UNIVERSITY OF GEORGIA
School of Law
*Land Conservation Clinic*

UNIVERSITY OF GEORGIA
River Basin Center

# LOCAL WETLANDS PROTECTION PRIMER

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LAND CONSERVATION CLINIC
UNIVERSITY OF GEORGIA SCHOOL OF LAW

AND THE

RIVER BASIN CENTER
UNIVERSITY OF GEORGIA SCHOOL OF ECOLOGY

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## Introduction

This Primer is designed to provide an overview of the need for wetland protection and tools that can be (and have been) used by local governments. This Primer is based off of the 2013 EPD guidebook *Local Wetlands Programs: A Guide for Georgia Communities*, developed by Katie Hill (Sheehan) with funding from EPA. Readers should consult *Local Wetlands Programs: A Guide for Georgia Communities* for a broader and deeper exploration of federal, state, and local programs affecting wetlands. This Primer's focus is on local protection of wetlands themselves and the pivotal role local governments can play. The goal of the Primer is to support local communities' efforts to protect their drinking water, provide critical wildlife habitat, and create attractive and resilient communities.

*DISCLAIMER: This Primer was produced with the assistance of students of the University of Georgia School of Law Land Conservation Clinic. The Primer is not intended to be, and does not constitute, legal advice. Laws and how courts interpret them can change rapidly and vary by jurisdiction. Readers should consult an attorney for specific situations. Furthermore, the contents of this primer do not necessarily represent the views of the University of Georgia, the University of Georgia Law School, and no official endorsement of the primer or its findings should be inferred.*
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Why read the Primer: Wetlands are important community assets and provide valuable environmental and economic benefits including flood prevention, water quality improvements, protection from erosion, support for fisheries and biodiversity, and opportunities for recreation activities.[1] While undisturbed wetlands provide numerous benefits to communities, communities are losing wetlands. Although advances in wetlands policy and laws have slowed the rate of wetlands loss in the United States, the nation is still experiencing a downward trend in both wetland acreage and condition. A 2021 analysis on the state of wetlands in the United States found that only forty-five percent of wetlands are in good condition.[2] Many local communities rely on the Federal Clean Water Act to protect these important resources. However, the definition of protected wetlands (also called a "jurisdictional wetland") was recently altered by the United States Supreme Court, reducing the number of wetlands that qualify for federal protection. States and local governments, however, retain the power to protect wetlands. This primer will explore the role of wetlands, the many public benefits they provide, and includes a variety of wetland protection tools, both voluntary and regulatory.

## 1. What Is a Wetland?

Wetlands are found along coastlines, adjacent to surface waters, in depressions that collect precipitation, in areas where groundwater is close to the surface of the land, and on sites where people have created them. Wetlands can be difficult to define, identify, and classify given the variety of types, seasonal variability, and human impact. The key determinants are hydric soils, hydrophytic vegetation, and soil saturation. Wetlands are defined by Georgia Department of Natural Resources as "those areas that are inundated or saturated by surface or groundwater at a

frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."[3] The National Wetlands Inventory (NWI) maps produced by the United States Fish and Wildlife Service (USFWS) provide approximate wetland locations, although maps may omit some wetlands and may not accurately represent wetland boundaries.

It is estimated that Georgia has between 4.9 and 7.7 million acres of wetlands.[4] Most of Georgia's wetlands are found in the coastal plain, but they are also found in the mountainous regions of the state and in the Piedmont region along stream and river systems.

Figure 2.
**How do I know if I am in a wetland?**

| Hydrology | Hydrophytic Vegetation | Hydric Soils |
|---|---|---|
| • Presence of standing water or soggy soils.<br>• Dark-colored water marks on tree trunks.<br>• Leaves on the ground are gray or darkly stained. | • Buttressing of tree trunks, where the base of the tree is enlarged to provide support.<br>• Knees or other adventitious growth that allows support and/or ability to access oxygen from the surface.<br>• An abrupt change in plant communities, often paired with a visual drop in elevation.<br>• Presence of hydrophytic vegetation. | • Soil colors may be gray, greenish, or blue-gray.<br>• Surface soils may be dark brown or black from decayed organic matter.<br>• Soils will "ribbon" when squeezed in your hand.<br>• Soils may be saturated with water, but may not if it is the dry season. |

**NOTE:** Water does not have to be present at all times for an area to be considered a wetland. In fact, many wetlands look like dry forests or meadows during the dry season – which is why it is important to look at plants and soils.

Source: Georgia Adopt-A-Stream Wetland Monitoring Manual 8-9.

## 2. Why Protect Wetlands?

The following is a partial list of the many important role wetlands play:

*Flood Control*: Wetlands act as "natural sponges," controlling floods by capturing and retaining stormwater, reducing flood water heights and speed. A one-acre wetland can store as much as 1.5 million gallons of water.[5] A healthy wetland system can provide the kind of flood control that

otherwise requires expensive man-made infrastructure. Coastal wetlands reduce storm surges and wave energy.

*Water Quality Improvement*: Wetlands maintain and improve water quality by absorbing and filtering pollutants, nutrients, and sediments from upland runoff. This service is very costly to replicate artificially: for example, the cost associated with the loss of an average hectare of wetland between 2001-2016 was $1,840 annually, and over $8,000 in developed areas.[6] Maintaining healthy wetlands systems is an effective way for local governments to avoid the costs associated with degradation in water quality.

*Groundwater Recharge*: Groundwater is used for twenty-two percent of the public water supply for all Georgia residents, is extensively utilized for agricultural irrigation, and is the main supply of drinking water for rural residents of Georgia.[7] Wetlands can retain water that would otherwise run off the land; moreover, water quality improves as it slowly percolates through the wetland soil. Wetlands with groundwater connections therefore provide a dual service of both replenishing and cleaning groundwater resources.

*Erosion Prevention*: Wetlands along edges of rivers, streams, reservoirs, and estuaries stabilize shorelines and prevent erosion. Increased water turbidity, a consequence of erosion, increases municipal water treatment costs. Soil erosion also causes sedimentation of waterways, for which millions of dollars are spent annually.[8]

*Fisheries Support*: The United States Fish and Wildlife Service (USFWS) stresses that "the importance of both estuarine and freshwater wetlands to fish populations, and sport and commercial fishing, cannot be overemphasized."[9] Wetlands are an essential component of the life cycle of seventy-five percent of the fish and shellfish harvested for the United States' commercial market,[10] and in the Southeast, "nearly all the commercial catch and over half of the recreational harvest are fish and shellfish that depend on the estuary-coastal wetland system."[11] In 2022, the economic impact of Georgia's seafood industry was over $826 million.[12]

*Wildlife Habitat*: Fish, birds, amphibians, reptiles, and mammals utilize wetland habitat for food, shelter, breeding and migration. Greater than one-third of the United States' endangered and threatened species spend their entire lives in wetlands and almost half use wetlands during some part of their life cycle.

*Recreation and Aesthetics*: Wetlands provide important environments for outdoor recreation, which provided an annual United States economic impact of $639.5 billion dollars in 2023.[13] In Georgia, outdoor recreation added $15.7 billion in 2022.[14] Wetlands also add beauty to a community and may increase the value of adjacent properties, as indicated by the premium commanded by marsh-front properties in coastal Georgia.

*Climate Resiliency*: Wetland plants and soils are carbon sinks, storing carbon that would otherwise be released as carbon dioxide to the atmosphere. Intact wetlands and floodplains increase a community's resilience to extreme weather variability, helping to reduce flooding and increasing drought resiliency. Wetlands capture and store water, which reduces flooding risk and, as they

release water slowly into aquifers and streams, they also may make more water available during dry periods.[15]

### 3. Wetland Protection Under the Federal Clean Water Act

The Clean Water Act (CWA), adopted in 1972, is the primary water quality protection law in the United States.[16] The purpose of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" to support propagation of fish, shellfish, and wildlife and recreation in and on the water.[17] Several CWA sections work, either directly or indirectly, to protect wetlands. It is important to note that this federal law establishes a floor, not a ceiling, on wetland protections—state and local governments are free to establish wetlands protection regulations that exceed the minimum requirements of federal protections.

**§ 404**. § 404 of the CWA[18] is the primary wetland protection tool in the United States. Under § 404, a United States Army Corps of Engineers (USACE) permit is required for most impacts to jurisdictional wetlands.[19] In Georgia, these permits are issued by the USACE Savannah District. In general, activities that directly impact a jurisdictional wetland require a permit unless the activity is specifically exempt, such as the exempt activities of ongoing agriculture and forestry.[20]

There are two major types of § 404 permits: general and individual.[21] General permits are for activities the USACE deems as having minimal impacts on water quality and the aquatic environment.[22] Individual permits are required for potentially significant impacts.[23] The CWA does not always prohibit impacts to wetlands.[24] Rather it requires projects to avoid, minimize, and compensate for adverse impacts to wetlands.[25] The basic idea behind compensatory mitigation is that § 404 permittees should compensate for authorized impacts through restoration, creation, enhancement, or preservation of other similar wetlands in the same watershed.[26]

**§ 401**. The CWA requires states to develop water quality standards for all surface waters.[27] In Georgia, the Georgia Environmental Protection Division (GAEPD) is charged with adopting and enforcing these standards.[28] Under CWA § 401, federal permits or licenses for activities impacting jurisdictional waters cannot be issued until the state or tribe certifies (with or without additional permit conditions) that the discharge will not violate its water quality standards; denies certification because the discharge will violate its standards; or waives its right to certification. If the state or tribe denies § 401 certification, the federal agency cannot issue the permit or license unless it secures special approval from Congress.[29]

§ 401 certification only occurs when a federal permit or federal funding is needed for the project. This is important for wetlands protection in Georgia, as the state utilizes § 401 certification as its primary method for providing input into § 404 permitting decisions. Wetlands no longer covered by the § 404 program due to recent United States Supreme Court decisions (see below) do not receive state protection under the § 401 water quality certification program.

| **Wetlands and the CWA:<br>The Impact of the *Sackett* Decision** |
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| The CWA applies to only certain water bodies as defined in the statute and by courts. The CWA regulates "navigable water", which is further defined as Waters of the United States (WOTUS). In a 2023 case, *EPA v. Sackett*, the United States Supreme Court ruled that WOTUS includes only 1) traditional navigable waters, the territorial seas, and interstate waters; 2) tributaries to traditional navigable waters, the territorial seas, and interstate waters that are "relatively permanent, standing or continuously flowing bodies of waters"; and 3) wetlands that have a continuous surface connection to waters in either 1) or 2). Thus, the CWA covers only those "wetlands with a continuous surface water connection to bodies that are WOTUS in their own right, and are "indistinguishable" from those waters". Note that this definition excludes wetlands that are separated from WOTUS by man-made barriers and natural features like berms and dunes, as well as other wetlands that are connected hydrologically to streams. |

## 4. State Laws Affecting Wetlands

While the Georgia state government has its own laws that regulate and manage wetlands, these do not provide more protection than federal regulation. Georgia's wetland protection regime does not require a broader definition of jurisdictional wetlands than that contained in the CWA, and all relevant wetland regulation on the state level in Georgia refers back to jurisdictional wetlands under § 404. This means that currently, wetland protection under Georgia's state regulations is tied to those wetlands with a continuous surface connection to Waters of the United States. However, Georgia does have some legislation that has been utilized by counties for the purposes of wetland protection, including the following:

<u>Georgia Erosion and Sedimentation Act</u>

The Georgia Erosion and Sedimentation Act (GESA) requires a twenty-five foot buffer prohibiting all construction and land-disturbing activities along the banks of all "state waters," which includes almost all surface waters.[30] The buffer zone is measured horizontally from the coastal marshland-upland interface in accordance with the Coastal Marshlands Protection Act (CMPA). However, this only includes waters of the state with "vegetation wrested from the channel by normal stream flow", meaning the vegetation has been wrested from the bank by normal streamflow or wave action.[31] Thus, wetlands are not protected by the buffer requirement, and only those wetlands that lie within the twenty-five foot buffer to qualified waters of the state will be protected.[32] Although GESA allows local governments to be certified as Local Issuing Authorities for permitting and enforcement, only the GAEPD Director may issue variances for intrusions into state mandated buffers, and such variances can only be issued under specific conditions.[33] However, Local Issuing Authorities may establish stricter requirements than what is required in the GESA, including larger buffers.[34]

Georgia Coastal Marshlands Protection Act

The Coastal Marshlands Protection Act (CMPA), adopted in 1970, establishes state regulation of coastal marshlands because the services they provide make them "essential to maintain the health, safety, and welfare of all citizens of the state."[35] The CMPA requires permits for regulated activities in "tidally influenced waters, marshes, and marshlands lying within a tide-elevation range from 5.6 feet above mean tide level and below" (the estuarine area of the state).[36] Regulated activities include removing, filling, dredging, draining, or otherwise altering these areas or constructing or locating any structure on or over them. Upland activities are, to a limited extent, also regulated under the CMPA. The Coastal Marshlands Protection Committee (CMPC) issues CMPA permits, though the Georgia Department of Natural Resources (GADNR) Commissioner has authority to issue permits for minor alterations.

Georgia Environmental Planning Criteria

The Georgia Planning Act (O.C.G.A. 45-12-200) focuses on land use planning at the local level and includes minimum standards and procedures known as "Environmental Planning Criteria" or "Part Five Criteria" that deal with particular natural resources, including wetlands.[37] Local governments must comply with these minimum standards to remain eligible for certain state grants, loans, and permits. They must identify and map wetlands in their comprehensive plan, address acceptable and unacceptable uses, and consider wetlands impacts when making land use decisions. State rules provide that acceptable uses may include: forestry, wildlife and fisheries management, wastewater treatment, recreation, water quality treatment, and other uses permitted under § 404 of the CWA. Unacceptable uses may include: receiving areas to toxic or hazardous waste, hazardous or sanitary waste landfills, and other uses unapproved by local governments.[38] Local governments are not constrained to the Act's possible acceptable and unacceptable uses. They may develop their own lists to reflect their community's unique situation.

## 5. Local Government Action

Local governments have the authority to establish laws and procedures to protect all wetlands, including wetlands that are not covered by the CWA, through their inherent police powers to safeguard health, safety, and welfare of communities. Many local governments have done just that, using carefully calibrated approaches involving voluntary and regulatory tools. The approaches vary in terms of breadth, complexity, and limits to wetland impact. A number of these approaches are introduced below.

### Voluntary Approaches

A number of voluntary approaches to protecting and restoring wetlands exist.

**Purchase of wetlands or conservation easement of wetlands:** Local governments can purchase wetlands outright, or purchase conservation easements that restrict modification of wetlands. Local government ownership can advance a community's greenspace plan, allow for recreational and educational amenities, or even create mitigation banks. Local governments can acquire wetlands

in a number of ways, including purchasing fee simple title to wetlands, purchasing development rights through a Purchase of Development Rights (PDR) program or Transferable Development Rights (TDR) program, or by purchasing a conservation easement that protects the wetlands. Wetlands are often less expensive than other types of land because they are considered "undevelopable." Georgia communities cannot acquire marshlands; title to these lands is held by the state for the public trust.

There are many options for funding acquisition programs. General revenues can be used to purchase these ecosystems if ownership will promote the health, safety, or general welfare of the public. Another option is to utilize Special Purpose Local Option Sales Tax (SPLOST) funds. Local governments can also establish a small property tax levy to support a dedicated fund for wetland acquisition. Many communities administer a stormwater utility that collects fees typically based on impervious surface area. These fees are used to among other goals, reduce pollution and maintain stormwater infrastructure. Given wetlands' pollution reduction and flood reduction roles an allowable use of these fees might include wetland protection and restoration. In addition, appropriately assessed development impact fees, as part of an authorized development impact fee program,[39] might be used to purchase recreational park land that also contains wetlands.[40] State and federal grants and loans may also be available. The Federal Emergency Management Agency (FEMA) administers a number of programs that provide funding for property acquisition in flood prone areas in order to reduce long term flood risk to structures and people and create more resilient communities.[41] These programs include the Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance, Pre-Disaster Mitigation, and a Safeguarding Tomorrow Revolving Loan Fund program. The Natural Resource Conservation Service's Emergency Watershed Protection Program has funds for floodplain buyouts in areas affected by a natural disaster that impairs the watershed. Each program has its own requirements and application process. Wetlands protection can be a co-benefit when the local government uses various state and federal grant programs to acquire land to accomplish other goals. For example, federal Land and Water Conservation Fund grants are used to, among other things, acquire land for recreational purpose. Some land purchased for this goal may include wetlands.

| Program Snapshots |
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| Spokane County, WA: The Conservation Futures Program is funded through property taxes. Funds are used solely for acquisition of property and development rights on lands that will be used for public use and enjoyment, including wetlands.[42] |
| Seminole County, FL: Local and state acquisition programs have been used to place about forty-three percent of Seminole County's wetlands in public ownership. Uplands that provide benefits to wetlands are also purchased or conserved through this program.[43] |
| Tulsa, OK: Tulsa's stormwater utility fee is used to purchase frequently flooded properties as part of a flood control plan.[44] |

**TDR program:** Transferable Development Rights (TDR) programs can protect wetlands by transferring development rights on wetland properties to areas suitable for denser development.

Georgia law sets out the requirements for establishing voluntary TDR programs.[45] TDR programs have four basic components: sending areas (areas to be protected), developable receiving areas, transferable credits, and a procedure for carrying out the transaction. In a TDR program, a landowner is able to transfer development rights from a parcel with historical or ecologically important features to a different parcel where higher density use is more appropriate. The sending area is then protected by a conservation easement in order to make this transfer permanent. Establishing a program that protects wetlands can be accomplished through thoughtful selection of sending areas that include wetlands or floodplains, and receiving areas where development should be encouraged. The following recommendations should help local governments develop a TDR program that protects wetlands:

- Locate receiving areas upland and away from wetland or floodplain sending areas to avoid indirect impacts to wetlands from dense development.
- Include buffers and areas directly adjacent to wetlands in the sending area.
- Carefully allocate credits available from jurisdictional (which often can still be impacted under the § 404 permitting system) and non-jurisdictional wetlands.

| Program Snapshots |
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| Dade County, FL: A TDR program is used to help implement the East Everglades Ordinance, which is designed to protect 242 square miles of wetlands in order to recharge the groundwater aquifer, maintain surface water flows to Everglades National Park, create flood storage capacity, maintain water quality and protect environmental resources, including thirty endangered or threatened species.[46] |
| Town of Southampton, NY: One of the TDR program's explicit goals is that "wetlands, as defined in the Town Code, and their immediate upland environments will be retained for their ecological benefits and held in permanent open space use."[47] |
| Pine Barrens, NJ – The Pine Barrens TDR program is a multi-jurisdictional program designed to protect the pine barrens, a rare habitat. Sending area credits are not reduced if the property contains sensitive features such as wetlands.[48] |
| City of Madison, GA – The goals of Madison's TDR program include protecting natural areas/habitat, riparian areas, greenspace buffers, farms, trails, gateways, recreation, and historic landmarks.[49] |

**Density bonuses:** Local governments can encourage natural resource protection by allowing development densities higher than those specified by local ordinance if the developer meets certain natural resource protection criteria. Unlike TDR programs, density bonus schemes usually provide for denser development and natural resource protection on the same site. Communities could, however, grant additional density for activities performed off-site. Density bonus requirements protecting wetlands include:

- Increasing buffers and/or setbacks from wetlands;
- Permanently protecting wetlands (via conservation easement or other device);
- Restoring wetlands;
- Permanently protecting wildlife corridors between wetlands and natural areas; and
- Protecting wetlands from indirect impacts with low impact development techniques.

Density bonuses can be offered when developers meet explicit criteria, on a case by case basis, or through a variance procedure. To encourage protection of wetlands on development sites, a local government can establish low underlying densities and offer attractive density bonuses for plans that include wetlands protection. Low underlying density may be justified because higher density development will degrade wetlands unless certain development practices occur. At least one state court has found that such a scheme does not constitute a taking if the developer can still make reasonable use of the land without the density bonus.[50] As with TDR programs, the criteria for awarding density bonuses for protection of jurisdictional wetlands should be carefully evaluated in the planning process.

| Program Snapshots |
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| Scott County, MN: Developers can obtain a density bonus through preservation of natural resources under the county's Public Values Incentive Program. The 2030 Comprehensive Plan identifies wetland restoration as a public value that could result in a density bonus.[51] |
| McHenry County, IL: Offers potential density bonus of up to five percent for wetland restoration and/or enhancement that is "substantially in excess" of county and USACE requirements.[52] |

**Tax incentives:** Local governments can encourage wetland protection and restoration by providing property tax abatement for the protection, restoration and non-disturbance of wetlands. Another tax incentive option is to ensure wetlands are properly valued for ad valorem tax purposes. Although it may be possible to develop some wetlands by obtaining necessary permits or because the wetlands are not covered by the CWA, taxing them as fully developable lands may act as a disincentive for conservation. Indeed, the model ordinance for Georgia's Environmental Planning Criteria for Wetlands (Appendix D) contains a provision requiring assessors to take wetlands development potential into consideration when valuing land. Local law could reward the protection and or restoration of wetlands by valuing the land as "preserved" or non-developable. In addition, local governments can inform landowners about conservation covenants under the Georgia Conservation Use Valuation Act (CUVA).[53] Under CUVA, landowners can covenant with their local tax board to keep their property in its natural state for ten years, and in return receive significant local property tax benefits for that time period. Conservation easement properties may also qualify for CUVA.

**Donated conservation easements:** Local governments can inform property owners about the significant federal and state tax incentives that exist to encourage the permanent protection of important natural resources (as well as farms and historical features) with conservation easements.

Donors of qualifying conservation easements may obtain a federal charitable tax deduction. In addition, Georgia provides a transferrable state tax credit to individuals and corporations donating land or qualifying conservation easements. The conservation easement must permanently protect the land and be held by either a land trust or a government agency. Conservation easements may cover all of a parcel or a portion of it. These agreements are binding on all future landowners and give landowners the ability to ensure their land is forever conserved.

| Program Snapshots |
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| Columbia County, GA: Columbia County provides conservation easement information on its website, including public and private benefits and information on its greenspace plan.[54] |
| Alachua County, FL: Alachua County provides a "Conservation Options" primer on its website. It includes a description of why landowners may want to conserve their property, a flow chart that guides people through available options, and a description of these options.[55] |

**Federal Natural Resource Conservation Service (NRCS) programs:** The NRCS administers programs that provides technical assistance for conservation efforts and funding for qualifying voluntary protection efforts. These include the Agricultural Conservation Easement Program (includes Agricultural Land Easements and Wetland Reserve Easements), Wetland Reserve Enhancement Partnership, Regional Conservation and Partnership Program (funds partnerships to enhance soil, water, and wildlife conservation that is multi state or watershed scale), and The Healthy Forest Reserve Program. In addition, the Emergency Watershed Protection Program which offers assistance to help communities with imminent threats caused by natural disasters that impair watershed function, funds floodplain easements for qualifying projects to restore and enhance floodplain functions and values.

**Wetlands education programs:** In addition to informing landowners of the various programs described above, local governments may wish to establish education programs that create a culture of voluntary conservation, including watershed education, signage, volunteer monitoring programs, and wetland education centers.

## Regulation:

Local governments in Georgia have the authority to regulate impacts to freshwater wetlands in their communities, including jurisdictional wetlands protected under CWA § 404 and non-jurisdictional wetlands that receive no protection. Local governments can adopt ordinances regulating impacts to freshwater wetlands because this is within their police powers and is not preempted by state or federal law.

The police powers allow local governments to adopt ordinances and programs to protect the public health, safety, and general welfare, unless preempted by state or federal law.[56] Wetlands provide many important services to community residents, so an ordinance designed to preserve these important services would protect the public health, safety, and general welfare. No state or federal law preempts[57] local freshwater wetlands protection. The Georgia Planning Act gives local

governments authority to develop freshwater wetland protection ordinances and the local standards and procedures it requires are "minimum" and pertain to both "land use activities" and "activities which involve alteration of wetlands."[58] At the federal level, the CWA explicitly reserves the right of states and their political subdivisions to adopt wetland protection laws so long as they are not less stringent than the CWA.[59] In contrast, although a court has never considered the issue, it is likely that the CMPA preempts a county or municipality from regulating direct impacts to coastal marshlands. The text of the CMPA states that "the management of the coastal marshlands has more than local significance, is of equal importance to all citizens of the state, is of state-wide concern, and consequently is properly a matter for regulation under the police power of the state."[60] Legislative intent is generally the basis for preemption,[61] and this verbiage indicates that the Georgia General Assembly intended marshland regulation to be a matter for the state only.

**Regulatory Takings Overview**

In general, local governments have successfully utilized their police power to regulate property in order to prevent uses that are detrimental to the public interest.[62] Even when a zoning regulation substantially burdens a property owner, the regulation may be justified if the regulation substantially relates to the public welfare.[63] Courts have held that preserving wetlands is a "legitimate public welfare obligation."[64]

A regulatory "taking" is said to occur when a government regulation (1) causes a permanent physical invasion of private property, (2) deprives the landowner of all economically beneficial use of their property,[65] or (3) meets the standard set forth in *Penn Central Transportation Co. v. City of New York.*[66] The U.S. Constitution[67] and the Georgia Constitution[68] provide that governments may take private property for public use so long as they pay just compensation.[69]

Under federal and state law, property owners may pursue an inverse condemnation claim when they believe there has been a regulatory taking by the government.[70] Inverse condemnation claims have been defined as actions "brought under the eminent domain provisions of the Georgia Constitution 'requiring the payment of compensation for the taking or damaging of private property for public purposes.'"[71] Georgia courts have noted that zoning regulations are unlikely to lead to successful inverse condemnation claims.[72]

A recent Georgia case is instructive on the issue of inverse condemnation claims based on zoning requirements. In *D. Rose, Inc. v. City of Atlanta*, a landowner brought an inverse condemnation claim on the basis that the city's denial of a variance request effectively deprived the owner of all economic use of their property.[73] Local zoning regulations, including a floodplain easement, prohibited the property owner from building on the "rear 2/3 of the property[,]" in addition to a "60-foot setback for the front yard."[74] Viewing the property owner's parcel as a whole, including encumbrances for the 100-year floodplain, sewer easements, and sewer lines, the Court found that, because "the setback requirement is not, *by itself*, the reason that *all* of the value of the property's beneficial economic use has been depleted[,]" the trial court was correct in determining the city zoning restriction was not a taking that would warrant just compensation.[75] The Court noted that they have also "acknowledged that 'zoning is unlikely to be a fertile ground

for inverse condemnation claims'" and that "[z]oning, in short, does not ordinarily present the kind of affirmative public use at the expense of the property owner that effects a taking, and we have previously recognized as much…."[76]

Local governments may reduce the risk of "taking" challenges with regulations that advance an articulated and supported police power goal; permit some limited economic uses of the land, such as by providing for some less intense or non-impactful uses; and by providing a variance procedure in the case of severe hardship. Note that often wetlands do not make up an entire parcel, and thus in many cases, the remaining portion of the property may be put to economic use even if a wetland is protected.

There are many types of ordinances that local governments can use to regulate wetland impacts within their communities, including the following:

**CWA § 404 verification:** Impacts to jurisdictional wetlands sometimes occur without landowners or developers obtaining required CWA § 404 permits. To avoid these problems, local governments can adopt ordinances requiring proof of a USACE wetlands jurisdictional determination when there is reason to believe that wetlands may be impacted by development activities. If jurisdictional wetlands are on the site and a CWA § 404 permit is required, local governments can also require a copy of the permit as a prerequisite for obtaining a local development permit. In communities where wetlands are not common, this kind of ordinance could apply to development activities occurring within a specified distance from wetlands that are shown on the community's Generalized Wetlands Map. In coastal communities where wetlands are prevalent, the ordinance should apply to all development activities. Note, however, that this approach would only protect wetlands that are regulated under the Clean Water Act, which may exclude many wetlands of value to local governments.

**Buffers:** Buffers are vegetated areas that act as transition zones between upland development and surface waters. They can minimize stormwater pollution, create privacy, preserve natural habitat, and reduce maintenance costs, erosion, heating of water, floods and flood damage. Buffers also protect wetlands from direct impacts because to reach the wetland a buffer variance must be obtained. Factors that determine buffer effectiveness include its size/width, the type of vegetation and soil present, its slope, the design or use of zones in the buffer, and the level of management.

Wetland buffers can be established through a wetland buffer ordinance or by amending a stream buffer ordinance to include wetlands. To protect isolated wetlands, the definition of "wetlands" should clearly include all wetland types, regardless of size or connection to a navigable water body. Buffer widths of between fifty and 100 feet are generally appropriate to protect wetland water quality; 100 to 300-foot buffers (or more) are recommended for wetlands with wildlife functions.[77] Buffer requirements must establish the type of uses allowed within buffers. Generally, communities should prohibit uses that result in creation of impervious surfaces, clearing of vegetation, or impacting of soils. Bioswales and limited recreational trails are examples of uses that may be appropriate.

Buffer averaging is an option that can balance buffer protection with site development needs or shape a buffer to maximize protection of natural features in the wetland or upland area. With buffer averaging, the buffer may vary between a minimum and maximum width so long as the average width equals or exceeds the buffer requirement.

Buffer requirements should include variance provisions whereby buffer widths can be reduced if they would result in a significant detriment to a property owner. If a required buffer causes a property owner significant detriment and has no substantial relation to the public health, safety, morality, and welfare, it may constitute a taking under Georgia law (see Regulatory Takings Overview on p11).

There are two general approaches to buffer width requirements: fixed width and variable width.

**Fixed-width approach:** Fixed-width requirements establish one single buffer width for all wetlands in the community. Fixed-width buffers are predictable and are generally inexpensive to administer, but they will result in some buffers being too small and some too large for the wetland functions that need protection.

| Program Snapshots |
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| Baldwin County, AL: Jurisdictional wetlands not permitted for fill must be set aside as common areas or protected via conservation easement; A common area or easement must extend thirty feet from the boundary of a wetland.[78] |
| Darien, GA: A seventy-five foot buffer is required for all jurisdictional wetlands in conservation subdivisions. Buffer averaging is allowed (minimum width of fifty feet and average of seventy-five feet required).[79] |

**Variable-width approach:** Variable buffer widths based on site-specific factors are the best way to protect wetlands and their functions and avoid overly wide buffers. They can be structured in several ways. Widths can be determined on a case-by-case basis, where a detailed formula and methodology is used. This approach is, however, time- consuming, unpredictable, and expensive. A second approach is to establish buffer widths that increase with the impact intensity of the adjacent land use. This is the approach utilized in Charleston, South Carolina. A third approach is to utilize a hierarchical rating system that places wetlands in categories based on site-specific characteristics. Buffer widths are fixed for the specific categories. King County, Washington, uses this approach.

| Program Snapshots |
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| Charleston, SC: A minimum twenty-five foot buffer is required for coastal marshlands adjacent to residential uses; A forty foot buffer is required for those next to industrial, commercial, office, or multi-family uses. Both the twenty-five and forty foot buffers also require a ten foot building setback.[80] |

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| Alachua County, FL: Requires a case-by-case performance standard buffer with numerical default value when there is not enough information to support a case-by-case determination.[81] |
| Fife, WA: Specifies buffer distances are necessary, but the community development director can require increased buffers if a larger buffer is needed to protect wetland functions based on local conditions.[82] |

**Permits:** Local government permitting programs can limit direct impacts and require compensatory mitigation. Permitting programs provide local control over important local resources and can be used to protect wetlands that are not covered by the CWA. Permitting requirements can be inserted into an existing zoning ordinance through special use permits required in overlay zoning districts. When planning a permitting program, local governments must determine which wetlands will be covered, wetlands determination requirements, and permit standards. Permitting programs may require more technical and financial resources than other approaches, depending on their scope.

**Covered wetlands:** Local wetland permitting programs may cover all wetlands in the community or only non-jurisdictional wetlands. Programs that cover all wetlands are appropriate in areas where wetlands are abundant or important to the community. Permitting schemes that only cover isolated wetlands may require less of an investment from the local government.

**Wetlands determination:** The first step in a wetland permitting process is determining whether a permit is needed on a development site. With wetlands determinations, a hydrologist, geologist, ecologist, or other expert visits the site and certifies whether or not covered wetlands are present. A site visit is required because existing maps such as the NWI do not show all wetlands and may be out of date. Determination requirements should ensure that all covered wetlands are accurately identified. In communities where wetlands are abundant, such as coastal counties, it may be appropriate to require a wetland determination for all land development activities. In areas where wetlands are less common, determinations can be required on development sites located within a certain distance from wetlands shown on the community's official wetlands map.

**Permit standards:** While local regulation of jurisdictional wetlands is authorized by the CWA, USACE continues to exercise its own permitting authority. Thus, a local permit cannot authorize greater impacts or less compensatory mitigation than a USACE § 404 permit. Local ordinances regulating impacts to jurisdictional wetlands should therefore include a provision in the ordinance stating that whichever wetlands permit (local and USACE) requirements are more stringent or more protective of aquatic resources shall apply.

With non-jurisdictional wetlands, local officials are not limited to § 404 permit standards. One approach for non-jurisdictional wetland permitting program is to require compensatory mitigation for impacts through purchase of mitigation bank credits within the watershed. This requirement could dissuade some developers from impacting isolated wetlands and might be attractive to counties without resources to develop a more comprehensive program. An alternative approach is to place stringent restrictions on impacts to non-jurisdictional wetland. This option would protect more wetlands, but require more resources to implement.

**Standards:** In order to ensure that permits are uniformly treated and that there is a rational basis for issuing or denying permits, the ordinance must include standards. Common reasons for denying a wetland impact permit are that the applicant has failed to show that the impact is necessary (i.e., other options are available); the impact would alter hydrology and increase erosion, sedimentation, or flooding impacts and the applicant's stormwater plan is not sufficient to compensate; or that the impacts are to an important or sensitive wetland.

| **Figure 4: Basic Process for Local Wetlands Permitting** |
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| **Step 1: Wetland determination** |
| Landowner or local government conducts wetland determination to see whether covered wetlands are present. In some areas, it may be appropriate to require determinations only during the rainy season so wetlands are more easily identifiable. |
| **Step 2: Wetland delineation.** |
| If covered wetlands are present, landowner or local government conducts a delineation to accurately identify the boundaries of the covered wetlands on the site. |
| **Step 3: Pre- application meeting (optional).** |
| Landowner may meet with local staff to receive feedback on development plans and impacts to covered wetlands. |
| **Step 4:Application submission** |
| Landowner submits wetland impact permit application for local staff review. |
| **Step 5:Application review.** |
| Local staff reviews permit application, decides on allowable impacts and permit conditions, including compensatory mitigation. |
| **Step 6:Permit issuance or denial.** |
| Local staff issue permit (perhaps with conditions) or deny it. |
| **Step 7: Denial appeal or application resubmission.** |
| Landowner may appeal denial of permit or submit a new amended application. |

| Program Snapshots |
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| Ft. Belknap Indian Community, MT: An isolated wetlands protection ordinance defines these wetlands as "areas that have no hydrological connection to 'waters of the United States'… that have functions and values relative to the health conditions of their immediate environment." It prohibits impacts to both jurisdictional and isolated wetlands unless there is no "feasible" alternative and the impact is necessary for completion of the project.[83] |
| Matthews County, VA: A local permit is required for wetland impacts. Wetlands are defined by presence of specific vegetation or as those lands lying contiguous to mean low water and between mean low water and mean high water. The definition can include isolated and jurisdictional wetlands.[84] |

**Zoning.**
Local governments often choose to use zoning to protect wetlands because they are experienced in making zoning decisions and have local staff in place to administer the zoning ordinances. In some instances, local government staff may need supplemental training to contend with technical and ecological components of wetland protection. The following are zoning techniques available to local governments that can help protect wetlands.

**Adopt wetlands-specific ordinance purpose and intent language.**
Zoning ordinance purpose and intent sections provide the rationale and basis for regulating wetlands, and inform the public of the ordinances' benefits and goals. Explicitly including wetlands makes a community's commitment to their protection clear. This section can also make clear how wetland protection advances other zoning objectives such as water quality protection and flood and erosion prevention.

**Incorporate wetlands protection into rezoning decisions.**
Rezoning decisions can have a profound impact on wetland protection. Generally, landowners want land rezoned to allow for higher intensity land use, which increases the chances of direct or indirect impacts to natural resources, including wetlands. By taking the presence of wetlands into consideration when making rezoning decisions, local governments can avoid unintended impacts. Standards can require rezoning applicants to provide maps showing the presence of wetlands on site and on adjacent sites. Written standards can be adopted that prohibit rezoning to high density, commercial, or industrial uses when the site or adjacent properties contain a certain amount of or type of wetlands or that require the rezoning applicant to detail how wetlands will be protected in their application. Written policies can benefit landowners by putting them on notice as to regulations that might apply to activities on their property.

| Program Snapshots |
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| Dunwoody, GA: Identification of water resources, including wetlands, is required as part of a rezoning application.[85] |

Watertown, WI: The city will not rezone a shoreland wetland in a wetland zoning district if the rezoning would result in a significant impact on: storm and flood water storage capacity; maintenance of dry season stream flow or the discharge of groundwater to a wetland, the recharge of groundwater from a wetland to another area or the flow of the groundwater through a wetland; filtering or storage of sediments, nutrients, heavy metals or organic compounds that would otherwise drain into waters of the state; shoreline protection against soil erosion; fish spawning, breeding, nursery or feeding grounds; wildlife habitat; or areas of special recreational, scenic or scientific interest, including scarce wetland types and habitat of endangered species.[86]

**Condition zoning approvals on CWA § 404 permits:**
At a minimum, local governments can inform landowners about § 404 permitting requirements in application materials and condition zoning approvals on receipt of federal permits. This will not protect additional wetlands but help prevent unauthorized impacts to wetlands. Local governments can also inform applicants of importance of all wetlands and their ecological role. They can further require that wetlands be identified on any maps submitted as part of the rezoning application.

**Designate Wetlands as Unbuildable Areas:**
Buildable area standards in zoning or subdivision ordinances describe types of land deemed suitable or unsuitable for construction or development. These are usually a part of the subdivision approval process which provides minimum buildable areas that must be met for approval of plats, and excludes certain areas (such as rights of way and sensitive natural resources) in the minimum buildable area. Specifying that wetlands are unbuildable areas can lead to reduced density, and can discourage projects with wetland impacts and provide officials with discretion to deny permits for projects with wetland impacts.[87] Requiring setbacks from wetlands will buffer the wetland and also result in lower density near wetlands.

| Program Snapshot: Marinette County, WI |
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| Marinette County requires that each lot have a minimum buildable area of at least 12,500 square feet of contiguous upland. Buildable area is defined to exclude wetlands and floodways.[88] |

**Adopt Wetlands Overlay Zones:**
Overlay zoning districts place additional requirements or restrictions on land that is already covered by another zoning district. The requirements and restrictions of the underlying district remain in place. Overlay zones are frequently used to protect natural resources, including wetlands. They often include permitted uses of wetlands, prohibited uses, and uses for which a special permit is required. The use of special permits is an effective way to place a permitting scheme into an existing zoning ordinance. In Seminole County, Florida, special wetland "approvals" are required for development activities in the county's Wetland Overlay Zone. Overlay zones can be superimposed on a community land use map or only apply when certain conditions are met. Called a "floating" overlay district, this second option is particularly useful in communities without detailed, current wetland maps. Because regulations apply when certain conditions, such as the

presence of wetlands, are met, the community does not necessarily have to fully map out community wetlands to create the overlay district.

| Program Snapshots |
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| Hall County, GA: Hall County uses NWI maps as its generalized wetlands map and has a wetland protection district overlay zone that consists of all wetlands on that map. Regulated activities, including those that could cause a disturbance to a wetland and are conducted within it or within fifty feet of the wetland, are prohibited without a local development permit. A jurisdictional determination and, under certain circumstances, a CWA § 404 permit are required for a local development permit.[89] |
| Brantley County, GA: Like Hall County, Brantley County uses a wetland protection overlay district and local development permit to comply with the Environmental Planning Criteria. Brantley County also requires detailed site plans for issuance of a local development permit that include maps of wetland boundaries, locations of impervious surface on the site and on adjacent sites for a distance of 200 feet, orientation and distance from the boundaries of the site to the nearest bank of water bodies, and all proposed temporary disruptions or diversions of local hydrology.[90] |
| King County, WA: The Wetland Management Area overlay protects high quality or rare wetland types by limiting stormwater related impacts through minimization of impervious surfaces, forest retention, development clustering, and use of constructed infiltration systems.[91] |
| City of Watertown, WI: The zoning district includes all wetlands over two acres shown on wetland inventory map. It lists permitted uses that do not require a building permit and should result in limited impacts. Prohibited uses are all uses not listed as permitted and the use of boathouses.[92] |

**Floodplain Ordinance:**
Floodplains are low-lying areas adjacent to surface waters where wetlands are common and flood events are likely. An ordinance that restricts development activities in floodplains will protect wetlands, mitigate flood impacts, and provide other benefits.

Developing in floodplains increases the risk of flood damage to structures placed within the floodplain and exacerbates flood impacts. Preserving, restoring, or creating wetlands in the floodplain can prevent or mitigate flood impacts because wetlands act as natural sponges that absorb floodwaters. Floodplain ordinances that preserve wetlands may help local governments secure reduced flood insurance rates for residents through the FEMA National Flood Insurance Program's Community Rating System. Some techniques communities can utilize to protect wetlands within the floodplain are:

- Condition floodplain development permits on preservation of open space areas such as wetlands;
- Limit impervious surfaces within the floodplain;

- Zone floodplains for low density; and
- Provide density bonuses or other incentives for floodplain wetlands preservation, restoration, or creation.
- Create or participate in floodplain wetland acquisition and restoration projects

| Program Snapshot: Fairfax County, VA |
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| Fairfax County regulates floodplain development in a number of ways, including:<br>• Lots with thirty percent or more area in floodplain have maximum density established at fifty percent for that area;<br>• Dwellings cannot be located closer than fifteen feet from the edge of a floodplain;<br>• Decisions regarding the use of a floodplain must take into consideration the "[i]mpact of the proposed use on the natural environment and on water quality"; and<br>• There is strict review for variances for uses in a floodplain.[93] |

**Open Space Requirement:**
Open space requirements are usually found in subdivision or zoning ordinances and typically require a certain percentage of a development to be protected natural space. Providing for open space reduces impervious surface and improves natural stormwater infiltration, advances a community's greenspace plan, and provides wildlife habitat and corridor, recreational, aesthetic, and other benefits. Open space is a key component of conservation subdivision ordinances and may also be mandatory for traditional subdivisions or commercial or mixed-use projects.

Open space requirements usually require some developable land on a site to be permanently protected. Jurisdictional wetlands are often impacted under CWA § 404 permits, however, so communities interested in an open space program should consider providing some sort of open space credit for protecting these resources. Non-jurisdictional wetlands are particularly vulnerable to development and provide significant benefits, so communities could provide additional open space credit for their protection.

| Program Snapshots |
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| Louisville, KY: Louisville provides credit for open space depending on development potential and public accessibility. Jurisdictional wetlands receive a fifty percent credit towards open space (a two-acre jurisdictional wetland would provide a one-acre credit). Wetlands may only be used to satisfy an open space requirement if "the hydrologic and vegetative character of the wetland is maintained in a pre-development condition," but this does "not preclude increasing the volume of water or rate in which it passes through the wetland when the wetland is being used as a water quality filter and said modifications would not degrade the quality of the existing wetland."[94] |
| Corpus Christi, TX: Open space requirements for Corpus Christi's "Cottage" zoning district allow wetlands to count towards as much as fifty percent of a development's required open space. Jurisdictional wetlands count with a one-to-one ratio (one acre of open space credit for |

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| one acre of protected jurisdictional wetland), and non-jurisdictional wetlands count with a two-for-one ratio (two acres of open space credit for one acre of protected non-jurisdictional wetlands).[95] |

**Heightened Erosion and Sedimentation Requirements for Wetlands:**
Sediment is critical for processes in many wetlands, and some wetlands act as important sediment sinks. If sedimentation of a wetland is excessive, however, it can reduce the hydrologic capacity of the wetland, tax the ability of plant communities to adapt, and reduce richness and diversity of invertebrate species and fish. Wetlands are often impacted by sediment because they are found at low topographic points in the landscape and receive large amounts of sediment-laden stormwater.

Construction sites can be a major input of sediment to wetlands and other water bodies. Urban construction sites without appropriate erosion control can lose between twenty and 200 tons per acre of sediment each year.[96] If wetlands are present on or adjacent to a construction site, local governments can require specific erosion and sedimentation practices, including preserving wetlands on site,[97] preserving wetland buffers,[98] requiring perimeter control practices along buffer boundaries, and encouraging more rapid stabilization near wetlands.[99]

| Program Snapshots |
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| Cheboygan County, MI: Cheboygan County requires special practices on sites where wetlands or other aquatic features are present. The erosion and sedimentation ordinance requires best management practices that intercept runoff and trap sediment before runoff reaches a water body and fill slope grades adjacent to wetlands and water bodies that are not steeper than a thirty-three percent rise.[100] |
| Mecklenburg County, NC: Mecklenburg County requires additional erosion control measure structures or devices to provide a higher level of protection to wetlands.[101] |

**Stormwater Standards:**
Stormwater standards in or near wetlands help protect wetlands from the hydrological changes caused by new or existing development. Stormwater standards that can be used in or near wetlands include:

- Prohibiting use of natural wetlands for stormwater treatment;
- Discouraging construction at wetland outlets;
- Restricting discharges of untreated stormwater to natural wetlands;
- Encouraging fingerprinting of stormwater practices around natural wetlands;
- Discouraging installation of stormwater treatment practices within wetland buffers; and
- Providing density bonuses to developments with exceptional stormwater management design (See Wilmington, NC, below.) [102]

## 6. Ordinances – General Considerations

Overview:
Most wetland protection ordinances contain the following elements:

- ***Findings/Purpose.*** The Findings and Purpose section of a local wetlands ordinance contains an explicit statement of the reasons for the ordinance and what it seeks to accomplish. It shows the scope of the ordinance, provides justification, aids interpretation, and sometimes includes statements citing the legal authority for its requirements. To make the justification for the ordinance stronger, community-specific wetland services and benefits should be included here.
- ***Wetlands Covered.*** Identifying which wetlands the ordinance covers is critical, and is one of the most significant decisions to make when drafting a wetland protection ordinance. The ordinance can regulate activities in all wetlands; isolated/non-jurisdictional wetlands only; mapped wetlands; or wetlands plus defined buffer areas. Communities may want to refer to the Generalized Wetlands Map (required pursuant to the Georgia Planning Act's Environmental Planning Criteria for wetlands and usually comprised of USFWS NWI data) in this section.
- ***Definitions.*** The Definitions section is very important in a wetland protection ordinance, and, if a community is seeking to provide more protection than the CWA, then care should be taken so as to **ensure that the definition is not tied to the CWA's finding of a jurisdictional wetland.**
- ***Administration.*** The ordinance should identify the local government body charged with administering the ordinance. This could be the Planning Department, a Wetlands Board created specifically to administer the ordinance, or some other body.
- ***Regulated Activities.*** Many ordinances only apply to "regulated activities" and this is often defined to only encompass those that would impact a jurisdictional wetland or require a 404 permit. Care should be taken to ensure this definition is broadened.
- ***Prohibited/Permitted Activities.*** Many ordinances prohibit all impacts to wetlands (however defined) except for a list of defined permitted uses and may also provide for other impacts pursuant to a permit or variance. Oftentimes, permitted uses mirror those activities exempt from permit requirements under CWA §404. Some ordinances also explicitly permit impacts connected to construction of individual single-family residences (not subdivisions). Ordinances may also contain a list of prohibited uses for which a permit or variance may not be obtained. In Georgia, the Environmental Planning Criteria for wetlands includes a list of prohibited uses (i.e., use for receiving areas for toxic or hazardous waste or other contaminants and hazardous or sanitary waste landfills).
- ***Permit/Variance Standards.*** Some ordinances may provide a list of explicit standards the ordinance administrator must consider when making permit or variance decisions. Others may allow for permit issuance when a Clean Water Act § 404 permit is obtained (jurisdictional wetlands) or when the applicant provides for compensatory mitigation for wetland impacts (isolated wetlands). If wetland protection is included in a zoning ordinance, hardship variances may be included to prevent regulatory takings challenges.

- ***Enforcement.*** A local wetland protection ordinance should give the administrator the ability to enter a site and issue Stop Work Orders and notices to correct, and provide for injunctions, fines, and other penalties.

Wetlands protection ordinances also generally include some boilerplate provisions referring to separability and abrogation and date of enactment. These have been omitted from the examples that follow.

Additional Recommendations:

Many Georgia counties have ordinances that address the protection of wetlands, as required by the Georgia Planning Act. In many instances, these regulations only apply to activities that impact jurisdictional wetlands under the CWA. This approach leaves a number of wetlands unprotected even when those wetlands are still connected to the broader hydrologic system (through subsurface or seasonal connections). Thus, in order to protect all wetlands that provide important public benefits, local communities should **ensure that their program is not limited to only those wetlands protected under CWA § 404.**
If a community seeks to expand their already existing wetland regulations so as to ensure that more wetlands are protected, then a careful review of existing provisions should be undertaken. Language that ties the local government's approach to § 404 should be inventoried and reviewed, looking for language limiting local protection to WOTUS or there being a wetland that falls within § 404 of the CWA. Likely places for a § 404 or WOTUS link can be found in the ordinance's definitions of wetlands, regulated wetlands, wetland map overlay zones, and regulated activities; permit requirements, review standards, and the identification of any associated map. Care should be taken to determine that wetlands are properly defined, and that action by the local government is not confined to or tied to a finding of CWA jurisdictional wetlands or to WOTUS.

Once wetlands are defined, then an additional consideration is whether the local regulatory approach actually prevents impact to wetlands as written and applied. This can be addressed by revising 1) protection goals and objectives, 2) criteria for permit approval, 3) permitted and prohibited activities, and 4) criteria for variances so as to reduce the degree and type of acceptable impact.

*Sample ordinances begin on the following page.*

## Buffer – Fixed Width with Option for Buffer Averaging

Model: Model Coastal Riparian Buffer, UGA River Basin Center, Funded by NOAA and GAEPD
See here: https://rivercenter.uga.edu/wp-content/uploads/2021/01/Model-Coastal-Riparian-Buffer-Ordinance-for-Georgias-Local-Governments.pdf

Note that this Model Coastal Riparian Buffer Ordinance may be modified for use by inland communities. The buffer width of seventy-five feet in this model was developed with coastal ecosystems in mind. Communities should take this into consideration when developing buffer ordinances for inland wetlands; wider or narrower buffers may be appropriate in some areas.

EPA has recommended the following buffer widths for various functions:

| ***Function*** | ***Special Features*** | ***Recommended Minimum Width (feet)*** |
|---|---|---|
| *Sediment reduction* | *Steep slopes (5-15%) and/or functionally valuable wetland* | *100* |
| | *Shallow slopes (<5%) or low quality wetland* | *50* |
| | *Slopes over 15%* | *Consider buffer width additions with each 1% increase of slope (e.g., 10 feet for each 1% of slope greater than 15%)* |
| *Phosphorus reduction* | *Steep slope* | *100* |
| | *Shallow slope* | *50* |
| *Nitrogen (nitrate) reduction* | *Focus on shallow groundwater flow* | *100* |
| *Biological contaminant and pesticide reduction* | *N/A* | *50* |
| *Wildlife habitat and corridor protection* | *Unthreatened species* | *100* |
| | *Rare, threatened, and endangered species* | *200-300* |
| | *Maintenance of species diversity* | *50 in rural area*<br>*100 in urban area* |
| *Flood control* | *N/A* | *Variable, depending on elevation of flood waters and potential damages* |
| *Source: Center for Watershed Protection and U.S. Environmental Protection Agency. 2005. Wetlands and Watersheds: Adapting Watershed Tools to Protect Wetlands.* | | |

**Buffer – Simple, Fixed Width**
Chipley, Florida

Buffer required. A thirty-foot buffer of native vegetation, subject to site plan approval, shall be required around and along all wetlands. Such buffer shall be measured from the [*Department of Environmental Resources*] wetlands jurisdictional line. The property owner may create a pathway through the buffer for visual or authorized pedestrian access to the wetland provided that the pathway is limited to a five-foot wide swath.

## Buffer – Variable Width based on adjacent land use

Example is from Charleston and for coastal wetlands.

Charleston's buffer ordinance applies to marshlands, not freshwater wetlands, and the buffer extends from a "critical line" established by the State Office of Ocean and Coastal Resource Management (part of the Department of Health and Environmental Control). The buffer method utilized here could be applied to freshwater wetlands.

**Sec. 54-347.1. - Critical line buffer requirements.**

Critical line buffers are naturally vegetated areas of specific widths, adjacent to all SCDHEC- OCRM critical lines. The primary purpose for critical line buffers is to protect water quality.

a. Generally:

1. Buffers which satisfy the requirements for a Type L Buffer as listed in Section 54-348, shall be located on all property within the zoning districts listed below in subsection 2.

2. Buffers shall vary in width according to the zoning of the lot as listed below:
   (a) Within the C, RR-1, SR-1 through SR-7, STR, DR-3, DR-6, and DR-9 zoning districts, each buffer shall maintain a minimum width of 25 feet.
   (b) Within the DR-4, DR-12, DR-1, DR-1F, DR-2, DR-2F, RO, GO, CT, LB, GB, UC, MU-1, MU-2, GP, BP, LI, and HI, zoning districts and all properties zoned or developed under the Neighborhood District regulations, each buffer shall maintain a minimum width of 40 feet.
   (c) Within the CY zoning district, the provisions of subsection 2 (a) and (b) shall apply based on designated uses in the development plan.

3. All buildings shall be setback a minimum of ten feet from the required Critical Line buffer.

4. Buffers shall be located adjacent to the Critical Line and extend the entire length of the Critical Line.

5. The boundaries of the SCDHEC-OCRM certified Critical Line and Critical Line Buffer shall be clearly delineated and identified on all development plans and plats submitted for approval and notes shall be placed on all development plans and plats which read as follows: "The Critical Line Buffer shown hereon is under the jurisdiction and permitting authority of the City of Charleston."

(b) Exemptions:

In addition to the exemptions provided in Section 54-344, the following exemptions shall apply:

1. Platted single family lots of record as of September 12, 2000.

2. Approved valid, preliminary subdivision plats as of September 12, 2000, and any project submitted to the Technical Review Committee as of September 12, 2000, shall be exempt from this ordinance.

3. Properties located within the Old City District or Old and Historic District and located on the peninsula south of Line Street extended from the Ashley River to the Cooper River or West of the Ashley River in an area bounded by the Ashley River on the east, the Highway 61 Connector and Merritt Road on the south, Albemarle Road on the west, and Folly Road/Highway 17 on the north.

4. Existing developed portions of The Citadel campus, and water-dependent maritime shipping and cargo handling facilities or terminals.

5. Golf courses shall only be exempt from tree removal restrictions of Section 54-348 in areas of the required Critical Line Buffer that fall within golf corridors when a tree or trees would obstruct play as shown on plans approved by the Technical Review Committee. Tree protection requirements of Article 3, Part 6, including requirements to protect grand trees, shall still apply.

c. Violations: The Board of Zoning Appeals—Site Design is authorized, upon a violation of the buffer regulations set forth herein, to require restoration of the buffer area using Best Management Practices to a condition deemed by the Board to be comparable to that which existed prior to the damage and/or destruction of the protected vegetation within the buffer.

**Sec. 54-513. - Exceptions to buffer requirements.**

The requirement in Section 54-347.1 for a critical line buffer within the DR-4, DR-12, DR-1, DR-1F, DR-2, DR-2F, RO, GO, CT, LB, GB, UC, MU-1, MU-2, GP, BP, LI, and HI zoning districts, and those areas within the CY district developed for comparable uses as shown on an approved development plan, shall not be reduced except with the approval of the Board of Zoning Appeals upon a finding by the Board that an alternative design, certified by an engineer registered by the State of South Carolina, will have no greater impact on water quality than the impact that would have occurred had there been compliance with the critical line buffer requirements and all of the following conditions are met:

a. There is a stormwater management plan which addresses, to the satisfaction of the Board based upon a review of the plan by the Technical Review Committee, the design, construction, future maintenance and future monitoring of storm water runoff resulting from the development of the Lot, which has been certified by an engineer licensed by the State of South Carolina.

b. The project's engineer certifies that the adverse impact on water quality in the adjacent water body of the project is equal to, or less than, what the impact would have been with compliance with the critical line buffer requirements.

c. The Board shall consider the project's stormwater management plan, the project engineer's certification and such other information as the Board shall elect, in its sole discretion. The Board shall have the right, but not the obligation, to have such information reviewed by an independent engineer and the project applicant shall bear the reasonable cost of such review.

# Wetland Permit – with Mitigation Requirement

Model, GAEPD, Coastal Resources Division

*This model ordinance was developed for coastal communities that are concerned with impacts to federally unprotected isolated wetlands and exceptions to federal regulatory requirements for protected wetlands but do not have the resources needed to make project-specific decisions concerning allowable impacts, permit conditions, and the like. To receive a permit for wetland impacts under this ordinance, an applicant must purchase wetland credits from a mitigation bank. This requirement can dissuade landowners from conducting regulated activities in wetlands and compensate, to a certain extent, for impacts that do occur. This model was written to cover not only wetlands, but also open waters and streams in a community; communities that wish to use it for wetlands only should amend it as necessary. It was developed as part of an overarching local natural resources protection ordinance, hence its title as "Article VIII."*

**Article VIII. Protection of Open Waters, Streams, and Wetlands Findings of Fact**

*[Community-specific wetland services and benefits should be included here to make the justification for the ordinance stronger. Some of the findings below may only be applicable to coastal communities.]*

1.1 Open waters such as ponds, lakes and rivers provide valuable commercial and recreational values for the citizens of [*local government*] in the form of fishing, boating, and transportation. These waters also provide valuable habitat for fish and wildlife.

1.2 Streams serve valuable functions in collecting rainwater and transporting it to open waters downstream. The organisms in both intermittent and perennial streams also provide a critical role in breaking down organic matter and freeing nutrients that can then be used throughout the food chain.

1.3 Wetlands are perhaps the most important waters addressed in this article. These waters store floodwaters, collect sediment, improve water quality by filtering out pollutants, and provide habitat for fish and wildlife. [*Local government*] is dependent on wetlands to help protect it from floods, provide a clean drinking water supply, and help ensure a healthy environment.

1.4 Open waters, streams, and wetlands are being excavated, filled, piped, and dredged at an unsustainable rate in this county. A particularly harmful trend is emerging that residential and commercial developments have been constructed in so-called "isolated wetlands." Such practices can lead to flooding and settling problems.

1.5 While the Federal Clean Water Act § 404 program which is administered by the Army Corps of Engineers does regulate dredging and filling activities in waters of the United States, it does not cover waters that do not have any connection to interstate commerce. These so-called "isolated waters" are not subject to regulation under the CWA.

1.6 The Federal Clean Water Act also does not regulate certain ditching and excavation activities in waters of United States as long as those activities do not involve the redeposit of dredged or fill material into waters of the United States. Such activities can have as destructive an impact on the waters of the County as the dredging and filling activities regulated by the CWA.

1.7 The [*local government*] economy depends on a healthy environment. Open waters, streams and wetlands are indispensable natural resources, yet they are threatened by poor development practices. The long-term sustainability of the County depends on protecting our natural resources such as these waters.

**Definitions**

2.1 "Army Corps of Engineers" or "Corps" is the Federal agency responsible under § 404 of the Clean Water Act for administering the permit program for any proposed discharges of dredged or fill material into waters of the United States.

2.2 "Delineation" means a site map that shows all waters of the County on a site. Delineations must be prepared by either qualified wetlands consultants or the Army Corps of Engineers.

2.3 "National Wetlands Inventory (NWI) Map" means the latest version of a map compiled by the U.S. Fish and Wildlife Service, which shows, in a general manner, the open waters, streams, and wetlands in [*local government*]. The map is compiled using aerial photographs and is periodically modified as new information becomes available. Because the NWI Map does not represent the actual boundaries of all open waters, streams, and wetlands within [*local government*], it should not serve as a substitute for a delineation of such boundaries.

2.4 "Open Waters" mean ponds, lakes, reservoirs, rivers, and similar waters. For the purposes of this article, "open waters" does not include saltwater bodies such as estuaries and the Atlantic Ocean.

2.5 "Article VIII Permit" means a County permit issued under this article authorizing the degradation or destruction of any waters of the County.

2.6 "Streams" mean intermittent and perennial tributaries of open waters, and includes creeks, branches, drainage systems, and springs.

2.7 "§ 404 Permit" means a permit issued by the Corps for proposed discharges of dredged or fill material into waters of the United States.

2.8 "Waters of the County" means all open waters, streams, and wetlands located in the County.

2.9 "Waters of the United States" means those open waters, streams, and wetlands that have a nexus to interstate commerce. Certain so-called "isolated waters" are an example of waters of the County that are not waters of the United States.

2.10 "Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. In order for an area to be considered a wetland, as described in the Corps of Engineers Wetlands Delineation Manual (1987), it must contain hydric soils, hydrophytic vegetation, and appropriate hydrological conditions. Certain waters, such as "isolated waters," meet the criteria for being considered "wetlands," but are not protected under the CWA. For the purposes of this article, wetlands do not include any areas defined as "coastal marshlands" by the State Coastal Marshlands Protection Act.

**Purpose**

3.1 It is the purpose of this article to ensure that the open waters, streams, and wetlands in [*local government*] are properly managed so that they can continue to serve their functions that are so vital to the economic, environmental, and social wellbeing of the community.

**Waters and Activities Covered**

4.1 In addition to covering Waters of the United States, which are also regulated by the Corps under the Clean Water Act, this article covers those waters of the County that are not considered Waters of the United States, such as so-called "isolated waters."

4.2 This article also covers activities such as the draining, ditching, pumping, and excavation of all waters of the County. In certain situations, such activities are not regulated by the Corps.

**Adoption of National Wetlands Inventory Map by Reference**

1.1 Under this article [*local government*] adopts by reference those sections of the current NWI Map that cover all portions of [*local government*] (together with any explanatory material on those sections), and make these sections part of this Article as if fully set forth in the article.

**Determination of Need**

6.1 An applicant for a [*local government*] land disturbance permit is not required to submit an accompanying Article VIII Permit if the applicant can provide either of the following:

A. an NWI Map for the site of the land disturbance that shows that there are no open waters, stream, or wetlands on the site, subject to the provisions of Section 6.2 below;

B. a delineation of all waters of the County on the site that clearly shows that such waters will not be degraded or destroyed by the land disturbance activity or any structures built as part of the proposed project.

6.2 Even though an applicant is able to show by producing an NWI Map that there are no waters of the County on the site, the applicant should consult with the Corps if there are any wetlands on the site not shown on the NWI map. NWI Maps do not reveal wetlands that are less than an acre in size. The applicant may still have to seek authorization from Corps to degrade or destroy any waters of the United States that are on the site and that are less than one acre in size.

6.3 For those sites involving the proposed degradation or destruction of waters protected under this article, [*local government*] cannot issue a final land disturbance permit until [*local government*] has issued an Article VIII Permit.

**Article VIII Permit Requirements**

7.1 To obtain an Article VIII Permit, the applicant must first demonstrate that there are no practicable alternatives to degrading or destroying a water of the County. If the applicant succeeds in making this demonstration, it must then demonstrate ways in which the harm to the waters could be minimized to the maximum extent practicable. Finally, the applicant must then provide a mitigation plan for all harm to waters of the County that could not be avoided or minimized.

7.2 All remaining harm to waters of the County must be mitigated through the purchase of mitigation credits in a wetlands mitigation bank or a stream mitigation bank that offers credits that would compensate for the wetlands or stream functions and values that will be lost through the construction of the proposed project. The site must be located in the primary or secondary service areas of any mitigation bank used.

7.3 If no mitigation credits of a suitable type are available, the applicant may purchase credits from the Georgia In-Lieu-Fee Program under the understanding that the resources purchased through the program will be purchased in the same watershed as the resources that will be lost as a result of the proposed project.

7.4 To calculate the number of mitigation bank or in-lieu-fee credits needed to compensate for the functions and values lost due to the proposed project, the applicant will use the Corps Savannah District's Standard Operating Procedures for calculating such credits. Such calculations will be verified by [*local government*].

7.5 [*Local government*] can issue a conditional Article VIII Permit for those waters covered by an application for a § 404 Permit. Such an Article VIII Permit will adopt the terms and conditions of the final § 404 Permit once it is issued. The Article VIII Permit can also include additional waters of the County not covered by the § 404 permit, as well as additional activities impacting waters of the County that are not covered by the § 404 Permit.

7.6 Before the applicant begins any land disturbing activities on the site, it must provide [*local government*] with proof that the applicant has purchased the necessary mitigation credits.

**Article VIII Permit Application Contents**

8.1 Article VIII Permit Application must include the following:

A. A complete copy of any § 404 Permit application for any § 404 permit that the applicant is seeking for activities on the site.

B. A site plan drawn at a scale of 1" = 50' showing the proposed activity as well as all planned dredging, excavation and fill details. The boundaries of all waters of the United States and all waters of the County must be drawn on the site plan.

C. A narrative of all efforts to ensure that there are no practicable alternatives available to avoid the degradation and/or destruction of any waters of the County. The narrative must also include how such impacts to waters of the County have been minimized to the maximum extent practicable, and how all unavoidable harm to waters has been mitigated. This narrative does not have to include any waters covered by a § 404 permit application.

D. A completed Corps Standard Operating Procedure form showing the number of credits required through a mitigation bank or the in-lieu-fee program.

**Enforcement**

9.1 The following actions and penalties may be applied to applicants that violate the provisions of this article:

A. The County may issue a Stop Work Order for all aspects of a project that are impacting waters of the County in violation of this article;

B. The County may order waters of the County to be restored if work performed in such waters has been done without securing an Article VIII Permit or if the recipient of an Article VIII Permit has not complied with all the terms of the Article VIII Permit; and

C. The County may issue penalties of up to *[$1,000*] a day for any violation of this article.

9.2 Any citizen of [*local government*] may commence a civil action on his or her own behalf in superior court against any person who is acting in violation of this article.

**Appeals**

Any party who feels aggrieved by a decision made by the County under the article, may appeal such decision to the [*local government*] Board of Commissioners.

All final decisions of the Commission concerning denial, approval, conditional approval, suspension or revocation of an Article VIII Permit shall be reviewed by [*local county*] court.

# Wetland Permit – Comprehensive Program

*This model ordinance was developed for communities that have the resources to administer a comprehensive wetland impact permitting program. This ordinance also includes an option for creation of a Wetlands Board, to make permitting decisions. It establishes non-regulatory restoration, education, and other programs and activities, as well. This kind of ordinance should only be adopted by a local government with the resources and technical expertise needed to administer what can be a complicated permitting regime. It was originally drafted with coastal communities in mind, so inland communities should amend it as necessary.*

**WETLANDS PROTECTION ORDINANCE**
**[*Local Government*], Georgia Ord.**
**No. _____**

**SECTION 1. GENERAL.**

**Section 1.1: Findings.**

The [*local government*] Board of Commissioners finds that the wetlands in [*local government*] are fragile natural resources that pose significant development constraints. Homes and other manmade structures built in wetlands are often damaged by flooding, failed septic systems, and structural failures due to the unique topography, hydrology, and soil conditions of wetlands areas.

Wetlands also impart many invaluable services to the residents of [*local government*]. Wetlands provide habitat for fish, wildlife, and vegetation; they provide water quality improvement, maintenance, and pollution control; flood control; protection from tropical storms; erosion control; areas for natural resources education and scientific study; recreational opportunities; and scenic beauty. In [*local government*], wetlands provide a foundation for the public health and economic well-being.

Many wetlands in [*local government*] have been degraded or destroyed by human development activities. Preservation of remaining wetlands is necessary to maintain their hydrologic, economic, recreational, and aesthetic services for existing and future residents of [*local government*]. Isolated wetlands, which provide some of the same kinds of services as their larger riparian counterparts, are not protected by federal law. Vegetated buffers protect wetland functions by minimizing human impacts, filtering sediment, nutrients, and pollution, providing habitat, stabilizing banks, and providing shade and aesthetics.

The wetlands protection ordinance is designed to promote the public health and general welfare of the residents of [*local government*] by protecting people from the hazards inherent in developing in wetlands, and by preserving invaluable wetlands services. The wetlands protection ordinance is also designed to ensure that [*local government*] and private persons are aware of and comply with the requirements of state and federal law. The wetlands protection ordinance is adopted under the home rule authority of [*local government*].

**Section 1.2: Purpose**.
*[The establishment of a Wetlands Board is optional. See Section 4 below].*

The purposes of this Ordinance are to provide for:

A. The protection, preservation, replacement, proper maintenance, restoration, and proper use of [*local government*]'s wetlands. Protection of wetlands includes preventing their pollution or contamination, minimizing their disturbance, and preventing damage from erosion, siltation, and flooding.

B. The creation of a Wetlands Board to make permitting decisions and develop complementary programs and activities for wetland protection.

**SECTION 2. DEFINITIONS.**

**IN-KIND MITIGATION.** The replacement of the impacted aquatic site with one of the same hydrologic regime and plant community type (same species composition).

**JURISDICTIONAL WETLANDS.** A wetland regulated under the federal Clean Water Act for which a § 404 permit from the U.S. Army Corps of Engineers may be needed to impact the wetland. Not all wetlands are jurisdictional wetlands.

**LAND DISTURBING ACTIVITY.** Any grading, scraping, excavating, or filling of land; clearing of vegetation; and any construction, rebuilding, or alteration of a structure. Land disturbing activity shall not include activities such as ordinary maintenance and landscaping operations; individual home gardens, yard and grounds upkeep; repairs, additions or minor modifications to a single-family residence; and the cutting of firewood for personal use.

**PERSON.** Any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, state agency, municipality or other political subdivision of this State, any interstate body or any other legal entity.

**WETLANDS.** Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. The primary ecological parameters for identifying wetlands include hydric soils, hydrophytic vegetation, and hydrologic conditions reflecting temporary or permanent inundation or saturation. For purposes of this ordinance, wetlands do not include coastal marshlands as defined under the Georgia Coastal Marshlands Protection Act.

**SECTION 3. RELATIONSHIP TO STATE AND FEDERAL PERMIT REQUIREMENTS.**

The issuance of a permit under this Ordinance does not relieve a person of the need to obtain applicable federal and/or state permits, including federal Clean Water Act § 404 and Georgia Erosion and Sediment Control Act permits. Likewise, the issuance of federal and/or state permits does not relieve a person of the need to obtain a permit under this Ordinance. In the case of a conflict between a permit issued under this Ordinance and a federal and/or state permit, the permit that is more restrictive of activities in wetlands shall control.

**SECTION 4. WETLANDS BOARD.**

*[This is an optional section. It is most appropriate for communities with abundant wetland resources that have persons with technical expertise who are willing to serve on a Wetlands Board. Alternatively, a wetlands board could be advisory and only serve the functions detailed in Section D below.]*

There is hereby created a Wetlands Board:

A. The Wetlands Board shall consist of [*3/5/other*] residents of [*local government*], appointed by the Board of Commissioners upon recommendation of the Planning Commission. [*One/two/other*] of the members shall have knowledge and experience in the areas of ecology, hydrology, soils, botany, geology, or natural resources. One member of the Wetlands Board shall be a member of the Board of Commissioners. The initial terms of appointment shall be as follows: [*The local government may want to establish staggered terms of appointment here, or may choose to have all*

*appointments last for a stated period of years*]. The term of the Board of Commissioners representative to the Wetlands Board shall be concurrent with the term of office.

B. The Wetlands Board shall establish rules of procedure and by-laws for administration of its duties.

C. The Wetlands Board may issue, deny, or conditionally issue wetlands use permits consistent with the standards, goals, and criteria set forth in this Ordinance.

D. The Wetlands Board is also authorized to undertake activities to protect wetlands, including, but not limited to, serving in an advisory role in setting policy on wetlands issues, identifying conflicts between wetlands protection and [*local government*] ordinances, operating procedures, and activities, coordinating with EPD and the U.S. Army Corps of Engineers in keeping up-to-date on issues affecting wetlands protection, and recommending and developing complementary programs for wetland protection such as acquisition schemes, protection incentives, educational programs, and restoration.

E. The [*local government*] Board of Commissioners has sole and exclusive discretion for removal of members of the Wetlands Board with or without a hearing.

**SECTION 5. GENERALIZED WETLANDS MAP.**

The Generalized Wetlands Map shows the general location of wetlands and should be consulted by persons contemplating activities in or near wetlands. The Generalized Wetlands Map is a general reference document, and wetland boundaries indicated on the map are approximations. In addition, the Generalized Wetlands Map may not show all wetlands. The purpose of the Generalized Wetlands Map is to alert developers/landowners if they are within proximity to a wetland. Wetlands may, however, exist on a site even if the Generalized Wetlands Map shows no wetlands in the area. The Generalized Wetlands Map does not represent the boundaries of wetlands and cannot serve as a substitute for a wetland determination or delineation as required by § 404 of the Clean Water Act or other laws.

The Generalized Wetlands Map, together with all explanatory matter thereon and attached thereto, is hereby adopted by reference and declared to be a part of this ordinance. The Generalized Wetlands Map shall be on file in the office of the [*local government*] clerk.

**SECTION 6. WETLANDS AND BUFFERS REGULATED BY THIS ORDINANCE.**

All wetlands and buffers extending [*50/75/other*] feet from the edge of wetlands are regulated by this Ordinance. A wetlands use permit is required to conduct activities in Section 7.1 in a wetland or buffer.

**SECTION 7. ACTIVITIES IN WETLANDS AND BUFFERS.**

**Section 7.1. Activities Requiring a Wetlands Use Permit.**

Except as otherwise provided by Section 7.2, it shall be unlawful for any person to conduct any of the following activities in a wetland or associated buffer without first obtaining a wetlands use permit from the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*]. Any person who conducts any of the following activities in a wetland without first obtaining a wetlands use permit shall be subject to the enforcement and penalties outlined in Section 12.2.

A. Deposit fill material in a wetland or associated buffer.
B. Dredge or remove soil or minerals from a wetland or associated buffer.
C. Construct, build, develop, or erect any structure or development in a wetland or associated buffer.
D. Drain surface water from a wetland.
E. Cut or remove wetland or associated buffer vegetation.

**Section 7.2. Activities Prohibited in Wetlands.**

*The Georgia Environmental Planning Criteria for wetlands recommends A and B for prohibition by local governments in their land use plans.*

Wetlands shall not, under any circumstances, be used for the following activities. Wetlands use permits shall not be issued for the following activities.

A. Receiving areas for toxic or hazardous waste or other contaminants.
B. Hazardous or sanitary waste landfills.
C. Construction of buildings or other structures.

## SECTION 8. WETLANDS USE PERMIT APPLICATION, PUBLIC HEARING, AND APPEAL PROCEDURES.

**Section 8.1. Application.**
*[Officials may wish to require more or less information in the wetlands use permit application than what is listed here.]*

Any person planning to conduct an activity listed in Section 7.1 shall apply for a wetlands use permit from the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*]. All applications shall include the following information in writing, in maps, or in drawings unless exempted in writing by the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*]:

A. An application completed in full, on a form supplied by the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*].
B. A site plan drawn at a scale of 1" = 50' showing the proposed activity as well as all planned drainage, filling, grading, dredging, vegetation removal, excavation and fill details. The boundaries of all wetlands must be drawn on the site plan.
C. Soil drainage and stormwater management plans.
D. A cover letter signed by the applicant including the following information:
    1. Name, address, and phone number of the applicant.
    2. Name of the project and a brief description.
    3. An explanation of why the project meets the wetlands use permit standards and criteria contained in this Ordinance. Specifically, this explanation will detail how the project will meet the standards and considerations of Section 9 of this Ordinance.
    4. A description of existing uses on the property including any structures, fills, grading, or drainage.
    5. The 100-year flood elevation and floodway boundaries at the project site if FEMA or other flood maps are available for the area.
    6. The sites and specifications for all proposed drainage, filling, grading, dredging, vegetation removal, and other activities which may affect a wetland or associated buffer. Such specifications shall include the size of the total wetland area on the site, the size of the wetland proposed for impact or elimination, and cubic yards of fill.

7. A description of any existing or proposed waste disposal and water supply including septic tanks and soil absorption fields. Such description shall include distances to wetlands, associated buffers and other water bodies.
8. A list of all federal, state, county or other local government permits or approvals required for the proposed project including permit approvals or denials already received. In the event of denials, the reasons for the denials shall be given. Copies of all issued permits shall be attached.
9. Identification of any present litigation involving the property.
10. An explanation of why this activity cannot be located at an upland location.

**Section 8.2. Application Submittal Procedures.**

Whenever a wetlands use permit application is submitted to the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*], the following procedures shall be followed:

A. Upon receipt of an application, the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*] shall ensure that all required information is included. The receipt of the application shall constitute permission from the owner to conduct an on-site investigation. If the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*] finds that the application is incomplete, or that information contained in the application is faulty, the applicant shall be informed that s/he must submit additional information or a new application. Wetlands use permits shall not be issued based on incomplete or faulty applications.

B. After the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*] confirms that a complete, error-free application has been submitted, the applicant shall pay required fees. The amount of the wetlands use application fee shall be established from time to time by resolution of the [*local government*] Board of Commissioners.

**Section 8.3. Wetlands Use Permit Decisions Appeals.**

The following procedures shall apply to decisions made by the [*local government*] [*Planning Commission/Board of Commissioners/other*]:

A. Any person who is aggrieved by the approval, approval with conditions, or denial of a wetlands use permit by the Wetlands Board, may appeal the decision to the [*Planning Commission/Board of Commissioners/other*]. A written letter containing the specific reasons for appeal shall be filed with the [*local government*] Clerk within ten (10) calendar days after the date of the decision to be appealed.

B. The [*Planning Commission/Board of Commissioners/other*] shall review the permit decision de novo, based on the record.

C. After a hearing, the [*Planning Commission/Board of Commissioners/other*] shall determine that the decision of the Wetlands Board be affirmed, affirmed with modification, or reversed. The [*Planning Commission/Board of Commissioners/other*]'s decision shall be based on written findings.

**SECTION 9. STANDARDS AND CONSIDERATIONS FOR ISSUANCE OF WETLANDS USE PERMITS.**

**Section 9.1. Standards.**

The [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*] shall not issue a wetlands use permit unless it finds the following:

A. Issuance of a permit is in the public interest, the permit is necessary to realize the benefits of the activity, and the activity is otherwise lawful.
B. There is no practicable alternative to the proposed activity that would have less adverse impact on wetlands.
C. The permit applicant has, to the maximum extent practical, avoided wetlands and associated buffers in its plans for the proposed activity.
D. The permit applicant has, to the maximum extent practical, reduced impacts to wetlands and associated buffers. The height, width, and length of structures shall be limited to the minimum dimensions necessary to achieve desired services and functions.
E. The proposed activity will, to the maximum extent practical, avoid fragmentation of wetlands and the separation of wetlands from other wetlands, broader aquatic systems, and uplands.
F. The proposed activity will not increase flood, erosion, subsidence or other hazards on the subject property or on other property.
G. The proposed activity will not result in the adverse modification of habitat for or jeopardize pant, animal, or other wildlife species listed as threatened or endangered by the U.S. Fish and Wildlife Service or Georgia Department of Natural Resources.
H. The proposed activity will not violate other applicable federal, state, and local statutes, ordinances, and regulations.

**Section 9.2. Considerations.**

*[Subsection K below considers whether the denial of a wetlands use permit would result in a taking of private property under Georgia law. Under Georgia law, the standard for determining whether an unconstitutional taking has occurred is whether the zoning or regulatory action causes the property owner a significant detriment having no substantial relation to the public health, safety, morality, and welfare. The fact that the property would be more valuable or easier to develop without the zoning or regulatory action does not constitute a significant detriment.]*

The [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*] shall consider all relevant evidence when making wetlands use permit issuance decisions, including, but not limited to:

A. The goals and purposes of this Ordinance.
B. The environmental impacts of the proposed action.
C. Whether all practical measures have been taken to minimize the impacts of the proposed activity on wetlands and associated buffers.
D. The impact of the proposed activity and other anticipated activities on flood flows, flood storage, and storm barriers.
E. Threats to the proposed activity from flooding, erosion, hurricane winds, subsidence, soil limitations, and other hazards.
F. The impact of the proposed activity and other existing and anticipated activities on neighboring properties.
G. The adequacy of water supply and waste disposal for the proposed activity.
H. Alternatives to the proposed activity and alternative sites for the activity on the subject property or other property owned by the applicant.
I. Public comments, evidence, and testimony.
J. Reports or comments from other local, state, regional, and/or federal agencies, commissions, soil and water conservation districts, and other organizations.
K. Whether denial of the permit would result in a significant detriment to the landowner and the denial has no substantial relation to the public health, safety, morality, and welfare.

**SECTION 10. WETLANDS USE PERMIT CONDITIONS.**

**Section 10.1. General Provisions.**

A. The [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*] shall attach any reasonable conditions considered necessary to ensure that the goals of this Ordinance are realized, to minimize or mitigate damage or impairment to, encroachment in or interference with natural resources and processes within wetlands, or to otherwise improve or maintain water quality. Any conditions related to wetlands mitigation shall follow the provisions of Section 11 of this Ordinance.

B. The [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*] shall fix a reasonable time to complete the required activities.

**Section 10.2. Mandatory Conditions.**

The following conditions shall be attached to all wetlands use permits:

A. A wetlands use permit shall be conditioned upon compliance with all other requirements of this Ordinance and other laws, statutes, ordinances, and regulations.

B. Any change that materially increases the size and/or scope of the activities on the site, including, but not limited to, activities permitted under this Ordinance, or which affects the standards and criteria considered in approving the wetlands use permit, as determined by the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*], shall require the filing of a new wetlands use permit application.

C. A permittee under this Ordinance shall comply with the following conditions in connection with any construction or other activity on the property for which the wetlands use permit has been issued:

   1. Maintain soil erosion control structures and measures, including, but not limited to, silt fences, straw bale berms, and sediment traps. The permittee shall provide for periodic inspections throughout the duration of the project.
   2. Maintain clear delineation of the wetlands so that such locations are visible to all construction workers.
   3. Post on the site, prior to commencement of work on the site and continuing throughout duration of the project, a copy of the approved wetlands use permit containing the conditions of issuance, in a conspicuous manner such that the wording of the permit is available for public inspection.

D. Compensatory mitigation measures the permittee must take to offset losses to wetland acreage, functions, and values.

**Section 10.3. Optional Conditions.**

The [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*] may attach additional conditions to wetlands use permits beyond those established in Section 10.2 of this Ordinance. These conditions include, but are not limited to, design measures to reduce project impacts; modification of waste disposal and water supply facilities to reflect flooding, high ground water, and erosion hazards; deed restrictions, covenants, or execution of conservation easements; setbacks; clustering of structures and development; erection of permanent wetland area markers and signs; long-term monitoring and management requirements; and other conditions necessary to protect wetland functions, offset losses, protect wildlife, and prevent increased natural hazard losses in the community.

**SECTION 11. COMPENSATORY MITIGATION.**

*[Because it is likely that the Army Corps will also require compensatory mitigation for jurisdictional wetlands impacts, this section notes that the decision-making body may credit compensatory mitigation activities required by the Corps when they satisfy the criteria of this section.]*

**Section 11.1. When Compensatory Mitigation is Required.**

Compensatory mitigation shall not be considered a substitute for making all practical attempts to avoid wetland impacts. Compensatory mitigation is required for all permitted impacts to wetlands. If impacts to wetlands will require compensatory mitigation pursuant to a Clean Water Act § 404 permit, the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*] may give credit for § 404 mitigation activities.

**Section 11.2. Criteria for Approving Proposals for Compensatory Mitigation.**

Compensatory mitigation plans shall be approved only if they meet the following criteria:

A. The mitigation plan shall provide for the in-kind replacement of the predominant functional values of the eliminated or impacted wetland. Mitigated wetlands shall be replaced at the following minimum ratios, in acres: 2:1 for restoration; 4:1 for creation; and 6:1 for enhancement. A larger replacement ratio may be required if the eliminated or impacted wetland is deemed to have exceptional value.

B. The mitigation plan shall provide for no net loss of wetland resources.

C. Mitigation may be achieved by purchasing credits at a mitigation bank in the primary or secondary service area of the permitted wetland impact, by purchasing credits from the Georgia In-Lieu Fee Program, or by performing on-site mitigation. All mitigation must be in-kind.

D. The mitigation plan shall comply with all applicable federal, state, and local laws and regulations.

E. Any mitigation activity shall be completed before initiation of permitted activities, including activities permitted by a wetlands use permit, unless a phased concurrent schedule can be agreed upon between the [*local government*] [*Wetlands Board/Board of Commissioners/Planning Commission/other*] and the applicant.

**SECTION 12. FEES, PENALTIES, AND ENFORCEMENT.**

**Section 12.1. Fees.**

Applications for a wetlands use permit under this Ordinance shall be accompanied by a non- refundable administrative application fee. All fees shall be specified from time to time by resolution of the [*local government*] Board of Commissioners. Fee schedules shall be available for public inspection in the office of the County Clerk.

A denial of an application for a wetlands use permit shall not affect an applicant's obligation to pay the fees provided for in this Ordinance.

**Section 12.2. Penalties and Enforcement.**

**A. Penalties.**

1. If, on the basis of available information, [*local government*] finds that a person is in violation of this Ordinance or of a condition set forth in a permit, [*local government*] shall issue an order requiring the person to comply with the prohibitions or conditions, or [*local government*] shall take such enforcement actions as it deems appropriate.
    a. If a person acts in violation of this Ordinance, [*local government*] may issue a Stop Work Order on construction or may refuse a certificate of occupancy or other construction permits related to the project.

b. An order issued under subsection 12.2.A.1 shall state with reasonable specificity the nature of the violation and shall specify a time for compliance, not to exceed thirty (30) days, which [*local government*] determines is reasonable, taking into account the seriousness of the violation and good faith efforts to comply.

2. A person who violates any provision of this Ordinance shall be responsible for a civil infraction for which the court may impose a civil fine of not less than [*$100/other amount*] nor no more than [*$10,000/other amount*] per day of violation plus all costs, direct or indirect, which [*local government*] has incurred in connection with the violation.

**B. Injunction.**

Any activity conducted in violation of this Ordinance is declared to be a nuisance per se, and [*local government*] may commence a civil suit in any court of competent jurisdiction for an order abating or enjoining the violation, and/or requiring restoration of the wetland as nearly as possible to its condition prior to the violation.

# Overlay District

Model, UGA River Basin Center

*[The following zoning overlay model establishes strict wetland protections by allowing wetland impacts only in the event that denying such impacts would result in a taking of private property. If a local government did not want to adhere to this strict standard, it could establish standards for granting a variance such as those found in the model permit ordinances above. It could also allow for certain activities in wetlands requiring a special use permit and establish standards for approval.*

*To protect other sensitive natural areas and wetlands that may not appear on NWI or other maps and are difficult to identify in the field, the overlay zone could also include floodplains, surface water buffers, and hydric soils]*

**District Findings and Intent**

An overlay district does not revoke any regulations set forth in the underlying district. Development within the overlay district must meet all regulations of the underlying district as well as the overlay district.

The wetlands within [*local government*], Georgia, are indispensable and fragile natural resources that pose significant development constraints due to flooding, erosion, and soils limitations. In their natural state, wetlands serve man and nature. They promote habitat areas for fish, wildlife and vegetation; they provide water quality maintenance and pollution control; flood control; erosion control; groundwater recharge; natural resource education; scientific study, and open space and recreational opportunities. In addition, the wise management of forested wetlands is essential to the economic wellbeing of many communities within the state of Georgia. Buffers protect wetland functions by minimizing human impacts, filtering sediment, nutrients and pollution, providing habitat, stabilizing banks, and providing shade and aesthetics.

Nationally, a considerable number of these important natural resources have been lost or impaired by draining, dredging, filling, excavating, building, pollution and other acts. Piecemeal or cumulative losses will, over time, destroy additional wetlands. Damaging or destroying wetlands threatens public safety and the general welfare.

The wetlands overlay district is designed to promote public health and the general welfare of [*local government*] by protecting people from the hazards inherent in developing in altered wetlands and by preserving wetland functions that serve man and nature. It is also designed to ensure that [*local government*] and private persons comply with requirements of state and federal law.

**A. Wetlands Overlay District Boundaries**

The wetlands overlay district consists of all wetlands in [*local government*] and buffers adjacent to wetlands extending to a distance of [*25/50/other*] feet from the boundary of wetlands. All wetlands shown on the Generalized Wetlands Map, which is hereby adopted as part of this ordinance and is on file in the office of the County Clerk [*and on the local government web site*] for public access, are part of the wetlands overlay district. The Generalized Wetlands Map does not show all wetlands in [*local government*], and is therefore intended only as a general reference document.

**B. Permitted Uses**

The following uses shall be allowed as a right within the wetland overlay district to the extent that they are not prohibited by any other ordinance or law and provided they do not require structures, grading, fill, draining, or dredging except as provided herein.

(1) Conservation or preservation of soil, water, vegetation, fish, and other wildlife, provided they do not affect the waters of Georgia or of the United States in such a way that would require an individual § 404 Permit.

(2) Outdoor passive recreational activities, including fishing, bird watching, hiking, boating, horseback riding, and canoeing.
(3) Forestry practices applied in accordance with best management practices approved by the Georgia Forestry Commission and as specified in § 404 of the Clean Water Act.
(4) The cultivation of agricultural crops. Agricultural activities shall be subject to best management practices approved by the Georgia Department of Agriculture.
(5) Education, scientific research, and nature trails.

**C. Prohibited Uses**

Wetlands shall not, under any circumstances, be used for the following activities.

(1) Receiving areas for toxic or hazardous waste or other contaminants.
(2) Hazardous or sanitary waste landfills.
(3) Construction of permanent structures.

**D. Wetlands Overlay District Variances**

*[The following special variance procedure is included if the local jurisdiction would like to provide an additional defense to a takings challenge to the application of the restrictions of the wetlands overlay district. By providing for an exception to the use restrictions of the overlay district when their application would result in little or no reasonable economic use of a site, a local government can both avoid a claim that the overlay district constitutes a taking on its face, and avoid specific situations where the strict application of the district's use restrictions might constitute a taking.]*

(1) Variance Decisions

The Planning Commission will only issue a variance if the following conditions are met:

i. The use restrictions of the wetlands overlay district represent significant economic damage to the landowner;
ii. The damage to the landowner is not justified by the benefit to the public; and
iii. Actions of the applicant have not created the conditions of hardship on that property.

(2) Variance Conditions

In granting a variance, the Planning Commission may attach conditions that it finds necessary to protect the general health and welfare of the citizens of [*local government*], preserve the services that wetlands provide, and/or protect the best interests of surrounding properties.

(3) Procedure for Taking Action on a Variance Application

Variances will be reviewed and authorized or rejected under the following procedure:

i. A property owner may initiate a request for a variance by filing an application with the Building Inspector. All applications must be filed a minimum of two weeks prior to the Planning Commission meeting when the request will be heard.
ii. At the Planning Commission meeting where the variance request will be heard, the applicant for the variance must provide evidence that strict application of the use restrictions of the wetlands overlay district would cause an extreme hardship for the applicant, such that no reasonable

economic use of the site is available. In addition, the applicant must show that the applicant's actions have not contributed to such an extreme hardship.

iii. The Planning Commission will hold one or more public hearings on the variance request.

iv. The Planning Commission shall render its decision on the application and notify the applicant within five days of that decision.

(4) Time Limit on Variance; Monitoring

Authorization of a variance will be void after one year unless substantial construction has taken place. The Planning Commission may extend authorization for an additional period not to exceed one year, upon request. The Building Inspector will monitor variances to ensure compliance with this section.

# Wetlands Ordinance in Compliance with Georgia Planning Act

As part of its treatment of certain sensitive environmental features, Jackson County creates an environmental overlay district for wetlands, and defines wetlands and protected wetlands.

**Sec. 501. - Establishment.**

There is hereby established the following environmental overlay districts in unincorporated Jackson County:

- [*LIST RIVER CORRIDORS*]
- Significant Groundwater Recharge Areas

**Sec. 505. - Definitions.**

*Protected Wetlands*

Wetlands: Freshwater areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar freshwater areas.

**Sec. 506. - Mitigation of violation.**

When a building or other structure has been constructed in violation of this article, the violator shall be required to remove the building or structure. When removal of vegetative cover, or excavation or fill has taken place in violation of this article, the violator shall be required to restore the affected land to its original contours and to restore vegetation, as far as practicable.
(Ord. No. 17-003 , § 1, 10-2-2017)

**DIVISION V. - PROTECTED WETLANDS**

**Sec. 541. - Authority.**

This division is adopted to implement the requirements of section 391-3-16-.03, "Criteria for Wetlands Protection" of the Rules of the Georgia Department of Natural Resources, Environmental Protection Division, chapter 391-3-16, "Rules for Environmental Planning Criteria." Said rules were adopted under the authority of O.C.G.A. § 12-2-8 (as amended).
(Ord. No. 17-003 , § 1, 10-2-2017)

**Sec. 542. - Findings.**

Wetlands are indispensable and fragile natural resources with significant development constraints due to flooding, erosion, and soils limitations. In their natural state, wetlands serve man and nature. They provide habitat areas for fish, wildlife and vegetation; water quality maintenance and pollution control; flood control; erosion control; natural resource education; scientific study; and open space and recreational opportunities.
(Ord. No. 17-003 , § 1, 10-2-2017)

**Sec. 543. - Establishment.**

There are hereby established protected wetlands in unincorporated Jackson County as shown on the protected wetlands environmental overlay district map.

**Sec. 544. - Applicability.**

(a) This division shall apply to all unincorporated lands within Jackson County that are mapped as protected wetlands as defined by this article.

(b) No land shall be disturbed and no use shall be established within an area regulated by this division, unless it is consistent with the requirements of this division.
(c) No development permit or building permit shall be issued by the public development department for a land use, building, structure, or manufactured home, nor shall any activity commence, unless the land use, building, structure, manufactured home or activity conforms to the requirements of this division. Prior to a development permit or building permit being issued, the public development department shall require a site plan or subdivision plat in sufficient detail to review the proposed development for compliance with the provisions of this division.
(Ord. No. 17-003 , § 1, 10-2-2017)

**Sec. 545. - Relationship to federal regulation.**

(a) The wetlands permit program under section 404 of the Clean Water Act provides a federal permit process the allow activities in wetlands after a public interest review. Most activities in wetlands will require a section 404 from the U.S. Army Corps of Engineers. If wetlands are altered or degraded, mitigation to offset losses will be required as a condition of a section 404 permit. Under current federal policy, alterations or degradations of wetlands should be avoided unless it can be demonstrated that there will be no long-term adverse impacts o loss of wetlands. Section 401 of the Clean Water Act requires certification by the state for any permit issued section 404. Other state and federal laws are also applicable to wetlands and wetlands protection.
(b) The provisions of this division shall be in addition to any requirements of federal regulations.
(Ord. No. 17-003 , § 1, 10-2-2017)

**Sec. 546. - Permitted uses.**

Only the following uses shall be permitted within a protected wetland, to the extent that they are not prohibited by any other ordinance or law, and provided they do not require structures, grading, fill, draining, or dredging except as provided herein. All other uses are prohibited within wetlands.
(a) Conservation or preservation of soil, water, vegetation, fish and other wildlife, provided it does not affect waters of Georgia or of the United States in such a way that would require an individual § 404 permit.
(b) Outdoor passive recreational activities, including fishing, bird watching, hiking, boating, horseback riding, and canoeing.
(c) Forestry practices applied in accordance with best management practices approved by the Georgia Forestry Commission and as specified in Section 404 of the Clean Water Act.
(d) The cultivation of agricultural crops. Agricultural activities shall be subject to best management practices approved by the Georgia Department of Agriculture.
(e) The pasturing of livestock, provided that riparian wetlands are protected, that soil profiles are not disturbed, and that approved agricultural best management practices are followed.
(f) Education, scientific research, and nature trails.
(Ord. No. 17-003 , § 1, 10-2-2017)
Sec. 547. - Wetland statement on plans and plats.

Design professionals shall indicate wetlands and protected wetlands on all plans required for land disturbance, development, and building, and on any plats required for subdivision. The design professional that prepared the required plan or plat accompanying the permit or plat application shall provide a statement on the plan sheet or plat sheet indicating whether or not a wetland or protected wetland is located on the property.

(Ord. No. 17-003 , § 1, 10-2-2017)Wetland, protected: Those wetlands identified on the protected wetlands environmental overlay district map, which are based on best available information including but not limited to National Wetlands Inventory maps prepared by the U.S. Fish and Wildlife Service. Areas approved by the U.S. Army Corps of Engineers based on studies prepared by a competent professional shall be considered a protected wetland, whether or not such wetland area is shown on the protected wetlands environmental overlay district map. Any new wetland area constructed as a best management practice for stormwater control shall also be considered a

protected wetland once construction is complete, whether or not such wetland area is shown on the protected wetlands environmental overlay district map.

# Riparian Buffer

*Defining river corridors widely enough to capture riverine wetlands would provide some level of protection to the wetlands. Athens Clarke County has adopted the following as a component of its regulation of environmental areas. Communities can determine what widths are most appropriate for their streams.*

**CHAPTER 8-6. PROTECTED ENVIRONMENTAL AREAS**



**ARTICLE 1. STATEMENT OF INTENT; DEFINITIONS**

**Sec. 8-6-1. Purpose and intent.**

The purpose of this chapter is to protect the quality of the community's waterways and to provide for the appropriate development of sites in and adjacent to floodplains, riparian areas, wetlands, significant groundwater recharge areas, water supply watersheds and water supply intake areas. The streams and rivers of Athens-Clarke County supply much of the water required by Athens-Clarke citizens for drinking and other governmental and industrial uses. The quality of the groundwater that is used for drinking, agricultural and industrial purposes in Athens-Clarke County is connected with the quality of the surface water in the streams and rivers of Athens-Clarke County. Furthermore, the people of Athens-Clarke County use the surface waters for fishing, canoeing, and other recreational and economic purposes. The Commission finds that the protection of the streams and rivers of Athens-Clarke County is vital to the health, safety, and economic welfare of its citizens.

Furthermore, it is the intent of this chapter to establish buffer areas adjacent to stream systems and rivers as well as all other state waters and to protect the integrity of floodplain in Athens-Clarke County. The purposes of these protective measures are to: protect public and private water supplies and restore and maintain the chemical, physical and biological integrity of water resources, trap sediment and other pollutants in surface runoff, stabilize stream banks, protect riparian wetlands, minimize the impact of floods, maintain base flow of streams and rivers, protect wildlife habitat, and furnish scenic and recreational opportunities.

It is not the intent of this section to repeal or preclude other regulations that affect the quality of the community's waterways, including, but not limited to, regulations such as the Soil Erosion and Sedimentation Control Ordinance (Chapter 8-3, Athens-Clarke County Code), Flood Protection (Chapter 8-2, Athens-Clarke County Code) or Stormwater Management (Chapter 5-4, Athens-Clarke County Code). The standards and requirements are not superseded by these standards. If the provisions of this chapter conflict with these or other regulations of Athens-

Clarke County, state or federal regulations including the protection of Wetlands as defined by the U.S. Army Corps of Engineers, the more restrictive of the regulations shall govern.
(Ord. of 11-3-2004, § 1)

**Sec. 8-6-2. General regulations.**

The following definitions shall apply to the provisions of this chapter.

**Agriculture:** The raising, harvesting, or storing of products of the field or orchard; feeding, breeding or managing livestock or poultry; producing or storing feed for use in the production of livestock, including but not limited to cattle, calves, swine, hogs, goats, sheep, and rabbits or for use in the production of poultry, including but not limited to chickens, hens and turkeys; producing plants, trees, fowl, or animals, the production of aqua culture, horticultural, dairy livestock, poultry, eggs and avian products; farm buildings and farm ponds.

**Best management practices (BMPs):** Conservation practices or management measures which control soil loss and reduce water quality degradation caused by nutrients, animal wastes, toxins, sediment and runoff. For the purposes of this chapter, best management practices shall be considered to be the most recent publication of those practices or measures officially promulgated by the State of Georgia, the Federal Government or the Unified Government of Athens-Clarke County.

**Buffer:** With respect to a stream, creek, river or other body of water a natural or enhanced vegetated area lying adjacent to the body of water.

**Buildable area:** The portion of a lot remaining and available for the construction of a building or structure after required setbacks, yards, environmental buffers, wetlands, floodplains, and easements have been provided.

**Drought:** A condition of moisture deficit sufficient to have an adverse effect on vegetation, animals, and humans over a sizeable area.

**Ephemeral stream:** Ephemeral (stormwater) stream means a feature that carries only stormwater in direct response to precipitation with water flowing only during and shortly after large precipitation events. An ephemeral stream may or may not have a well-defined channel, the aquatic bed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and physical characteristics commonly associated with the continuous or intermittent conveyance of water.

**Hazardous material:** Any substance or material that, by reason of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment as codified in 40 C.F.R. 370.

**Hazardous waste:** Any solid waste which has been defined as a hazardous waste in regulations promulgated by the administrator of the United States Environmental Protection Agency pursuant to the federal act, which are in force and effect on February 1, 1988, codified as 40 C.F.R. Section 261.3.

**Intermittent stream:** Intermittent stream means a well-defined channel that contains water for only part of the year, typically during winter and spring when the aquatic bed is below the water table. The flow may be heavily supplemented by stormwater runoff.

**Jurisdictional wetlands:** An area that meets the definitional requirements for wetland boundaries by the U.S. Army Corps of Engineers, as required by the Clean Water Act, 33 U.S.C. Section 1344, as amended.

**Jurisdictional wetlands determination:** A delineation of jurisdictional wetland boundaries by the U.S. Army Corps of Engineers, as required by Section 404 of the Clean Water Act, as amended.

**Large water supply watershed:** A watershed containing 100 square miles or more of land within the drainage basin upstream of a governmentally-owned public drinking water supply intake.

**Lot:** A unit of land created by a subdivision, which complies with all applicable laws at the time such lots were created.

**Perennial stream:** Perennial stream means a well-defined channel that contains water year-round during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water for a perennial stream, but it also carries stormwater runoff.

**Pollution susceptibility:** The relative vulnerability of an aquifer to being polluted from spills, discharges, leaks, impoundments, applications of chemicals, injections and other human activities in the recharge area. All of Athens-Clarke County is located within a low pollution susceptibility area.

**Pollution susceptibility maps:** Maps of relative vulnerability to pollution prepared by the Department of Natural Resources, using the DRASTIC methodology. (Georgia Department of Natural Resources Hydrologic Atlas 20: Groundwater Pollution Susceptibility Map of Georgia.)

**Protected stream:** Any perennial stream or intermittent stream that has a stream channel with perennial or intermittent stream flow as defined hereinafter. A stream channel with perennial or intermittent stream flow is one, which satisfies any one of the following criteria:

(1) Any stream identified on the most recent edition of the Natural Resources Conservation Service Soil Survey Map; or

(2) A channel that originates from a spring, seep, or other groundwater outflow not caused by construction, that sustains water flow during periods of high water tables; or

(3) A point within a stream channel with a drainage area of 25 acres or more.

In the event of a disagreement as to whether or not any of the above criteria have been met, or in the event that evidence supporting or negating the existence of a protected stream is inconclusive, then the planning director shall make the determination using evidence from a physical inspection of the site applying the adopted stream classification protocol as defined in this chapter.

**Protected river:** A river or waterway with an average annual flow exceeding 400 cubic feet per second (cfs) as determined by the appropriate U.S. Geological Survey documents or by field data, site evaluations or other appropriate evidence. The area between the top of the riverbank and the edge of the river shall be included within the boundaries of the protected river.

**Protected river corridor:** All the land, inclusive of islands not regulated under the Metropolitan River Protection Act (O.C.G.A. §§ 12-5-440 through 12-5-459), or the Coastal Marshlands Protection Act (O.C.G.A. §§ 12-5-280 through 12-5-293), in areas of a protected river and being within 100 feet horizontally on both sides of the river as measured from the river banks. The 100-foot buffer shall be measured horizontally from the uppermost part of the riverbanks, usually marked by a break in slope. Although not within the measured 100-foot wide buffer, the area between the top of the bank and the edge of the river shall be treated by Athens-Clarke County in the same manner as the river corridor and shall be included within the River Corridor Protection District. Because stream channels move due to natural process such as meandering, riverbank erosion, and jumping of channels, the river corridor may shift with time. For purposes of these standards, the river corridor shall be considered to be fixed at its position at the beginning of each review period for the Athens-Clarke County Comprehensive Plan. Any shift in the location of the protected river after the review period will be shown by revision of the boundaries of the river corridor at the time of the next comprehensive plan review by the Department of Community Affairs.

**Public utility or utilities:** A service or services provided by a public utility company or a private entity which provides such service or services and all equipment and structures necessary to provide such services.

**Regulated activity for wetlands:** Any activity which will, or which may reasonably be expected to, result in the discharge of dredged or fill material into waters of the U.S. excepting those activities exempted in Section 404 of the Federal Clean Water Act.

**River bank:** The rising ground, bordering a river, which serves to confine the water to the natural channel during the normal course of flow, usually marked by a break in slope.

**Single-family dwelling:** A detached residential unit other than a Class "B" manufactured home, hotel or motel, designed for, and occupied by, one family only.

**State waters:** Any and all rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, and other bodies of surface or subsurface water, natural or artificial, lying within, or forming a part of, the boundaries of the State which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation; and as subject to the requirements of O.C.G.A. § 12-7-6(b)(15)(A).

**Stream bank:** The sloping land that contains the stream channel and normal flows of the stream.

**Stream channel:** The portion of a watercourse that contains the base flow of the stream.

**Stream classification protocol:** This protocol refers to the Athens-Clarke County Manual for Identification of Streams, which manual is incorporated into this chapter by reference and adopted by the mayor and commission as part of this chapter. A copy of this manual, dated November 3, 2004, is on record and available for public inspection at the Athens-Clarke County Department of Transportation and Public Works. This manual and accompanying field form can be used to identify points on the landscape that represent stream origins as well as stream, channel and flow characteristics resulting from these varying sources of water.

**Timber production and forestry:** The use of land for the raising and harvesting of timber, pulp woods, and other forestry products for commercial purposes. Excluded from this definition shall be the cutting of timber associated with land development and construction.

**Wetlands:** Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. The ecological parameters for designating wetlands include hydric soils, hydrophytic vegetation, and hydrological conditions that involve a temporary or permanent source of water to cause soil saturation.
(Ord. of 11-3-2004, § 1; Ord. of 8-4-2015, § 1)

**Sec. 8-6-3. Environmental areas review, environmental areas permits, and approval of permits.**

(a) In lieu of an environmental areas review permit, review for compliance with the provisions of this chapter shall be conducted in conjunction with the review of the following applications for activity that is proposed to occur within either the floodplains, riparian buffer areas, including protected rivers, wetlands, or significant groundwater recharge areas.

(1) Plats combining the full extent of two or more lots to create a single lot.
(2) Preliminary subdivision plats.
(3) Final plats associated with major subdivisions.

(b) An environmental areas review permit is required for all activity which meets the following thresholds and which occurs or is proposed to occur within either the floodplains, riparian buffer areas, including protected rivers, wetlands, or significant groundwater recharge areas.

(1) Any proposed change of use of any property. Change of use, as used herein, shall be defined in a manner consistent with that employed in the administration of the Athens-Clarke County zoning ordinance.

(2) Any plat not exempted from the permit requirement by section 8-6-3(a).

(3) Any proposed water treatment facility, purification facility, or stormwater management facility.

(4) Road and utility construction.

(5) Excavation and fill where the fill or excavation combined is equal to or greater than ten cubic yards.

(6) Any work requiring a zoning permit or land disturbance activity permit to be issued by Athens-Clarke County other than permits required for ordinary repair and maintenance or work that occurs entirely within the interior of a building or structure but does not entail a change of the use of the building or structure.

(7) Any substantial clearing of vegetation which alters the nature and characteristics of the existing vegetation on site unless the clearing meets the definition of timber production or agriculture.

(8) Any increase in impervious surface equal to or more than either ten percent of the existing impervious surface on the existing lot of record or 10,000 square feet, whichever is less.

(9) Construction of a dam or any other impoundment.

(c) An environmental areas review permit is not required for the following activities:

(1) Ordinary maintenance of buildings and yards, planting and maintenance of non-commercial home gardens and the cutting of firewood for personal use provided that no live trees are removed within 25 feet of a stream bank. (i.e., fewer than two cords of wood per year). Routine repair and maintenance of existing roadways and utility facilities.

(2) Timber production, surface mining, granite quarry. Although not requiring an Environmental Areas Review Permit, all activities associated with timber production shall comply with the best management practices as specified in Georgia's Best Management Practices for Forestry available from the Georgia Forestry Commission. All activities associated with timber production, surface mining, or granite quarry shall not impair the quality of the water as defined by the Federal Clean Water Act, and shall comply with all state and federal laws and all regulations promulgated by the Georgia Forestry Commission.

(3) Any action taken by Athens-Clarke County or other governmental entity in an emergency to mitigate an existing or potential hazard.

(4) Any land-disturbing activities conducted by any electric membership corporation or any public utility under the regulatory jurisdiction of the Public Service Commission.

(5) Agricultural production and management. Although not requiring an environmental areas review permit, all agricultural production and management shall comply with the best management practices established by the Georgia Soil and Water Conservation Commission, shall not impair the quality of the water as defined by the Federal Clean Water Act, and shall comply with all state and federal laws and all regulations promulgated by the Georgia Department of Agriculture, including the best management practices established by the Natural Resources Conservation Service.

(6) Existing buildings, structures or on-going land-use activities do not require an environmental areas review as long as at the time of construction the existing building or

structures obtained the appropriate construction related permits (i.e., building permits). An environmental areas review permit shall be required if the previously permitted land-use activities have ceased for a period of more than one year.

(d) Application and plans required. A complete application and the following plans are required for any activity that meets the thresholds established in 8-6-3(a):

(1) A site plan containing the following information:

a. The location and extent of environmental areas, as established in 8-6-4. Plans shall indicate the extent and boundaries of floodplain, riparian buffers, wetlands, or significant groundwater recharge areas. The applicant may request the department to field verify the applicant's delineation of protected streams and buffers. The field review by the department will be valid for up to six months.

b. The location and extent of topography, with areas having slopes greater than 25 percent delineated.

c. The location and extent of all existing non-natural features including buildings, structures, foundations, parking areas, driveways, walls, and fences.

d. The location and extent of any easements or other physical encumbrances on the property.

e. The location and extent of all proposed construction including clearing, construction of buildings, impervious surfaces (driveways, paving, patios and sidewalks), roads, walls, fences and other accessory structures.

f. Buildable area.

(2) The application form shall be made available at the Athens-Clarke County Planning Department. As part of the application process, the boundaries of all environmental areas shall be clearly marked in the field for review by Athens-Clarke County staff and shall remain clearly marked for the duration of the proposed activity. Ongoing activities shall be marked in a manner approved by staff.

(3) The application and plans shall clearly demonstrate how the proposed activity within the environmental areas meets the requirements of this chapter.

(e) Criteria for approval. An application for an environmental areas review permit shall be issued by the planning director when the applicant demonstrates the following:

(1) That all environmental areas have been properly identified and indicated on the plans submitted.

(2) That the proposed activity is in compliance with the requirements of this chapter.

(Ord. of 11-3-2004, § 1; Ord. of 10-4-2005, § 1)

**Sec. 8-6-4. Establishment of environmental areas.**

For the purposes of this chapter, the following shall be used to determine classifications of environmental areas. The type of regulation applicable to a specific land area depends upon the classification in which the land is placed. In the event that land meets the criteria for more than one type of environmental area, then the more restrictive of the standards for activities shall apply.

(a) *Floodplains:* Floodplains are identified by the Federal Emergency Management Agency (FEMA) on such agency's current official Flood Insurance Rate Maps or identified and defined through standard engineering analysis by other government agencies or a licensed professional engineer, but not yet incorporated into the FEMA Flood Insurance Rate Maps.

(b) *Wetlands:* Wetlands are hereby established which shall correspond to all lands within Athens-Clarke County that are mapped as wetland areas by the U.S. Fish and Wildlife Service National Wetland Inventory (NWI) maps. The locations of the wetland areas identified by the NWI maps shall be incorporated on the Athens-Clarke County Environmental Areas Map as described in section 8-6-5. The Environmental Areas Map does not necessarily represent the boundaries of

jurisdictional wetlands within Athens-Clarke County and cannot serve as a substitute for a delineation of wetland boundaries by the U.S. Army Corps of Engineers, as required by Section 404 of the Clean Water Act, as amended.

(c) *Riparian Buffer Areas:* As set forth in the following table, areas adjacent to protected rivers, streams and bodies of water including all state waters. If a hydrologic feature meets more than one definition, then the more stringent definition of riparian buffer shall apply. The buffer width is measured horizontally, on both banks (as applicable) of the stream or body of water, from the top of the bank associated with the stream or body of water.

(d) *Significant groundwater recharge areas:* Areas identified as significant groundwater recharge areas by the Georgia Department of Natural Resources, and as indicated on the Environmental Areas Map and by the Georgia Department of Natural Resources in Hydrologic Atlas 18, 1989 Edition.

(e) *Water supply watersheds and water supply intake areas:* As defined and adopted in section 8-6-5 and indicated on the Environmental Areas Map.

(Ord. of 11-3-2004, § 1; Ord. of 8-4-2015, § 2)

**Sec. 8-6-5. Official map.**

(a) An Environmental Areas Map as required by the Georgia Planning Act Part V shall be incorporated herein by reference with the text of this chapter. The Athens-Clarke County Environmental Areas Map is hereby established as a reference and educational tool. For purposes of this ordinance, field data and evaluations of the site at the time of application for an environmental review permit will supersede information found on the Environmental Areas Map. Copies of the map will be maintained in the offices of the Athens-Clarke County Planning Department for public inspection, and copies shall be available for sale.
The Environmental Areas Map shall be dated as of the adoption date of this ordinance, and signed by the Athens-Clarke County Mayor and Clerk of Commission, with the following certification: "This is to certify that this is the Official Environmental Areas Map of Athens-Clarke County referred to in Chapter 8-6 of the Code of Athens-Clarke County, Georgia. This map supersedes the Official Environmental Areas Map adopted December 2, 2014. Adopted the 2nd day of July, 2019." Said map is hereby made a part of this Title by reference and incorporation as if fully set forth herein.

(b) For any application for an environmental areas review permit, the delineation of environmental areas on the site map, as approved by the planning director and based upon field data and evaluations of the site at the time of application, shall supersede the Athens-Clarke County Environmental Areas Map in determining what areas are subject to the requirements of this chapter. Nothing in this subparagraph (b) shall be construed to change the riparian buffer areas as described in subsection 8-6-4(c) above.

(c) The boundaries of all environmental areas shall be clearly marked in the field for the duration of land-disturbing activities on the property.

(Ord. of 11-3-2004, § 1; Ord. of 12-2-2014, § 1; Ord. of 7-2-2019(2), § 1)

**ARTICLE 2. RIPARIAN BUFFERS AND FLOODPLAINS**

**Sec. 8-6-6. Standards for activities within the floodplains.**

(a) *Permitted activities.* Applications for environmental areas review permits where the proposed activity or activities is proposed to occur within a floodplain shall be evaluated against the following criteria:

(1) Subdivisions of land: All lots modified by lot line adjustments or new lots created from existing lots which contain protected environmental areas must demonstrate that the proposed lots contain a buildable area of sufficient size to accommodate a single-family dwelling, regardless of the

extent of the uses allowed by the underlying zoning. The demonstration of the buildable area does not establish or secure the ability of the owner or subsequent owners to construct on the site.

(2) Standards for water treatment or purification:

a. The restoration or enhancement of floodplains must meet the federal and state standards and be conducted in accordance with state and federal standards and guidelines.
b. Measures to remove or abate nuisances or any other violation of state or federal statute, administrative rule or Athens-Clarke County ordinance must demonstrate that manner of removal or abatement does not create a further negative impact on the floodplain or violate additional Athens-Clarke County ordinances.

(3) New transportation or utility stream crossings must meet the following criteria:

a. Water and sewerlines must run parallel to existing streams and rivers. The location of water and sewerlines shall be located as far from the bank as the physical constraints of the site allows.
b. All crossings shall be made at a right angle unless demonstrated that a right angle is not feasible.
c. An installation and maintenance plan for the transportation or utility stream crossing shall accompany the environmental areas review application.
d. Construction of transportation and utilities shall meet all requirements of the Erosion and Sedimentation Control Act as amended.
e. Utilities shall not impair the drinking quality of the water, as defined by the Federal Clean Water Act, as amended.

(4) Excavation and fill: Any modification to the floodplain that includes excavation and fill must demonstrate that it has satisfied the requirements established in Chapter 8-2 (Flood Protection) including, but not limited to the requirement for adjustments to the FEMA map.

a. No net fill in any floodplain is allowed. All fill placed in a floodplain shall be balanced with at least an equal amount of soil material removal. Any modification to the floodplain must satisfy the conditions established in Chapter 8-2 (Flood Protection).
b. Excavation areas shall not exceed fill areas by more than 50 percent of the square footage of the proposed improvements.
c. Installation and maintenance of the facilities shall be such as to protect the integrity of the floodplain area.
d. Excavation to balance a fill shall be located on the same parcel as the fill. If it is demonstrated that if such excavation is not possible, and the director of Athens-Clarke County Public Works Department concurs, then the excavation shall be located in the same drainage basin and as close as possible to the fill site, and the proposed excavation must not increase the flood impacts for surrounding properties as determined through hydrologic and hydraulic analysis.
e. Temporary fills which are necessary for construction may be permitted during construction and must be located upslope except in association with permitted uses and removed prior to the issuance of a certificate of occupancy or the initiation of the use of the parcel.
f. New culverts, stream crossings and transportation projects shall be designed as balanced cut and fill projects or designed not to raise the design flood elevation. Such projects shall be designed to minimize the area of fill in floodplains and to minimize erosive velocities

of water as defined by the Georgia Erosion and Sediment Control Manual. Stream crossings shall be perpendicular to the protected stream.

g. Excavation and fill required for the construction of detention facilities, levees, or other such structures shall be designed to reduce or mitigate flood impacts and improve the conditions of the environmental areas. Levees shall not be used to create additional buildable areas.

h. These standards are in addition to and do not supersede those actions required in Chapter 8-2 (Floodplain Protection).

(5) Buildings and construction:

a. Additions to existing buildings or structures must not exceed ten percent of the current square footage of the total square footage of all of the buildings or structures located within the floodplain and must meet the requirements of Chapter 8-2 (Flood Protection). Provided that the applicant demonstrates that the proposed additions and those additions constructed with benefit of all previous environmental areas review permits are less than or equal to ten percent of the square footage of the sum of the square footage of those buildings and structures extant at the time of the first environmental areas review permit.

b. The construction of one single-family dwelling on existing lot of record provided that the following criteria are met:

1. The dwelling shall be located within the buildable area on the parcel. The available buildable area on the subject property shall be used for the proposed construction before any construction is permitted in the protected environmental area.
2. Septic tanks shall not be located within the floodplain.
3. Septic tank drainfields and other forms of on-site wastewater treatment shall not be located within the floodplain.
4. Best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resulting sedimentation, which are consistent with, and no less stringent than, those practices contained in the "Manual for Erosion and Sediment Control in Georgia," published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity is permitted.
5. The stripping of vegetation, regrading, and other development activities shall be conducted in a manner to minimize erosion and shall be limited to that necessary for the construction of the single-family dwelling.
6. Cut and fill operations shall be limited to that necessary for the construction of the single-family dwelling.
7. Development plans must conform to topography and soil type, so as to create the lowest practicable erosion potential.
8. Whenever feasible, natural vegetation shall be retained, protected and supplemented.
9. The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum.
10. Disturbed soil shall be stabilized as in accordance with Georgia Manual for Sediment and Erosion Control.
11. Temporary vegetation or mulching shall be employed to protect exposed critical areas during the development.
12. To the extent necessary, sediment in run-off water must be trapped by the use of debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized. As used in this paragraph, a disturbed area is stabilized when it

is brought to a condition of continuous compliance with the requirements of O.C.G.A. § 12-7-1 et seq.

13. Adequate provisions must be provided to minimize damage from surface water to cut face of excavation or the sloping surfaces of fills.
14. Cuts and fills may not endanger adjoining property.
15. Fills may not encroach upon natural watercourses or constructed channels so as to adversely affect other property owners.
16. Grading equipment must cross flowing streams by the means of bridges or culverts, except where such methods are not feasible; provided, in any case, that such crossings must be kept to a minimum.
17. Land-disturbing activity plans for erosion and sedimentation control shall include provisions for treatment or control of any source of sediments and adequate sedimentation control facilities to retain sediments on site or preclude sedimentation of adjacent waters beyond the levels specified in O.C.G.A. § 12-7-6(a).
18. The impervious area footprint of the house and accessory structures within a floodplain must be less than 2,500 square feet.

(6) Criteria for the clearing of vegetation:

a. Native vegetation shall be retained, protected and supplemented within the flood plain. Limited non-mechanical clearing of vegetation is allowed within the flood plain, provided that the vegetation removed is less than six-inch (DBH) and is not within 25 feet of the stream bank.
b. No removal of living trees shall be removed within 25 feet of the bank.

(7) Impervious surfaces: Increases in impervious surface, including increases to or construction of parking lots, may be located at an elevation no lower than one foot below the elevation of the 100-year floodplain.

(b) *Prohibited activities within floodplains.*

(1) Handling areas for the receiving and storage of hazardous waste as defined by the State of Georgia.
(2) Hazardous waste and solid waste landfills.
(3) Agricultural waste pits.
(4) New buildings, new structures or other impervious improvements that encroach into the floodplain that require a grading permit or a building permit except as specified in 8-6-6(a)(5).

(Ord. of 11-3-2004, § 1; Ord. of 8-4-2015, § 3)

**Sec. 8-6-7. Standards for activities within the riparian buffers.**

(a) *Permitted activities.*

(1) Subdivisions of land: All lots modified by lot line adjustments or new lots created from existing lots which contain protected environmental areas must demonstrate that the proposed lots contain a buildable area of sufficient size to accommodate a single-family dwelling, regardless of the extent of the uses allowed by the underlying zoning. The demonstration of the buildable area does not establish or secure the ability of the owner or subsequent owners to construct on the site.

(2) Standards for water treatment facilities or purification facilities:

a. The restoration or enhancement of riparian buffers must meet the federal and state standards and be conducted in accordance with state and federal standards and guidelines.
b. Measures to remove or abate nuisances or any other violation of state or federal statute, administrative rule or Athens-Clarke County ordinance must demonstrate that manner of removal or abatement does not create a further negative impact on the riparian buffers or violate additional Athens-Clarke County ordinances.

(3) New transportation or utility stream crossings must meet the following criteria:
a. Water and sewerlines must run parallel to existing streams and rivers. The location of water and sewerlines shall be located as far from the bank as the physical constraints of the site allows.
b. All crossings shall be made at a right angle unless demonstrated that a right angle is not feasible.
c. The installation and maintenance of the facility shall be conducted in such a manner as to protect the integrity of the floodplain area. An installation and maintenance plan shall accompany the environmental areas review application.
d. Construction of transportation and utilities shall meet all requirements of the Erosion and Sedimentation Control Act as amended.
e. Utilities shall not impair the drinking quality of the water, as defined by the Federal Clean Water Act, as amended.

(4) The construction of one single-family dwelling on existing lot of record provided that the following criteria are met:
a. If the proposed construction is located within a protected river corridor, the dwelling shall be located on a lot that is no less than two acres in size.
b. The dwelling shall be located within the buildable area on the parcel. The available buildable area on the subject property shall be used for the proposed construction before any construction is permitted in the protected environmental area.
c. Septic tanks shall not be located within the riparian buffer.
d. Septic tank drainfields and other forms of on-site wastewater treatment shall not be located within the riparian buffer.
e. Best management practices, including sound conservation and engineering practices to prevent and minimize erosion and resulting sedimentation, which are consistent with, and no less stringent than, those practices contained in the "Manual for Erosion and Sediment Control in Georgia," published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity is permitted.
f. The stripping of vegetation, regrading, and other development activities shall be conducted in a manner to minimize erosion and shall be limited to that necessary for the construction of the single-family dwelling.
g. Cut and fill operations shall be limited to that necessary for the construction of the single-family dwelling.
h. Development plans must conform to topography and soil type, so as to create the lowest practicable erosion potential.
i. Whenever feasible, natural vegetation shall be retained, protected and supplemented.
j. The disturbed area and the duration of exposure to erosive elements shall be kept to a practicable minimum.
k. Disturbed soil shall be stabilized as in accordance with Georgia Manual for Sediment and Erosion Control.
l. Temporary vegetation or mulching shall be employed to protect exposed critical areas during the development.

m. To the extent necessary, sediment in run-off water must be trapped by the use of debris basins, sediment basins, silt traps, or similar measures until the disturbed area is stabilized. As used in this paragraph, a disturbed area is stabilized when it is brought to a condition of continuous compliance with the requirements of O.C.G.A. § 12-7-1 et seq.

n. Adequate provisions must be provided to minimize damage from surface water to cut face of excavation or the sloping surfaces of fills.

o. Cuts and fills may not endanger adjoining property.

p. Fills may not encroach upon natural watercourses or constructed channels so as to adversely affect other property owners.

q. Grading equipment must cross flowing streams by the means of bridges or culverts, except where such methods are not feasible; provided, in any case, that such crossings must be kept to a minimum.

r. Land-disturbing activity plans for erosion and sedimentation control shall include provisions for treatment or control of any source of sediments and adequate sedimentation control facilities to retain sediments on site or preclude sedimentation of adjacent waters beyond the levels specified in O.C.G.A. § 12-7-6(a).

s. The impervious area footprint of the house and accessory structures within a riparian buffer must be less than 2,500 square feet.

(5) Criteria for clearing vegetation within the riparian buffer for permitted activities:

a. Native vegetation shall be retained, protected, and supplemented within the environmental area. Limited non-mechanical clearing of vegetation is allowed within riparian buffer, provided that the vegetation removed is less than six-inch (DBH) and is not within 25 feet of the stream bank.

b. No removal of living trees within 25 feet of the stream bank.

(b) *Prohibited activities within riparian buffers.*

(1) Any new structures, land disturbance activities, or impervious surfaces other than those specifically permitted in this chapter.

(2) Handling areas for the receiving and storage of hazardous waste as defined by the State of Georgia.

(3) Hazardous waste and solid waste landfills.

(4) Agricultural waste pits.

(5) Parking lots.

(6) Those activities not specifically listed in 8-6-7(a).

(Ord. of 11-3-2004, § 1; Ord. of 8-4-2015, § 4)

## ARTICLE 4. MINIMUM BUILDABLE AREA, VARIANCE, AND VIOLATIONS

### Sec. 8-6-11. Minimum buildable area required.

All lots modified by lot line adjustments or new lots created from existing lots which contain floodplains, wetlands, riparian buffer areas, or significant groundwater recharge areas must contain a buildable area of a sufficient size to accommodate the uses permitted in the underlying zone, unless the action is for open space or conservation purposes. This section shall apply even if the effect is to prohibit further division of lots that are larger than the minimum size permitted in the zoning ordinance.

(Ord. of 11-3-2004, § 1)

### Sec. 8-6-12. Variances for environmental areas.

Where there are extraordinary and exceptional conditions pertaining to the particular piece of property in question because of its size, shape, character, topography; and the special conditions and circumstances do not result from the actions of the applicant; and the benefits of granting the variance will be greater than any negative impacts on the environmental areas or will further the purpose and intent of the Environmental Areas Protection Ordinance;

and the variance for environmental areas requested is the minimum variance that will make possible the legal use of the land, building or structure, the Athens-Clarke County Hearings Board established in Title 9 (Zoning) of this Code may grant a variance. In granting a variance, the Athens-Clarke County Hearings Board may approve or approve with conditions applications for variance that protect the integrity of the environmental areas as well as the best interests of the surrounding property and property owners and the community as a whole. Properties within protected river corridors, as defined in this chapter, are not eligible for variances. Variances for the 25-foot buffer on all state waters are subject to the provisions of Chapter 8-3 and cannot be granted by the hearings board.

(a) Application. Variances shall be heard by the hearings board in accordance with section 9-21-3. Such application shall be accompanied by the following:

(1) Site plans prepared in accordance with 8-6-3.

(2) A statement and evidence demonstrating that the following criteria are met:
a. There are unique or unusual circumstances that apply to this site which do not typically exist for parcels which contain environmental areas;
b. The approval of the application is necessary for the preservation of property rights;
c. The proposal's benefits will be greater than any negative impacts on the environmental areas, on adjacent uses and will further the purpose and intent of this chapter; and
d. The circumstances or conditions have not been willfully or purposefully self-imposed.

(3) Proposed mitigation plan that offsets the effects of the proposed encroachment during site preparation, construction and post-construction phases.

(b) No variances shall be issued unless the hearings board determines that the circumstances documented in 8-6-12(a)(2) exist and that the requirements of this chapter represent an extreme hardship for the landowner such that little or no reasonable economic use of the land is available without a variance.

(c) Any variance issued by the hearings board shall meet the following conditions:
(1) The width of the encroachment on the environmental area is the minimum necessary to provide relief; and
(2) The encroachment will not result in violations of any other local, state and federal laws, and will not impair water quality as defined by the Clean Water Act.

(d) Planning staff permit: Minor variances for protected streams with riparian buffers of 50 feet or greater.

(1) A minor variance is a reduction of up to ten percent of the buffer width over a portion of a property in exchange for an increase in buffer width elsewhere on the same property such that the average buffer width remains the same for the protected stream. No minor variance can decrease the buffer width more than ten percent of total buffer width. A property owner may request a minor variance from the requirements of the riparian buffer by submitting the appropriate application to the Athens-Clarke County Planning Department. Such applications are to be processed following the procedures for staff permits established in section 9-4-7 of this Code.

(2) Each applicant for a minor variance must submit documentation that the variance, if approved, will not result in a reduction in water quality. All minor variances shall adhere to the following criteria:
a. The width of the riparian buffer shall be reduced by the minimum amount necessary, and the width of the buffer shall never be reduced more than 25 feet.

b. Reductions in the width of the riparian buffer shall be balanced by corresponding increases in the riparian buffer elsewhere on the same property, such that there is no net reduction in the total riparian buffer area.

c. The land disturbing activities must comply with the requirements of Chapter 8-3 and all applicable best management practices.

(e) Variances to the protected environmental areas regulations do not preclude other regulations that affect the quality of the community's waterways, including, but not limited to, regulations such as the Soil Erosion and Sedimentation Control Ordinance (Chapter 8-3, Athens-Clarke County Code), Flood Protection (Chapter 8-2, Athens-Clarke County Code) or Stormwater Management (Chapter 5-4, Athens-Clarke County Code). The standards and requirements are not superseded by these standards. If the granting of a variance conflicts with these or other regulations of Athens-Clarke County, state or federal regulations, including the protection of Wetlands as defined by the U.S. Army Corps of Engineers, the more restrictive of the regulations shall govern.

(Ord. of 11-3-2004, § 1)

**Sec. 8-6-13. Penalties for violation.**

Any person, firm or corporation, whether as principal, agent, employee, or otherwise, violating or causing the violation of any of the provisions of this chapter has committed an infraction, and upon conviction thereof is punishable as prescribed in section 1-1-5 of the Athens-Clarke County Code. Such person, firm or corporation is guilty of a separate violation for each and every day during any portion of which any violation of this chapter is committed or continued by such person, firm or corporation.

(Ord. of 11-3-2004, § 1)

# Erosion and Sedimentation Requirements when Wetlands Present

**Stormwater Standards**

*The following stormwater standards are part of Wilmington, North Carolina's, Exceptionally Designed Projects standards, which provide for density bonuses when certain environmentally preferred design techniques are incorporated into developments.*

Stormwater Controls. Reduce total pollutant load leaving the site and minimize changes in overall site hydrology by use of LID techniques, or a combination of LID and conventional techniques. To qualify for bonus points in this category, the following guidelines shall be met:

(1) Site design and impervious cover reduction practices shall be used to the maximum extent practicable to minimize runoff volume;

(2) Serial combinations of the following techniques shall be used to result in a postdevelopment time of concentration (Tc) equal to the pre-development Tc:

- a. Vegetated swale conveyance of runoff;
- b. Disconnecting impervious surfaces;
- c. Lengthening of flow path;
- d. Increasing resistance (roughness) of flow path;
- e. Maximize use of sheet flow over vegetated surface;
- f. Increase flow over pervious soils to increase filtration;
- g. Flattening grades;
- h. Use of decentralized bio-infiltration, and infiltration, and storage (cisterns);
- i. Iterations and combinations of the above as approved by the City Manager.

(3) The entire retention storage volume must be retained and infiltrated.

(4) All added landscaping areas shall be made hydrologically functional for retention.

(5) The stormwater management plan shall include an approved maintenance plan and schedule.

## Acronym Index

(Alphabetical by Acronym)

| | |
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| CMPA | Coastal Marshlands Protection Act |
| CMPC | Coastal Marshlands Protection Committee |
| CUVA | Georgia Conservation Use Valuation Act |
| CWA | Clean Water Act |
| FEMA | Federal Emergency Management Agency |
| GAEPD | Georgia Environmental Protection Division |
| GADNR | Georgia Department of Natural Resources |
| GESA | Georgia Erosion and Sedimentation Act |
| HMGP | Hazard Mitigation Grant Program |
| LID | Low Impact Development |
| NOAA | National Oceanic and Atmospheric Administration |
| NRCS | Federal Natural Resource Conservation Service |
| NWI | National Wetlands Inventory |
| PDR | Purchase of Development Rights |
| SPLOST | Special Purpose Local Option Sales Tax |
| TDR | Transferable Development Rights |
| USACE | United States Army Corps of Engineers |
| USFWS | United States Fish and Wildlife Service |
| WOTUS | Waters of the United States |
| WQS | Water Quality Standards |

# NOTES

[1] *Wetlands*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/report-environment/wetlands (Feb. 27, 2024).
[2] Office of Water and Office of Research and Development, *National Wetland Condition Assessment: The Third Collaborative Survey of Wetlands in the United States*, U.S. ENV'T PROT. AGENCY (Dec. 2024), https://wetlandassessment.epa.gov/webreport/.
[3] GA. COMP. R. & REGS. 391-3-16-.03(3)(a) (2025).
[4] GA. ADOPT-A-STREAM, WETLAND MONITORING 5 (2006), https://adoptastream.georgia.gov/data-forms-2/aas-manuals.
[5] *Science Publishes EDF Analysis Warning up to 90 Million Acres of Wetlands May Now Be at Risk*, ENV'T DEF. FUND (Sept. 26, 2024) https://www.edf.org/media/science-publishes-edf-analysis-warning-90-million-acres-wetlands-may-now-be-risk.
[6] Taylor, Charles A., and Hannah Druckenmiller. 2022. "Wetlands, Flooding, and the Clean Water Act." American Economic Review 112 (4): 1334-63, https://www.aeaweb.org/articles?id=10.1257/aer.20210497.
[7] GA. ENV'T PROT. DIV., GEORGIA SURFACE WATER AND GROUNDWATER QUALITY MONITORING AND ASSESSMENT STRATEGY (2021), https://epd.georgia.gov/document/document/monitoring-strategy-update-march-16-2021pdf/download#:~:text=Groundwater%20makes%20up%2022%20percent,the%20industrial%20and%20mining%20use.
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[10] *Wetland Functions and Values,* US EPA, https://cfpub.epa.gov/watertrain/moduleFrame.cfm?parent_object_id=301&object_id=304 (March 12, 2025).
[11] *Why are Wetlands Important?*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/wetlands/why-are-wetlands-important (Mar. 11, 2024).
[12] National Marine Fisheries Service. 2024. Fisheries Economics of the United States, 2022. US Department of Commerce NOAA Technical Memorandum NMFS-F.SPO-248B
[13] *Outdoor Recreation*, U.S. BUREAU OF ECON. ANALYSIS, https://www.bea.gov/data/special-topics/outdoor-recreation (Jan. 29, 2025).
[14] Stanislaw Rzeznik & Blaire Thomson, *Outdoor Recreation Satellite Account: New Statistics for 2022 and Updated Statistics for 2017–2021*, U.S. BUREAU OF ECON. ANALYSIS (Apr. 23, 2024), https://apps.bea.gov/scb/issues/2024/04-april/0424-outdoor-recreation.htm.
[15] Jones, Charles N., et al. 2018, "Estimating restorable wetland water storage at landscape scales." Hydrological Processes 32 (2): 305-313, https://onlinelibrary.wiley.com/doi/10.1002/hyp.11405.
[16] 33 U.S.C. § 1251 et. seq. (2023).
[17] 33 U.S.C. § 1251(a) (2023).
[18] 33 U.S.C. § 1344 (2023).
[19] *Id.* § 1344(a). The term "fill material" means "material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of a water of the United States." 33 C.F.R. § 323.2(e)(1) (2025). Examples of fill material include, but are not limited to, "rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure of infrastructure in the waters of the United States." *Id.* § 323.2(e)(2). The term "discharge of fill material" means "the addition of fill material into waters of the United States." *Id.* § 323.2(f) (2025).
[20] *See* https://www.epa.gov/cwa-404/exemptions-permit-requirements-under-cwa-section-404. Activities exempt under the Clean Water Act 4040(f)(1) include: established (ongoing) arming, ranching, and silviculture activities. Last updated on March 26, 2024. Last visited 2/16/2025.
[21] Env't Prot. Agency, *Wetland Regulatory Authority,* https://www.epa.gov/sites/default/files/2015-03/documents/404_reg_authority_fact_sheet.pdf (last visited Mar. 12, 2025)
[22] 33 U.S.C. 1344(e) (2023); *see also* 33 C.F.R. § 330.1 (2025).

[23] Env't Prot. Agency, *Wetland Regulatory Authority,* https://www.epa.gov/sites/default/files/2015-03/documents/404_reg_authority_fact_sheet.pdf (last visited Mar. 12, 2025)
[24] 33 U.S.C. 1344(a) (2023).
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[26] Env't Prot. Agency, *Wetlands Compensatory Mitigation*, https://www.epa.gov/sites/default/files/2015-08/documents/compensatory_mitigation_factsheet.pdf (last visited Mar. 9, 2025).
[27] 33 U.S.C. § 1313 (2023). Water quality standards are comprised of three components: designated uses for water bodies (such as fishable/swimmable, drinking water, etc.), numerical or narrative standards for designated uses, and an anti-degradation policy.
[28] O.C.G.A. § 12-5-21 (2024).
[29] 33 U.S.C. § 1344(r) (2023); *see also* 33 U.S.C. § 1371(a)(2)(a) (2023).
[30] GA. COMP. R. & REGS. 391-3-7-.05(1) (2025).
[31] *Id.*
[32] O.C.G.A. § 12-7-6(b)(15) (2024).
[33] *Id.* § 12-7-6(b)(15)(A)(i)-(vi).
[34] *Id.* § 12-7-6(c).
[35] *Id.* § 12-5-281.
[36] *Id.* § 12-5-282(7).
[37] GA. COMP. R. & REGS. 391-3-16 (2025).
[38] *Id.* 391-3-16-.03(d), (e).
[39] *See* O.C.G.A. § 36-71-1 et seq.
[40] Please explore the details of these possibilities with your county attorney.
[41] *Hazard Mitigation Assistance Program and Policy Guide Executive Summary*, FEMA https://www.fema.gov/fact-sheet/hazard-mitigation-assistance-program-and-policy-guide-executive-summary (Jan. 21, 2025).
[42] Code of the City of Spokane, WA, Title 17E, § 17E.070.150(C)(2) (2012).
[43] SEMINOLE COUNTY, FLORIDA, SEMINOLE COUNTY COMPREHENSIVE PLAN ELEMENT: CONSERVATION, at Con-6 (2008), available at http://www.seminolecountyfl.gov/gm/planning/pdf/compplan/compplan_con_element.pdf.
[44] *See* AMERICAN RIVERS, RIVER OF RENEWAL: A VISION FOR RECONNECTING COMMUNITIES TO A LIVING MISSISSIPPI RIVER 26, *available at* http://www.americanrivers.org/assets/pdfs/reports-andpublications/river-of-renewal.pdf.
[45] O.C.G.A. § 36-66A-2 (2024).
[46] *See* PRUETZ, RICK, SAVED BY DEVELOPMENT: PRESERVING ENVIRONMENTAL AREAS, FARMLAND AND HISTORIC LANDMARKS WITH TRANSFER OF DEVELOPMENT RIGHTS (Arje Press 1997) at 39.
[47] Code of the Town of Southampton, New York, § 330-7.A.(3) (2012).
[48] *See* CENTRAL PINE BARRENS JOINT PLANNING AND POLICY COMMISSION, THE PINE BARRENS CREDIT PROGRAM: TRANSFERABLE DEVELOPMENT RIGHTS IN CENTRAL SUFFOLK COUNTY, NY (January 2010), *available at* http://pb.state.ny.us/pbc/pbc_overview.pdf.
[49] MADISON, GA., ORDINANCES, Ch. 54, Art. III, sec. 54-52 (2024).
[50] Montgomery County v. Woodward & Lothrop, Inc., 280 Md. 686, 722–23 (1977).
[51] Scott County, Minnesota, 2030 Comprehensive Plan UpdateV-17 – 18 (2011).
[52] McHenry County, Illinois, Code of Ordinances, Title 16, Ch. 16.44.060.B.2.d (2012).
[53] O.C.G.A. § 48-5-7.4 (2024).
[54] Columbia County, Georgia – Questions and Answers regarding the Columbia County Greenspace Program, http://www.columbiacountyga.gov/index.aspx?page=2786 (July 27, 2011).
[55] Alachua County, Florida, Environmental Protection Division – Conservation Options, http://www.alachuacounty.us/DEPTS/GAEPD/LANDCONSERVATION/Pages/ConservationOptionsforLandOwners.aspx (last visited December 28, 2012).
[56] *See* Pawnmart, Inc. v. Gwinnett County, 608 S.E.2d 639, 641 (Ga. 2005).
[57] *See* Franklin County v. Fieldale Farms Corp., 507 S.E.2d 460 (Ga. 1998) (noting that, in Georgia, a local law will be preempted when either a State law exists regarding the subject matter of the local law or when the local law conflicts with a State law); Jevne v. Superior Court, 111 P.3d 954 (Cal. 2005) (explaining federal preemption).

[58] O.C.G.A. § 12-2-8 (2024).
[59] 33 U.S.C. § 1370 (2023).
[60] O.C.G.A. § 12-5-281 (2024).
[61] *Franklin County*, 507 S.E.2d at 461.
[62] Diversified Holdings, LLP v. City of Suwanee, 807 S.E.2d 876, 885 (Ga. 2017) (stating police power may be "used to regulate property to prevent its use in a manner detrimental to the public interest").
[63] *Id.* at 888.
[64] *See*, *e.g.*, Norman v. United States, 63 Fed. Cl. 231, 282 (2004), *aff'd*, 429 F.3d 1081 (Fed. Cir. 2005); Brace v. United States, 48 Fed. Cl. 272, 279 (2000) ("The court holds that the United States has a legitimate public welfare obligation to preserve our nation's wetlands."); Florida Rock Indus., Inc. v. United States, 791 F.2d 893, 904 (Fed. Cir. 1986) (stating that "the preservation of wetlands bears a substantial relationship to the public welfare as perceived by the best lights of our time"); Broadwater Farms Joint Venture v. United States, 45 Fed. Cl. 154, 156 (1999) (referencing the "legitimate public welfare duty to preserve the nation's wetlands") (citation omitted); Grogan v. Zoning Bd. of Appeals of Town of E. Hampton, 633 N.Y.S.2d 809, 810 (N.Y. App. Div. 1995) ("Rather, the record demonstrates that there is an essential nexus between the easement and the legitimate governmental interest of protecting wetlands and environmentally significant areas."); Quest Enterprises, Inc. v. Town of Westford, No. 9706343C, 2002 WL 2017175, at *3 (Mass. Super. Mar. 21, 2002) ("The values promoted by wetlands regulation, including those identified as relevant here, are legitimate state interests."); Adams v. Town of Waterford, No. 560751, 2002 WL 31601002, at *5 (Conn. Super. Ct. Nov. 5, 2002) ("Regulating the use of private property in or affecting the wetlands and watercourses in order to protect the public interest is a legitimate exercise of the police power and does not, per se, constitute a taking.").
[65] *Diversified Holdings, LLP*, 807 S.E.2d at 885–86.
[66] Penn Cent. Transp. Co. v. City of New York, 438 U.S. 104 (1978).
[67] U.S. CONST. amend. V.
[68] GA. CONST. art. 1, § 3 para. 1.
[69] *See Diversified Holdings, LLP*, 807 S.E.2d at 885.
[70] *See generally id.* at 884, 885–86. Note, in addition to claiming a taking landowners might also contest the constitutionality of the ordinance. However, in Georgia, a zoning ordinance is presumptively valid, with the burden on the property owner to demonstrate that the ordinance places a "significant detriment to the landowner and is insubstantially related to . . . the public health, safety, morality, and welfare." *Id.* at 889. Interests supporting zoning restrictions on land include "aesthetics, environmental impact, injury to neighboring property, traffic impacts and potential hazards to pedestrians, and the long-range planning goals for the area." *Id.*; *see also* City of Atlanta v. Awtry & Lowndes Co., 53 S.E.2d 358 (Ga. 1949) (injury to neighboring property); Pope v. City of Atlanta, 249 S.E.2d 16 (Ga. 1978) (environmental impact); Westbrook v. Bd. of Adjustment, 262 S.E.2d 785 (Ga. 1980) (traffic impact and pedestrian hazards); City of Atlanta v. Tap Assocs., 544 S.E.2d 433 (Ga. 2001) (long-range planning goals).
[71] Bray v. Dep't of Transp., 750 S.E.2d 391, 394 (Ga. 2013) (citation omitted).
[72] *See*, *e.g.*, *Diversified Holdings, LLP*, 807 S.E.2d at 887; Mayor & Aldermen of the City of Savannah v. Savannah Cigarette & Amusement Servs., Inc., 476 S.E.2d 581, 582 (Ga. 1996) ("Even assuming that inverse condemnation is an available remedy in this type of rezoning case, that does not end the inquiry."); *see also* City of Tybee Island v. Live Oak Group, LLC, 751 S.E.2d 123, 126 (Ga. 2013) ("While the theory of inverse condemnation arises out of the eminent domain paragraph of the Georgia Constitution, . . . it is not synonymous with a claim attacking the constitutionality of an existing zoning ordinance following the denial of an application to rezone . . . .").
[73] D. Rose, Inc. v. City of Atlanta, 859 S.E.2d 514, 514 (Ga. App. 2021).
[74] *Id.* at 515.
[75] *Id.* at 517.
[76] *Id.* at 516 (quoting *Diversified Holdings, LLP*, 807 S.E.2d at 887–88); *see also D. Rose, Inc.*, 859 S.E.2d at 516 ("[W]e have identified no zoning case where the party claiming inverse condemnation received a takings remedy, that is, financial damages to compensate for the loss of their property.") (quoting *Diversified Holdings, LLP*, 807 S.E.2d at 888 (citation omitted)).
[77] CENTER FOR WATERSHED PROTECTION, WETLANDS AND WATERSHEDS ARTICLE SERIES, ARTICLE 6: THE IMPORTANCE OF PROTECTING VULNERABLE STREAMS AND WETLANDS AT THE LOCAL LEVEL 25 (2007).
[78] Baldwin County, Alabama, Zoning Ordinance, Art. 10, § 10.4 (2002).
[79] DARIEN, GA., ORDINANCES, Appendix A, Article XVI, Sec. 20-2513 (2024)

[80] CHARLESTON, SC, ORDINANCES, Article 3, Part 8, Sec. 54-347.1 (2024).
[81] ALACHUA COUNTY, FL, ORDINANCES, Part II, Ch. 77, Article II, Sec. 77.19.
[82] FIFE, WASHINGTON, ORDINANCES, Title 17, Ch. 17.05 (2024)
[83] http://www.ftbelknap.org/ENVIRgap/pdf/ARPO_final_draft_II.pdf
[84] Matthews County, Virginia, Code of Ordinances, Chapter 175 Zoning, Chapter 166 Wetlands (2012).
[85] City of Dunwoody, Georgia, Rezoning Application 4, 11, *available at* http://www.dunwoodyga.gov/Libraries/Community_Development_Documents/Rezoning_Application.sflb.ashx.
[86] City of Watertown, Wisconsin, Zoning Code, Ch. 22.03(4)(a), *available at* http://www.ci.watertown.wi.us/Ordinances/Chapter%2022.pdf (2009).
[87] WISCONSIN WETLANDS ASSOC., LAND USE AND WETLANDS: ZONING OPPORTUNITIES TO IMPROVE WETLANDS PROTECTION 26 (2011)
[88] Marinette County, Wisconsin, Shoreland-Wetland Zoning Ordinance, Ch. 21.02(9), 21.05 (2012).
[89] Code of Hall County, Georgia, Title 17, Ch. 17.225 (2012).
[90] The Code of Brantley County, Georgia, Pt. II, Ch. 40, Art. II, Div. 2.
[91] *See* CENTER FOR WATERSHED PROTECTION, WETLANDS AND WATERSHEDS ARTICLE SERIES, ARTICLE 3: ADOPTING WATERSHED TOOLS TO PROTECT WETLANDS 15 (2005).
[92] City of Watertown, Wisconsin, Zoning Code, Ch. 22.03, available at http://www.ci.watertown.wi.us/Ordinances/Chapter%2022.pdf (2009).
[93] Fairfax County, Virginia, Zoning Ordinance, Part 9, 2-900 (2012), available at http://www.fairfaxcounty.gov/dpz/zoningordinance/articles/art02.pdf.
[94] Louisville, Kentucky, Land Development Code, Open Space Standards, Ch. 10.5.3.D.2 (2006), available at http://www.louisvilleky.gov/NR/rdonlyres/A2E691C7-1A3A-4C01-91DC-56BC8FA17560/0/C10P05March06.pdf.
[95] Corpus Christi, Texas, Zoning Ordinance, Art. 6C, at 6C7(B) (2010), available at http://www.cctexas.com/files/g33/Public%20Copy%20of%20Cottage%20Housing%20District%20Ordinance%20031510.pdf.
[96] PITT, ROBERT ET AL, CONSTRUCTION SITE EROSION AND SEDIMENT CONTROLS 1 (DEStech Publications 2007).
[97] ATLANTA REGIONAL COMMISSION, GEORGIA STORMWATER MANAGEMENT MANUAL, VOLUME 2 (TECHNICAL HANDBOOK) 1.4-5 (2001).
[98] *Id.* at 1.4-6
[99] *See* CENTER FOR WATERSHED PROTECTION, WETLANDS AND WATERSHEDS ARTICLE SERIES, ARTICLE 3: ADOPTION WATERSHED TOOLS TO PROTECT WETLANDS 30 (2005).
[100] Cheboygan County, Michigan, Soil Erosion Sedimentation and Stormwater Runoff Control Ordinance (2012), available at http://www.cheboygancounty.net/__library/sessrc_ordinance.pdf.
[101] Mecklenburg County, Virginia, Soil Erosion and Sedimentation Control Ordinance 8(a) (2012), *available at* http://charmeck.org/mecklenburg/county/WaterandLandResources/LandDevelopment/Documents/ErosOrd.pdf.
[102] CENTER FOR WATERSHED PROTECTION, *supra* note 92, at 30.

## THE RIVER BASIN CENTER

The University of Georgia River Basin Center works with external partners to connect freshwater science to management and policy. It has more than 80 faculty affiliates who bring an exceptional range of disciplinary expertise to address pressing water problems in Georgia and beyond.

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The Land Conservation Clinic at the University of Georgia supports land conservation efforts in Georgia and the southeast. The Clinic, an interdisciplinary collaboration with UGA's School of Ecology, focuses on transactional and policy matters that impact land conservation. Clients include nonprofits, government agencies, and university researchers.

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