## Links to Project WET Activities



Project WET (Water Education for Teachers) is a nonprofit water education program for educators and young people, grades K–12. The *Project WET Curriculum and Activity Guide* was published in 1995 by The Watercourse and the Western Regional Environmental Education Council and contains more than 90 water education activities. These guides are distributed through water resources workshops that also provide local-, regional-and state-specific information to participants. In Florida, Project WET is sponsored by the St. Johns River, Southwest Florida and South Florida water management districts and the Florida Department of Environmental Protection.

The following activities from the *Project WET Curriculum and Activity Guide* are especially appropriate for the content of each chapter. For Sunshine State Standards correlations for these activities, please visit the Southwest Florida Water Management District's Web site's Information and Education Section at **WaterMatters.org**, or call 1-800-423-1476, ext. 4757, to request a copy.

Chapter 1 — The Human Framework The First Floridians Water Celebration, page 446, grades 3-8 Water Messages in Stone, page 455, grades 3-8 Drainage, Flood Control and Navigation Dust Bowls and Failed Levees, page 303, grades 9-12 Modern Water Management *Humpty Dumpty*, page 316, grades 3–8 Hot Water, page 389, grades 9-12 Perspectives, page 397, grades 6–12 Water Law Pass the Jug, page 393, grades 3–12, K–2 option Water Bill of Rights, page 403, grades 3–12 Common Water, page 232, grades 3-8, K-2 option Chapter 2 — Water: It's Magic! Introduction

> Wish Book, page 460, grades 6–12 Water Messages in Stone, page 454, grades 3–8 Aqua Bodies, page 63, grades K–5 Aqua Notes, page 66, grades K–5



Water's Structure *Hangin' Together*, page 35, grades 3–12 Adventures in Density, page 25, grades 3–12 Molecules in Motion, page 47, grades K-8 *Water Match*, page 50, grades K–5 What's the Solution? page 54, grades 3-8 H<sub>2</sub>Olympics, page 30, grades 3–8 Global Water Cycle Thirsty Plants, page 116, grades 6-8 Imagine! page 157, grades 3-8 The Incredible Journey, page 161, grades 3–8 *Just Passing Through*, page 166, grades 3–8 Old Water, page 171, grades 3–8 Poetic Precipitation, page 182, grades 3-8, K-2 option Floods and Droughts AfterMath, page 289, grades 3–8 Nature Rules! page 262, grades 6-12 Storms *The Thunderstorm*, page 196, grades K–12 Water Models, page 201, grades 3-8 Chapter 3 — Florida's Water Resources Watersheds Branching Out! page 129, grades 6-8 Capture, Store, and Release, page 133, grades 4-5 Rainy-Day Hike, page 186, grades 4–8 Color Me a Watershed, page 223, grades 9–12 **Ground Water** Get the Ground Water Picture, page 136, grades 6–12 Surface Water Stream Sense, page 191, grades K-5 Back to the Future, page 293, grades 6–12 Wetlands Life in the Fast Lane, page 79, grades 3-8 Wetland Soils in Living Color, page 212, grades 6-8 Capture, Store, and Release, page 133, grades 4-5 **Estuaries** Salt Marsh Players, page 99, grades 4–5 Chapter 4 — Water and Life: Natural Systems Ancient Origins Common Water, page 232, grades 6-8 *People of the Bog*, page 89, grades 6–12 *Energetic Water*, page 242, grades 4–8 Ecosystems The Life Box, page 76, grades K-5 Macroinvertebrate Mayhem, page 322, grades 4-8



Soils Wetland Soils in Living Color, page 212, grades 6-8 **Ecosystem Processes: Water and Fire** A House of Seasons, page 155, grades K–3 Natural Communities Salt Marsh Players, page 99, grades 4-5 Water Address, page 122, grades 4-8 Chapter 5 — Water Supply and Water Quality Water Use Common Water, page 232, grades 6-8 A Drop in the Bucket, page 238, grades 6–8 Irrigation Interpretation, page 254, grades 4-8 The Long Haul, page 260, grades K-12 Water Meter, page 271, grades 4-8 Water Works, page 274, grades 4-8 Every Drop Counts, page 307, grades 4-8 Choices and Preferences, Water Index, page 367, grades 6–12 Dilemma Derby, page 377, grades 6–12 Easy Street, page 382, grades 6-8 Water Concentration, page 407, grades 4-5 *Water Court*, page 413, grades 9–12 Water Reuse Sparkling Water, page 348, grades 6–12 Water Quality Water Actions, page 12, grades 6–12 *No Bellyachers*, page 85, grades 4–8 Poison Pump, page 93, grades 6-8 Super Sleuths, page 107, grades 6–12 Just Passing Through, page 166, grades 4–8 Sum of the Parts, page 267, grades 4-8 A-maze-ing Water, page 219, grades K-5 Where Are the Frogs? page 279, grades 6-8 The CEO, page 300, grades 9-12 A Grave Mistake, page 311, grades 6–12 The Pucker Effect, page 338, grades 6-12 Reaching Your Limits, page 344, grades 4-8 Sparkling Water, page 348, grades 6-12 Super Bowl Surge, page 353, grades 4–12 Chapter 6 — Forward to the Past

hapter 6 — Forward to the Past Restoration *Humpty Dumpty*, page 316, grades 4–8 *Pass the Jug*, page 392, grades 6–8 *Perspectives*, page 397, grades 6–12



## Glossary



Alluvial river — a type of river with a large, well-defined drainage basin that carries a high sediment load and has a large forested floodplain

Aquaculture — the cultivation of fish or shellfish

Aquifer — a layer of underground rock or sand that stores water

Aquifer storage and recovery — the process by which fresh surface water or ground water is injected deep into an aquifer and fresh water pumped to the surface at some later time from the same well

Atom — the smallest part of an element that exists in nature

**Best management practices** — methods designed to minimize harm to the environment

**Blackwater river** — a type of river that drains pine flatwoods and cypress swamps and that has dark, stained waters from decomposing plant material

**Brackish** — fresh water that is mixed with salt water

**Capillarity** — process by which water rises in tubes (capillaries) because of the attraction of water molecules to each other and to the molecules on the sides of the tubes

**Condensation** — moisture produced when warm water vapor mixes with cooler air in the atmosphere to form clouds or fog

**Conductivity** — measure of the ability of a substance to conduct an electric charge; indicates presence of minerals or salts

**Coral reefs** — structure formed over thousands of years by the limestone remains of millions of tiny animals (coral) **Degradation** (habitat) — the result of human disturbances and land-use changes commonly associated with urban and agricultural development, as well as with exotic plant invasion, to the extent that habitat size and/or quality becomes negatively impacted

**Desalination** — any of numerous processes that remove salt from seawater or brackish water

**Detention pond** — a pond constructed to slow stormwater runoff and to allow the sediment in the runoff to settle to the bottom

Discharge - flowing or issuing out

**Dissolved oxygen** — oxygen dissolved in water — comes from the air and as a by-product of photosynthesis

**Drainage** — process of removing water from the land

**Drainage basin** — land area that contributes runoff to a water body; also known as a watershed

**Drip irrigation** — most efficient form of irrigation whereby water is delivered through pipes directly to the plants' roots

**Drought** — a long period of time with little or no rain

Dry prairies — expansive native grass and shrub lands occurring on very flat terrain

Ecosystem — a community of plants and animals and their physical environment

**Ecosystem restoration** — Re-establishing and maintaining the health, sustainability and biological diversity of natural systems

Edge habitat — the area between natural community types



El Niño — unseasonably warm ocean current that occurs in the Pacific Ocean off the coast of Peru every 3 to 7 years

**Endemic** — an animal or plant restricted in its distribution to one or a few places

Entisols — soils of slight and recent development, common along rivers and floodplains

**Environmental pollution** — anything that harms or causes an imbalance in plants and animals in their natural habitat

Estuary — a place where fresh water and salt water mix

**Evaporation** — process by which water changes from a liquid to a vapor (gas)

**Evapotranspiration** — the total loss of water to the atmosphere by evaporation from land and water surface and by transpiration from plants

Fill — material taken from the land as a result of drainage

Filtration — to hold and filter runoff through seepage

**Finger-fill canals** — canals created by dredging wetlands; resulting fill is used to build dry land, usually for houses

First-magnitude spring — one that discharges water at a rate of 100 cubic feet per second or more

Flood — the overflow of water onto an area that is normally dry

Flood control — means used to control floods, may be structural (dams, dikes) or nonstructural (limiting development in floodplains)

**Gas** — a physical form of a substance as a vapor; generally invisible

**Global warming** — warming of the Earth's surface thought to result from the burning of fossil fuels

**Ground water** — water under the ground in aquifers

Habitat fragmentation — isolated patches of habitat remaining after land is cleared

Hammocks — small tree islands in the midst of marsh and swampland

Hardwood hammock — biologically diverse community growing on elevated coastal ridges and islands of ground slightly higher than surrounding wetlands

Histosols — soils that contain large amounts of organic material derived from decayed organisms

Humid subtropical — climate of most of Florida except the southern tip of the peninsula, characterized by cooler temperatures in the winter and lack of distinct wet and dry seasons

Hurricane — a storm with winds of 74 mph or greater

Hydrogenase — catalyst for recycling natural materials produced by microorganisms in mud

Hydrologic divide — area across which water does not flow

**Hydrology** — study of water's properties, movement and distribution

**Hydroperiod** — amount of time water is standing on the land's surface

**Impervious surface** — material such as asphalt and concrete that does not allow water to pass through it

**Insectivorous plants** — plants that digest insects

**Invasive exotics** — nonnative species of plants and animals that outcompete native species

**Irrigation** — the application of water to an area

**Karst** — type of terrain underlain by limestone and characterized by caves, sinkholes and disappearing streams

La Niña — opposite of El Niño; occurs when stronger than normal Pacific trade winds stir up cooler water from the ocean depths



Land acquisition — purchasing land, as for conservation

**Land restoration** — returning the land to its former integrity

Limestone — highly porous rock formed over millennia from shells and bones of sea animals

Limnologist — one who studies inland water

**Liquid** — the physical form of a substance that flows

**Mangroves** — trees that grow along Florida's southern coasts; most plentiful in salt water where few other trees are able to survive

Marsh — area of shallow water covered with grasses

Microbes — microscopic organisms such as viruses and bacteria

Minimum flows and levels — the limit at which further water withdrawals would cause significant harm to the water resource or ecology of the area

Molecule — group of atoms bonded together

Natural community — interdependent association of plants, animals and microorganisms

Navigation — traveling or transporting goods by water

**Non-point source pollution** — pollution that does not come from a single point or location

Nutrients — substances that provide sources of energy and growth for plants and animals

**pH** — a measure of the amount of hydrogen ions (H+) and hydroxide (OH-) in a solution

**Pine flatwoods** — characterized by low, flat topography; poorly drained and nutrient-poor, acidic, sandy soils; and an open woodland vegetation with a pine overstory.

**Pleistocene** — geologic epoch beginning about 2 million years ago and ending about 10,000 years ago; also known as the Ice Ages **Point source pollution** — contamination that can be traced to a single point or location

**Pollution** — contamination of water, soil or air by harmful chemicals or waste materials

**Precipitation** — condensed water vapor that falls to the Earth in the form of rain, snow, sleet or hail

**Prescribed burns** — controlled fires set by land managers to mimic natural processes

**Prior appropriation** — doctrine of water use common in the West whereby the first water user had continued rights to withdraw and use the water

**Public supply** — water delivered to homes, schools, businesses and other users by a utility company

**Reasonable and beneficial use** — doctrine of water use set forth in Florida law whereby use of water must be both reasonable and beneficial

**Recharge** — the process of water seeping into the ground and refilling the aquifer

**Reclaimed water** — water collected and often treated after use

**Retention pond** — constructed pond where storm water is held

**Reuse** — use of reclaimed water for various purposes, most commonly for landscape irrigation

**Riparian** — along the shore of a river or another water body

**Runoff** — rainfall that is not absorbed by the soil but flows to a larger body of water

**Saltwater intrusion** — the phenomenon occurring when salt water moves laterally inland from the seacoast or vertically from saltwater zones in the aquifer, mixing with and replacing fresh water

Savanna — a flat grassland of tropical or subtropical regions



**Scrub** — a type of natural community found on extremely well-drained sands along ancient shorelines and islands; dominated by sand pine or xeric oak

**Seagrass beds** — expanses of plants that flower and produce fruits and seeds in seawater

**Sheetflow** — the movement of water, like a sheet, across a surface — moving not in channels, but as a whole mass

**Sinkhole** — depression in the land surface caused when rainwater dissolves limestone near the ground surface or when the roofs of underground channels and caverns collapse

**Slough** — shallow channels of slow-moving water

**Solid** — the physical form of a substance that has three fixed dimensions

**Solvent** — a liquid that dissolves other substances

**Spring** — natural flow of water at the Earth's surface caused by pressure of ground water

**Spring-fed river** — a type of river with cool clear water issuing from springs

**Steepheads** — a unique natural community found in Florida and created when water seeps from the aquifer eroding land from the ground up

**Stormwater runoff** — rainwater that runs off land surfaces into the nearest body of water

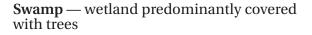
**Stormwater treatment areas** — artificial wetlands used to reduce nutrients and improve water quality

Strand — a linear swamp

**Streamflow** — the amount of water that flows past a given point at a given time; usually measured in cubic feet per second

**Surface tension** — attraction of water molecules at the surface of a liquid

**Surface water** — water found on the surface of the Earth (rivers, lakes, streams, ponds, wetlands, oceans and seas)



**Symbiotic** — characteristic of the relationship between two different kinds of organisms that are interdependent; each gains benefits from the other

**Tornado** — a violent rotating column of air capable of mass destruction

**Transpiration** — the process by which plants give off moisture through the surface of their leaves

**Tributary** — small stream or river that flows into a larger stream or river

**Tropical savanna** — type of climate found in southern Florida, characterized by distinct wet and dry seasons

Turbidity — the degree of cloudiness of water caused by suspended solids

Uplands — higher parts of the landscape

Wastewater — water that has been used and is no longer clean

Water allocation — the distribution of water among various users

Water budget — formula used by hydrologists to help determine water surpluses and deficits in an area

Water cycle — continuous cycling of water between earth and sky

Water restoration — restoring water bodies to a more natural state

Water supply — amount of water available for human and other uses

Water use caution area — an area that is experiencing, or is anticipated to experience within the next 20 years, critical water resource problems

Watershed — land area that contributes runoff to a water body; also known as a drainage basin

Wetland — area that supports plants adapted to wet soil and often to changes in water level

**Xeriscaping** — a type of landscaping designed to use water efficiently



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## Index



ACF River Basin Compact — 14 Alabama — 4, 14, 37, 38, 51, 53, 57, 66, 71 Alapaha River — 14 Alluvial rivers — 58, 59, 71, 99 Apalachee Indians — 2, 5, 62 Apalachicola-Chattahoochee-Flint River Basin (ACF) — 14, 33 Apalachicola River — 5, 14, 29, 42, 57, 58, 71, 95 Aquaculture — 59, 99 Aquifer — 11, 14, 31, 37, 38, 39, 42, 43, 48, 49, 52, (fig.)53, 54, 55, 56, 57, 62, 69, 75, 76, 79, 90, 99 Aquifer storage and recovery — 14, 76, (fig) 90, 99 Archeologists – 2 Atom — 35, 99 Bays - 1, 2, 49, 62, 82, 92 Best management practices — 83, 99 Big Cypress — 5, 6, 30, 49, 61, 66, 91 Biscayne Bay — 13, 62, 90 Blackwater river — 58, 59, 71, 99 Brackish — 62, 75, 99 Broward, Napoleon Bonaparte — 7, 23, 88 Caloosahatchee — 2, 5, 6, 21, 80, 88 Calusa — 2, 5 Canals — 1, 6, 9, 12, 19, 21, 42, 50, 53, 86, 88, 89, 91, 93 Capillarity — 36, 99 Central and Southern Florida Flood Control — 9, 28, 30, 89, 90, 93 Climate - 2, 7, 34, 35, (fig.)40, 46, 48, 69, 90 Comprehensive Everglades Restoration Plan — 90 Comprehensive Planning Act — 9, 10 Condensation — 37, 39, 99 Conductivity — 81, 82, 99 Congress - 6, 9, 14, 19, 28, 29, 30, 32, 89, 90, 93 Conservation — 10, 13, (fig.) 15, 28, 76, 80, 87 Consumptive use — 76 Consumptive use permits -12, 13Coral reefs — 65, 72, 73, 87, 99 Covalent bond — 35 Creeks -4, 5Cross Florida Barge Canal — 9, 26, 27, 30 Deficiency — (fig.)11 Degradation — 87, 99 Department of Environmental Protection - 13, 14, 32, 56, 63, 83 Department of Natural Resources - 9, 32



Desalination — 44, 75, 99 Detention pond — 83, 99 Discharge — (fig.)54, 58, 62, 71, 91, 94, 99 Dissolved oxygen — 81, 82, 99 Disston, Hamilton – 6, 21, 88 Drainage — 1, 6, 7, 13, 15, 19, 24, 36, (fig.)51, 52, 56, 73, 86, 88, 99 Drainage basin — 13, 36, 50, 58, 99 Drip irrigation — 79, 99 Drought - 10, 12, 27, 30, 34, 35, 41, 42, 48, 55, 68, 69, 76, 91, 99 Dry prairies — 65, 66, 69, 99 Dunes — 64, 69, 71, 72 Eastern Water Law — 12 Ecosystem — 13, 14, 63, 64, 65, 68, 70, 73, 86, 87, 90, 91, 95, 99 Ecosystem restoration — 13, 14, 87, 99 Edges — 87, 99 El Niño — (fig.)46, 47, 48, 100 Endemic — 63, 66, 71, 72, 100 Entisols — 66, 100 Environmental Land and Water Management Act - 9, 10 Environmental pollution — 82, 100 Escambia Bay — 30 Estuaries - 41, 49, (fig.)62, 64, 66, 71, 82, 86, 90, 91,100 Eutrophication - 31 Evaporation — 37, 38, 39, 76, 100 Evapotranspiration — 37, 38, 84, 100 Everglades — 5, 6, 7, 13, 19, 20, 23, 24, 27, 28, 30, 31, 32, 49, 59, 61, 62, 64, 65, 66, 68, 70, 82, 87, 88, 90, 91, 94 Everglades Forever Act — 13, 91 Federal Clean Water Act - 9 Fill — 59, 100 Filtration — 83, 100 Finger-fill canals — 91, 100 Fires - 41, 42, 48, 63, 65, 68, 69, 70, 88, 94, 95 First-magnitude springs — 49, 59, 100 Flood — 9, 30, 32, 34, 35, 41, 42, 44, 48, 58, 61, 68, 69, 70, 71, 78, 81, 89, 90, 91, 93, 94, 100 Flood control — 1, 6, 9, 61, 86, 91,100 Flood Control Act of 1948 - 9 Flood protection — 10, 14, 90, 95 Floodplains — 14, 41, 58, 59, 61, 62, 66, 68, 71, 93, 95 Floodwaters — 1, 41, 53, 62, 91 Florida Bay — 13, 65, 87, 88 Florida Forever Act - 14, 33 Florida Water law — 12 Florida Water Resources Act — 9 Flow — (fig.)88 Four River Basins, Florida Project — 9, 29, 30, 91 Fresh water — 2, 15, 34, 36, 37, 39, 42, 43, 44, 49, 55, 57, 59, 62, 72, 74, 76, (fig.)79, (fig.)80, 82, 90,91 Freshwater marshes — 61, 62, 65, 66, 68, 70, 93



Gas — 35, 36, 37, 100 Georgia - 37, 53, 54, 57, 61, 66 Glaciers - 2, 34, 36, 37, 47 Global warming — (fig.)47, 48, 100 Gold Rush — 11 Ground water – 2, 12, 13, 14, 31, 37, 38, 39, 49, 52, 53, 54, 55, 56, 57, 59, 60, 62, 65, 66, 68, 71, 74, 75, 76, 78, 79, 80, 81, 83, 84, 90, 94, 100 Gulf - 2, 14, 21, 37, 38, 39, 44, 46, 47, 57, 59, 62, 72, 88, 90 Habitat fragmentation - 87, 95, 100 Hammocks - 5, 49, 65, 68, 69, 70, 88, 100 Hardwood hammock — 65, 70, 88, 100 Herbert Hoover Dike - 9, 27 Histosols — 68, 100 Humid subtropical — 40, 100 Hurricane - 7, 9, 22, 26, 28, 29, 32, 34, 42, 43, 44, (fig.)45, 47, 48, 88, 89, 91, 93, 100 Hydric hammocks — 49 Hydrogenase — 64, 100 Hydrologic cycle — (fig.)39 Hydrologic divide — 37, (fig.)39, 100 Hydrology — 60, 63, 65, 100 Hydroperiod — 68, 100 Impervious surface — 82, 83, 84, 100 Indian River Lagoon — 13, 14, 82, 93, 94 Insectivorous plants - 71, 100 Intracoastal Waterway — 9, 24, 26 Invasive exotics — 71, 86, 90, 100 Irrigation — 44, 59, 74, 76, 79, 80, 81, 100 Karst — 49, 50, 52, 59, 100 Keys — 1, 40, 41, 70, 73 Kissimmee Canal — 9, 29 Kissimmee River — 6, 9, 13, 21, 30, 31, 32, 57, 65, 69, 87, 88, 90 La Nina — 46, 47, 48, 100 Lake Apopka — 13, 14, 28, 32, 65, 80, 82 Lake Lanier — 14 Lake Okeechobee — 2, 6, 7, 9, 13, 21, 26, 27, 31, 42, 47, 52, 54, 57, 59, 65, 68, 69, 80, 87, 88, 89, 90, 91 Lakes — 1, 2, 3, 9, 12, 14, 35, 37, 48, 49, 56, 59, 64, 65, 66, 68, 71, 81, 82, 86, 93 Land acquisition — 13, 14, 33, 86, 87, 92, 101 Land Conservation Act — 9, 10 Land restoration — 87, 101 Legislature — 9, 10, 13, 14, 28, 31, 32, 33, 91 Lightning — 41, 44, 68, 70, 94 Limestone — 1, 49, 50, 53, 55, 59, 64, 65, 68, 70, 71, 73, 84, 101 Limnologist — 64, 101 Liquid — 35, 36, 37, 101 Longleaf pine — 66, 68, 86, 94, 95 Lower St. Johns River — 13 Lumber — 6, 20, 23 Mangrove — 62, 65, 72, 101 Mangrove swamps — 49, 60, 61, 88



Maritime forests — 71, 72 Marsh — 14, 49, 52, 53, 59, 60, 61, 62, 64, 65, 66, 67, 68, 69, 70, 88, 93, 94, 101 Miccosukee Tribe — 6 Microbes — 65, 101 Minimum flows and levels — 12, 13, 33, 101 Molecule — 35, 36, 37, 101 Native Americans - 2, 18, 57, 62 Natural community - 41, 63, 65, (fig.)67, 68, 73, 88, 101 Natural systems - 2, 10, 12, 14, 32, 41, 74, 76, 81, 82, 86, 90 Navigation — 1, (fig.)7, 9, 88, 101 Non-point source pollution — 74, 83, 101 Northwest Florida Water Management District — (fig.)10, 14, 56, 75, 80, 95 Nutrients - 41, 50, 56, 61, 62, 65, 71, 74, 81, 91, 93, 95, 101 Ocklawaha River — 9, 20, 21, 59, 68 Okeechobee Flood Control District - 9 Okeechobee Waterway - 9 Okefenokee Swamp — 14, 59, 61 Paleoindians — 2, (fig.)3 Peace River — 6, 9, 28, 29, 59, 83 Percolation — (fig.)39 pH-81, 82, 101 Phosphate - 6, 22, 74 Pine flatwoods — 58, 68, 69, 88, 101 Pleistocene — 63, 65, 101 Point source pollution — 74, 83, 101 Polar ice caps — 34, 37 Pollution (polluted) — 20, 28, 36, 49, 56, 64, 71, 74, 80, 81, 82, 83, 85, 92, 93, 95, 101 Population — (fig.)16, (fig.)17, 39, 41, 44, 47, 73, 74, 78, 79, 85, 90, 91, 93, 94 Prairie - 2, 41, 56, 61, 65, 66, 68, 69 Precipitation — 37, (fig.) 39, 101 Prescribed burns — 68, 101 Preservation - 2, 59, 87 Preservation 2000 — 13, 14, 32 Prior appropriation — 11, 12, 101 Public supply — 76, 78, 80, 101 Rain (rainfall, rainwater, rainy) — 1, 14, 34, 37, 38, 40, (fig.)41, (fig.)42, (fig.)43, 44, 46, 47, 48, 49, 50, 52, 53, 54, 55, 57, 59, 65, 66, 68, 69, 70, 74, 76, 82, 84, 90 Rainfall — see rain Reasonable and beneficial use - 12, 13, 101 Recharge - 14, 42, 43, (fig.)54, 55, 57, 66, 68, 81, 94, 101 Reclaimed water — 75, 80, 81, 101 Retention pond — 83, 101 Reuse — 80, 81, 89, 101 Riparian — 12, 101 Rivers – 1, 2, 3, 4, 5, 6, 7, 9, 12, 35, 37, 38, 39, 42, 49, 50, 52, 56, 57, 58, 59, 62, 65, 68, 70, 71, 76, 81, 82, 86, 88, 93, 94, 95 Rodman Dam and Reservoir — 9 Runoff — (fig.)39, 50, 52, 56, 59, 61, 66, 74, 81, 82, 83, (fig.)84, 92, 93, 101 Salt water — 27, 34, 37, 42, 43, 59, 62, 70, 72



Saltwater intrusion — 14, 25, 42, 62, 101 Savanna — 2, 40, 69, 101 Save Our Rivers — 13, 31 Scrub — 41, 64, 65, (fig.)67, 68, 69, 102 Sea - 1, 2, 34, 35, 37, 49, 50, 52, 59, 62, 91 Sea level — 1, 2, 31, 48, 63, 64, 65, 75 Seagrass beds — 65, 72, 91, (fig.)92, 102 Seminole Indians — 2, 3, 4, 5, 6, 88 Seminole Tribe of Florida — 6 Sheetflow — 52, 53, 89, 94, 102 Sinkholes — 1, 30, 42, 49, 55, 56, 59, 65, 102 Slough — 70, 102 Solid — 35, 81, 102 Solvent — 36, 102 South Florida Water Management District — (fig.)10, 75, 80, 87 Southern Water Use Caution Area — 32 Southwest Florida Water Management District — (fig.)10, 14, 29, 32, 42, 55, 75, 80, 91, 92 Spanish — 2, 5, 18, 56, 57 Spring-fed rivers — 58, 59, 71, 102 Springs — 1, 2, 7, 20, 34, 49, 52, 56, 57, 59, 65, 75, 102 Steepheads — 66, 102 St. Johns River – 2, 5, 7, 21, 57, 62, 66, 80, 83, 93 St. Johns River Water Management District — (fig.)10, 13, 32, 42, 75, 80, 93 Stormwater runoff — 37, 59, 82, 83, 91, 102 Stormwater treatment areas — 91, 102 Strand — 61, 70, 102 Streamflow — 58, 102 Streams — 4, 5, 9, 11, 12, 38, 49, 50, 52, 56, 58, 66, 71 Surface tension — 36, 102 Surface water — 12, 13, 14, 37, 38, 49, 50, 52, 55, 60, 74, 76, 78, 79, 80, 83, 84, 85, 89, 90, 102 Surface Water Improvement and Management Act — 13, 32 Surplus — (fig.)11 Suwannee Basin Interagency Alliance — 14 Suwannee River — 14, 18, 29, 30, 31, 57, 59, 62, 66, 71, 95 Suwannee River Basin — 14, 95 Suwannee River Water Management District — (fig.)10, 14, 75, 80 Swamp — 5, 19, 20, 52, 53, 59, 60, 61, 64, 65, 66, 69, 70, 71, 102 Symbiotic — 102 Tampa Bay — 9, 13, 14, 29, 32, 62, 82, 91, 92 Tates Hell Swamp — 14, 59, 61 Temperature — 35, 46, 48, 72, 81, 82 Thunderstorms — 34, 40, 41, 42, 43, 44, 45, 68 Time line — 18-33 Timucuan — 2, 5, 18 Tornado — 34,44, 45, 102 Tourists — 6, 15, 21, 27, 57 Transpiration — 37, 38, 39, 76, 102 Treaty of Paynes Landing - 5 Tributaries — 50, 102 Tropical savanna — 40, 102



Turbidity — 81, 102 Uplands — 65, 66, 72, 86, 88, 102 Upper St. Johns River Basin — 31, 93, 94 U.S. Army Corps of Engineers - 9, 87, 91 U.S. Geological Survey — 76 Wastes — 1, 82, 83 Wastewater - 33, 74, 80, 81, 83, 89, 91, 93, 102 Water allocation — 10, 14, 102 Water budget — (fig.)44, 102 Water control — (fig.)8, 9, 53, 94 Water cycle — 34, 36, 37, (fig.)38, 102 Water law -11Water management — 1, 10, 13 Water management districts - 9, (fig.)10, 12, 13, 14, 33, 74, 75, 76, 80 Water quality - 2, 10, 13, 14, 42, 56, 61, 74, 81, 82, 83, (fig.) 85, 90, 91, 93, 94, 95 Water Quality Assurance Act — 13, 31 Water Resources Act of 1972 — 1, 10, 14 Water restoration — 102 Water supply - 2, 10, 14, 33, 36, 43, 74, 76, 90, 102 Water use — (fig.)78, (fig.)79 Water use (resource) caution areas — 32, (fig.)75, 81, 102 Water withdrawals — (fig.)77, (fig.)80 Watershed — 13, 14, 50, (fig.) 52, 57, 58, 83, 90, 91, 95, 102 Western Water Law — 11, 12 Wetlands — 1, 12, 19, 31, 37, 49, 59, 60, (fig.)61, 62, 64, 66, 68, 71, 81, 86, 91, 93, 102 Withlacoochee River — 9, 14, 59 World's water — (fig.)36 Xeriscape — 76, 80, 102

