	7.3%	-	0.0%	72	1.4%	10	1.0%
AGRICULTURE	1,461	7.8%	19,126	71.0%	533	3.0%	28	20.6%	1	2.3%	-	0.0%	79	1.6%	2	0.1%
FOREST	1,631	8.7%	2,813	10.4%	13,991	77.6%	18	13.2%	6	9.8%	-	0.0%	460	9.1%	42	4.1%
WATER	60	0.3%	60	0.2%	88	0.5%	8	5.6%	30	47.8%	-	0.0%	227	4.5%	939	91.5%
NATURAL_WET	269	1.4%	656	2.4%	2,402	13.3%	21	15.7%	16	24.9%	-	0.0%	4,102	80.8%	30	2.9%
DISTURBED_WET	45	0.2%	85	0.3%	25	0.1%	14	10.4%	4	5.8%	-	0.0%	51	1.0%	2	0.2%
AGRICULTURAL_WET	70	0.4%	2,035	7.6%	92	0.5%	7	4.9%	0	0.1%	-	0.0%	47	0.9%	1	0.1%
URBAN_WETLANDS	41	0.2%	81	0.3%	17	0.1%	4	3.2%	1	2.0%	-	0.0%	38	0.7%	1	0.1%
BARREN LAND	189	1.0%	106	0.4%	21	0.1%	113	82.7%	0	0.1%	-	0.0%	2	0.0%	-	0.0%
total hectares CRSSA	18,663	100.0%	26,957	100.0%	18,030	100.0%	136	100.0%	63	100.0%	-	0.0%	5,077	100.0%	1,025	100.0%



Table A-12 DEP LULC	95 vers	us CRS	SA LC9	5 level 1	1 cross-	compar	ison fo	or WMA	12 in I	hectares	and p	percent.				
WMA 12	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	<b>BARE_LAND</b>	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	36,027	86.1%	2,540	20.7%	1,227	8.9%	188	36.3%	60	7.9%	24	1.6%	207	2.1%	88	0.3%
AGRICULTURE	1,197	2.9%	5,263	42.9%	191	1.4%	26	5.0%	2	0.3%	1	0.0%	66	0.7%	1	0.0%
FOREST	2,978	7.1%	1,568	12.8%	9,058	66.0%	110	21.3%	22	2.9%	61	4.1%	497	5.1%	34	0.1%
WATER	182	0.4%	118	1.0%	110	0.8%	16	3.1%	431	56.6%	201	13.4%	222	2.3%	31,741	99.3%
NATURAL_WET	1,115	2.7%	1,243	10.1%	2,968	21.6%	81	15.6%	203	26.6%	1,197	80.1%	8,525	87.2%	108	0.3%
DISTURBED_WET	110	0.3%	137	1.1%	60	0.4%	59	11.4%	34	4.5%	10	0.7%	73	0.7%	5	0.0%
AGRICULTURAL_WET	107	0.3%	1,145	9.3%	61	0.4%	14	2.6%	1	0.2%	0	0.0%	56	0.6%	1	0.0%
URBAN_WETLANDS	152	0.4%	263	2.1%	52	0.4%	24	4.6%	7	1.0%	0	0.0%	131	1.3%	2	0.0%
BARREN LAND	401	1.0%	484	3.9%	76	0.6%	333	64.4%	242	31.7%	6	0.4%	6	0.1%	64	0.2%
total hectares CRSSA	41,868	100.0%	12,278	100.0%	13,726	100.0%	517	100.0%	762	100.0%	1,494	100.0%	9,777	100.0%	31,979	100.0%



Table A-13 DEP LULC	95 vers	us CRS	SA LC	95 level	1 cros	s-compa	rison	for WMA	A 13 in	hectare	es and	percen	t.			
WMA 13	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	31,679	78.3%	1,423	27.6%	1,239	2.3%	368	26.8%	90	4.6%	24	0.3%	401	1.4%	326	0.7%
AGRICULTURE	762	1.9%	1,253	24.3%	208	0.4%	49	3.6%	-	0.0%	0	0.0%	49	0.2%	0	0.0%
FOREST	5,981	14.8%	2,059	39.9%	50,084	93.8%	629	45.8%	6	0.3%	23	0.3%	4,266	14.7%	19	0.0%
WATER	788	1.9%	50	1.0%	53	0.1%	96	7.0%	988	50.7%	637	7.0%	409	1.4%	49,320	98.9%
NATURAL_WET	1,045	2.6%	180	3.5%	1,717	3.2%	92	6.7%	858	44.1%	8,346	92.3%	23,431	80.9%	196	0.4%
DISTURBED_WET	102	0.3%	34	0.7%	43	0.1%	107	7.8%	4	0.2%	12	0.1%	166	0.6%	5	0.0%
AGRICULTURAL_WET	32	0.1%	138	2.7%	37	0.1%	11	0.8%	-	0.0%	0	0.0%	23	0.1%	5	0.0%
URBAN_WETLANDS	88	0.2%	18	0.3%	18	0.0%	19	1.4%	0	0.0%	1	0.0%	223	0.8%	1	0.0%
BARREN LAND	594	1.5%	708	13.7%	106	0.2%	1,934	141.0%	406	20.9%	8	0.1%	20	0.1%	122	0.2%
total hectares CRSSA	40,477	100.0%	5,154	100.0%	53,399	100.0%	1,372	100.0%	1,947	100.0%	9,043	100.0%	28,969	100.0%	49,872	100.0%



Table A-14 DEP LULC	95 vers	us CRS	SA LC	95 level	1 cross	s-compa	rison	for WM/	A 06 ir	hectar	es and	percent	-			
WMA 14	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	7,975	69.4%	565	4.2%	698	1.1%	68	11.3%	5	0.2%	12	0.1%	293	0.6%	24	0.2%
AGRICULTURE	979	8.5%	8,072	59.5%	496	0.8%	106	17.6%	2	0.1%	1	0.0%	205	0.4%	1	0.0%
FOREST	2,102	18.3%	1,855	13.7%	61,878	96.0%	253	41.9%	8	0.4%	52	0.4%	9,807	20.0%	18	0.1%
WATER	75	0.6%	271	2.0%	51	0.1%	46	7.7%	1,131	53.0%	594	5.0%	958	2.0%	13,011	98.4%
NATURAL_WET	312	2.7%	571	4.2%	1,139	1.8%	85	14.1%	982	46.0%	11,144	94.4%	37,436	76.3%	169	1.3%
DISTURBED_WET	14	0.1%	24	0.2%	18	0.0%	23	3.8%	3	0.1%	1	0.0%	204	0.4%	1	0.0%
AGRICULTURAL_WET	23	0.2%	2,167	16.0%	148	0.2%	20	3.4%	2	0.1%	0	0.0%	104	0.2%	3	0.0%
URBAN_WETLANDS	14	0.1%	37	0.3%	1	0.0%	2	0.3%	-	0.0%	0	0.0%	30	0.1%	-	0.0%
BARREN LAND	121	1.1%	215	1.6%	66	0.1%	332	55.0%	208	9.8%	12	0.1%	12	0.0%	27	0.2%
total hectares CRSSA	11,493	100.0%	13,560	100.0%	64,428	100.0%	603	100.0%	2,132	100.0%	11,804	100.0%	49,038	100.0%	13,226	100.0%



Table A-15 DEP LULC95 versus CRSSA LC95 level 1 cross-comparison for WMA 15 in hectares and percent.																
WMA 15	DEVELOPED	%tot	CULTIVATED	%tot		%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	20,393	75.3%	1,479	13.7%	1,736	3.4%	194	19.6%	17	0.7%	35	0.3%	452	1.2%	53	0.3%
AGRICULTURE	1,198	4.4%	6,437	59.6%	594	1.2%	128	12.9%	0	0.0%	2	0.0%	175	0.5%	0	0.0%
FOREST	4,609	17.0%	2,160	20.0%	46,987	93.0%	276	27.8%	8	0.4%	116	0.9%	7,057	19.2%	21	0.1%
WATER	182	0.7%	25	0.2%	42	0.1%	131	13.3%	1,629	68.4%	825	6.1%	585	1.6%	14,921	98.3%
NATURAL_WET	576	2.1%	173	1.6%	1,028	2.0%	70	7.0%	723	30.3%	12,474	92.5%	28,069	76.2%	186	1.2%
DISTURBED_WET	34	0.1%	37	0.3%	23	0.0%	109	10.9%	5	0.2%	6	0.0%	201	0.5%	3	0.0%
AGRICULTURAL_WET	33	0.1%	461	4.3%	101	0.2%	74	7.5%	-	0.0%	0	0.0%	51	0.1%	-	0.0%
URBAN_WETLANDS	42	0.2%	23	0.2%	14	0.0%	10	1.0%	0	0.0%	22	0.2%	242	0.7%	0	0.0%
BARREN LAND	444	1.6%	497	4.6%	125	0.2%	735	74.1%	149	6.2%	2	0.0%	23	0.1%	22	0.1%
total hectares CRSSA	27,068	100.0%	10,795	100.0%	50,526	100.0%	992	100.0%	2,383	100.0%	13,482	100.0%	36,833	100.0%	15,184	100.0%


Table A-16 DEP LULC	Table A-16 DEP LULC95 versus CRSSA LC95 level 1 cross-comparison for WMA 16 in hectares and percent.															
WMA 16	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	8,300	79.3%	604	14.8%	528	5.1%	70	16.6%	44	1.2%	35	0.2%	163	1.3%	36	0.2%
AGRICULTURE	402	3.8%	2,073	51.0%	221	2.1%	10	2.4%	0	0.0%	4	0.0%	50	0.4%	0	0.0%
FOREST	922	8.8%	608	14.9%	8,709	84.3%	67	16.0%	15	0.4%	63	0.4%	932	7.6%	14	0.1%
WATER	118	1.1%	9	0.2%	15	0.1%	39	9.3%	1,741	48.0%	810	5.1%	136	1.1%	20,377	98.5%
NATURAL_WET	533	5.1%	177	4.4%	783	7.6%	132	31.4%	1,820	50.2%	14,775	93.9%	10,765	87.9%	244	1.2%
DISTURBED_WET	61	0.6%	19	0.5%	25	0.2%	89	21.1%	6	0.2%	38	0.2%	110	0.9%	8	0.0%
AGRICULTURAL_WET	48	0.5%	469	11.5%	48	0.5%	6	1.5%	0	0.0%	3	0.0%	34	0.3%	2	0.0%
URBAN_WETLANDS	84	0.8%	108	2.7%	5	0.0%	8	1.9%	1	0.0%	4	0.0%	53	0.4%	0	0.0%
BARREN LAND	91	0.9%	122	3.0%	54	0.5%	172	40.8%	441	12.2%	43	0.3%	7	0.1%	59	0.3%
total hectares CRSSA	10,468	100.0%	4,067	100.0%	10,335	100.0%	421	100.0%	3,628	100.0%	15,731	100.0%	12,244	100.0%	20,681	100.0%



Table A-17 DEP LULC95 versus CRSSA LC95 level 1 cross-comparison for WMA 17 in hectares and percent.																
WMA 17	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	23,594	70.0%	2,549	3.7%	1,325	2.8%	200	11.6%	12	0.4%	23	0.1%	398	1.1%	54	0.1%
AGRICULTURE	4,635	13.7%	54,902	79.9%	1,450	3.0%	207	12.0%	6	0.2%	33	0.1%	676	1.8%	5	0.0%
FOREST	4,060	12.0%	5,098	7.4%	43,459	90.7%	330	19.1%	20	0.6%	83	0.3%	5,533	14.7%	45	0.1%
WATER	145	0.4%	81	0.1%	70	0.1%	128	7.4%	1,845	57.6%	2,587	9.8%	1,085	2.9%	38,098	99.1%
NATURAL_WET	812	2.4%	980	1.4%	1,282	2.7%	577	33.4%	1,319	41.1%	23,668	89.3%	29,170	77.3%	245	0.6%
DISTURBED_WET	79	0.2%	48	0.1%	28	0.1%	196	11.3%	3	0.1%	12	0.0%	451	1.2%	9	0.0%
AGRICULTURAL_WET	257	0.8%	4,962	7.2%	286	0.6%	45	2.6%	0	0.0%	18	0.1%	196	0.5%	0	0.0%
URBAN_WETLANDS	136	0.4%	66	0.1%	7	0.0%	44	2.5%	1	0.0%	68	0.3%	234	0.6%	5	0.0%
BARREN LAND	286	0.8%	584	0.9%	153	0.3%	852	49.3%	15	0.5%	49	0.2%	47	0.1%	19	0.0%
total hectares CRSSA	33,718	100.0%	68,686	100.0%	47,907	100.0%	1,727	100.0%	3,206	100.0%	26,491	100.0%	37,742	100.0%	38,462	100.0%



Table A-18 DEP LULC95 versus CRSSA LC95 level 1 cross-comparison for WMA 18 in hectares and percent.																
WMA 18	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	42,691	85.4%	2,444	11.1%	690	7.7%	371	33.5%	15	2.2%	3	0.6%	323	2.6%	52	1.4%
AGRICULTURE	1,968	3.9%	16,351	74.0%	569	6.4%	94	8.5%	2	0.3%	3	0.4%	339	2.8%	3	0.1%
FOREST	3,655	7.3%	1,960	8.9%	6,884	77.3%	170	15.4%	25	3.8%	5	0.8%	1,804	14.7%	41	1.1%
WATER	268	0.5%	48	0.2%	59	0.7%	53	4.8%	502	74.8%	154	25.7%	819	6.7%	3,569	95.6%
NATURAL_WET	968	1.9%	436	2.0%	532	6.0%	191	17.3%	117	17.4%	428	71.3%	8,102	66.1%	54	1.5%
DISTURBED_WET	219	0.4%	96	0.4%	62	0.7%	164	14.8%	10	1.6%	6	1.1%	719	5.9%	13	0.4%
AGRICULTURAL_WET	116	0.2%	726	3.3%	106	1.2%	38	3.4%	0	0.0%	1	0.1%	107	0.9%	0	0.0%
URBAN_WETLANDS	98	0.2%	31	0.1%	8	0.1%	26	2.4%	0	0.0%	-	0.0%	43	0.4%	0	0.0%
BARREN LAND	503	1.0%	707	3.2%	105	1.2%	508	45.9%	3	0.4%	1	0.2%	106	0.9%	4	0.1%
total hectares CRSSA	49,983	100.0%	22,093	100.0%	8,910	100.0%	1,107	100.0%	671	100.0%	600	100.0%	12,257	100.0%	3,733	100.0%



Table A-19 DEP LULCS	Table A-19 DEP LULC95 versus CRSSA LC95 level 1 cross-comparison for WMA 19 in hectares and percent.															
WMA 19	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	16,220	80.5%	1,299	7.9%	725	2.6%	130	16.2%	6	2.7%	-	0.0%	296	1.2%	22	2.9%
AGRICULTURE	893	4.4%	8,917	54.5%	424	1.5%	134	16.7%	0	0.0%	-	0.0%	185	0.8%	1	0.1%
FOREST	1,937	9.6%	1,492	9.1%	25,328	91.3%	161	20.2%	5	2.3%	-	0.0%	3,502	14.6%	14	1.8%
WATER	152	0.8%	199	1.2%	52	0.2%	30	3.8%	192	84.7%	-	0.0%	658	2.8%	681	88.9%
NATURAL_WET	648	3.2%	575	3.5%	662	2.4%	185	23.2%	23	10.2%	-	0.0%	18,878	79.0%	14	1.8%
DISTURBED_WET	70	0.3%	38	0.2%	14	0.1%	43	5.4%	0	0.0%	-	0.0%	82	0.3%	0	0.0%
AGRICULTURAL_WET	182	0.9%	3,818	23.3%	520	1.9%	92	11.5%	-	0.0%	-	0.0%	242	1.0%	33	4.3%
URBAN_WETLANDS	49	0.2%	19	0.1%	3	0.0%	24	3.0%	-	0.0%	-	0.0%	67	0.3%	-	0.0%
BARREN LAND	171	0.9%	335	2.0%	47	0.2%	293	36.7%	1	0.3%	-	0.0%	7	0.0%	3	0.4%
total hectares CRSSA	20,150	100.0%	16,357	100.0%	27,728	100.0%	800	100.0%	227	100.0%	-	0.0%	23,910	100.0%	766	100.0%



Table A-20 DEP LULC95 versus CRSSA LC95 level 1 cross-comparison for WMA 20 in hectares and percent.																
WMA 20	DEVELOPED	%tot	CULTIVATED	%tot	UPLAND_FOR	%tot	BARE_LAND	%tot	UNCONSOLID	%tot	ESTUARINE_	%tot	PALUSTRINE	%tot	WATER	%tot
URBAN	11,890	76.7%	1,795	6.8%	427	4.7%	204	33.6%	14	7.8%	-	0.0%	192	1.5%	12	1.6%
AGRICULTURE	1,572	10.1%	18,439	70.3%	630	7.0%	75	12.4%	1	0.3%	-	0.0%	276	2.2%	1	0.1%
FOREST	1,378	8.9%	1,396	5.3%	7,134	79.2%	91	15.0%	5	3.2%	-	0.0%	1,310	10.4%	11	1.5%
WATER	62	0.4%	41	0.2%	33	0.4%	10	1.7%	141	81.5%	-	0.0%	473	3.7%	705	95.5%
NATURAL_WET	360	2.3%	681	2.6%	595	6.6%	132	21.8%	11	6.2%	-	0.0%	10,031	79.6%	9	1.2%
DISTURBED_WET	98	0.6%	60	0.2%	17	0.2%	50	8.2%	2	0.9%	-	0.0%	122	1.0%	1	0.1%
AGRICULTURAL_WET	101	0.7%	3,752	14.3%	151	1.7%	19	3.1%	-	0.0%	-	0.0%	138	1.1%	-	0.0%
URBAN_WETLANDS	47	0.3%	49	0.2%	18	0.2%	26	4.2%	0	0.1%	-	0.0%	65	0.5%	0	0.0%
BARREN LAND	213	1.4%	294	1.1%	26	0.3%	96	15.9%	1	0.4%	-	0.0%	5	0.0%	1	0.1%
total hectares CRSSA	15,508	100.0%	26,213	100.0%	9,006	100.0%	606	100.0%	173	100.0%	-	0.0%	12,607	100.0%	738	100.0%