



## Local Planning Considerations for Wetlands

Office of Water Quality

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### Introduction



Local government planning comes with many challenges, not the least of which is coordinating with outside agencies on the permitting of protected resources like wetlands and streams. It is important for planning officials and their engineering counterparts to understand when development activities may require Section 401, Section 404, construction stormwater permit coverage, and other waterway related permits. Local leaders also play an important role in the protection of critical water resources and related community health and resiliency.

### Common Development Activities That May Require a Waterway Permit:

- Bridge replacement over a waterway.
- Encapsulation (piping or culverting) of any waterway.
- Stream relocation.
- Wetland fill or dredging for land development.
  - Buildings.
  - Parking lots.
  - Roads or road widening.
- Construction in a floodway.
- Discharge into waterways, like streambank stabilization projects.
- One acre or more of land disturbance.



### Contact Information and Additional Resources

The Indiana Department of Environmental Management (IDEM) is often the best place to start if waterway impacts are likely to be part of a proposed project. Wetland project managers are assigned to various parts of the state and can provide step-by-step guidance and resources. Contact info for project managers can be found at <https://www.in.gov/idem/wetlands/2347.htm>, or call 317-233-8488 or toll-free 800-451-6027.

All proposed development sites should be evaluated for the presence of water resources. Several free online GIS maps are available that can be used to scout potential stream and wetland locations. The IndianaMap website is an easy to use, comprehensive tool that covers the entire state: <https://www.indianamap.org/>.



Supplemental information about wetlands and streams including identification, regulation, and permitting can also be found at <https://www.in.gov/idem/wetlands/index.htm>. These resources are great for initial planning, but should plans progress for a project, a wetland delineation should be conducted to verify existing resources on-site as early as possible.

### Other Important Things to Know

Existing wetlands cannot be used for stormwater management without pre-treatment. If pre-treatment is not feasible, permits should be submitted to IDEM and may require mitigation.

Existing streams cannot be used for in-line stormwater detention without permit approval and mitigation.

The state and federal wetland permit process may take up to 12 months, so plan projects accordingly. Time spent in permit application preparation, permit review, and approval is related to the scale of proposed impacts. Identifying alternatives or avoidance and minimization measures could save time and money.

The stream and wetland mitigation program can provide opportunities for communities to restore wetlands and streams (i.e., state-led or private development projects may need mitigation sites and would therefore pay to create natural area improvements in your community).

Wetlands can be great community amenities (e.g., boardwalks or birdwatching). However, any structures put in place to facilitate community use should be designed to minimize impacts.

Local governments can create their own wetland and floodplain protection through local ordinances. This can be a great tool to help further protect critical local resources that support local environmental goals.



### **How Wetlands Benefit Urban Areas and Why They Should Be a Part of Comprehensive Planning**

Local planners and engineers play a critical role in the quality, sustainability, and health of their respective communities. Comprehensive plans and their associated zoning and development ordinances control the built environment. Respecting and elevating important natural resources like wetlands and streams can directly protect communities and create valuable, cost-efficient quality of life elements.

**Store water:** Wetlands reduce the amount of potential flooding within urban areas.



- One acre of wetland can typically store about one million gallons of water.
- Trees and other wetland vegetation slow the speed of flood waters and uptake, store, and transpire large volumes of water. The vegetation also stabilizes the soil, reducing erosion.
- These wetland services lower peak flood heights and reduce their destructive potential.



**Clean water:** Wetlands can filter harmful nutrients and other pollutants from runoff water by naturally storing, trapping, and chemically altering contaminants. By acting as a buffer, wetlands can filter stormwater runoff before it enters local waterways.

**Fight climate change:** Wetlands can store carbon, preventing its release into the atmosphere as a greenhouse gas. Forested wetlands also cool urban climates and improve local air quality.

**Promote healthy and happy lifestyles:** Wetlands provide greenspace where residents can enjoy diverse plant and animal life. Greenspaces can improve property values and benefit physical and mental health.



Photographs: Beckenholdt Park, Greenfield Parks and Recreation, Indiana; wetland boardwalk and interpretive sign.

### **Reference**

- <https://markets.businessinsider.com/news/stocks/urban-wetlands-make-cities-more-livable-1014836466>
- <https://science.howstuffworks.com/environmental/green-science/urban-planning2.htm>