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RIVER BASIN AND HYDROLOGIC UNIT MAP OF FLORIDA

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INTRODUCTION

This map and accompanying table delineate the "river basins" and the "Hydrologic Units" in Florida. A river basin consists of a drainage system composed of a surface stream or a body of surface water together with all tributary surface streams and bodies of water. A river basin contributes runoff to a stream and is bounded by a drainage divide.

A Hydrologic Unit is a geographic area designated as a basis for cataloging and processing the large volumes of hydrologic data and other information that are accumulating in the National Water Data network. Retrieval and statistical analysis of the large volumes of hydrologic data in storage are handled by means of an electronic computer system.

RIVER BASINS

River basins in Florida may encompass many square miles, such as the Suwannee River basin, or less than a square mile, such as a small basin that is tributary to a tributary of the Suwannee River basin. Delineating the drainage divide of a river basin is prerequisite to evaluating the hydrology of the stream system within that basin. In particular, a determination of the drainage area of a basin is needed for an estimation of the amount of runoff available as water supply, for flood evaluation and forecasting, for design of various water control and drainage works, and for water management, regulation, and allocation. The drainage divide is commonly delineated by using topographic maps which show altitudes of the land surface. On such a map, a line is drawn along the ridge or drainage divide that separates adjacent stream valleys. If the line is begun at the mouth of a stream and is drawn along the drainage divide so as to completely encircle the stream, its tributaries, and the land drained by the system, the line is the basin boundary and the land within it is the drainage basin.

In Florida, which for the most part has little topographic relief, drainage divides are difficult to delineate and even after being delineated, frequently can be hydrologically misleading. Where the ridge between basins is indistinct, such as the one between the St. Johns River basin above the Oklawaha River and the Kissimmee River basin, and is low enough to be topped by floodwaters, it functions as a basin boundary only part of the time. During floods, water in one basin thus can move to an adjacent basin and run off through the stream system of the adjacent basin. Where the ridges between basins are particularly low, for example south of Lake Okeechobee, natural drainage divides are somewhat indeterminate.

An area effectively encircled by dikes and levees can be treated as a basin because the dikes and levees form artificial divides. In a large area where dikes and canals occur in great profusion, natural divides are not functional because runoff can be diverted across these divides to another basin with relative ease. In southern Florida natural basin and subbasin boundaries may not be permanent because construction of drainage canals and dike systems is a continuing process.

Although a basin boundary consisting of a distinct ridge indicates that surface water does not cross the boundary in either direction to add to or to subtract from the flow of the stream system, it does not follow that all the surface-water flow in the system in Florida originates in the basin. The hydraulic highs of the ground-water system in Florida, a system represented primarily by the Florida aquifer, do not coincide with the topographic highs of the surface-drainage system. Accordingly, the flow of most streams in Florida is not consistently related to the size of the drainage basin. For example, additions to normal basin flow can come from springs whose source of water is outside the drainage basin. Conversely, deficiencies in flow result from natural "non-contributing areas" in a basin and from man-made interbasin diversions. "Non-contributing areas," such as Paynes Prairie in the western part of the Oklawaha River basin, are small basins without surface outlets that lie within a larger basin. Water from such basins may flow to adjacent basins by means of the underlying aquifer system.

The areal extent of the basins which are fully enclosed—those that drain to a common point on a stream—are given in square miles under Drainage Area in the table. The drainage areas listed include the parts that are in Alabama or Georgia. The areas of poorly defined interbasin coastal areas that do not drain to a point, and intervening and partial drainage areas are given under Hydrologic Units (Accounting and Cataloging) in table 1 and include only those parts that are in Florida.

The areal extent of drainage basins is determined by using standard procedures outlined in Bulletin 4 of the Subcommittee on Hydrology, Federal Inter-Agency River Basin Committee (1951). Drainage areas are revised periodically as new standard topographic maps become available in accordance with the responsibility given to the Water Resources Division of the U. S. Geological Survey by the Subcommittee on Hydrology. Drainage areas given in the table represent summations of smaller drainage areas determined in fulfillment of this responsibility. Drainage areas contributing to streams at gaging stations are published annually by the Geological Survey in "Surface Water Records of Florida."

HYDROLOGIC UNITS

Hydrologic Units depict the basin areal planning units and form a national system for cataloging hydrologic and other information. The boundaries of Hydrologic Units coincide with those of river basins but also delineate areas such as intervening segments of drainage areas and islands, estuaries, coastal lands, and other similar areas that are not part of river basins. The Hydrologic Unit code consists of an eight digit code representing the Region, Subregion, Accounting, and Cataloging Unit. The Regions, Subregions and Accounting Units are aggregates of the Cataloging Units. The Regions and Subregions are currently (1975) used by the U. S. Water Resources Council for comprehensive planning, including the National Assessment, and as a standard geographical framework for more detailed water and related land-resources planning. The Accounting and Cataloging Units are those currently (1975) in use by the U. S. Geological Survey for managing the National Water Data Network.

The boundaries as shown on the map have been adapted from "The Catalog of Information on Water Data" (1972), "Water Resources Regions and Subregions for the National Assessment of Water and Related land Resources" by the U. S. Water Resources Council (1970), "River Basins of the United States" by the U. S. Soil Conservation Service (1963, 1970), and "River Basin Maps Showing Hydrologic Stations" by the Inter-Agency Committee on Water Resources, Subcommittee on Hydrology (1961). The boundaries also have been adopted by the Florida Department of Natural Resources and provide a cataloging system for the five Water Management Districts whose boundaries are hydrologic in nature.

The Cataloging Units shown will supplant the Cataloging Units previously used by the U. S. Geological Survey in its Catalog of Information of Water Data (1966-72) and as portrayed by Map Series 28, "Drainage Basins in Florida," of the Florida Board of Conservation. The previous U. S. Geological Survey Catalog-Indexing System was by map number and letter, such as 12B.

Florida is within the South Atlantic-Gulf Region of the U. S. Water Resources Council (03). The 8 Subregions (Nos. 7-14) in Florida are indicated by color shading on the map and are named in the table. Presently 53 cataloging units are recognized and listed in the table. Additional cataloging or sub-units may be added as needed to delineate drainage basins of small tributary streams, bays, or estuaries. Some Hydrologic Units, primarily the Cataloging Units, given in the table include poorly defined coastal areas that do not drain to a point, and intervening and partial drainage areas. The areas of the Hydrologic Units given in the table include only those in Florida.

POLITICAL SUBDIVISION CODE

The "Political Subdivision Code" provides a basis for cataloging and retrieving hydrologic and other data by political units as well as by hydrologic units.

The Political Subdivision Code has been adopted from "Counties and County equivalents of the States of the United States" presented in Federal Information Processing Standards Publication 6-2, issued by the National Bureau of Standards (1973) in which each county or county equivalent is identified by a 2-character State code and a 3-character county code. The State code for Florida is 12. The county codes are shown in the accompanying table but are not shown on the map.

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FLORIDA POLITICAL SUBDIVISION CODE

(Adapted from "Counties and county equivalents of the States of the United States")

County	Code	County	Code	County	Code
Alachua	001	Hamilton	047	Okeechobee	093
Baker	003	Hardee	049	Orange	095
Bay	005	Hendry	051	Osceola	097
Bradford	007	Hernando	053	Palm Beach	099
Brevard	009	Highlands	055	Pasco	101
Broward	011	Hillsborough	057	Pinellas	103
Calhoun	013	Holmes	059	Polk	105
Charlotte	015	Indian River	061	Putnam	107
Citrus	017	Jackson	063	St. Johns	109
Clay	019	Jefferson	065	St. Lucie	111
Collier	021	Lafayette	067	Santa Rosa	113
Columbia	023	Lake	069	Sarasota	115
Dade	025	Lee	071	Seminole	117
DeSoto	027	Leon	073	Sumter	119
Dixie	029	Levy	075	Suwannee	121
Duval	031	Liberty	077	Taylor	123
Escambia	033	Madison	079	Union	125
Flagler	035	Manatee	081	Volusia	127
Franklin	037	Marion	083	Wakulla	129
Gadsden	039	Martin	085	Walton	131
Gilchrist	041	Monroe	087	Washington	133
Glades	043	Nassau	089		
Gulf	045	Okaloosa	091		

HYDROLOGIC UNITS, NAMES, AND AREAS, IN SQUARE MILES, FOR THE SOUTH ATLANTIC—GULF REGION 03 IN FLORIDA

(Number in parenthesis following name refers to designaton on superseded Map Series 28.)

Subregion No.	Accounting Unit	Cataloging Unit	Name of Hydrologic Unit	Drainage Area[1]	Subregion[2]	Accounting Unit[2]	Cataloging Unit[2]
07			ALTAMAHA—ST. MARYS RIVERS		1,400		
	02		St. Marys—Satilla Rivers			1,400	
		04	St. Marys River Basin (09C)	1,505			965
		05	Coastal area between St. Marys and St. Johns River (09D)				435
08			ST. JOHNS RIVER		11,306		
	01		St. Johns River Basin	9,116		9,116	
		01	St. Johns River Basin above Okalawaha River (09E1)	3,753			3,753
		02	Okalawaha River Basin (09E2)	2,718			2,718
		03	St. Johns River Basin below Oklawaha River (09E3)	2,645			2,645
	02		East Florida Coastal			2,190	
		01	Coastal area between St. Johns River and Ponce de Leon Inlet (09F)				798
		02	Coastal area between Ponce de Leon Inlet and Sebastian Inlet (09F, 10A)				905
		03	Coastal area Sebastian Inlet to St. Lucie River (10A)				487
09			SOUTHERN FLORIDA		18,212		
	01		Lake Okeechobee inflow			4,086	
		01	Kissimmee River Basin (10B1)	2,933			2,933
		02	Taylor Creek Basin and inflow to Lake Okeechobee from North (10B1)				273
		03	Fisheating Creek Basin and inflow to Lake Okeechobee from Northwest (10B1)				880
	02		Lake Okeechobee			14,126	
		01	Lake Okeechobee (10B2)				696
		02	Everglades and southeastern coastal area (10B2)				8,028
		03	Florida Bay and the Florida Keys (10B2)				1,375
		04	Big Cypress Swamp and southwestern coastal area (10B2)				2,649
		05	Caloosahatchee River (10B2)				1,378
10			PEACE, WITHLACOOCHEE, HILLSBOROUGH RIVERS AND WESTERN COASTAL AREA		9,811		
	01		Peace River			3,578	
		01	Peace River Basin (10D)	2,403			2,403
		02	Myakka River Basin (10E)	550			550
		03	Charlotte Harbor and coastal area (10C)				625
	02		Tampa Bay			6,233	
		01	Coastal area between Myakka and Manatee Rivers (10F)				425
		02	Manatee River Basin (10F)	350			350
		03	Little Manatee River Basin (10F)	211			211
		04	Alafia River Basin (10F)	420			420
		05	Hillsboro River Basin (10H)	690			690
		06	Tampa Bay and Coastal areas (10F-10J)				877
		07	Coastal area from Tampa Bay to Withlacoochee River (10J)				1,201
		08	Withlacoochee River Basin (09G)	2,059			2,059
11			SUWANNEE AND AUCILLA RIVERS		7,832		
	01		Aucilla River and Coastal area			3,572	
		01	Waccasassa River and coastal area between Withlacoochee and Suwannee Rivers (09H)				924
		02	Coastal area between Suwannee and Aucilla Rivers (09K)				1,892
		03	Aucilla River Basin (11A)	952			756
	02		Suwannee River	10,030		4,260	
		01	Suwannee River Basin above Withlacoochee River excluding Alapaha River Basin (09J1)				912
		02	Alapaha River Basin (09J2)	1,840			112
		03	Withlacoochee River Basin (09J3)	2,290			275
		05	Suwannee River Basin below Withlacoochee River excluding Santa Fe River Basin (09J5)				1,577
		06	Santa Fe River Basin (09J6)	1,384			1,384
12			OCHLOCKONEE RIVER		2,324		
	00		Ochlockonee River			2,324	
		01	St. Marks and Wakulla Rivers and coastal area between Aucilla and Ochlockonee Rivers (11B)				1,047
		03	Ochlockonee River Basin (11C)	2,270			1,277
13			APALACHICOLA, CHATTAHOOCHEE, AND FLINT RIVERS	19,600	3,081		
	00		Apalachicola River			3,081	
		04	Lower Chattahoochee (11E2)				191
		11	Apalachicola River (11E7)				1,061
		12	Chipola River Basin (11E8)	1,237			1,020
		13	Coastal area between Ochlockonee and Apalachicola Rivers (11D)				557
		14	Apalachicola Bay coastal area and offshore islands (11E7)				252
14			CHOCTAWHATCHEE, YELLOW, AND ESCAMBIA RIVERS		6,491		
	01		Florida Panhandle Coastal			4,528	
		01	St. Andrew Bay, inflow and coastal area (11F)				1,351
		02	Choctawhatchee Bay, inflow and coastal area (12B)				692
		03	Yellow River Basin (12C)	1,365			838
		04	Blackwater River Basin (12D)	860			700
		05	Escambia Bay, inflow and coastal area (12B-12E4)				542
		06	Perdido River Basin (12F)	925			252
		07	Perdido Bay, inflow and coastal area (12F)				133
	02		Choctawhatchee River Basin	4,646		1,538	
		02	Pea River (12A3)				108
		03	Choctawhatchee River below Pea River (12A4)				1,430
	03		Escambia River Basin	4,233		425	
		04	Lower Conecuh River (12E1)				8
		05	Escambia River (12E4)				417

[1]Includes area (sq. miles) in adjacent states.
[2]Includes area (sq. miles) in Florida only.

Note: To convert to square kilometers multiply square miles by 2.59.

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