

REPORT

Monroe County Environmental Constraints Overlay (ECO) Committee

To: Monroe County Commissioners
Norman S. Anderson
Joyce B. Poling
Timothy A. Tilton

From: Monroe County Environmental Constraints Overlay Committee

Date: June 21, 1996

We are pleased to forward final recommendations from the Monroe County Environmental Constraints Overlay Committee formed last February 7, 1996 to propose regulations to be used in drafting the Zoning Ordinance for the Monroe County Watershed. All recommendations in the attached report represent a full consensus of our diverse committee with the exception of the following three sub areas:

- Exception by Bill Hayden for V. OVERLAY AREA, D. Area 4 to
 - inclusion of acreage near The Point,
 - change in Committee provisions for Two Mile Fringe area from City regulations, and,
- Exception by Bill Hayden and Larry Onesti for V. OVERLAY AREA, D. 1.
 - allowance of 30 feet disturbance beyond 18% slope.

The Committee feels that the provision for disturbance of 30 feet beyond an 18% slope in Area 4 should be offset by implementation of a strong mitigation program. Further, the Committee believes each element in this report is important to the whole, thus, we encourage adoption of these provisions in their entirety.

Respectfully submitted,


Jane Martin

Committee Chair
Retired General Partner, Investment Firm

Committee Members:

Ben Beard	Co-owner, The Gentry Group
James Bohrer	Partner, Mallor Clendening Grodner & Bohrer
Charles Felkner	Monroe County Plan Commissioner; Monroe County Extension Educator
Bill Hayden	Chairman, The Uplands Group, Sierra Club
Bill Jones	Director, Environmental Systems Applications Center, Indiana University School of Environmental & Public Affairs
Pam Lohmann	Member, League of Women Voters; Former Member, Utility Service Board
Susan McCloud	District Conservationist, Natural Resources Conservation Service
Larry Onesti	Professor, Indiana University Department of Geological Sciences; Member, Monroe County Drainage Board
Steve Smith	President, Smith Neubecker & Assoc.;
	Vice President, Monroe County Drainage Board
Dan Willard	Professor, Indiana University School of Environmental and Public Affairs

ENVIRONMENTAL CONSTRAINTS OVERLAY ZONE

June 19, 1996

I. INTRODUCTION:

The new Comprehensive Land Use Plan just adopted by the County states the following regarding Watershed Development:

"While the reservoir, its immediate shoreline (up to 560 feet Mean Sea Level) and the adjoining State and national forests are managed by the State and Federal governments, most of the remainder of the watershed in Monroe County..... is in the jurisdiction of the Monroe County Plan Commission. This jurisdiction includes most of the watershed's prime development land which is privately owned.

Over the past 25 years, development has generally been sparse in the watershed because of relatively high development costs, steep slopes, poor access and poor soils for septic systems.....Development pressure in the reservoir area is increasing. At some point, incremental development may diminish the water quality and recreational value of the reservoir. Significant opportunities exist for economic development which utilizes the reservoir as an asset. However, as with many issues regarding land use, the value of opportunity is personal and vested. Not all prospective uses can be accommodated, as some uses will preclude others. At some point, certain opportunities must be foregone in order to allow for the maintenance of others."

A. Guiding Principles:

Master Plan Direction: The Monroe County Comprehensive Land Use Plan calls for maintaining the rural quality of non-urbanized land in the County, protecting vulnerable environmental resources such as Lake Monroe, and leveraging existing infrastructure in order to minimize new public investments.

Charge from Commissioners: The Monroe County Commissioners have charged the Environmental Constraints Overlay Committee to establish regulations which, taken as a whole, shall be at least as protective of the scenic quality, the natural resources and water quality of the Lake Monroe Reservoir as existing regulations.

Fairness: The Environmental Constraints Overlay Committee attempted to find the just balance between the public good and private property rights.

B. Significant Considerations:

Critical Public Resource: Monroe Reservoir is the sole source of drinking water for the county (and for some neighboring counties). Land disturbance in the Watershed affects water quality both from erosion and runoff.

Economic Base: Lake Monroe is one of the biggest assets in the public trust, representing a huge economic base. Tourism represents \$144 million annually to the County, employs 4,899 people and is the third largest industry in the County (1993 MC Convention Center & Visitors Bureau). Over 50% of visitors to the lake do so for scenic beauty reasons.

Housing Needs: The I. U. School of Business Research Center, projects 1990 Monroe County population of 108,978 to grow to 114,400 in 1995, and 126,900 in 2010, up 16.4% from 1990. Dwelling units in 1990 were 39,351. Between 1990 and 1995, 13,000 dwelling units were approved for eventual build-out. This is well above the projections in the Master Plan of 7,749 through 2010. While further dwelling units will undoubtedly be approved, there are currently more than enough to accommodate County projected growth for at least the next 20 years.

Helped to maintain focus

II. PURPOSE OF THE ENVIRONMENTAL CONSTRAINTS OVERLAY ZONE:

The purpose of the Environmental Constraints Overlay Committee is to develop recommendations to supplement the underlying Zoning Ordinance and the Subdivision Control Ordinance. The purpose of the Environmental Constraints Overlay Zone is to:

- A. Protect and enhance public health, safety, and welfare
 - 1. preserve and enhance the quality of the water supply for residential, industrial and public use
 - 2. recommend appropriate regulations for building sites, structures and land use
 - 3. improve stormwater management
 - 4. prevent pollution, erosion, siltation, and loss of topsoil
 - 5. protect tax base from impairment by unwise uses
 - 6. encourage Watershed mitigation areas
- B. Protect and enhance resources as recreational and tourist attraction
 - 1. protect water quality for fish and other aquatic life
 - 2. preserve shore cover and natural beauty
 - 3. enhance and protect forests, wildlife areas, wetlands, parks and recreational facilities for beneficial water management

III. THROUGHOUT THE WATERSHED:

A. Erosion and Drainage Control

- 1. Site plans, subdivision plats, planned unit developments and plans for more than one single family unit shall be designed by a Professional Engineer, registered in the State of Indiana.
- 2. Construction projects shall minimize disturbance of tree concentrations.
- 3. Streets, parking areas and building pads shall be designed so as to conform closely to existing contours and minimize grading.
- 4. In addition to any other erosion control required by County ordinances, such plans shall incorporate redundant stormwater runoff quality mitigation measures during development and construction.
- 5. All plans where 5 acres or more is disturbed shall also incorporate a binding, recordable commitment or deed restriction for the ongoing maintenance, if any, required for the stormwater facilities. Plans must also include:
 - a. Periodic third party inspection and report;
 - b. Incorporated Owners Association with financing capability or provisions in the owner's deeds providing for periodic assessments to cover expected stormwater maintenance expenditures;
 - c. County authorization to perform necessary maintenance and charge the owners or Owners Association for the work if the owner or Owners Association fails to maintain the stormwater facilities in accordance with good management practices after the County gives written notice and an opportunity to cure;
 - d. County authorization to seek injunctive relief if the owners or Owners Association fail to maintain the stormwater facilities in accordance with good management practices after the County gives written notice and an opportunity to cure;
 - e. Reports by a qualified consultant regarding stormwater detention, soil stabilization, erosion/siltation control, and stormwater runoff quality mitigation. Such plans will note the presence or absence of hydric soils, karst geology features, geologic hazard features, and existing vegetation, flood prone areas, slopes in excess of 12%, perennial and intermittent streams, receiving waters for drainage,

and the drainage distance to the fee take line. These features will be marked on a map of the project site and addressed in the erosion and sediment control and drainage plans. The reviewing authority shall determine whether such plans are adequate and shall not approve such plans unless the applicant has demonstrated that the proposed design and mitigation measures will adequately protect the public health, safety, and welfare.

6. Development and construction permitting processes are to be as required in the remainder of the County, with the exception that in the Lake Monroe Watershed, all construction projects which require a grading permit will be inspected a minimum of every two weeks from ground breaking to stabilization, and within 48 hours of any precipitation event exceeding a 10 year, 24-hour precipitation event. Inspections will be carried out by employees of the County.
7. There will be a pre-construction conference, on the site, for all projects where more than one acre will be disturbed. This conference will include the developer, contractor, job foreman, county erosion control inspector, and a representative of other county or public agencies as deemed necessary from review of the project plans. A record will be kept of the items discussed at this conference.

B. Forestry

Forestry activities will be encouraged to employ the Best Management Practices described in the manual being prepared by the Indiana Department of Natural Resources. Forestry activities are subject to the same provisions as other activities under the Overlay Ordinance.

C. Agriculture/Livestock Feeding

Agricultural and livestock feeding activities should be carried out in conjunction with a soil and water conservation plan prepared with the Natural Resources Conservation Service. Any area of the Watershed where land disturbance is prohibited shall also be restricted from any tillage or other earth disturbing activity. Confined livestock feeding operations shall not be permitted in the Watershed. Incentive programs and grants will be pursued to establish riparian buffer zones on such land. Existing land uses are excepted.

IV. SPECIFIC RESTRICTIONS FOR SENSITIVE LANDS:

A. Distance from the Lake:

A setback of 125' from the 556 foot elevation.

There shall be no land disturbance, construction of any kind, removal of vegetation, agricultural activity, logging operation, or construction of infrastructure within this setback. On private land, no erosion control or mitigation activities shall be carried out on the lake shore, at the water's edge, or along the fee take line without appropriate permits from the County and other agencies as required. Restoration and mitigation activities intended to reduce erosion and improve water quality on non-private land shall be carried out only with the permission of appropriate agencies including the Army Corps of Engineers and Indiana Department of Natural Resources.

The only permitted activities are:

- * The clearing of brush less than 3 inches in diameter to create pedestrian access to the fee take line, to be no more than 6 feet wide, and to be surfaced with permeable material to prevent erosion;
- * Removal of tree branches or tree trunks if said trees present a clear and immediate danger to property or persons. Tree stumps shall be left in place.

B. Distance from Tributaries:

Riparian buffer zones will be established for 100 feet to both sides of all intermittent and perennial streams which are shown on the U. S. Geological Survey 7 1/2 minute topographic maps. In riparian buffer zones, no earth disturbance, removal of vegetation, logging, agricultural and livestock feeding activities are permitted except in those cases where it is necessary for, a) installation or construction of infrastructure crossings or, b) the removal of snags and logjams. In those cases where infrastructure crossings are necessary, erosion and sediment control plans will be submitted to the reviewing bodies which will include specifications for practices to be used in minimizing disturbance, methods for revegetation, and a discussion of any sensitive areas which may be encountered. Removal of tree branches or tree trunks if said trees present a clear and immediate danger to property or persons is permitted. Tree stumps shall be left in place.

C. Flood Plain/ Floodways:

Areas designated by the Federal Emergency Management Agency, the Indiana Department of Natural Resources, or the Monroe County Drainage Board as subject to flooding fall under the jurisdiction of the appropriate agency to determine which activities are permitted. Residential and commercial development in floodplains and floodways are discouraged.

D. Slope:

There will be no earth moving or grading, logging operations, or agricultural tillage on slopes as designated as nondisturbable areas. The Monroe County Soil Survey (published by the Natural Resources Conservation Service) may be used as a reference.

E. Soils:

If reference to the Monroe County Soil Survey indicates a "Severe" limitation the project plan shall indicate how the problem will be addressed.

F. Geology:

There shall be limited earth disturbing activity in sensitive geologic areas.

In areas designated as Karst Terrain on Plate 1 (Special Report 47 "Geology for Environmental Planning in Monroe County, Indiana" Edwin J. Hartke and Henry Grey, State of Indiana, Department of Natural Resources), a geological and geophysical survey is required before any construction or significant earth disturbance takes place.

In any area in the watershed which contains sinkholes or other karst features where construction or significant earth disturbance is proposed, no construction or earth disturbance shall take place within 50 feet of the outer rim of a sinkhole unless a geological and geophysical survey indicates that such construction or earth disturbance is appropriate. In addition, there shall be a 25 foot vegetative buffer from the rim toward the center of a sinkhole.

A geological and geophysical survey required by this section shall:

1. identify sinkholes, springs and caves;
2. demonstrate that any proposed earth disturbance or construction would not negatively and materially affect the water quality in the watershed;
3. assure the structural integrity of any proposed structure.

In addition, construction is to be avoided in areas designated as

1. limestone residuum over siltstone bedrock in the Ramp Creek Watershed (due to a tendency to landslide) and
2. New Providence Shale, the lowest formation in the Borden Group, (due to a tendency to spalling during frost).

G. Single Family Home Exception:

The Overlay Ordinance provisions shall not apply to an existing parcel of record for which a single residence is proposed.

V. OVERLAY AREAS

- A. Area 1 (defined as from pool elevation 556 feet to 1000 feet from same):
 1. No land disturbance on any slope >12% (measured as 6 ft. fall in any 50 ft.)
 2. 1 unit per 5 acres (no additional density with sewer)
 3. All Natural Vegetation beyond 12% slope
 4. Each dwelling unit requires 1 acre = or < 12% slope
 5. 300 feet minimum lake frontage on lake front lots
- B. Area 2 (defined as 1000 feet to 2500 feet from 556 line):
 1. No land disturbance on any slope >15% (measured as 7.5 ft. fall in any 50 ft.)
 2. 1 unit per 2.5 acres (no additional density with sewer)
 3. All Natural Vegetation beyond 15% slope
 4. Each dwelling unit requires 1 acre = or < 15% slope
- C. Area 3 (defined as beyond 2500 feet to Watershed Boundary except mapped Area 4):
 1. No land disturbance on any slope >18% (measured as 9 ft. fall in any 50 ft.)
 2. 1 unit per 2.5 acres (no additional density with sewer)
 3. All Natural Vegetation beyond 18% slope
 4. Each dwelling unit requires 1 acre = or < 18% slope

D. Area 4 (defined as 1605 acres designated on map attached which is the **only** area in the Watershed where high density development of 3 dwelling units per acre is appropriate due to the following critical characteristics:

- * Area 4 is largely less than 12% slope with approximately 88 acres of 12-18% and approximately 21 acres over 18%;
- * adjacent to existing infrastructure such as adequate roads and in place sewer systems;
- * within one-half mile of existing similar population centers.

Not all of the acreage in Area 4 currently meets all of the above criteria - specifically regarding in place sewer and adequate existing infrastructure; but we defer to the Plan Commission and Commissioners to determine when and if these criteria are met):

1. Maximum slope of 18% except for approximately 21 acres over 18% where construction may extend a maximum of 30 feet beyond until a 24% slope is reached (all Natural Vegetation beyond)
2. 3 units per acre only if on sewer
3. 1 unit per 2.5 acres if on septic

E. Commercial Zoning (provisions apply to new development as of date of enactment)

1. All slope restrictions for above residential overlay development apply
2. Parking lots to be gravel not paved
3. On site storm water detention
4. All erosion and drainage control provisions elsewhere in this document apply

VI. MITIGATION PROVISIONS AND RECOMMENDATION:

— Lake improvement measures shall be encouraged. The Plan Commission may waive **only** those provisions of the Overlay Ordinance which hinder achievement of water quality mitigation. Upon petition and after a public hearing, the developer must present the Plan Commission with credible evidence of mitigation measures undertaken or restoration work planned that will rectify or improve existing erosion or water quality problems. The Plan Commission will give due regard to dedications of land to public use, conservation easements, recordable commitments and other recognized measures that would tend to improve the overall condition of Lake Monroe

The Environmental Constraints Overlay Committee recommends implementation of a mitigation program to provide an effective and sustained insurance policy against failure in protective systems which will occur. (An important distinction between protection and mitigation is that protection keeps a project from doing harm, whereas mitigation improves on the conditions before the project.)

Initial studies show about 661 streamside acres in need of restoration for water quality improvement. We propose the County Commissioners appoint a Committee to study ways to finance a mitigation fund for this necessary restoration. Some preliminary suggestions include 1) a \$75 contribution from every new dwelling unit in Monroe County, 2) \$200 from every new dwelling unit in the Watershed, 3) matching funds programs available from state or federal sources, and/or, 4) an optional \$.50 per month contribution from every water consumer in Monroe County.

VI. EXCEPTIONS:

Except as provided for in IV. G, and VI. paragraph one, there should be no exceptions to these Watershed Overlay Ordinance provisions.

VIII. MONITORING AND ENFORCEMENT:

- A. County should set fees sufficient to cover adequate inspection and monitoring of all land disturbing activities.
- B. County should require a letter of credit (or other financial assurance) from developers to guarantee proper erosion control measures during construction; and from Homeowners Associations to guarantee maintenance of any sediment detention or other systems after construction.
- C. County should have authority to stop work and/or order necessary corrective or maintenance work, or to perform such work and assess the developer or Homeowners Association if non-compliance within a specified time.
- D. County should establish fines for violation of the provisions of the overlay zone including but not limited to clearing provisions, setback distances, amount of land disturbance, etc.

IX. OTHER RECOMMENDATIONS:

- A. Monroe County contains only 20% of the Lake Monroe Watershed. Therefore, the Committee encourages and supports establishment of a voluntary, watershed-wide effort to promote cooperation among the various jurisdictions involved in order to protect the water quality of the Lake.
- B. Water-borne recreation is out of the County Commissioners jurisdiction but direct effects of recreational uses adversely and severely affect the water quality of Lake Monroe. We urge the Indiana Department of Natural Resources, the Indiana Department of Environmental Management and the Army Corps of Engineers to document the effects of recreational uses on water quality and to set appropriate standards for non-detrimental recreational use.
- C. The Committee believes each element of this report is important to the whole, thus, we encourage adoption of these provisions in their entirety.

Note: Definitions have not been included with this report since most terms are self-explanatory. However, the Committee will clarify any term or element requested.