

Non-Structural BMP Corrective Action Case Studies



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How to Minimize the Need for Corrective Actions?

1. Enact prescriptive, **detailed** local codes/resolutions
2. Educate community staff, officials, contractors, etc.
3. Develop and implement a **thoughtful** plan review process
4. Ensure that setback areas are demarcated in the field with orange construction fence **prior** to construction starting
5. Perform **detailed** compliance inspections to **guide** the construction process

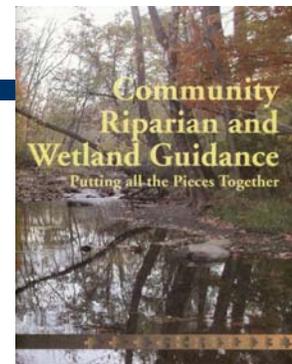
1) Pass Prescriptive Local Code/Resolution

Northeast Ohio Regional Storm Water Task Force

- *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*

2) Education Targets

- Planning Commission
- Zoning Board
- Council
- Staff
- Commissioners
- Trustees
- Consultants
- Contractors
- Residents

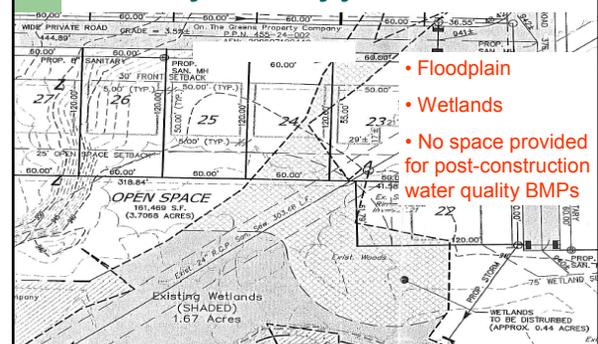


3) Thoughtful Plan Review

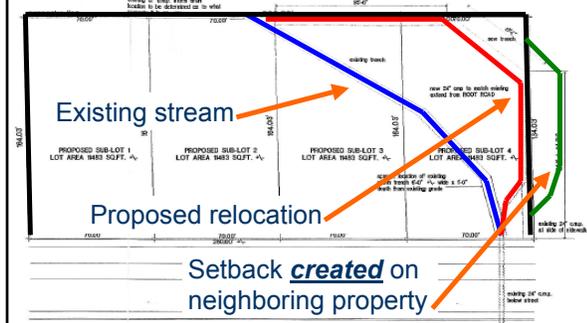


Riparian and Wetland Setbacks need to be DEMONSTRATED on all plans

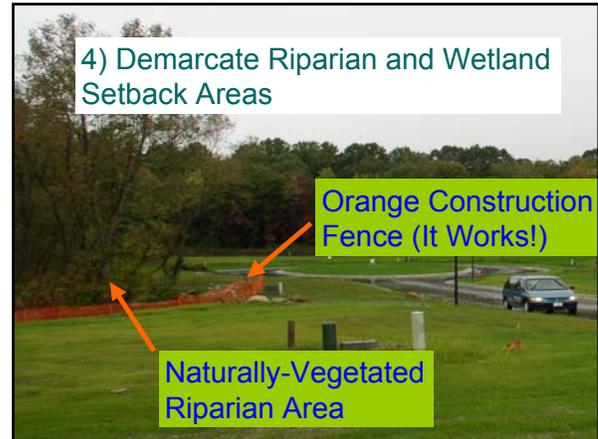
Some layouts may just not work!



Stream relocations are problematic



4) Demarcate Riparian and Wetland Setback Areas



5) Guide Construction Process



- Discuss construction limits during pre-construction meeting
- Perform monthly compliance inspections (community)
- Request logs for weekly and storm event inspections performed by competent person (developer)
- Ensure that no encroachments occur...if they do...

When Corrective Actions Are Necessary

- Assess degree and extent of disturbance
- Certified arborists can be consulted regarding riparian/wetland tree value (<http://www.isa-arbor.com/findArborist/verifyArbByLoc.aspx>)
- Revegetate disturbed areas with pasture grass mix (http://efotg.nrcs.usda.gov/references/public/OH/Oh512_Standard_Pasture_And_Hayland_Planting.pdf) and **appropriate** woody species
- SWCD or ODNR-Division of Forestry (Urban Foresters) are resources for revegetation
- Conservation easements ensure that areas are maintained

Clearing Gone Wild!



Corrective Action Example

RIPARIAN AREA ENHANCEMENT NOTE

THIS SECTION OF THE RIPARIAN AREA SHALL BE ENHANCED BY THE PLANTING OF FIVE MINIMUM TWO-INCH CALIPER TREES, THREE SYCAMORE AND TWO PIN OAK, BALLED AND BURLAPED. TREES SHALL BE PLANTED NO CLOSER THAN 7 FEET FROM THE EASTERLY STREAM BANK AND APPROXIMATELY LOCATED AS SHOWN HEREON.

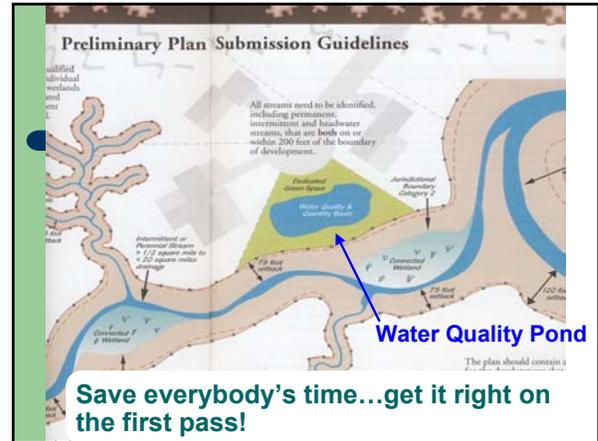
IN ADDITION, THE RIPARIAN AREA IS TO BE SEEDED WITH PASTURE AND HAYLAND PLANTINGS AS SPECIFIED IN THE NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD 512 FOR OHIO, INCLUDING FERTILIZATION AND MULCHING. THIS STANDARD CAN BE OBTAINED FROM THE NRCS WEB SITE: WWW.OH.NRCS.USDA.GOV

CONSERVATION EASEMENT

THE OWNERS OF PERMANENT PARCEL NO. 456-28-003 INTEND TO GRANT A CONSERVATION EASEMENT OVER THIS PARCEL. SEE MAP OF INTENDED CONSERVATION EASEMENT ON SHEET NO. 7-A.

Corrective Action Example

- Ball & burlap trees (> 5 ft.)
- Pin Oak, Sycamore, Swamp White Oak
- Conservation Easement



Save everybody's time...get it right on the first pass!

