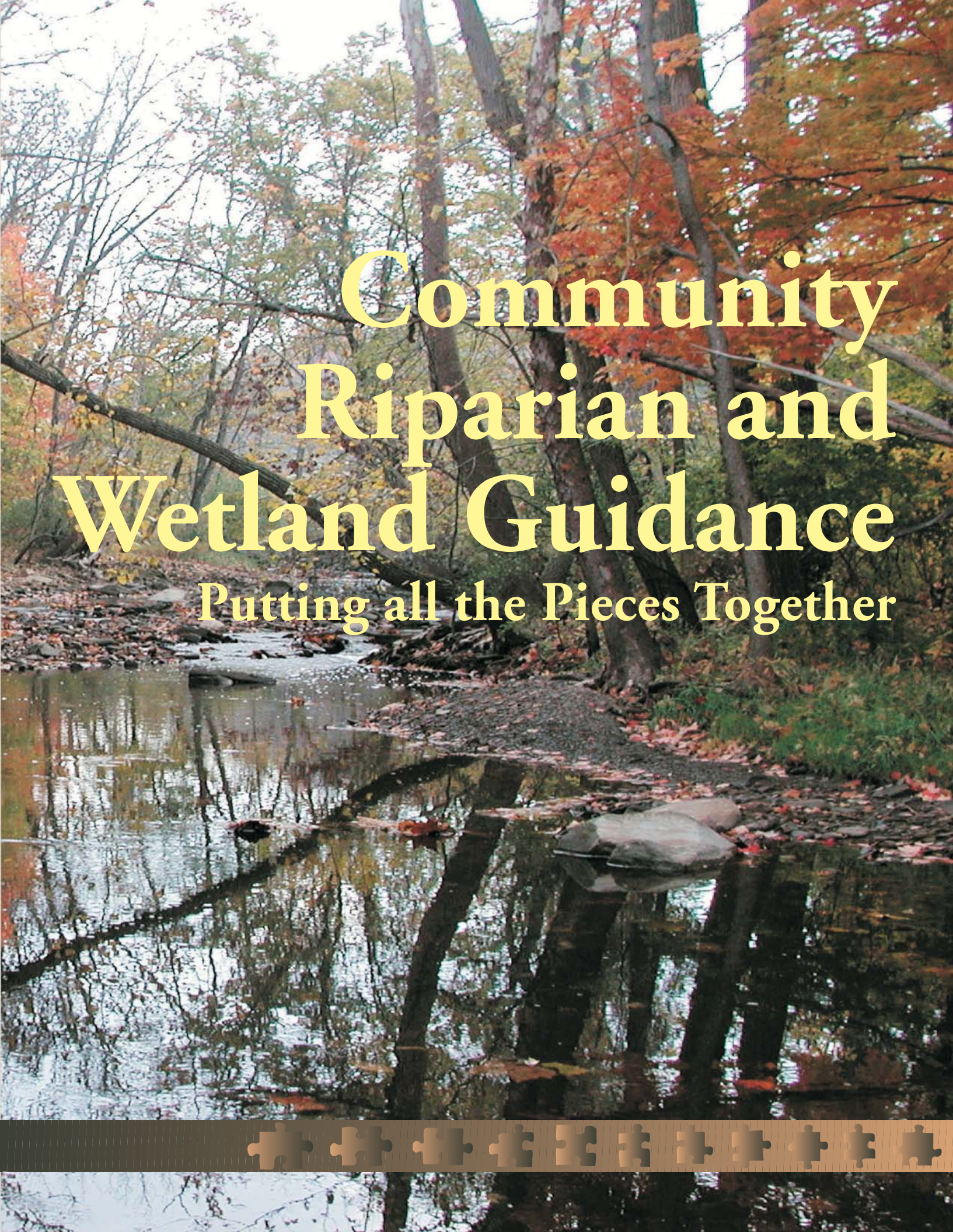


Community Riparian and Wetland Guidance

Putting all the Pieces Together

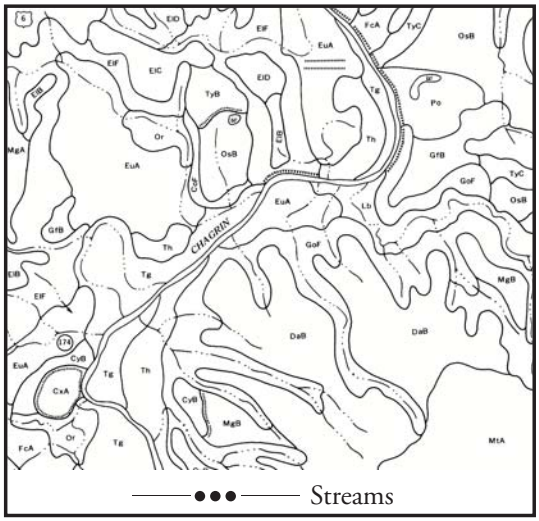
What are Riparian Zones and Wetlands?

Riparian zones are the lands along the banks of rivers and streams that separate the water from the surrounding landscape. These corridors stretch from a stream's intermittent headwaters to its mouth and are directly influenced by flowing water. Riparian zones, when appropriately sized and well-vegetated, maintain healthy streams and aquatic life.

Well-vegetated riparian zone.

Poorly vegetated riparian zone with eroding streambank

Streams have defined bed and banks with continuous or periodically flowing water. They can be as large as the Cuyahoga River or as small as a rivulet flowing intermittently through a woodland. Some may serve as hydrologic connections between wetlands. Many headwater streams are much smaller, have intermittent flows, and are difficult to identify. These very small streams usually are not found on USGS topographic maps. County soil maps and/or local Soil and Water Conservation District staff should be consulted to determine if a small intermittent stream falls under local setback regulations.



Wetlands include lakes, ponds, swamps, marshes, bogs, and similar areas that are delineated in accordance with the 1987 US Army Corps of Engineers wetland delineation manual. Section 6111.02 of the Ohio Revised Code also defines "wetlands" as those areas that are inundated or saturated by surface or ground water at a frequency and duration that are sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wetlands may be located with the use of the Ohio Wetland Inventory, the National Wetland Inventory, local soil surveys or topographic maps. Additionally, many areas may have more recent local wetland inventories or field survey data available. Your local SWCD, Ohio EPA, or a professional environmental firm may be able to assist in identification and classification of wetlands.

Local Riparian and Wetland Setback ordinances are defined here as those that meet the minimum standards established by the Northeast Ohio Regional Storm Water Task Force in the development of its model setback ordinance. These setbacks protect a Community's water resources and satisfy Ohio EPA's NPDES Phase II Storm Water Permit requirements

It takes time to properly train community employees. Plan on initially using outside consultation by trained and experienced specialists, such as local Soil and Water Conservation District staff, in identifying all categories of regulated streams and wetlands. These professionals can also provide expertise in the areas of protecting the existing natural vegetation in setback areas and mitigation of any damages done.

Riparian and Wetland setbacks protect the function of waterbodies managed by other programs. Jurisdictional streams and wetlands are under regulation by the US Army Corps of Engineers and Ohio EPA. Isolated wetlands require a permit from the Ohio EPA Section 401 Water Quality Certification Section.

The Ohio EPA has adopted regulations that categorize wetlands based on their quality and impose differing levels of protection based on the wetland's category (OAC Rules 3745-1-50 through 3745-1-54). These regulations specify three wetland categories corresponding to wetlands of low, medium and high "quality". Mitigation requirements increase with the wetland category.

Category 1 Wetlands (Low Quality)

- Support minimal wildlife habitat, and minimal hydrological and recreational functions
- Do not provide critical habitat for threatened or endangered species or contain rare, threatened or endangered species
- Often have low species diversity, no significant habitat or wildlife use, limited potential to achieve beneficial functions, and/or a predominance of non-native species
- Some may have reasonable potential for restoration to Category 2

Category 2 Wetlands

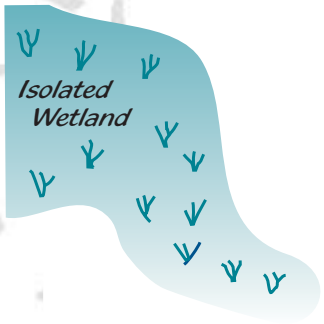
- Support moderate wildlife habitat or hydrological or recreational functions
- Dominated by native species but generally without the presence of, or habitat for, rare, threatened, or endangered species
- Includes wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions

Category 3 Wetlands (High Quality)

- Have superior habitat, or superior hydrological or recreational functions
- Have high levels of diversity, a high proportion of native species and/or high functional values
- Includes wetlands which contain or provide habitat for threatened species
- Are high quality mature forested wetlands, vernal pools, bogs, fens, or which are scarce regionally and/or statewide
- Impacts to these high quality wetlands should be avoided

If you comply with properly sized local setbacks, you avoid disturbance of regulated streams and wetlands and the need for Federal and State permits.

Riparian Area and

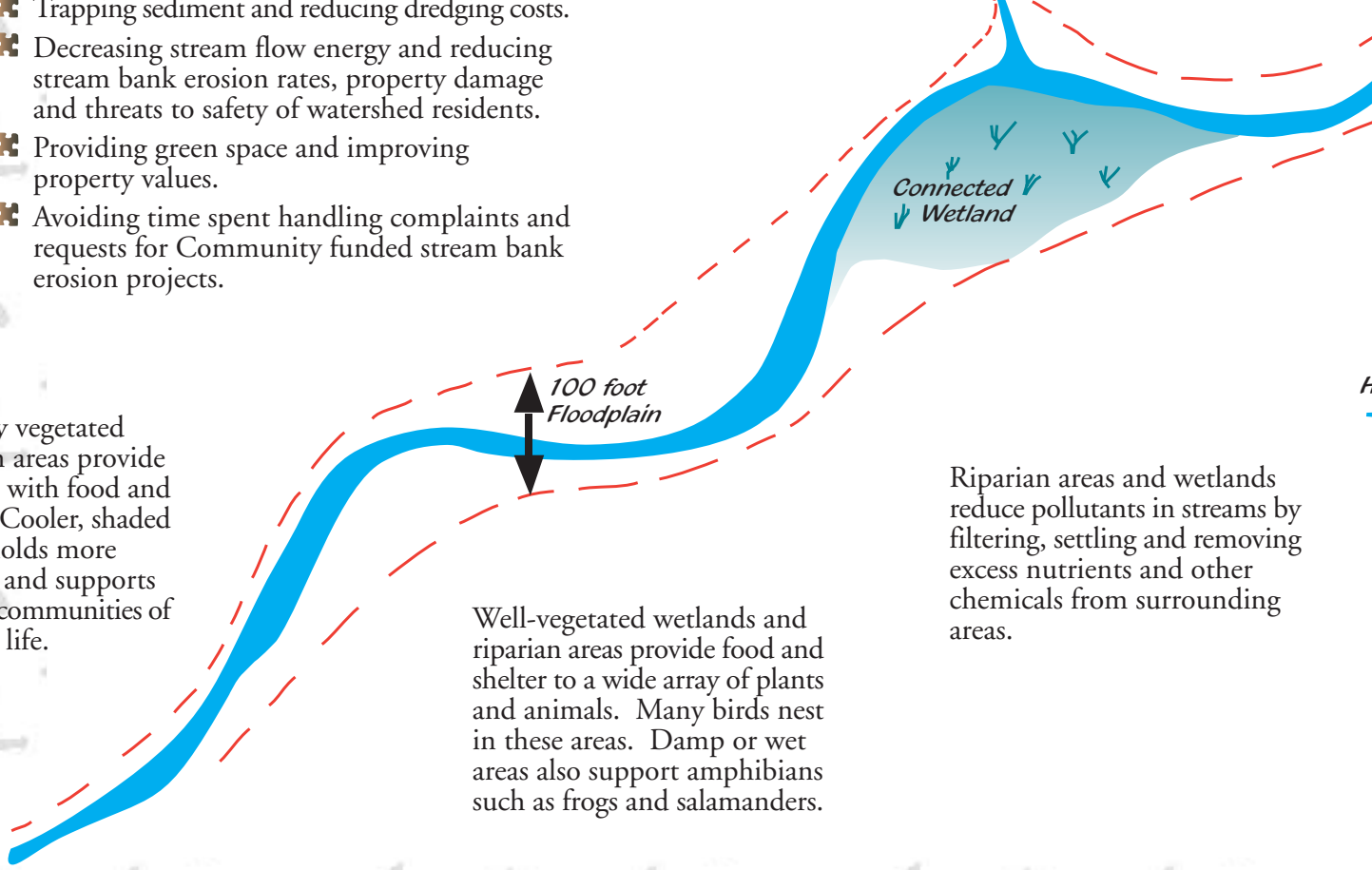


Well-vegetated riparian zones assist in stabilizing stream banks to reduce erosion and sediment transport to downstream areas.

Mile for mile, small intermittent and perennial headwater streams provide more food for aquatic life and refuge for sensitive species than larger streams.

Healthy, well-vegetated riparian zones and wetlands benefit a community <u>economically</u> by:

- Minimizing encroachment on stream channels and the need for costly engineering solutions such as dams or riprap to protect structures.
- Improving a Community's quality of life by contributing to the scenic beauty and recreational benefits in an area.
- Storing water in wetlands and floodplains for protection against flood damage.
- Trapping sediment and reducing dredging costs.
- Decreasing stream flow energy and reducing stream bank erosion rates, property damage and threats to safety of watershed residents.
- Providing green space and improving property values.
- Avoiding time spent handling complaints and requests for Community funded stream bank erosion projects.

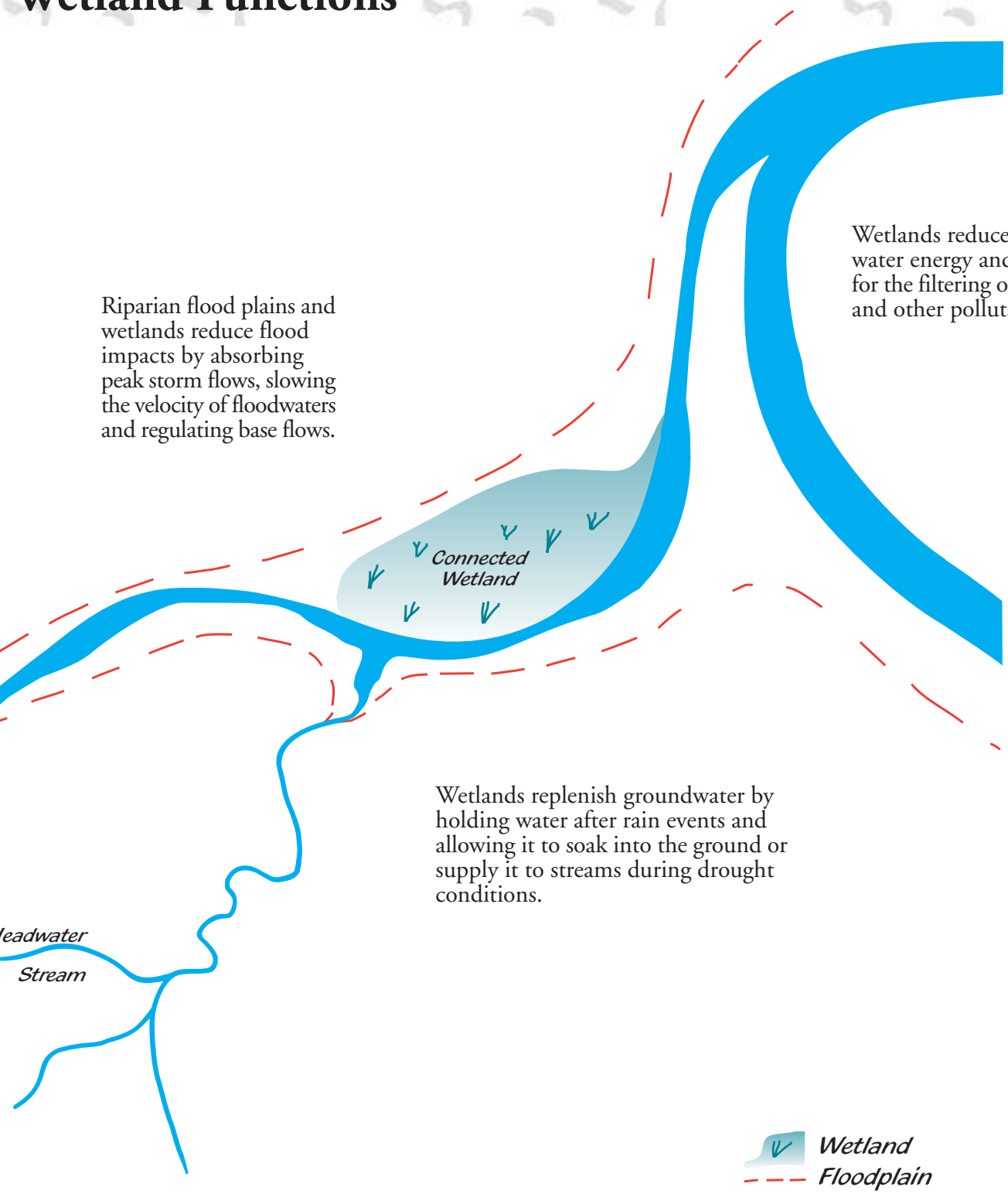


Healthy vegetated riparian areas provide streams with food and shade. Cooler, shaded water holds more oxygen and supports diverse communities of aquatic life.

Well-vegetated wetlands and riparian areas provide food and shelter to a wide array of plants and animals. Many birds nest in these areas. Damp or wet areas also support amphibians such as frogs and salamanders.

Riparian areas and wetlands reduce pollutants in streams by filtering, settling and removing excess nutrients and other chemicals from surrounding areas.

Wetland Functions



Principles of Riparian Area

Principle 1: Support of the Environment: Protection of wetlands and riparian areas is the most important thing that we can do to maintain our local environment.

Riparian and wetland protection is conservation in action.

Principle 3: Protection of Property Values: Nobody's property values are maintained if their house or garage is in danger of being flooded or is about to collapse into a stream channel due to stream bank erosion. "Green" properties with a water view from a safe distance are the properties with the highest values.

The communities in Northeast Ohio that have the most park like settings are the communities with the highest property values.

Principle 2: The Danger Zone: Every building that suffers flood damage or is in danger of being undermined by stream bank erosion is located in the Riparian Area. All damage to such buildings and all protection costs are the responsibility of the landowner. Any public infrastructure in the riparian area can incur damage and must be maintained.

and Wetland Protection

Principle 4: Downstream Liability: The loss of riparian zone function increases stream flow and erosive forces in downstream areas. The Storm Water Phase II Program is one mechanism that highlights this fact to communities. Failure to avoid riparian zone function losses, after being duly warned of the consequences, exposes a community to damage claims from downstream landowners.

Principle 5: Compliance with Ohio EPA's Storm Water Permits:

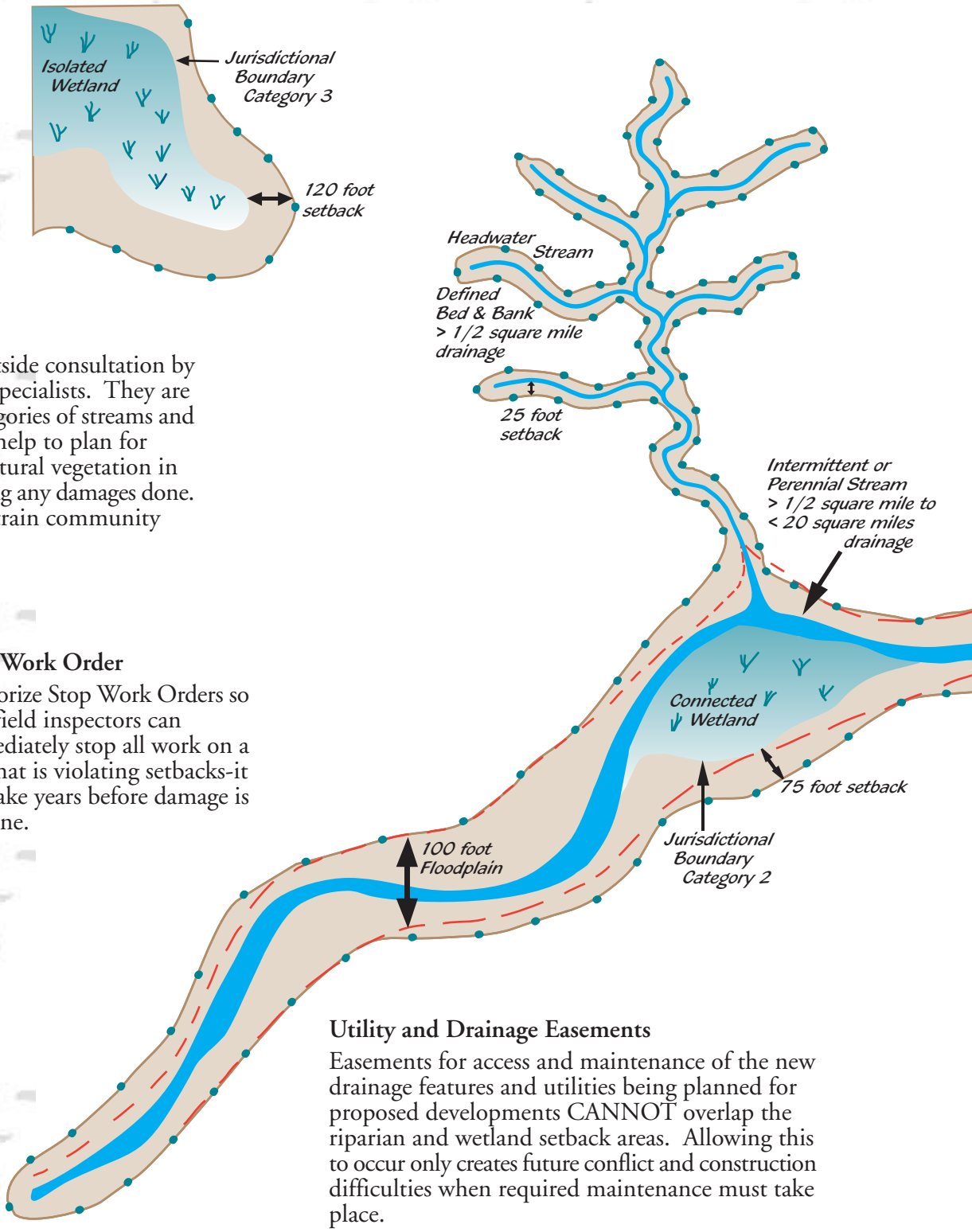
Permit Requirement (Section 3.2.5.1.3)
Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law;

Permit Requirement (Section 3.2.5.2.3.1)
Policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation.

<u>Properly sized riparian and wetland setbacks meet all of these requirements and provide conservation benefits for your community.</u>

The Northeast Ohio Regional Storm Water Task Force reviewed these principles and determined that setbacks were the best method of achieving riparian and wetland protection while complying with the Phase II Storm Water requirements. If you are not using setbacks, you are violating the principles of riparian and wetland protection. Every other scenario results in losses to riparian or wetland functions or requires remediation, either at the landowner's or the Community's expense. Under the Phase II Program, even with the ordinances in place, the Community must provide for the remediation of any disturbances allowed by any granted variances. Ohio EPA has endorsed the Task Force's recommendation and requires that communities document all variance actions in their annual Phase II Reports.

Critical Components of an



Consultations

Plan on initially using outside consultation by trained and experienced specialists. They are needed to identify all categories of streams and wetlands. They can also help to plan for protecting the existing natural vegetation in setback areas and mitigating any damages done. It takes time to properly train community employees.

Stop Work Order

Authorize Stop Work Orders so that field inspectors can immediately stop all work on a site that is violating setbacks-it can take years before damage is undone.

Utility and Drainage Easements

Easements for access and maintenance of the new drainage features and utilities being planned for proposed developments CANNOT overlap the riparian and wetland setback areas. Allowing this to occur only creates future conflict and construction difficulties when required maintenance must take place.

Effective Setback Ordinance

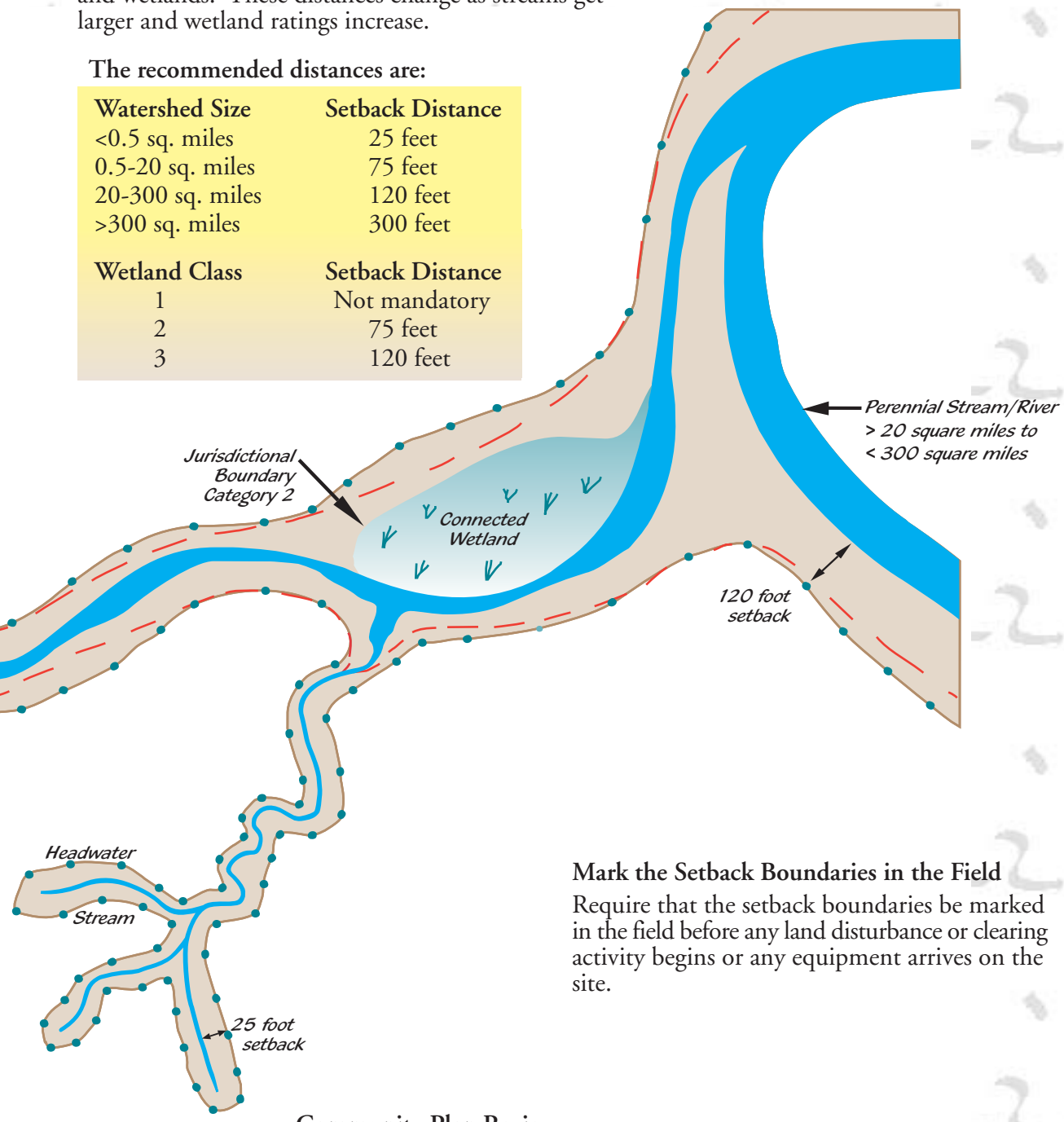
Setback Distances

Recommended setback distances are based on the analysis of scientific studies that indicate the **minimum** setbacks required to maintain the functioning of riparian areas and wetlands. These distances change as streams get larger and wetland ratings increase.

The recommended distances are:

Watershed Size	Setback Distance
<0.5 sq. miles	25 feet
0.5-20 sq. miles	75 feet
20-300 sq. miles	120 feet
>300 sq. miles	300 feet

Wetland Class	Setback Distance
1	Not mandatory
2	75 feet
3	120 feet



Mark the Setback Boundaries in the Field

Require that the setback boundaries be marked in the field before any land disturbance or clearing activity begins or any equipment arrives on the site.

Community Plan Review

Require that all setback boundaries be clearly shown on all plans, including preliminary plans, that are submitted for review and approval.

Wetland
Floodplain
Setback

Issues Commonly Raised Regarding

Setback ordinances contain a grandfather clause. Setbacks do not affect structures or uses existing at the time of passage of the Community's regulations.

All tributaries are protected by the setback requirements. It is becoming increasingly recognized that the smaller tributary streams are extremely important and the most in need of protection. Variances should not be granted for the relocation/redirection of streams to accommodate a building project.

While there are many ramifications involved with redevelopment projects, the most basic is to restrict any additional loss of riparian area functioning. Ideally, redevelopment will help to recover previous losses.

When absolutely necessary, the relocated stream channel shall incorporate natural channel design including commonly accepted bioengineering stabilization techniques. Full setback width must be applied to the new channel. If any of this setback width falls on adjoining property, prior approval and acceptance must be secured from all affected property owners.

Riparian Setback Ordinances

The Community needs to track the variances granted as well as the associated reasons. Any mitigation required needs to be documented and verified by the Community. This information should be submitted to Ohio EPA as part of the Community's Annual Storm Water Management Report. Your decisions now tend to set precedents for future decisions.

The use of conservation easements on riparian and wetland setbacks is a way to protect these areas over time and can prevent the need for future variances as well.

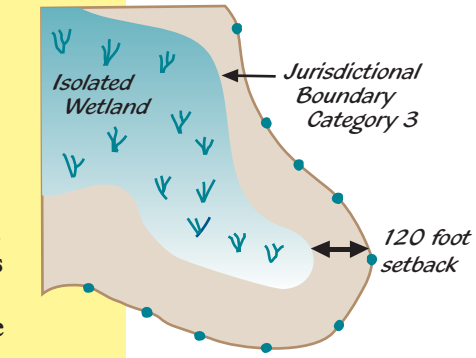
During redevelopment, no structures should be built in areas where they would be subject to flooding or to bank erosion. All streams naturally shift their banks over time. Additional setbacks that serve to protect the riparian area can be varied if adequate mitigation is provided.

There are, as of yet, no definitive maps of the setback requirements. The Community must make the determination on a case-by-case basis until a definitive map is created. County soil maps and local Soil and Water Conservation District staff may need to be consulted in the interim.

Preliminary Plan

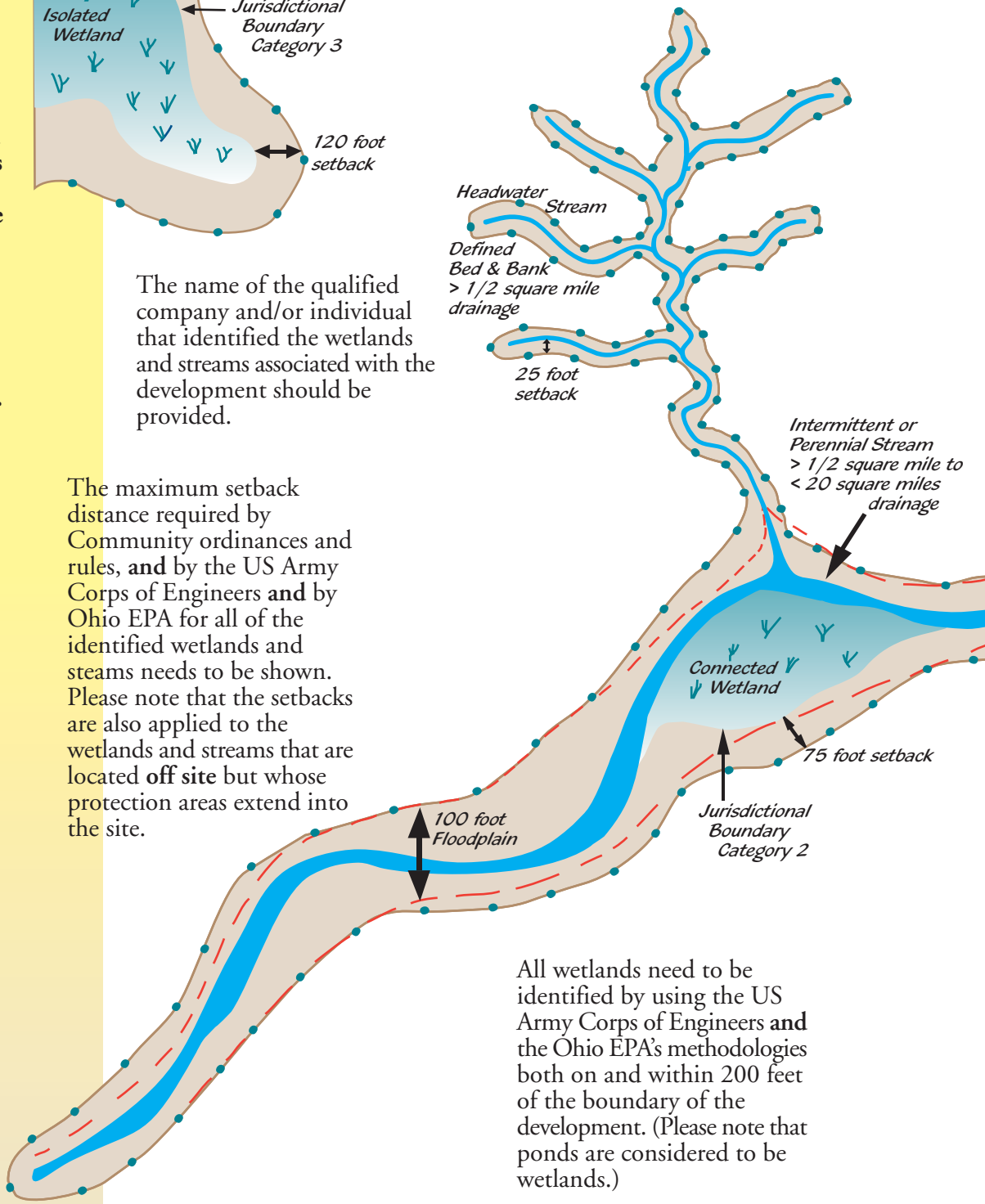
The first submittal to the Community should be a preliminary plan. While the preliminary plan submittal should not require the applicant to spend large amounts of money and time to develop, that plan should contain realistic estimates of the features that will need to be engineered. The applicant should also submit accurate information based on the natural resources and the landscape as well as detailed information on the wetlands and streams.

The identification and location of all regulated setbacks need to be accomplished at the very beginning of the planning process so as to minimize problems and delays later on.



The name of the qualified company and/or individual that identified the wetlands and streams associated with the development should be provided.

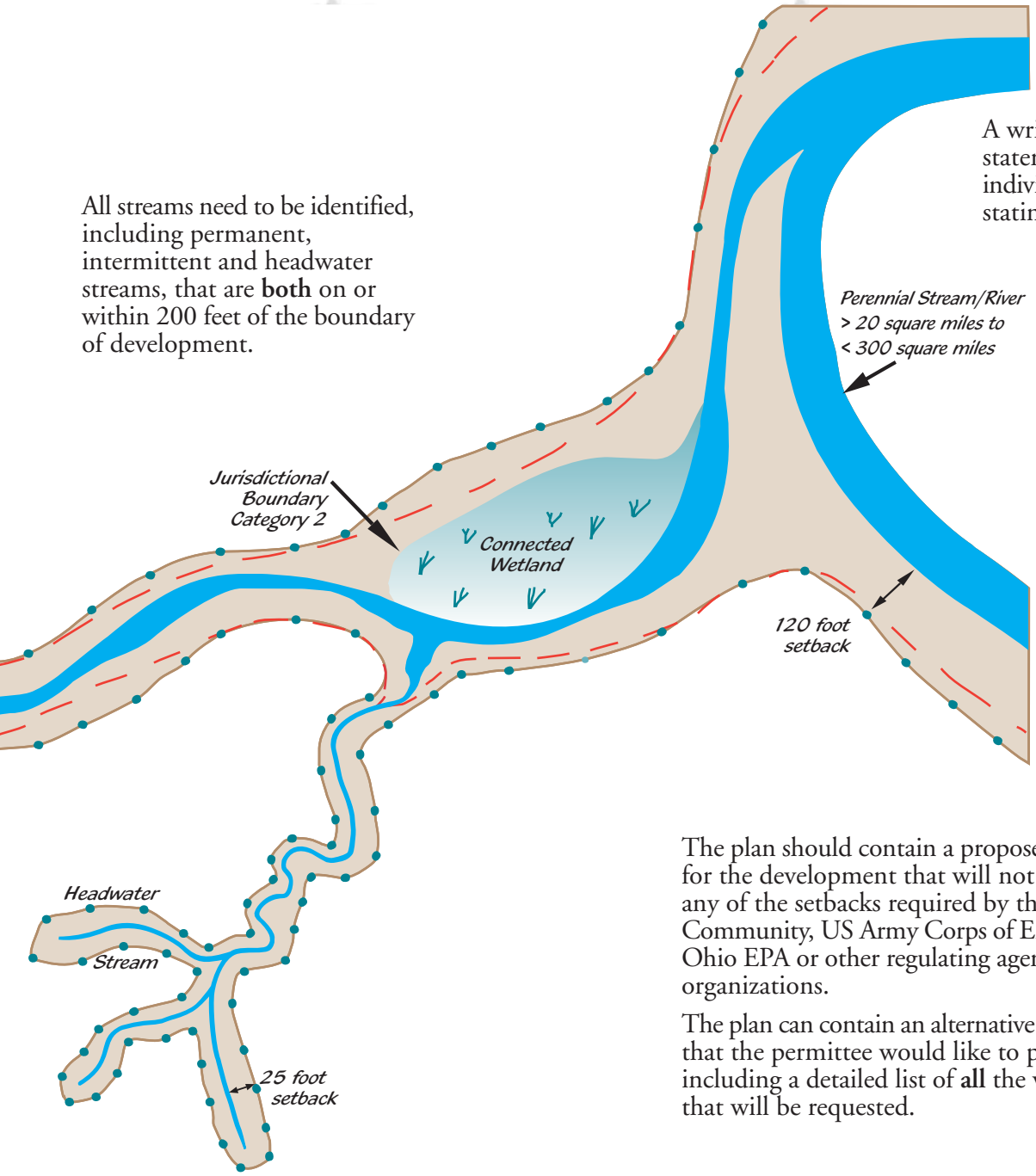
The maximum setback distance required by Community ordinances and rules, **and** by the US Army Corps of Engineers **and** by Ohio EPA for all of the identified wetlands and steams needs to be shown. Please note that the setbacks are also applied to the wetlands and streams that are located **off site** but whose protection areas extend into the site.



All wetlands need to be identified by using the US Army Corps of Engineers **and** the Ohio EPA's methodologies both on and within 200 feet of the boundary of the development. (Please note that ponds are considered to be wetlands.)

Submission Guidelines

All streams need to be identified, including permanent, intermittent and headwater streams, that are **both** on or within 200 feet of the boundary of development.



A written, dated and signed statement from a qualified individual(s) needs to be provided stating that either:

- no permits will be needed from the US Army Corps of Engineers or Ohio EPA for the proposal being presented, or;
- the timeline for the permitting process that will take place to obtain the necessary permits from the US Army Corps of Engineers and/or Ohio EPA for the proposal being presented.

The plan should contain a proposed layout for the development that will not disturb any of the setbacks required by the Community, US Army Corps of Engineers, Ohio EPA or other regulating agencies and organizations.

The plan can contain an alternative proposal that the permittee would like to present including a detailed list of **all** the variances that will be requested.

The location and estimated size of all planned storm water management basins and water quality basins should be shown on the plan. All necessary maintenance easements for these basins need to be shown as well.

Guidelines for Considering

Reduction of the riparian zone results in increased stress on downstream lands and stream channels. This often results in increased costs to other landowners and the taxpayers. The effect of any application for a riparian setback variance must be weighed against the potential risks to all landowners.

Usually the Community Zoning Board has the exclusive power to order the issuance of variances from the terms of any official controls including restrictions placed on nonconformities. Variances should only be permitted when they are in harmony with the general purposes and intent of the riparian and wetland setback ordinance, in cases where there are practical difficulties or particular hardship in the way of carrying out the strict letter of any official control, and when the terms of the variance are consistent with the Community's comprehensive plan. The Zoning Board should consider the criteria set forth below when passing upon a variance request:

Has the applicant demonstrated a hardship?

Hardship means that the property cannot be put to a reasonable use under conditions allowed by the Zoning Ordinance. Economic considerations alone do not constitute a hardship.

Are there exceptional circumstances, unique to this property, which were not created by the landowner?

An example of an exceptional circumstance that **IS** caused by the landowner is the splitting of an existing parcel such that one or more sublots cannot be built on without a setback variance. Variances for parcel splits that precede the date of the community's Riparian and Wetland Setback Ordinance may be considered. Avoidance of rights-of-way, such as for power lines that existed prior to the passage of the community's Riparian and Wetland Setback Ordinance is an example of an exceptional circumstance that **IS NOT** created by the landowner.

Can the variance be granted without upsetting the purpose and intent of the Zoning Ordinance?

The Public Purpose section of the Northeast Ohio Regional model ordinance identifies seven considerations for protecting the ability of riparian areas to function properly. The applicant for a variance must demonstrate that these elements are either not affected by the variance or will be mitigated to a reasonable degree.

Can the variance be granted without altering the essential character of the surrounding area?

The variance should not irrevocably change the area so as to harm the function of the riparian area of the landowner, or remove or reduce the function of adjoining and downstream landowner's properties?

Is the variance requested the minimum variance that would alleviate the hardship?

Giving in to the landowner now might bring a sense of peace to the zoning board and other Community officials, but in the long run potential damage to other property, and reduction of wetland or riparian functions could lead to long term problems for your community.

Riparian Setback Variances

The Zoning Board may impose conditions upon a variance that relate to the purposes and objectives of this Ordinance. If conditions are imposed, the variance shall not be effective until the conditions are fully complied with. A conditional variance shall be in effect only as long as the condition is complied with. If a condition is not being complied with, the Zoning Board at its next meeting with public notice should revoke the variance and the Community should pursue any and all enforcement remedies available to it.

Simultaneous Considerations

The Zoning Board must examine all of these considerations as a package concept when a variance is requested. This is critical concept because ALL of the functions of both riparian areas and wetlands work together in order to provide the environmental benefits being protected.

1. Does the variance request extend into the active floodplain? This is where it may affect the reduction of flood impacts by causing a reduction in the absorption of peak flows, or by reducing the stream's ability to slow the velocity of floodwaters?

2. If the variance request does extend into the active floodplain, measures must be taken to insure that stream bank stability is not impaired so as to result in bank erosion and downstream transport of sediment.

3. If the variance request does extend into the active floodplain, measures must be taken to offset the loss of vegetation that acts to reduce the pollutants in the watercourse by filtering, settling, transforming, and absorbing pollutants already present in the watercourse.

4. One purpose of the riparian area that is to be protected is the reduction of pollutants in runoff before it enters the watercourse. Any variance request to disturb riparian vegetation must include a provision to collect and route the runoff that would have been treated by the disturbed area to a water quality pond or other suitable storm water quality improvement treatment option.

5. Woody vegetation along a stream channel provides for cooling of the watercourse through the effects of shading. Plant materials also offer a food source for aquatic organisms and the root masses may provide soil erosion protection. It is important to maintain at least minimal coverage of the watercourse. While it is important to maintain as much woody vegetation in the stream's riparian area as is possible, leaving at least one row of mature trees or other woody vegetation at the top of the bank will minimize impacts on this function. Note that vegetation beyond the first row at the top of the bank may serve to provide others functions beyond shade and removal of this line of vegetation must be very carefully considered.

6. Vegetated riparian areas perform an important habitat function for a variety of plants and animals. Maintaining integrated habitat corridors is an objective of the effort to maintain and protect riparian areas.

For all variance requests, the applicant must address how adverse impacts will be mitigated in order to maintain the function of the riparian area or wetland. It is the responsibility of the Community Zoning Board to fairly judge the applicant's mitigation compared to the reduction in function and how to make-up for the loss in riparian or wetland function, and to prepare the report for the Community's Ohio EPA NPDES permit. The Community Zoning Board must be aware that all variances must be mitigated.

The final judge will be how your community addresses each variance in your annual report to Ohio EPA!

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