

Environmentally Sensitive Development Area

External Advisory Group Recommendations

Prepared for
Ohio EPA and
City of Columbus Public Utilities

November 2004

**Report to the Director of the Ohio EPA and the Director of Public
Utilities for the City of Columbus**

ESDA EAG Recommendations

November 2004

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Introduction

Background

On January 22, 2003, Governor Taft signed a letter certifying the Water Quality Management Plan for the Scioto River Basin and Blacklick Creek. Subsequently, on November 24, 2003, USEPA approved the plan, which is a partial update to the existing Water Quality Management Plan for the Scioto Basin that was originally completed in 1979, and then revised several times prior to the 2002 update. The Ohio EPA refers to the January 22, 2003 certified plan as the Central Scioto Water Quality Management Plan (CSPU.)

The CSPU includes the Columbus Metropolitan Area, which is the most populated area in the Scioto Basin. The plan was updated with respect to several plan elements: 1) designated management agencies; 2) identification of municipal and industrial waste treatment needs; 3) nonpoint source, urban stormwater; 4) implementation measures to carry out the plan; and 5) effluent limits.

The CSPU established an Environmentally Sensitive Development Area (ESDA) on the western limits of Franklin County. The ESDA is located within the Darby Creek watershed, a State and National Scenic River System that was recognized by The Nature Conservancy as being one of twelve "Last Great Places." The primary concern in this area is the potential for wastewater and stormwater pollution that accompanies improperly controlled growth, as stated, "unplanned and uncontrolled growth poses a threat to the Darby Creek watershed and the unique biodiversity of its aquatic and prairie land ecosystem." In recognizing the sensitivity of this area, the CSPU prohibits centralized sewer service in any part of the ESDA until the four following conditions are met:

1. Riparian buffer restrictions are in place;
2. Comprehensive stormwater management planning has occurred;
3. Conservation development restrictions are in place that involve the concept of clustering development to preserve tracts of open space, including farmland; and
4. Adequate public facilities, including roadways, exist or are planned to support any proposed development.

Along with the creation of the ESDA, the CSPU mandated that the City of Columbus convene an External Advisory Group (EAG.) The EAG is composed of diverse stakeholders who are charged with studying and recommending criteria or standards by which fulfillment of each condition could be measured and judged by the Director to be "sufficient to protect water quality."

EAG Purpose and Scope

The purpose of the EAG is to study and create recommended criteria or standards by which fulfillment of each of the four conditions can be measured. The EAG operates using a process based on the Ohio EPA EAG model, which is to seek consensus among stakeholders and issue a report and recommendations, even if consensus is not reached on all issues. According to the Ohio EPA, there are two distinct aspects of the EAG work in each topic area.

1. To provide recommendations for how one (i.e., a governmental jurisdiction) would demonstrate that the institutional framework or mechanism is in place to implement requirements associated with each topic area.
2. To provide recommendations regarding the content and minimum “technical” expectations that represent an environmentally protective and socially acceptable condition or end point relative to each topic area.

These non-binding recommendations will be forwarded to the Director of the Ohio EPA and the Director of Public Utilities for the City of Columbus (Directors.) The Director of the Ohio EPA will determine if the EAG recommendations are sufficient to protect water quality and will update the CSPU accordingly.

Methodology to Create Recommendations

The methodology employed by the EAG used a consensus building approach that included the following four steps:

- Information Gathering;
- Discussion of Institutional Controls;
- Discussion of Technical Elements; and
- Development of a Report.

Information Gathering

Discussions for each of the four topic areas began with presentations to the EAG on each topic area. The presenters were selected by the EAG and were chosen to provide scientific and practical non-scientific information for the group to consider throughout their discussions. The presenters came from a wide variety of backgrounds and experience, ranging from planners and scientists to economists.

In addition, EAG members were provided written, scientific information for review by the group. Both the written information and presentation materials were made available to the EAG and the public via the Internet.

Discussion of Institutional Controls

Once other technical and practical information had been gathered, the EAG focused initial consensus building efforts in determining appropriate institutional controls for the specific topic under discussion. The group first listed various types of controls (ordinances, resolutions, regulations, etc.) then discussed the pros and cons of the different methods and attempted to reach consensus on the control most likely to yield success.

Discussion of Technical Elements within Institutional Controls

Discussion of technical elements within the institutional controls began with identifying the individual elements necessary to protect water quality within the control. For example, under the riparian corridor discussions, the EAG determined that the following technical elements must be addressed:

- Definition of a stream;
- Riparian corridor ownership;
- Riparian corridor width;
- Permitted, prohibited and conditional uses;
- Vegetation; and
- Enforcement.

Once the individual elements were identified, the group discussed each element and attempted to reach consensus on the minimum technical standard, or criteria necessary to help protect the unique aquatic and prairie land ecosystem within the ESDA.

Development of Report

Following the completion of the discussion of riparian corridors, a final report was developed. The following process was followed in the development of the report:

1. At the end of the group's deliberations, a draft report was developed and forwarded to the group for their review;
2. Members of the EAG forwarded their comments to the facilitator (Fuller, Mossbarger, Scott and May Engineers, Inc.) via email;
3. FMSM reviewed the comments and addressed them in one of the following means:
 - a. The requested change was editorial or corrected a factual error by FMSM and was made;
 - b. The requested change expressed an opinion or position of one entity; or was an opinion or position that the group did not reach consensus on; therefore no changes were made and the comment is forwarded to the Directors for consideration; or
 - c. The requested change was factually incorrect or requested additional effort for which resources were not available; therefore no change was made.

Note: All the comments received from EAG members are being passed along with the report to the Directors for their consideration.
4. Preparation of the Final Draft Report.

This process was slightly revised from the original process envisioned, due to the type and number of comments received from participants.

Report Format

The report is organized into four primary sections; a separate section is designated for each of the four topic areas that the EAG was tasked with studying:

- Riparian corridors;
- Stormwater management;
- Conservation development; and

- Adequate public facilities.

Each section begins with a summary of the technical information provided to the EAG for consideration on that specific topic. Information from the presentations as well as from any additional resources, such as Internet resources is provided. The next subsection for each of the four elements deals with the institutional controls necessary for the implementation of the requirements for each technical element. Following that is a subsection designated to the technical elements that must be included in each ordinance for the ESDA. A summary of the discussions for each element is provided, along with consensus recommendations, if appropriate, and a review of non-consensus viewpoints.

The intent of this report is to summarize the consensus recommendations and defined points of non-consensus. This report is not intended to summarize all discussions of the EAG. The reader is referred to EAG meeting minutes for summaries of all discussions.

Executive Summary

The ESDA EAG was charged with developing recommendations on four elements: riparian corridor restrictions, comprehensive stormwater management, conservation development restrictions, and adequate public facilities. The primary recommendations out of each of those four topic areas are highlighted below. Please refer to the detailed report for additional discussions, including the non-consensus items. Also, please refer to the section entitled "Other Recommendations Outside the EAG's Mission" (page 50 of this report) for several broad reaching recommendations that were not included under the group's mission.

Riparian Corridors (Pages 9 to 24)

Purpose Statement

The purpose statement for each riparian corridor control should include the following three elements:

1. Maintain and improve biological diversity and aquatic life use designations.
2. Achieve sediment, pollutant and nutrient removal.
3. Maintain stream functionality.

Definition of a Stream

The definition of a stream requiring protection is defined as a perennial, ephemeral or intermittent stream with a defined bed, bank or channel. NRCS maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field.

Ownership

The group recommends that for new development, ownership will remain with the parcel, but may be dedicated at the option of the owner.

Riparian Corridor Width

The group recommends that the buffer width be the width of the 100-year regulatory floodplain as defined by FEMA Flood Insurance Rate Maps (FIRMS) or the Hellbranch Overlay formula, whichever is largest, with a minimum of 200 feet (assumed 100 feet per side).

Permitted Uses

The following are the recommended permitted uses for riparian corridors:

- Passive recreational activity;
- Removal of damaged or diseased trees;
- Revegetation or reforestation;
- Arterial streets (provided disturbances due to construction of arterial streets are minimized and mitigated); and

- Disturbances (as outlined in the Hellbranch Overlay – refer to the disturbances associated with the uses above; See page 18).

Enforcement

The EAG recommends the following:

“The boundary of the buffer is required to be clearly delineated on plans and prominently displayed in the field prior to development. No later than the end of construction, the applicant should permanently delineate the stream corridor protection zone in an aesthetically harmonious manner, approved by the *[insert appropriate position for individual jurisdiction]*, such that the location of the zone is apparent to the casual observer and that permits access to the zone.”

Conservation Subdivisions (Pages 25 to 38)

Should Conservation Subdivisions Be Required Everywhere in the ESDA?

The EAG recommends that conservation subdivisions should be a by-right form of development and conventional subdivisions be a conditional use that must go through a special approval process.

Acceptable Open Space: Primary Conservation Areas

The EAG recommends that the following elements should be considered as primary conservation areas and should be included in the open space:

- Riparian zones (Defined as the width of the 100-year regulatory floodplain as defined by FEMA FIRMs, or the Hellbranch Overlay formula, whichever is largest, with a minimum of 200 feet);
- Slopes which include NRCS designated Highly Erodable Land (HEL) plus a 50-foot setback from the top of the slope;
- Wetlands as defined by the Army Corps of Engineers or the EPA;
- Populations of endangered or threatened species as defined by either the state or the federal government; and
- Healthy forests of at least one contiguous acre.

Acceptable Open Space: Secondary Conservation Areas

The EAG recommends that the following elements should be considered as secondary conservation areas:

- Existing healthy forests less than one contiguous acre;
- Other significant natural features and scenic viewsheds; and
- Prime agricultural lands of at least five acres contiguous area.

Ownership of Open Space

The EAG recommends three ownership options for open space: 1) homeowners/condominium associations, 2) political jurisdictions, and 3) third party land trusts.

Design and Review Process

The EAG recommends that Ohio EPA mandate the following four principles of the design and review process be integrated into the zoning approach of each jurisdiction:

1. Identify areas to be conserved.
2. Identify areas for the location of homes.
3. Placement of roads and other infrastructure.
4. Drawing in the lot lines.

Open Space Management Criteria

In terms of open space management criteria, the EAG recommends the following language:

“Applicant shall submit a Plan for Management of Open Space and Common Facilities that maximizes ecological function of the open space, has been prepared by a qualified person or entity and contains at least the following:

- a. Allocates responsibility and guidelines for the maintenance and operation of the Open Space and any facilities located thereon, including provisions for ongoing maintenance and for long-term capital improvements;
- b. Estimates the costs and staff requirements needed for maintenance and operation of, and insurance for, the Open Space and outlines a means by which such funding will be obtained or provided;
- c. Provides for any changes to the Plan to be approved by the Board of Commissioners; and
- d. Provides for enhancement of the Plan.

In the event the party responsible for maintenance of the Open Space fails to maintain all or any portion in reasonable order and condition, [the jurisdiction] may assume responsibility for its maintenance and may enter the premises and take corrective action, including the provision of extended maintenance. The costs of such maintenance may be charged to the homeowners association, or to the individual property owners that make up the homeowners association and may include administrative costs and penalties. Such costs shall become a lien on all subdivision properties.”

Stormwater Management (Pages 39 to 48)

Note: The EAG has concluded that it is beyond the capabilities of the group to recommend scientifically rigorous standards, and have asked the Ohio EPA to undertake the setting of these standards.

Water Quality Performance Goals

The EAG recommends the following four water quality performance goals:

1. Meet current water quality standards as set by the Ohio EPA, including anti-degradation rules and specifications of the TMDL.
2. Maintain exceptional warmwater habitat (EWH) at locations where it has been designated.
3. Improve streams without EWH status.
4. Meet Ohio EPA designations for all stream segments.

Water Quantity Performance Goals

The EAG recommends the following six performance goals for water quantity:

1. Meet current water quality standards as set by the Ohio EPA, including anti-degradation rules and specifications of the TMDL.
2. Maintain exceptional warmwater habitat (EWH) at locations where it has been designated.
3. Improve streams without EWH status.
4. Meet Ohio EPA designations for all stream segments.
5. Develop water quantity management standards to maintain the physical, morphological and hydrological characteristics to support and improve on water quality goals.
6. Maintain where adequate or improve where inadequate the existing groundwater regime.

Construction Controls

The EAG recommends that sediment basins be required on all development sites, regardless of size.

Inspection and Enforcement of Construction Controls

The EAG recommends that local communities must demonstrate to the Ohio EPA that they have enforcement mechanisms in place that have a short-term impact, including the ability to stop work. Periodic inspections are recommended.

Adequate Public Facilities (Page 49)

No consensus recommendations were developed for adequate public facilities.

Riparian Corridors

Summary of Technical Information

Throughout the discussions of riparian corridors, the ESDA EAG relied on technical information supplied to them for their review. The technical information provided to the group for their review was obtained from two categories of sources: written information in the form of guidebooks, manuals and existing ordinances, and information presented by the speakers chosen by the EAG. Supporting information, including meeting minutes from each meeting, is available at the following web site: <http://utilities.ci.columbus.oh.us/project>.

The written technical information provided to the group for their review was obtained from a wide variety of sources. The written sources of technical information can be divided up into two broad categories of information. The first category consisted of existing ordinances from other jurisdictions and associated guidebooks for creating effective buffer ordinances. The information on existing ordinances served as useful comparisons for the group to gauge what they proposed for inclusion in an ordinance. The second category included more scientifically-based information such as handbooks on determining buffer width and scientific papers on such topics as practical performance criteria that govern how a buffer will be delineated, managed, crossed, etc.

There were five speakers who presented information relevant to riparian corridors, the majority of whom focused on scientific and technical information. Highlights from each of the presentations are found below.

The first speaker was Jim McCormac, a botanist from the Ohio Department of Natural Resources (ODNR), who works in the Division of Natural Areas and Preserves and has done extensive field research along the Darby. Jim gave the group some statistics on the use of riparian corridors by native and rare species to emphasize their ecological importance. For example, out of the 866 native species that still remain in Franklin County, 80-85% of these occur within the riparian corridors.

The second speaker was Dr. Andy Ward of Ohio State University, a professor in stream restoration, who gave a presentation about the size of stream setbacks and their impact on stream health. Dr. Ward provided several recommendations to the group as to what stream corridor protection should be based upon.

- Incorporating the landscape measures that reduce runoff such as pervious pavements, green spaces and bio-retention areas.
- Detention/retention management strategies that result in similar pre- and post-development bedload and sediment transport amounts.
- River geomorphology concepts and specifically the ability of the stream to self-adjust to a state of dynamic equilibrium as a function of landscape changes during the life of the stream.

Dr. Lance Williams, a professor in the School of Natural Resources at Ohio State University, gave a presentation entitled "*Riparian Corridors and Stream Water Quality*." Dr. Williams provided several criteria for riparian zones during his presentation.

- For the protection of water quality, riparian zones should be 40-80 feet on either side (depending upon slope.)
- For aesthetic/scenic value, there should be a minimum of 100 feet on both sides and the first 50 feet should be undisturbed.
- For the conservation and enhancement of wildlife diversity, the riparian zone should be 100-300 feet on either side.
- Native vegetation is best for the riparian corridor.
- There should be no broadcast application of pesticides or fertilizers in the riparian corridor.

Tracy Hatmaker and Cheryl Roberto gave a presentation about the existing riparian restrictions in the county/townships and the City of Columbus. Cheryl presented a brief overview of the Hellbranch Watershed Protection Overlay, including permitted and prohibited uses within the overlay and a description of the formula used to calculate the buffer area in the overlay. Tracy presented information on the Franklin County Zoning Resolution entitled "*Big and Little Darby Creeks Critical Resource Protection District*," including its purpose and allowable and non-allowable uses. He also provided information on two sections of the Franklin County Subdivision Regulations, Section 404 – Natural and Environmental Issues and Section 406 – Watercourse Protection Area. Finally, Tracy discussed the inclusion of stream corridors in both the Prairie and Brown Township plans and their link with policies for conservation development.

The EAG broke their discussions on riparian corridors into two major categories: 1) Institutional Controls; and 2) Technical Elements. Summaries of the discussions and areas of consensus and non-consensus are discussed below.

Institutional Controls

Discussion

The EAG members formulated a list of possible institutional controls for riparian corridors. The group considered which item could be used on its own to enforce riparian corridors. If an item could not function independently in enforcing riparian corridors, the item was eliminated from the list. The original list of institutional controls was as follows:

- Watershed-based zoning;
- Conservation easements held by a third party;
- Citizen monitoring;
- Variances/exemptions;
- Resolutions of council (become law);
- Comprehensive plans;
- Regulations including subdivision, zoning and stormwater regulations;
- Parkland ordinances;
- Floodplain regulations;
- Phase II Permits (NPDES);
- City area plans; and

- City zoning ordinances.

The finalized list included three elements: 1) watershed-based zoning; 2) subdivision, zoning, stormwater and floodplain regulations; and 3) resolutions of council.

Consensus Recommendation

The ESDA EAG recommends that a political jurisdiction be required to implement at least one of the following institutional controls for riparian corridor protection within the ESDA prior to the extension of centralized sanitary sewer service:

- Watershed-based zoning;
- Subdivision, zoning, stormwater and/or floodplain regulations;
- Council resolution; and/or
- Ordinances.

Please note that the EAG strongly encourages the development of comprehensive plans to support zoning and other regulations.

Technical Elements of Riparian Corridors

The members of the EAG identified the individual elements necessary to protect water quality within the institutional controls listed above. The technical elements with respect to riparian corridors discussed by the EAG include the following:

- Purpose Statement;
- Definition of a Stream;
- Riparian Corridor Ownership;
- Riparian Corridor Width;
- Uses;
- Vegetation; and
- Enforcement.

Purpose Statement

Discussion

The Purpose Statement is based on water quality goals for the ESDA and serves as the foundation upon which recommendations and guidance with respect to riparian corridors were formulated.

Consensus Recommendation

The purpose statement in each riparian corridor control should include the following three elements:

1. Maintain and improve biological diversity and aquatic life use designations.
2. Achieve sediment, pollutant and nutrient removal.
3. Maintain stream functionality.

The recommended purpose statement is as follows:

“It is the goal of the control to establish riparian buffer restrictions to maintain and improve biological diversity and aquatic life use designations, achieve sediment, pollutant and nutrient removal, and maintain stream functionality.”

Non-consensus Views

The group did not come to a consensus on the inclusion of an additional element of implementability and affordability to the purpose statement.

The Building Industry of Central Ohio suggested that the elements of implementability and affordability be added to the list of elements for inclusion in the purpose statement. The BIA as well as other supporters of the addition believe that the cost of any action must be taken into account in determining if the action can be implemented. The supporters also believe that cost is a factor in determining social acceptability of an action, and that whatever recommendations the group comes up with must be based on sound science and must make economic sense.

One group opposed to the addition of the elements of implementability and affordability believes that while affordability may be a factor in social acceptability, its inclusion in the purpose statement would imply that it is more important than other aspects of community acceptability. Another group in opposition believes that a price cannot be placed on the uniqueness of the Darby ecosystem, that affordability is not part of social acceptability, and that if affordability was added to the purpose statement, a loophole would be created that would allow some who opposed the restrictions to bypass their implementation by arguing that they were not “affordable.”

Definition of a Stream**Discussion**

The discussion about the definition of a stream focused on two primary elements. The first was that streams listed on NRCS maps as dashed, dotted, or solid lines should receive protection. The second element taken into consideration was the text of the Hellbranch Overlay which defines a waterway as “any ephemeral, intermittent, perennial, natural or manmade creek, ditch (excepting any roadside ditch), river, or stream with a defined bed, bank, or channel.”

The EAG discussed whether a map of the streams falling within the definition should be created by each jurisdiction as part of the ordinance. Consensus was not reached on the issue of mapping.

Consensus Recommendation

The definition of a stream requiring protection is defined as a perennial, ephemeral or intermittent stream with a defined bed, bank or channel. NRCS maps should be used as one reference and the presence of a stream requiring protection should also be confirmed in the field.

Non-consensus Views

Several entities, including the City of Columbus and Prairie Township, voiced concerns about the jurisdictions' ability to map the stream and suggested that maps be created as development concerns arise. Those that held this view were in favor of waiting until developers came forward with plans to develop a piece of land and of placing the burden of mapping on the developer. Those that held the opposing view were in favor of the streams being mapped by local jurisdictions or a third party, such as the FSWCD, prior to development.

Riparian Corridor Ownership

Discussion

The EAG considered several options for ownership listed below:

Option 1

- New development: Ownership dedicated to the local jurisdiction or as a conservation easement to the FSWCD, or some other third party concurrent with subdivision and with or without public access.
- Existing development: No change in ownership, but may be dedicated at option of owner (potentially resulting in tax decrease.) Prohibitions on expansion of existing facilities and new facilities. No public access.

Option 2

- New development: Ownership dedicated to homeowners association with access by residents of development or tenants of commercial area.
- Existing development: No change in ownership, but may be dedicated at option of owner (resulting in a tax decrease.) Restrictions on expansion of existing facilities and new facilities. No public access.

Option 3 (From the text of the Hellbranch Overlay)

- New development: Ownership remains with parcel, but may be dedicated at option of owner (resulting in tax decrease). No public access.
- Existing development: Totally grand-fathered exempted from restrictions.

Option 3 is used under the Hellbranch Overlay. Within this option, the landowner has a choice to dedicate the land in the buffer area to the City of Columbus or maintain it themselves with the restrictions in place.

Consensus Recommendation

The EAG recommends that the text of Option 3 be used as the model for ownership, provided that there is appropriate enforcement.

Riparian Corridor Width

Discussion

In determining standards for riparian corridor width, the EAG considered four options for width, as listed below (where W = width and DA = drainage area):

Option 1

- Minimum width = 80 feet (80 feet on each side)

- $W = 120DA^{0.43}$
- Include adjacent wetlands by extending buffer by width of wetlands
- Exclude impervious surfaces by extending the buffer by the same width as the impervious surface
- Slopes over 25% do not count toward buffer width
- Where W is less than the 100-year regulatory floodplain width, extend buffer to edge of 100-year regulatory floodplain

Note: Slopes over 25% differ from the definition of steep slopes given in the Conservation Subdivisions section due to the fact that this definition of slopes came from a handout of buffer width options presented to the group for their consideration. These buffer width options were based on the literature presented on the ESDA EAG project web site as well as on the presentations given by the various speakers. The definition of steep slopes found in the Conservation Subdivisions section was developed by the EAG.

Option 2 (Hellbranch Overlay formula)

- Minimum width = 50 feet (25 feet on each side)
- $W = 117DA^{0.43}$ when DA is less than 16 square miles
- $W = 87 DA^{0.43} + 100$ when DA is greater than 16 square miles
- Where W is less than the floodway width, extend buffer to edge of floodway
- No increases for slope, impervious surfaces or wetlands

Option 3

- Minimum width = 50 feet (25 feet on each side)
- $W = 87 DA^{0.43}$
- Where W is less than the floodway width, extend buffer to the edge of floodway
- No increases for the slope, impervious surfaces or wetlands

Option 4

- $W = 80$ feet fixed for intermittent streams; 160 feet for perennial streams
- No increases for floodway, floodplain, slope, impervious surfaces or wetlands

Note: The terms 100-year regulatory floodplain and floodway are as defined by the FEMA Floodplain Insurance Rate Maps (FIRMs).

Option 1 was proposed for the group to consider. Concerns were raised over the economics of property that will be rendered non-developable under Option 1. The BIA of Central Ohio proposed Option 2 in lieu of Option 1 to lessen the financial impact.

A poll was taken on the various options to gauge the group's potential for consensus. The results were as follows:

- 2 members for Option 1
- 4 members for Option 2
- 7 members for Option 1 with a minimum of 200 feet (100 feet on each side)

The group considered establishing a floor and ceiling for the buffer width in order to make those in opposition to the highest level of protection more comfortable. The floor was proposed to be 100 feet on each side, 200 feet total. The ceiling was proposed to be up to 300 feet or the width of the floodplain, whichever is larger. Consensus was not reached on an overall buffer width.

The issue of width was revisited at a later meeting. Four options were considered, the first three of which were used analyzed by the Ohio EPA:

1. Fixed buffer width of 200 feet
2. Equation A: the width calculated using the Hellbranch Overlay formula with a minimum of 50 feet
3. Equation A': the width calculated using the Hellbranch Overlay formula with a minimum of 200 feet
4. The width of the 100-year regulatory floodplain or the Hellbranch Overlay formula, whichever is largest, with a minimum of 200 feet.

Consensus Recommendation

The group recommends that the buffer width be the width of the 100-year regulatory floodplain or the Hellbranch Overlay formula, whichever is largest, with a minimum of 200 ft (assumed 100 feet per side.) The Hellbranch Overlay formula is defined as the following:

$W = 117DA^{0.43}$ when DA is less than 16 square miles

$W = 87DA^{0.43} + 100$ when DA is greater than 16 square miles.

Uses

Discussion and Recommendations

The group considered the permitted, prohibited and conditional uses that would be enforced through any ordinance of the ESDA. Permitted uses are those that can be conducted without any approval process. Conditional uses are defined as uses that require approval from the local jurisdiction. Prohibited uses are uses that are not permitted unless a variance is requested and obtained. The group members began their discussion of allowable and non-allowable use by considering the uses listed in the Hellbranch Overlay text.

Permitted Uses

This list of permitted uses in the Hellbranch is as follows:

- a. Passive Recreational Activity;
- b. Removal of Damaged or Diseased Trees;
- c. Revegetation and/or Reforestation;
- d. Public Utilities;
- e. Existing Roads and New Arterial Streets; and
- f. Disturbances Necessary to Complete Above.

The text of the Hellbranch Overlay for each of the above listed uses is outlined below followed by the group's recommendation(s) or an overview of items of non consensus. Please note the term "stream corridor protection zone" used in the Overlay text is synonymous with the EAG's riparian zone of protection.

- a. **Passive Recreational Activity.** Uses that are passive in character shall be permitted in stream corridor protection zones, including, but not limited to, passive recreational uses, as permitted by federal, state and local laws, such as hiking, fishing, hunting, picnicking and similar uses. Construction of paved trails to further such passive recreation uses is also authorized. However, trails that become damaged due to natural erosion shall not be repaired but shall be moved upland or removed altogether.

Consensus Recommendation

Passive recreation should be a permitted use and paved trails shall be a conditional use.

- b. **Removal of Damaged or Diseased Trees.** Damaged or diseased trees may be removed. Due to the potential for felled logs and branches to damage downstream properties and/or block ditches or otherwise exacerbate flooding, logs and branches resulting from the removal of damaged or diseased trees that are greater than six (6) feet, may be anchored to the shore or removed from the one hundred (100) year floodway.

Consensus Recommendation

Removal of damaged or diseased trees should be a permitted use.

- c. **Revegetation and/or Reforestation.** Revegetation and/or reforestation of the stream corridor protection zone using approved species pursuant to ODNR's Native Ohio Trees Species, Low-Growing Tree or Shrub Species, and Grass Species Suitable for Planting within 1000 Feet of State Scenic Rivers. This document lists species of vegetation recommended for stabilizing flood prone areas and/or constructing wetlands within the ESDA.

Consensus Recommendation

Revegetation and/or reforestation should be a permitted use.

- d. **Public Utilities.** Sanitary sewer, storm sewer and/or water lines and public utility transmission lines may be located within the stream corridor protection zone, and disturbances of the zone necessary to place and/or maintain such utilities are also authorized. The placement, construction and maintenance of such utilities shall minimize disturbance to riparian areas and shall mitigate any necessary disturbances.

There were two concerns voiced by the group members in regard to allowing public utilities in the buffer. The first issue pertained to the disturbances caused by construction and maintenance and the removal of trees to support construction and maintenance. The second issue pertained to the fact that public utilities generally have the right of eminent domain and restricting the location of public utilities may not be possible. The main concern here was with the placement of storm, sanitary and water lines within the buffer, and whether lines parallel to the buffer should be a permitted use.

Tim Peterkoski of ODNR, Scenic Rivers Program, presented a proposal for utilities in the buffer. The proposal stated that sanitary, storm sewer and/or water lines and public utility transmission lines may not be located within the buffer area unless they meet the following standards:

1. When the buffer area is less than 300 feet from the stream, public utilities shall be located outside the buffer area except; perpendicular crossings of the buffer and stream will be permitted to provide that the crossings are conducted through the use of

directional boring methods. Perpendicular crossings shall be located, when possible, within existing road crossings. The placement, construction and maintenance of such utilities shall minimize disturbance to riparian areas and shall mitigate any necessary disturbances.

2. When the buffer area is greater than 300 feet from the stream, public utilities may be located within the buffer area provided that they are located beyond 300 feet from the stream and it is not technically feasible to locate the utility outside the buffer area, except; perpendicular crossings of the buffer and stream will be permitted provided that the crossings are conducted through the use of directional boring methods. Perpendicular crossings shall be located, when possible within existing road crossings. The placement, construction and maintenance of such utilities shall minimize disturbance to riparian areas and shall mitigate any necessary disturbances.

Objections were raised to placing public utilities in the buffer and the following language was proposed:

“All parallel utilities must be placed outside of the buffer unless technologically impractical and no utilities are permitted in the streamway.”

Consensus could not be reached.

Non-Consensus Views

The Sierra Club raised concerns over the broad nature of the phrase “technologically impractical,” stating that there was a risk that this exception would be granted for all projects. The Sierra Club was also concerned with the lack of definition as to what constituted a technical impracticality. All other groups supported the proposed language.

Objections were also raised relative to utility crossings and the following language was suggested:

“All crossings are to be done through borings and there shall be no boring pits in the buffer in Exceptional Warmwater Habitat (EWH) areas.”

Consensus was not reached on this language.

The Sierra Club could not live with boring pits in any of the buffers and cited degradation of areas not categorized as EWH as their main concern.

- e. **Existing Crossings and New Arterial Streets.** Construction and operation, including maintenance, widening and new construction of any existing crossing or bridge or new arterial street or arterial bridge, as that term is defined in Columbus City Code 3123.03. A new crossing or new roadway for a street other than an arterial may be permitted to cross the stream corridor protection zone only in those circumstances when the parcel has no other existing access or when such crossing is necessary for public health or safety. Such activity shall minimize disturbance to stream corridor protection zones and shall mitigate any necessary disturbances.

Note: An arterial street (as defined in MORPC’s Draft Regional Thoroughfare Plan) is a street whose primary function is traffic movement. Major arterial streets serve the major centers of activity of the urbanized area, the highest traffic volume corridors, the longest

trips and the highest proportion of vehicle miles of travel to the amount of centerline mileage. Trips on major arterial streets may be either inter- or intra-regional in nature.

Concerns were expressed that new arterial streets would have an adverse impact on the buffer due to stormwater runoff and impervious surfaces. Other concerns were expressed that arterial streets were important to help protect public health and safety.

Consensus Recommendation

Provided disturbances due to construction of arterial streets are minimized and mitigated, arterial streets are classified as a permitted use.

- f. **Disturbances.** Disturbances of the zone necessary to accomplish the uses described in paragraphs a through f of this subsection are also authorized. However, all such disturbances shall be minimized and any necessary disturbances shall be mitigated.

Consensus Recommendation

In agreeing upon the fact that the word “minimize” can be defined as meaning the smallest possible disturbance, the group members recommend that the above language be used and that disturbances, in the context of the above paragraph, are a permitted use. These disturbances would include those associated with passive recreational activity, removal or damaged or diseased trees, revegetation and/or reforestation, and new arterial streets as these are the permitted uses agreed upon by the EAG.

Prohibited Uses

The list of prohibited uses in the Hellbranch Overlay is as follows:

- a. Construction of Structures; except for modification of existing single-family residential structures and associated appurtenances;
- b. Dredging and Filling;
- c. Roads or Driveways;
- d. Motorized Vehicles, except on roadways;
- e. Disturbance of Natural Vegetation;
- f. Parking Lots or other Man-made Impervious Cover; and
- g. New Surface and/or Subsurface Sewage Disposal or Treatment Areas.

The text of the Hellbranch Overlay for each of the above listed uses is outlined below followed by the group’s recommendation(s) or an overview of items of non consensus.

- a. **Construction.** There shall be no construction.

Consensus Recommendation

Construction within the riparian corridor is a prohibited use. Since the new restrictions do not apply to existing development, the exception for modification to existing residential structures and associated appurtenances was determined to be non-applicable.

- b. **Dredging and Filling.** There shall be no drilling, filling, dredging, grading, or dumping of soil, spoils, liquid, or solid materials. No floodplain fill permits may be granted for any area within the stream corridor protection zone.

Consensus Recommendation

Dredging and filling should be a prohibited use.

- c. **Roadways or Driveways.** There shall be no new roads or driveways other than arterial streets as that term is defined in Columbus City Code 3123.03.

Consensus Recommendation

Roads and driveways should be a conditional use.

The group also discussed non-arterial streets as a conditional use, citing concerns such as traffic, crossings and disturbances. The group did not come to a consensus on non-arterial streets as a conditional use because the Sierra Club could not live with having arterial streets in the riparian corridor under any circumstance. Concerns were raised of stream degradation and of cutting the buffers in half by allowing roads to go through the buffer.

Although the group as a whole did not reach consensus on the issue of non-arterial streets as a conditional use, the Darby Creek Association asked that group members who did agree with non-arterial streets as a conditional use come to a consensus as to what the language should be for non-arterial streets as a conditional use. The following language was proposed:

“A new crossing or new roadway for a street other than an arterial may be permitted to cross the stream corridor protection zone only in those circumstances when the parcel has no other existing access or when such crossing is necessary for public health or safety. The applicant must demonstrate that the new crossing or new roadway in the buffer is necessary to achieve important ecological protection, or maximizes ecological benefit. Such activity shall minimize disturbance to the riparian buffer and shall mitigate any necessary disturbances.”

The OSU Extension asked that the wording “In addition” be added to the beginning of the second sentence. This wording clarifies that there is a two-part test to meet for the placement of a non-arterial street in the buffer: one part deals with public health and safety, and the other with maximizing ecological benefit.

The finalized language upon which consensus was reached is the following:

“A new crossing or new roadway for a street other than an arterial may be permitted to cross the stream corridor protection zone only in those circumstances when the parcel has no other existing access or when such crossing is necessary for public health or safety. In addition, the applicant must demonstrate that the new crossing or new roadway in the buffer is necessary to achieve important ecological protection, or maximizes ecological benefit. Such activity shall minimize disturbance to the riparian buffer and shall mitigate any necessary disturbances.”

- d. **Motorized vehicles.** There shall be no use of motorized vehicles.

Consensus Recommendation

Motorized vehicles should be a prohibited use, with the exception of emergency vehicles when necessary for public health and safety.

- e. **Disturbance of Natural Vegetation.** There shall be no disturbance of the natural vegetation at any time, including during construction, on the remainder of the site except for such conservation maintenance that the landowner deems necessary to control noxious weeds; for such plantings as are consistent with these regulations; and for the passive enjoyment, access and maintenance of landscaping or lawns existing at the time of passage of these regulations.

Consensus Recommendation

Disturbance of natural vegetation should be a prohibited use with the addition that the term "noxious weeds" will be as defined by ODNR.

Also included in this discussion of disturbance of natural vegetation was the definition for vegetation. The group came to a consensus that the definition for vegetation should be as follows:

"There shall be no disturbance of the natural vegetation at any time during construction on the remainder of the site, except for such conservation maintenance that the landowner deems necessary to control noxious weeds; for such plantings as are consistent with these regulations; and for the passive enjoyment, access and maintenance of lawns or landscaping on existing parcels. If natural vegetation does not exist, replanting is required with native vegetation in accordance with an approved plan."

Note: Native vegetation was defined by the group as the plant species found in a local area prior to European settlement. Each jurisdiction responsible for enforcing the regulations will determine if a plan is approved.

- f. **Parking Lots.** There shall be no parking lots or other human made impervious cover.

Consensus Recommendation

Parking lots should be a prohibited use.

- g. **New Surface and/or Subsurface Sewage Disposal or Treatment Areas.** Stream corridor protection zones shall not be used for the disposal or treatment of sewage except for those treatment and/or disposal systems existing at the time of the passage of these regulations when such systems are properly permitted in accordance with the City of Columbus or Franklin County Health Department's and/or Ohio Environmental Protection Agency regulations.

Consensus Recommendation

The application and/or spraying of waste water treatment plant residuals should be a prohibited use.

Consensus was not reached on the issue of new surface and/or subsurface sewage disposal or treatment areas as a prohibited use.

Non-consensus Views

Township representatives could not accept this prohibition because they felt that it eliminated the ability of local jurisdictions to permit and construct wastewater treatment plants, other than those already permitted and constructed. The township representatives indicated that there was no wording that could be changed to alleviate their concerns. Their primary concern was that they felt that they had to retain the ability to attempt to obtain permits from Ohio EPA and other regulatory bodies to construct wastewater treatment plants (and by practical standards these plants might have to be located near a stream) and that this prohibition would prevent them from seeking those approvals. All other groups supported the proposed language.

Conditional Uses

There are two views held by the members regarding the conditional use process. One view believes that the EAG should define the conditions, while the opposing view thinks that the jurisdictions should define their own conditions with oversight and final approval by the Ohio EPA. The Ohio EPA suggested that the group not get into individual conditions, but because of those members who felt that it was important to consider the individual conditions; individual conditions were discussed for the following conditional uses:

- a. Streambank Stabilization / Erosion Control Measures; and
- b. Paved trails.

The text found in the Hellbranch Overlay regarding streambank stabilization and erosion control is listed below followed by the group's recommendation(s) or an overview of items of non consensus.

- a. **Streambank Stabilization / Erosion Control Measures.** Streambank stabilization / erosion control measures which are ecologically compatible and substantially utilize natural materials and native plant species where practical and available. Such streambank stabilization/erosion control measures shall only be undertaken upon approval by the Director of the Department of Public Utilities or the director's designee of a streambank stabilization plan that provides long-term streambank protection. In reviewing this plan, the director may consult with a representative of the Ohio Department of Natural Resources, Division of Natural Areas and Preserves; Ohio Environmental Protection Agency, Division of Surface Water; Franklin County Soil and Water Conservation District; or other technical experts as necessary.

Consensus Recommendation

- The above language for streambank stabilization is recommended. In addition, local jurisdictions should provide language stating that streambank stabilization will only be permitted to protect water quality, prevent flooding, or protect existing structures.
- The above language for erosion control measures is recommended. In addition, local jurisdictions should provide language stating that erosion control measures be limited to the purposes of water quality protection, the prevention of flooding, or the protection of existing structures.

Non-consensus Views

While the group was able to reach consensus on the above, there was disagreement over whether an expert agency should be required to be consulted to determine whether any specific project met the protection of water quality, flooding, or existing structures conditions. Several members expressed concerns that the local jurisdictions may not have the technical capability to review erosion control measures, their suitability and their impacts to water quality. The members representing jurisdictions expressed concerns that by requiring that expert agencies be consulted, they would be abdicating their constitutional rights under the home rule doctrine.

- b. **Paved Trails.** The following elements were listed by the group for inclusion in approving paved trails as a conditional use:

1. Minimum setback from the stream;
2. Maximum width for trails; and
3. Specification of materials where practical.

The Metro Parks were asked to come up with recommended values for the items listed above for review by the group. The following is the proposal with the group's additions to the proposal found in *italics*:

1. Public *and private* trails may be developed for river access and the enjoyment of nature.
2. All public trails shall meet State and Federal laws and guidelines, pertaining to Americans with Disabilities Act Accessibility Guidelines and floodplain programs.

Permitted Uses:

1) Unpaved Trails

- Trail surface: unimproved/earthen
- Trail width: min. 3', max. 5'
- No clearing of *woody* vegetation shall be permitted
- Distance from edge of stream: min. 125'
- River access points may be developed

Conditional Uses:

1) Paved Trails

- Trail surface: (hard) asphalt or concrete
- Trail width: min. 10', max. 12'
- Clearing width: max. 20' (clearing width not included as part of buffer)
- Distance from edge of stream: min. 300'
- River access points may be developed *but must be unpaved*
- *Private trails should not have crossings and crossings on public trails are a conditional use and will be permitted only if they are part of a comprehensive trail plan.*

2) Unpaved Trails

- Trail surface: (soft) compacted gravel
- Trail width: min. 5', max. 12'
- Clearing width: max. 20' (clearing width not included as part of buffer)
- Distance from edge of stream: min. 200'
- River access points may be developed

Consensus Recommendation

Local jurisdictions should adopt the Metro Parks' proposal for paved and unpaved trails in riparian corridors as outlined above.

Enforcement

Discussion

The EAG discussed three elements under the enforcement heading: delineation, inspection, and the enforcement of damaged trails. The group began the discussion of enforcement by considering two pieces of the text of the Hellbranch Overlay under the heading Stream Corridor Protection.

1. The boundary of the buffer is required to be clearly delineated on plans and prominently displayed in the field prior to development. By the end of construction, the buffer must be permanently delineated in the field.
2. Damaged trails shall not be rebuilt, but shall be removed, or moved upland.

Concerns about the method of delineation were discussed with an addition made to item 1 above.

In terms of inspections, there were initially two opposing positions on the inspection issue:

1. Those that favored the complaint-driven process were concerned that a periodic inspection process does not make wise use of resources because many times, periodic inspections will not uncover any violations, while a complaint-driven process is more focused and will address specific violations where and when they occur.
2. Those that favored periodic monitoring were concerned that a compliant-driven system is unreliable and while it can capture some violations, it will not capture as many as will occur. They feel that a complaint-driven system relies on an informed public and landowners regarding the location and uses of the corridor and that this knowledge will be lost with time, thereby lessening the protection that can be afforded.

However, upon revisiting the issue, the City of Columbus stated that it was willing to come to terms with a periodic enforcement mechanism to bridge the gap between the two stances on the inspection issue.

Consensus Recommendation

The recommendations for the enforcement of delineation and damaged trails are the following:

1. The boundary of the buffer is required to be clearly delineated on plans prominently displayed in the field prior to development. No later than the end of construction, the applicant shall permanently delineate the stream corridor protection zone in an aesthetically harmonious manner, approved by the *[insert appropriate position for individual jurisdiction]*, such that the location of the zone is apparent to the casual observer and that permits access to the zone.
2. Damaged trails shall not be rebuilt, but shall be removed, or moved upland.

In terms of inspections, the group recommends that periodic inspections of riparian corridors should be required of the jurisdictions. Each individual jurisdiction will define how often inspections will be conducted.

Non-consensus Views

Consensus was not reached on the issue of inspection. There were two opposing views on the inspection issue.

1. Those that favored a complaint-driven process; and
2. Those that favored frequent monitoring.

The Darby Creek Association was not comfortable with only a complaint-driven system and feels that there must be an official and jurisdictional regime of inspection. FSWCD stated that frequent or periodic monitoring of riparian buffers is essential to ensuring compliance with buffer standards. A complaint-driven process does not adequately provide the necessary vigilance or record of condition required for permanent buffer establishment. FSWCD also stated that the most effective defense of these buffer areas requires regular monitoring that includes documentation of the condition of these buffers.

Conservation Subdivisions

Summary of Technical Information

Throughout the discussions of conservation subdivisions, the ESDA EAG relied on technical information supplied to them for their review. The technical information provided for their review was obtained from two categories of sources: written information in the form of guidebooks, manuals and existing ordinances, and information presented by the speakers chosen by the EAG. Supporting information, including meeting minutes from each meeting, is available at the following web site: <http://utilities.ci.columbus.oh.us/project>.

The written technical information provided to the group for their review was obtained from a wide variety of sources. The written sources of technical information can be divided up into two broad categories of information. The first category consisted of guidance for creating conservation subdivision ordinances and how to add conservation subdivisions to an existing zoning code. The second category of information included toolkits and associated guidebooks that outlined elements of conservation subdivisions, such as the management of open space, density requirements and permitted and prohibited uses within the open space.

There were several speakers chosen by the EAG to speak on their areas of expertise as they related to conservation subdivisions. There were seven speakers who presented information relevant to conservation subdivisions. The speakers came from a diverse background of subjects, from planning and economics to biological sciences. The first speaker was Kirby Date, the Director of the Countryside Program. Kirby provided a brief background on the Countryside Program, created to promote conservation subdivisions, which is defined by the organization as “an approach to new development patterns that conserve rural character, community identity, and natural, agricultural and historic resources in Northeast Ohio.” She provided the group with several elements required for conservation development:

- At least 40% of the land area is permanently dedicated as open space;
- Open space must be of high quality;
- Open space should be used for resource protection; and
- Intensity of development is appropriate for the location.

The second speaker on issues related to conservation subdivisions was Tim DeWitt, of Bennett and Williams, who spoke about the integration of LESA, a multivariate model, with green infrastructure planning. LESA was developed to provide for the assessment and ranking of land in support of agriculture preservation initiatives. Tim stated that the model can be tailored to local community needs by a committee, which can decide on the most pertinent factors and come up with a scoring system. Tim also stated that prior to undertaking conservation-based land use planning for an area, the impacts of development on water quality need to be determined so that appropriate types of development (residential, commercial, etc.) and densities can be determined.

Phil Laurien, the Planning Director of Delaware County Regional Planning, was the third speaker. Much of Phil’s presentation centered on land use planning and how it was essential to undertake such planning within the overall context of the area under consideration. Phil also stressed the fact that within conservation land use planning, transfer of development rights

should be considered and included as one practical method of achieving the conservation goal while at the same time providing for development opportunities and equal financial opportunity for all landowners.

The fourth speaker was Bob Miltner, from the Ohio EPA, who spoke about the biological integrity of small streams in Franklin County relative to urbanization. Bob discussed the general relationship between biological integrity and urbanization, and provided specific examples for the group from Rocky Fork and the Hellbranch. Bob also spoke about the biological consequences of urbanization and the relationship between biological integrity and the intensity of land use. Bob provided several key points for the group to take into consideration as well as several implications of development, which included the following:

- The highest quality watersheds require the highest level of protection.
- Where development occurs, aggressive regulation and enforcement are needed.
 - There is a need for mandatory riparian buffers, effective construction site BMPs, and the treatment of stormwater.
- Not every stream can be protected.

The EAG also listened to a panel of economists who spoke on the economic issues related to conservation subdivisions. The first speaker was Alan Prindle, from Otterbein College, who provided the group with some general economic considerations associated with conservation subdivisions. He briefly outlined the economic benefits of conservation subdivisions:

- Lower infrastructure costs
- Marketing: emphasis on open space
- Value appreciation
- Reduced demand for public parkland
- Smoother review process

Larry Libby, from the Rural-Urban Policy Program at Ohio State University, was the second speaker of the panel. Larry spoke about economic and policy considerations in regards to conservation subdivisions. He addressed two questions in his presentation: 1) whether there was evidence that protecting open space as part of a development pays; and 2) what some of the policy options that use economic information are. Larry addressed the first question by stating that there is substantial evidence that people value open space and are willing to pay for open and natural areas. The economic conclusions drawn from various studies on the value of open space near development indicate a positive economic value to nearby land. Larry then addressed the second question of policy options that incorporate economic information. He provided several examples of such policy options, including transfer of development rights (TDR) and land pooling, which is a private sector approach that enables landowners to gain from development and open land by designating areas for development and areas that will be left as open lands.

Sam Staley, from the Buckeye Institute, was the final speaker on the panel. Sam provided the group with some recommendations based on his past experience in the housing and planning arenas. He said that the focus must be on tradeoffs and supply and demand and emphasized the importance of recognizing changes in the housing market, i.e. average private lot size has decreased by 10% due to an increase in the desire to preserve open space. He stated that

environmental quality aspects are driving the land market and stressed the importance of identifying standards and incorporating those standards into the process.

Institutional Controls

Discussion

The EAG considered a list of possible institutional controls for conservation subdivisions. In doing so, the group reviewed the overall list of institutional controls that had been created for riparian corridors. That list is as follows:

- Watershed-based zoning
- Conservation easements held by a third party
- Citizen monitoring
- Variances/exemptions
- Resolutions of council
- Comprehensive plans
- Regulations including subdivision, zoning and stormwater regulations
- Parkland ordinances
- Floodplain regulations
- Phase II permits (NPDES)
- City area plans, and
- City zoning ordinances.

The group then considered which of the items in the list above could be used on their own to enforce conservation subdivisions.

Consensus Recommendation

The ESDA EAG recommends that a political jurisdiction be required to implement at least one of the following institutional controls for conservation subdivisions within the ESDA prior to the extension of centralized sanitary sewer service:

- Watershed-based zoning
- Subdivision and zoning regulations
- Resolutions of council
- Ordinances

Technical Elements of Conservation Subdivisions

The members of the EAG identified the individual elements necessary to protect water quality within the institutional controls listed above. The technical elements with respect to conservation subdivisions discussed by the EAG include the following:

- Definition of conservation subdivisions

- Should conservation subdivisions should be required everywhere within the ESDA?
- Open space and water quality protection
 - Permitted and prohibited activities
 - Acceptable open space
 - Ownership
 - Permanent protection
 - Open space minimum requirements
 - Design and review process
 - Consistency with comprehensive plans
 - Open space management criteria, and
 - General performance criteria.

Definition of Conservation Development (Subdivisions)

Discussion

Differences were expressed amongst members about the definition of conservation development. Differences stemmed from disagreement over the scale of conservation development. The Ohio EPA was asked to define the limits of the group's efforts. Ohio EPA made it clear that they desired recommendations on conservation subdivisions defined as conservation development at the parcel, or subdivision level, not at the regional or watershed level. Consensus was not reached on the definition of conservation subdivisions.

Non-consensus Views

Some group members indicated that conservation development referred to individual parcel developments and did not refer to a broader scale conservation effort. Others felt that conservation development referred to an overall philosophy of protecting natural resources within a larger geographic scale than just a single subdivision or parcel.

Should Conservation Subdivisions Be Required Everywhere in the ESDA?

Discussion

The group clarified what was meant by the definition of by right development. Common understanding was achieved by considering "by- right" to mean that a variance was not required in order for the specific form of development to be approved. Initially, group members were evenly split on whether conservation subdivisions should be required everywhere within the ESDA. Those in favor felt that if conservation subdivisions were not required, they would not be used. Those in favor also felt that if conservation subdivisions were necessary to provide overall water quality protection. Those opposed to requiring conservation subdivisions everywhere within the ESDA felt that some parcels are not suitable for conservation subdivisions and as long as the overall water quality goals are being achieved, it is best to have a combination of conventional development, preservation and conservation subdivisions. Opponents also pointed out that if conservation subdivisions were required, it may be more difficult to combine large tracts of land for preservation purposes.

The BIA of Central Ohio suggested that both conventional and conservation subdivisions be "by-right" forms of development with the following language:

“Conservation subdivisions should be a by-right form of development and are the preferred form. Conventional subdivisions are also by right, but will only be allowed if they contribute to the goal of water quality preservation and are placed in the least environmentally sensitive areas.”

The Darby Creek Association was concerned that a “loophole” had been created by making traditional development “by-right” without further clarification. The following language was thus proposed:

“Conservation development will be required, unless a proposal for conventional subdivisions is part of a jurisdictional plan, certified by the EPA, aimed at offsetting denser conventional subdivisions in the least sensitive areas of a jurisdiction with large tracts of open space in more sensitive areas.”

The City of Columbus pointed out that the EPA does not have the authority to certify that conventional subdivisions be part of a plan. The group then reconsidered the language suggested by the BIA above. A suggestion was made that additional language be added to the above, stating that conventional subdivisions must protect water quality, water quantity and groundwater recharge goals. Consensus was not reached on the language above plus the additions.

A suggestion was made that conservation subdivisions be required. The group could not reach consensus on this statement.

Consensus Recommendation

Conservation subdivisions should be by-right and conventional subdivisions are a conditional use and must go through a special approval process.

Non-Consensus Views

On the issue of adding language stating that conventional subdivisions must protect water quality, water quantity and groundwater recharge goals, Prairie Township raised concerns about the enforceability and legality of implementing those conditions. On the issue of requiring conservation subdivisions, 11 members favored requiring conservation subdivisions throughout the ESDA, and 4 members could not live with that statement due to the following:

- Lack of understanding as to what it means;
- The group is hung up on semantics – if traditional development meets the performance goals, it is okay; and
- The original language is superior. (Conservation development is by-right and traditional development is a conditional use and must go through a special approval process.)

Open Space and Water Quality Protection

Permissible and Prohibited Activities

Discussion

The group initiated the discussion of open space and water quality by looking at the permitted and prohibited uses for riparian corridors to see if agreement could be made that the uses would be the same for open space.

Consensus Recommendation

The following should be permitted uses within open space:

- Passive recreation;
- Removal of damaged or diseased trees;
- Revegetation and reforestation;
- New arterial streets (provided that disturbances due to construction of arterial streets are minimized and mitigated); and
- Disturbances (as outlined in the Hellbranch Overlay – refer to the disturbances associated with the uses above; See pages 16-18.)

The following should be prohibited uses within open space:

- Construction of structures;
- Dredging and filling;
- Motorized vehicles;
- Disturbance of natural vegetation;
- Parking lots; and
- Application or spraying of waste water treatment plant residuals.

The following should be conditional uses within open space:

- Streambank stabilization;
- Erosion control measures;
- Paved trails; and
- Stormwater BMPs.

Acceptable Open Space**Discussion**

The first question raised in regards to acceptable open space was whether primary and secondary conservation areas should be included as open space. Primary conservation areas are defined as areas that must be conserved. Secondary conservation areas are defined as those areas that should be conserved to the extent feasible.

The group considered the Atlanta Regional Commission's document entitled "*Conservation Subdivisions*" that outlined elements of primary and secondary conservation areas.

The following are primary conservation areas:

- 100-year floodplain;
- Riparian zones of at least 75 feet width along all perennial and intermittent streams;
- Slopes above 25% of at least 5,000 square feet contiguous area;

- Wetlands that meet the definition used by the Army Corps of Engineers pursuant to the Clean Water Act;
- Populations of endangered or threatened species, or habitat for such species; and
- Archeological sites, cemeteries and burial grounds.

The following are secondary conservation areas:

- Important historical sites;
- Existing healthy, native forests of at least one acre of contiguous area;
- Individual existing healthy trees greater than 8 inches caliper, as measured from their outermost drip line;
- Other significant natural features and scenic viewsheds such as ridge lines, peaks and rock outcroppings, particularly those that can be seen from public roads;
- Prime agricultural lands of at least five acres contiguous area; and
- Existing trails that connect the tract to neighboring areas.

Consensus Recommendation

Primary Conservation Areas. The following elements should be considered primary conservation areas:

- Riparian zones (buffer width is the width of the 100-year regulatory floodplain as defined by FEMA FIRMs or the Hellbranch Overlay formula, whichever is largest, with a minimum of 200 feet.)
- Slopes which include NRCS designated Highly Erodable Land (HEL) plus a 50-foot setback from the top of the slope.
- Wetlands as defined by the Army Corps of Engineers or the EPA.
- Populations of endangered or threatened species as defined by either the state or the federal government.
- Healthy forests of at least one contiguous acre.

Note: Archeological sites, cemeteries and burial grounds were not recommended for consideration for primary conservation areas because they do not have a direct impact on water quality.

Secondary Conservation Areas. The following elements should be considered secondary conservation areas:

- Existing healthy forests less than one contiguous acre
- Other significant natural features and scenic viewsheds
- Prime agricultural lands of at least five acres contiguous area

Note: Important historical sites and existing trails that connect the tract to neighboring areas were removed from consideration as secondary conservation areas because they do not have a direct impact on water quality.

Non-consensus Views

The group also discussed wetland buffers. The Nature Conservancy recommended that in terms of wetland buffer width, Ohio Rapid Assessment Method (ORAM) be used, or a 200 meter (650 foot) designation, whichever is greater. TNC also specified that the wetland buffer be large enough to maintain flow into wetlands, including both surface and groundwater.

Several members raised concerns with this recommendation and stated the need to look at peer-reviewed literature, which was provided by TNC. The City of Columbus suggested that the focus be placed on achieving the two goals of maintaining quality and hydrology, but that the local jurisdictions should choose the methods for achievement. Several members disagreed with this statement, stating that local jurisdictions won't have the expertise to choose appropriate methods for achievement and that it is unrealistic to assume that the jurisdictions will look in depth at hydrology.

The Sierra Club stated that they are not comfortable with using ORAM to determine buffer widths because ORAM is used to classify wetlands that can then be removed and mitigated. The Sierra Club believes that no wetlands should be disturbed within the ESDA and that mitigation of wetlands within the ESDA should not be permitted. The OSU Extension stated that a 650 foot wetland buffer is out of the group's purview due to the fact that 650 feet is for habitat quality and not water quality.

Ownership of Open Space

Discussion

Three options for ownership were considered by the group:

1. Homeowners associations;
2. Political jurisdictions; and
3. Third party land trusts.

During the discussion, concerns were raised by the Sierra Club that homeowners associations are ineffective as owners of dedicated open space because they generally do not do an adequate job of maintaining the open space. It was clarified that it is the responsibility of the local community through zoning enforcement that the restrictions in the ordinance are followed. The Building Industry of Central Ohio recommended that condominium associations be added to the list alongside of homeowners associations to clarify that both have the same authorities.

Consensus Recommendation

The following open space ownership options should be permitted by Ohio EPA:

1. Homeowners associations/condominium associations
2. Political jurisdictions
3. Third party land trusts

Permanent Protection

Discussion

The group began its discussion of permanent protection by considering the following language:

“Require that all ordinances have a provision for permanent open space, but the implementation of the protection will be left up to the local jurisdiction.”

Consensus was not reached on the language above. Concerns were raised about the need to have the ability to contract with a third party.

The group made the following three suggestions for acceptable types of permanent protection to address the lacking elements from the language above:

1. Conservation easements held by a local jurisdiction, government entity or land trust/conservation organization such as FSWCD.
2. Restrictive covenants (Ohio EPA and ODNR) are designated as enforcers.
3. Dedication as parkland.

Consensus Recommendation

Conservation easements are an acceptable form of permanent protection so long as enforcement of the easement is undertaken by one of the three ownership options (homeowners associations/condominium associations, political jurisdictions, and third party land trusts), and not the owner of the open space.

Non-consensus Views

Consensus was not reached on the suggestion of restrictive covenants with Ohio EPA and ODNR as enforcers as an option for permanent protection. The City of Columbus could not live with Ohio EPA and ODNR being the designated enforcers. The City feels that restrictive covenants should not be limited to those two government entities. The Sierra Club could not live with the suggestion of restrictive covenants because their effectiveness is unproven. All other groups supported the proposed language regarding restrictive covenants.

Consensus was also not reached on the suggestion of dedication as parkland as an option for permanent protection. ODNR stated that a conservation easement is necessary because parkland is not permanent and does not guarantee protection in perpetuity.

Open Space Minimum Requirements

Discussion

The ESDA EAG considered four questions in terms of open space minimum requirements:

1. How should the number of dwelling units be calculated (net buildable vs. total buildable)?
2. If net buildable, what areas should be considered “non buildable”?
3. What is the percentage of open space (fixed or variable)?
4. If variable, how should it vary and what are the numbers?

Net Developable or Total Developable. The central question for the group to consider when looking at net developable vs. total developable is the number of acres. Under the total developable approach, the whole parcel is considered. Under net buildable, the acreage considered excludes some non-buildable area, resulting in less allowable total units. There were two positions regarding the calculation of open space:

1. Open space should be based on net buildable, taking no position on whether the number of dwelling units should be based on net or total buildable.

2. Both open space and dwelling units are to be based on net buildable.

Non-consensus Views

Consensus was not reached on the calculation of open space; however, a poll was taken to gauge the group's opinion. Ten members voted for position #1, and two voted for position #2. Those that voted for position #2 stated their concerns for the group. The Sierra Club was concerned that position #1 would create high density pockets that would result in too many units on too small of an area. The FSWCD raised concerns about minimizing the number of houses. FSWCD indicated that they could live with position #1 but would prefer #2.

Non-Buildable Areas. Primary conservation areas were suggested as areas to be considered as non-buildable. The list is as follows:

- Riparian areas;
- Wetlands as defined by Army Corps of Engineers or the EPA;
- Populations of endangered or threatened species as defined by either the state or federal government; and
- Healthy forests of at least one contiguous acre.

Consensus Recommendation

Those areas as listed above should be designated as non-buildable.

Note: The reason why slopes that include NRCS designated Highly Erodable Land (HEL) + 50 feet, (a designated primary conservation area as per page 6) were not included in the list above is that they were discussed after this discussion had taken place as items that were revisited.

Percentage of Open Space, Fixed or Variable? If fixed, open space would be based on a certain chosen number. If variable, open space would be based on density. Several suggestions were made for percentage ranges for the group to consider.

Non-consensus Views

Consensus could not be reached relative to the percentage of open space required. The BIA of Central Ohio was concerned that the numbers were arbitrary. The Nature Conservancy voiced concerns that a range of open space percentages will not meet Exceptional Warmwater Habitat use designation (WWH.) TNC also stated that the percentage of open space should be based on performance. The Darby Creek Association stated that evidence shows that water quality cannot be maintained with the level of development that was proposed during the discussion. The DCA also voiced concern that the amount of open space needed to protect water quality is unknown at this time, and that Ohio EPA's proposal for using an adaptive management approach was preferable. The DCA also voiced concerns about not being able to take into account regional planning.

Contiguity of Open Space. The group's discussions focused around segments of the Atlanta Regional Commission's document entitled "*Conservation Subdivisions*" that reads:

"At least 75% of the Open Space shall be a contiguous tract. The Open Space shall adjoin any neighboring areas of Open Space, other protected areas, and non-protected natural areas that would be candidates for inclusion as part of a future area of protected Open Space."

Concerns were raised about the contiguity specification in the language above. TNC felt that the contiguity specification may not always be best, indicating that ecological concerns may override contiguity. ODNR stated that there is almost always more benefit in sensitive areas if open space is contiguous. Ohio EPA offered language which stated that open space should be contiguous to the extent that it maximizes ecological benefit.

Consensus Recommendation

The EAG recommends the following language in terms of contiguity of open space:

“At least 75% of the Open Space shall be a contiguous tract. The Open Space shall adjoin any neighboring areas of Open Space, other protected areas, and non-protected natural areas that would be candidates for inclusion as part of a future area of protected Open Space. The contiguity requirement may be waived if use of the open space in another fashion is necessary to achieve important ecological protection or to maximize ecological benefit.”

Design and Review Process

Discussion

Prairie Township presented recommendations for a design and review process requirement. The first recommendation was that technical parties walk the site prior to the development of a site plan. The second recommendation was that Randall Arendt's four-step review process be implemented. These four steps are broken down as follows:

1. Identify areas to be conserved.
2. Identify areas for the location of homes.
3. Placement of roads and other infrastructure.
4. Drawing in the lot lines.

The City of Columbus does not agree with the order of the design and review process, but stated that they will adhere to the four principles of the process. The City recommended that the concepts be integrated into the zoning approach, and that the EPA must mandate that those principles are there.

Consensus Recommendation

The four principles of the design and review process: identify areas to be conserved; identify areas for the location of homes; placement of roads and other infrastructure; and drawing in lot lines should be integrated into the zoning approach of each jurisdiction and the EPA should mandate that they are there.

Consistency with Comprehensive Plans

Discussion

The Ohio State University Extension presented its views on the fact that conservation subdivisions should be consistent with comprehensive plans. The OSU Extension also stated that local jurisdictions have flexibility to change their plans to allow for conservation subdivisions and that existing plans must be adjusted to account for newly annexed land. Ohio EPA pointed out that where comprehensive plans are in existence, conservation subdivisions should be consistent with these plans but that Ohio EPA cannot mandate that communities develop in

accordance with comprehensive plans. Ohio EPA also cannot mandate that communities create comprehensive plans.

Non-consensus Views

Several members raised concerns over whether the plans are protective of water quality. A provision is included here in the report stating that the EAG feels that a water quality plan for the ESDA must be prepared out of the results of the TMDL. The Darby Creek Association recommended that all protections that come out of the EAG be extended to the entire Darby watershed in western Franklin County.

Consensus was not reached on the recommendation to require that conservation subdivisions be consistent with the local comprehensive plan.

Note: The group reached consensus that regional planning with a natural resource protection focus was an important element to water quality protection. Since land use and regional planning are outside the mission of the EAG, this report reflects that the group strongly encourages that natural resource based regional planning be conducted.

Open Space Management Criteria

Discussion

The discussion on open space management criteria began with considering text from the Atlanta Regional Commission's document entitled "*Conservation Subdivisions*."

"Management Plan. Applicant shall submit a Plan for Management of Open Space and Common Facilities that:

- a. Allocates responsibility and guidelines for the maintenance and operation of the Open Space and any facilities located thereon, including provisions for ongoing maintenance and for long-term capital improvements;
- b. Estimates the costs and staff requirements needed for maintenance and operation of, and insurance for, the Open Space and outlines a means by which such funding will be obtained or provided;
- c. Provides for any changes to the Plan to be approved by the Board of Commissioners; and
- d. Provides for enhancement of the Plan.

In the event the party responsible for maintenance of the Open Space fails to maintain all or any portion in reasonable order and condition, [the jurisdiction] may assume responsibility for its maintenance and may enter the premises and take corrective action, including the provision of extended maintenance. The costs of such maintenance may be charged to the homeowners association, or to the individual property owners that make up the homeowners association and may include administrative costs and penalties. Such costs shall become a lien on all subdivision properties."

Several members voiced concerns over giving control of the open space back to groups like homeowners associations, because they really do not possess the knowledge necessary for adequate management. Concerns were also raised about funding abilities of unincorporated areas and changes in the members of a homeowners association, i.e. changes in education

level, and the consequences on management, and of ecological benefits to be derived from open space.

Consensus Recommendation

In terms of open space management criteria, the EAG recommends the following language:

“Applicant shall submit a Plan for Management of Open Space and Common Facilities that maximizes ecological function of the open space, has been prepared by a qualified person or entity and contains at least the following:

- a. Allocates responsibility and guidelines for the maintenance and operation of the Open Space and any facilities located thereon, including provisions for ongoing maintenance and for long-term capital improvements;
- b. Estimates the costs and staff requirements needed for maintenance and operation of, and insurance for, the Open Space and outlines a means by which such funding will be obtained or provided;
- c. Provides for any changes to the Plan to be approved by the [*local governing body*]; and
- d. Provides for enhancement of the Plan.

In the event the party responsible for maintenance of the Open Space fails to maintain all or any portion in reasonable order and condition, [the jurisdiction] may assume responsibility for its maintenance and may enter the premises and take corrective action, including the provision of extended maintenance. The costs of such maintenance may be charged to the homeowners association, or to the individual property owners that make up the homeowners association and may include administrative costs and penalties. Such costs shall become a line on all subdivision properties.”

General Performance Criteria

Discussion

The Nature Conservancy recommended that the group consider performance goals that will protect water quality as they proceeded with their discussions and suggested the following:

- Stormwater runoff rates retain the predevelopment hydrologic response of the watershed;
- No increase in stormwater runoff volumes;
- No loss of fish or mussel species;
- No increase in channel eroding flows;
- No decrease in baseflow;
- Control of nutrients and sediment loads (or other pollutants) to the level necessary to maintain or improve the biological community; and
- No increase in stream temperature (and other parameters as determined by aquatic ecology specialists.)

Discussions were held on whether all of these goals were within the purview of the group. The following recommended performance goals were found to be within the purview of the group:

- Stormwater runoff rates retain the predevelopment hydrologic response of the watershed;
- No increase in stormwater runoff volumes;
- No increase in channel eroding flows; and
- No decrease in baseflow.

Consensus Recommendation

Because the group could not reach consensus on the above list, the EAG recommends that the Ohio EPA establish overall performance indicators and that the Ohio EPA require local jurisdictions to adhere to those performance standards.

Note: The Darby Creek Association asked if it would be possible for the group to recommend to the Ohio EPA that there be no loss of fish or mussel species then leave it up to Ohio EPA to take it from there.

Stormwater Management

Summary of Technical Information

Throughout the discussions of stormwater management, the ESDA EAG relied on technical information supplied to them for review. The technical information provided for their review was obtained from two categories of sources: written information in the form of guidebooks and manuals, and information provided by technical experts who were present at the meetings to field questions and provide guidance when needed. Supporting information, including meeting minutes from each meeting, is available at the following web site:

<http://utilities.ci.columbus.oh.us/project/>.

The written information provided to the group for their review was obtained from a wide variety of sources. The information included model ordinances including a post-construction ordinance and a stormwater management and discharge control ordinance, stormwater management manuals, information on Low Impact Development (LID), and the Ohio EPA Construction Activity General Permit.

There were several experts who were asked to sit in on the meetings to answer questions from the group and to provide technical information. The experts included the following:

- Harry Kallipolitis, Ohio EPA Phase II Program;
- Tom Russell, Division of Sewerage and Drainage, City of Columbus; and
- John Mathews, ODNR, Division of Soil and Water Conservation.

Institutional Controls

Due to time constraints, the group did not consider institutional controls for stormwater management. However, given the previous institutional controls established by the group, it may be reasonable to expect that ordinances that refer to engineering manuals are acceptable controls for jurisdictions to implement.

Technical Elements of Stormwater Management

Due to time constraints in the process, the EAG concentrated on the critical issues of stormwater management. The members came up with a list of critical issues to discuss, based on their review of the available literature. The list of critical issues was grouped into seven overall categories:

1. Water quality performance goals;
2. Water quantity performance goals;
3. Groundwater recharge;
4. Possible BMPs;
5. BMP siting criteria;
6. Natural channel design; and

7. Compliance/enforcement.

Note: Due to time constraints on the overall process, all seven categories were not discussed. Compliance/enforcement was discussed under the broader headings of water quality and quantity performance goals. Possible BMPs, BMP siting criteria, and natural channel design were not discussed by the group.

Water Quality Performance Goals

Discussion

The group listed several options for water quality performance goals:

1. Meet current water quality standards as set by the Ohio EPA, including anti-degradation rules and specifications of the TMDL.
2. Maintain exceptional warmwater habitat (EWH) at locations where it has been designated.
3. Improve streams without EWH status.
4. Meet Ohio EPA designations for all stream segments.

Consensus Recommendation

Water quality performance goals should be as listed above.

Margins of Safety

Discussion

The Darby Creek Association asked about other standards in addition to the aquatic life use designations included above, specifically anti-degradation rules. The Ohio EPA explained that anti-degradation is intended to provide additional protection to those stream segments that are performing better than their aquatic life use designations. If a stream is doing better than the standard, additional inputs will be allowed as long as the stream can assimilate that pollutant, plus a safety margin depending on the stream's classification.

Anti-degradation also applies to streams that are not meeting the recommended performance standards. If a stream is not meeting standards for a given pollutant, no additional inputs of that pollutant will be allowed. The Ohio EPA informed the group that there is a margin of safety beyond what the standard indicates, and that for the Darby, the margin of safety will be higher due its uniqueness. The TMDL must describe the margin of safety within its scenarios.

Consensus Recommendation

The EAG agreed to add the following language as a note to the four water quality performance goals listed above:

“Appropriate margins of safety are included in the TMDL and anti-degradation rules.”

Options for Achieving Water Quality Standards

Discussion

The options for achieving water quality standards were taken from the Darby Creek Stormwater Strategies and Standards and are listed as follows:

Option 1. Require Stormwater Treatment Practices for Stormwater Quality. Many current stormwater programs simply require that the developer install stormwater treatment practices, but do not specify a target for the specific pollutant reduction performance. These programs simply require that a standard volume of stormwater be treated (e.g., a half-inch of rain.) Many of these programs also have generous waiver and exemption provisions, so that as much as 25% of all new development can avoid criteria for water quality. Typically, these programs have no formal maintenance programs. Unless the target removal goals are very low, these communities cannot expect their current programs to eliminate net additional pollutants associated with future development.

Option 2. Institute More Rigorous Design Standards for Stormwater Practices. A number of communities have improved their stormwater programs by strengthening their design standards for stormwater practices. This has involved narrowing the list of acceptable practices to those with a proven ability to remove particular pollutants, increasing the volume of runoff that is treated by each practice (e.g., treat first 1" of stormwater runoff), clamping down on waivers and exemptions (or requiring a fee-in-lieu), and requiring design features that reduce maintenance problems.

The advantage of this program option is that compliance can be presumed as long as designers follow the design rules. It does require a good stormwater manual and more extensive local/state staff review and training. It can achieve significant reduction for some pollutants, such as sediments and nutrients. The disadvantage of the program option is that current stormwater technology may not be effective enough for some pollutants (e.g., bacteria), or capable of reducing the net additional load for high levels from future development.

This option has been recommended for the Darby Creek watershed communities.

Option 3. Require On-Site Load Calculation. A handful of communities have adopted an approach whereby the design engineer must calculate pre- and post-development loads for a particular pollutant, and then design a system of practices to meet a load reduction target, based on BMP removal rates. Phosphorus has been used in most cases, and the load reduction target varies. This option results in more directed design geared more specifically to the pollutant of concern.

The on-site load calculation option has several disadvantages. First, designers often utilize BMP math tricks to come into compliance (fudging loads, removal efficiencies, etc.) Second, technical data to support the program option are limited to just a few parameters, such as phosphorus, nitrogen and sediment. Third, the removal rates for stormwater practices seldom account for factors where pollutant load removal is compromised, and tend to be optimistic. Lastly, this program option is very intensive in terms of local review and compliance, and requires more staffing to implement.

Option 4. Load Calculation with Stormwater Offset Fee to Provide Retrofits on Existing Development. In this program option, a community requires the on-site load calculation described in Option 3, but is very conservative in the assumptions it allows on loading and removal efficiency. Consequently, designers at most sites cannot fully comply with the load reduction for the requirement at their site. To fully comply, they must pay an offset fee to the local government which is used to support design and construction of stormwater retrofits at existing developments in the watershed. The fee is set at the cost of providing an equivalent amount of pollutant removal elsewhere (dollars/pound.)

The advantage of this approach is that it provides a means of financing the stormwater retrofits needed to reduce pollutant loads from existing development. It does require greater local staffing to find, design and build the retrofits which offset the loads from new development. If administered properly, this program option can potentially eliminate the net additional load from new development. Several communities currently provide this option for developers, but it is not clear how much revenue has been collected thus far.

The Sierra Club stated that Option 4 was favorable due to the inclusion of older site improvements. However, the fee was questioned by the Sierra Club, who is unsure of whether a developer should have to pay for someone else's problem, adding that smaller communities could be hit hard. Several members agreed that creating a stormwater utility would be more appropriate.

Several group members stated that Option 2 is more practical for this watershed due to its broad and diverse nature. Prairie Township stated that Option 4 is not consistent with the group's recommendations and Brown Township raised concerns about the use of assumptions in Option 4.

Consensus Recommendation

The EAG recommends Option 2, instituting more rigorous design standards for stormwater practices, to be used to achieve the water quality performance standards found above.

Water Quality Performance Standards

Discussion

The group discussed water quality performance standards to achieve the consensus water quality goals for new development.

Consensus Recommendation

The EAG recommends that for new development, the structural best management practices should be:

- Designed to capture and treat the prescribed water quality volume (WQv);
- Designed in accordance with specific performance criteria (i.e. removal efficiencies, volume of runoff, etc.);
- Constructed properly; and
- Maintained regularly.

Funding Mechanisms

Discussion

Stormwater utilities were considered as a possible funding mechanism. The group considered two different suggestions regarding stormwater utilities: whether they should be required prior to the extension of centralized sewers or whether they should be encouraged prior to the extension of centralized sewers. A poll was taken on the two options for providing funding for maintenance, enforcement and improvements, with the following results:

1. Require prior to extension of centralized sewers. (7)
2. Encourage prior to extension of centralized sewers. (5)

Note: 2 members did not vote

The Ohio EPA stated that it cannot require that a funding mechanism be created, but stated that their lawyers could look into the issue. The City of Hilliard suggested that the group recommend that the establishment of a stormwater funding mechanism be required if possible under EPA guidelines, otherwise the group should strongly encourage the establishment of a funding mechanism.

Non-Consensus Views

The group did not reach a consensus on the issue of a funding mechanism. The Sierra Club raised concerns about the lack of progress being made toward the establishment of a utility and felt that a dedicated funding mechanism should be required.

Specific Pollutants and Pollutant Removal Efficiencies

Discussion

The group discussed setting numeric standards for pollutant removal efficiencies. The Darby Creek Association suggested that the group put off developing numerical criteria for pollutants because it feels that the EAG is not capable of coming up with reliable numbers due to the fact that these numbers need to be supplied during multi-jurisdictional planning with the guidance of scientific assessments, including the TMDL. The Ohio EPA suggested that the group recommend that the director of the Ohio EPA integrate the output of the TMDL or other future analyses in setting removal efficiencies. A suggestion was made to use 80% as a floor and if the TMDL advocates a higher level, the percentage can be increased in the future. The Sierra Club raised concerns about when the group would address the specific figures if not now and about how it will be done.

The group then moved on to discussing water quality protection parameters by listing possible parameters. The Darby Creek Association stated that the group does not know what it needs to know to protect the Darby. The Ohio Environmental Council concurred citing the fact that there are no examples of a similar watershed to follow. FSWCD asked about improvements in technology and how often the technology is checked to ensure that it is good enough. The Ohio EPA responded that if they are aware of a change in technology that allows for better protection, they will include it in future planned updates to the 208 Plan.

Consensus Recommendation

The EAG agreed not to look at specific pollutants and removal efficiencies, and instead requested that the Ohio EPA take on this responsibility.

Construction Control

Discussion

The group addressed construction controls as a means to achieving water quality performance goals. A question was posed to the group as to whether higher standards should be set, in place of the Ohio EPA minimum standards. Harry Kallipolitis, an expert from Ohio EPA, explained that the general stormwater permit applies to developments greater than 1 acre. The general permit requires that a pollution prevention plan and a sediment/erosion control plan exist throughout all construction activities. The stormwater permit also mandates that a construction sediment basin be implemented on all sites greater than 10 acres, from the first

phase of construction through all construction activities. Harry suggested that a recommendation be made that a sediment basin be incorporated down to 5-acre sites.

The group discussed whether to require sediment basins on sites less than 10 acres. The City of Columbus suggested that development be regulated in conjunction with centralized sewers to which the City of Hilliard agreed, saying that if construction is related to development and centralized sewers, sediment basins be required for sites less than 10 acres. The City of Columbus also made the point that better ways to do stormwater treatment than a basin can be developed. The Ohio EPA stated that it does look at alternatives. The following language was suggested for consideration:

“Construction sediment basins should be required on all development sites unless an alternative is developed that is clearly demonstrated to be more protective and is approved by the Ohio EPA.”

Consensus Recommendation

Sediment basins should be required on all construction sites.

Non-Consensus Views

The group did not reach consensus on the language above specifying that sediment basins should be required on all development sites unless an alternative is developed that is clearly demonstrated to be more protective and is approved by the Ohio EPA. The Sierra Club could not live with this language. While the Sierra Club agreed that sediment basins were an effective means of controlling sediment, they were uncomfortable with allowing other, un-named protective measures. All other groups supported the proposed language above dealing with alternatives.

Inspection and Enforcement

Discussion

The group discussed inspection regimes of various entities including the Ohio EPA, FSWCD and the City of Columbus. Harry Kallipolitis provided clarification on several of the group's questions regarding the Ohio EPA's inspection process under Phase II and in unincorporated areas. Harry informed the group that the Ohio EPA is committed to looking at all sites under the Phase II regulations. He also stated that unincorporated areas are under the same regulations as incorporated areas. Pre-construction site visits are required in both incorporated and unincorporated areas. The Ohio EPA expects that in all areas (incorporated and unincorporated) an enforcement regime is developed by the local jurisdictions and that the legal authority stemming from the permit must be developed through an ordinance, etc.

The group was asked for recommendations for increasing enforcement. The final list of recommendations included the following:

- Fine;
- Stop work;
- Bonding;
- Notice of violation; and
- Mechanisms that have a short-term impact.

Due to the fact that the Ohio EPA already requires most of the mechanisms listed above, the following language was proposed regarding enforcement mechanisms:

“Local communities must demonstrate to the Ohio EPA that they have enforcement mechanisms in place that have a short-term impact.”

The Darby Creek Association stated that stop work orders should be part of that enforcement mechanism and feels that every jurisdiction should give itself the option to stop work immediately. Harry provided information on what is included in the permit language. The language states that enforcement capabilities on a short-term basis must be demonstrated but the language does not clearly say to develop stop-work orders. The above language was amended to include stop work orders.

The group then discussed whether all sites should be inspected by the local jurisdiction. Several suggestions were offered up in regards to frequency of inspections, ranging from having no set frequency to setting the frequency at two weeks or after a storm event. Two of the experts, Tom Russell and Harry Kallipolitis provided the group with additional information related to inspection frequency.

There were two main views in the group regarding the issue of the requirement of periodic inspections:

1. Periodic inspections should be required without a specified frequency; and
2. Periodic inspections should be required with a fixed frequency.

A poll was taken to gauge the group's potential for consensus. Five members voted for view #1 and six members voted for view #2.

Consensus Recommendation

The group recommends that local communities must demonstrate to the Ohio EPA that they have enforcement mechanisms in place that have a short-term impact, including the authority to stop work. In terms of inspection frequency, the EAG recommends requiring periodic inspections.

Non-Consensus Views

The group did not reach consensus on the frequency for inspections. Those that were in favor of having a defined frequency cited the benefit of having consistent knowledge of the site and a better chance that the inspections will be routine if a frequency is set. Those opposed to having a determined frequency for inspections cited the fact that local judgment should come into play; jurisdictions must use their judgment on when to inspect.

Phasing Construction

Discussion

During discussions over phasing construction, the Darby Creek Association stated that jurisdictions should require phased development and that construction controls should go in prior to any construction activity. The Sierra Club suggested that no construction continue until primary controls are in place and that there should be a check-off point by an inspector in order to move forward. The City of Columbus raised the issue of having a temporary delineation of the riparian buffer prior to construction.

Consensus Recommendation

The EAG recommends the following: Require the installation and approval of on-site primary construction controls prior to any other work being performed. The group also recommends the requirement of the temporary delineation of the riparian buffer prior to construction.

Water Quantity Performance Goals**Discussion**

Several members objected to starting the discussion of water quantity performance goals with by considering the Darby Creek Stormwater Strategies and Standards. The Darby Creek Association and The Nature Conservancy stated that they felt that the group did not have the technical background to be making recommendations on water quantity and quality performance goals. The Darby Creek Association suggested that the group recommend what controls it thinks are important but leave the technical aspects to the Ohio EPA. The Nature Conservancy agreed, adding that they hope that ODNR will work with Ohio EPA in determining adequate baseflow and channel stability protection, and the Ohio Environmental Council agreed with this statement. The Sierra Club did not agree with the Darby Creek Association's proposal, stating that the technical aspects should not be left to Ohio EPA and that by not setting limits, the streams in the ESDA will be no better than other streams.

Several members voiced concerns about how the bar will be set higher for the ESDA and Darby as a whole. The Ohio EPA stated that there would be specific performance-based standards, including specifically called out sizing requirements, which would be included in the permits for the ESDA, something which is not done in other permits.

The group briefly discussed public involvement in setting performance standards and in implementation of the standards. The Ohio EPA gave the Hellbranch Forum as an example of an implementation group. Ohio EPA also explained that the Hellbranch Forum is one of the venues through which the EPA's process of setting standards would go through, that there is a federal requirement for public involvement, and that the Hellbranch Forum is one way to satisfy that requirement.

Additions to the Darby Creek Association's proposal were discussed. The City of Columbus stated that it would be more comfortable with the proposal by the Darby Creek Association if language was added that the Ohio EPA would work in conjunction with the local jurisdictions to establish dialog. The Building Industry Association of Central Ohio pointed out that forums such as the Hellbranch Forum and advisory groups such as this one are only open to limited membership. The BIA stated a need for improvement to be made on involving appropriate stakeholders.

The following language was proposed for the group to consider:

"The Ohio EPA will set adequate performance goals and the Ohio EPA will determine the 'technological' means to achieve the performance goals using a collaborative process that involves input from appropriate stakeholders."

Non-Consensus Views

Consensus could not be reached on the language above. The Sierra Club could not agree to the language, citing concerns of not knowing what an appropriate stakeholder is and of who determines appropriate stakeholders. All other groups supported the proposed language.

Water Quantity Management: Peak Control and Channel Protection

Discussion

The Darby Creek Association suggested that the group provide the Ohio EPA with a list of things to address in regards to water quantity. The four water quality performance goals stated earlier in this document were suggested as a starting point:

1. Meet current water quality standards as set by the Ohio EPA, including anti-degradation rules and specifications of the TMDL.
2. Maintain exceptional warmwater habitat (EWH) at locations where it has been designated.
3. Improve streams without EWH status.
4. Meet Ohio EPA designations for all stream segments.

In addition to the goals above, John Mathews, one of the stormwater experts chosen by the group, suggested that a physical component be added for consideration so as to not focus entirely on loadings. He suggested the following wording as a performance goal:

“Physical (morphological) conditions to support high quality stream systems.”

The Nature Conservancy added that improving hydrology is a key characteristic.

New wording was offered up to address this goal:

“Develop water quantity management standards to maintain the physical, morphological and hydrological characteristics to improve/enhance water quality goals.”

Water quantity management standards, as mentioned above, are inclusive of peak control and channel protection.

The wording above was modified to become performance goal #5. Performance goal #6 came out of the groundwater recharge discussion listed below.

Consensus Recommendation

The EAG recommends the following as water quantity performance goals:

1. Meet current water quality standards as set by the Ohio EPA, including anti-degradation rules and specifications of the TMDL.
2. Maintain exceptional warmwater habitat (EWH) at locations where it has been designated.
3. Improve streams without EWH status.
4. Meet Ohio EPA designations for all stream segments.
5. Develop water quantity management standards to maintain the physical, morphological and hydrological characteristics to support and improve on water quality goals.

6. Maintain where adequate or improve where inadequate, the existing groundwater regime.

Groundwater Recharge

Discussion

Paragraph C under Section 5 of the Darby Creek Stormwater Strategies and Standards was used as a starting point for the group's considerations:

"C. Annual groundwater recharge rates shall be maintained, by promoting infiltration through the use of structural and non-structural methods. At a minimum, annual recharge from the post-development site shall mimic the annual recharge from the pre-development site conditions."

The Nature Conservancy stated that the pre-development conditions may not be supportive of water quality goals. He also stated that the need to improve on existing stressed conditions. The OSU Extension suggested the following language:

"Maintain or improve the existing groundwater recharge regime."

TNC stated that there cannot be an option to maintain **or** improve. The wording was thus changed to the following:

"Maintain where adequate or improve where inadequate, the existing groundwater regime."

Consensus Recommendation

The EAG recommends the following language as a performance goal for groundwater recharge:

"Maintain where adequate or improve where inadequate, the existing groundwater regime."

Adequate Public Facilities

The group did not have detailed discussions on adequate public facilities due to the time constraints on the overall process. Instead, an email dialog was undertaken amongst members on the issue of adequate public facilities. The City of Columbus drafted up language for the group to consider regarding adequate public facilities which is provided below:

“As development occurs in the watershed, local jurisdictions will assure that any public facilities associated with that development, like roads, water, sanitary and storm systems, are adequately planned for, sized and developed to help maintain water quality.

Political jurisdictions that provide governmental services within the Darby Watershed have a responsibility to plan for and provide citizens with an appropriate level of governmental services. These jurisdictions also have a duty to provide these services and any public facilities necessary for the provision of such services in a manner consistent with water quality protection measures in the Darby Watershed.

As the Ohio EPA and local jurisdictions take measures to address water quality in the Darby Watershed, it is important to assure that the various political jurisdictions responsible for providing adequate public facilities and services comply with the riparian corridor and stormwater protections set forth in the EAG process and subsequent Ohio EPA guidance in 208 planning, and when applicable and to the highest degree practical, the principles of conservation development set forth by the EAG and Ohio EPA.”

The Darby Creek Association was the only group to provide comment on the above language. The DCA proposed an addition to amend the first paragraph to read: “to help maintain or improve water quality as recommended by the Ohio EPA.” The first paragraph was amended to read the following:

“As development occurs in the watershed, local jurisdictions will assure that any public facilities associated with that development, like roads, water, sanitary and storm systems, are adequately planned for, sized and developed to help maintain or improve the water quality as recommended by the Ohio EPA.”

Consensus was not reached on the language above.

Non-Consensus Views

The Sierra Club felt that adequate public facilities were an issue that had to be addressed by the group in detail and not by a blanket statement. The Sierra Club raised the point that under the 208 Plan, a major issue is adequate public facilities and therefore, it should be discussed. Another point made by the Sierra Club was regarding sanitary sewers, stating that sanitary sewers are at or above capacity and should be addressed. All other groups supported the proposed language. The Ohio EPA was asked for their guidance on this matter and it stated that the group was at a point in the process where it must prioritize and move on.

Other Recommendations Outside the EAG's Mission

Throughout the discussions on the four elements that the group was charged with creating recommendations for, the EAG came up with several broad reaching recommendations that were not included under the group's mission. These recommendations are provided below for consideration:

- EAG strongly encourages the development of comprehensive plans to support zoning and other regulations.
- Regional planning with a natural resource protection focus was an important element to water quality protection. Since land use and regional planning are outside the mission of the EAG, this report reflects that the group strongly encourages that natural resource based regional planning be conducted.
- The Darby Creek Association along with TNC asked that in regards to general performance criteria for open space and water quality protection, the EAG recommend to the Ohio EPA that there be no loss of fish or mussel species.
- Similar recommendations should apply to all development, not just development served by centralized sewers.
- These recommendations should not be interpreted to diminish authorities that political jurisdictions have to protect health, safety and welfare.

APPENDIX 1 – Resolution of Comments

Franklin County Soil and Water Conservation District

Comment: Overall, this preliminary draft summarizes the activities and decisions of the EAG well. We do recommend expanding the executive summary in order to ensure key decisions and concepts are clearly and completely stated in a manner that anyone can understand. It is important to refrain from oversimplification. The District has also contributed to several “edits” of the document where several grammatical and stylistic comments and certain inconsistencies in terms such as riparian corridor width have been addressed. Our greatest concern is in making sure District recommendations are clearly stated and that it is clear how the District can best contribute towards a mechanism that supports the implementation of these recommendations for water quality benefit.

Resolution: No further changes were made to the Executive Summary due to the lack of resources available to make those changes. Some “edits” have been made to the final document.

Comment: Riparian Corridors - It is stated that consensus was not reached on the issue of stream mapping and the creation of a common multi-jurisdictional map to be used as a standard for stream determination and riparian buffer width implementation. The report should clearly state that the Franklin Soil and Water Conservation District stated that it is available to house, and implement a common map to be used in all stream and buffer determinations and would recommend that such a map exist and be easily available. District recommendations that did not achieve consensus or were not discussed by the EAG will be forwarded to the Directors for consideration.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Riparian Corridors - The definition of steep slopes is not consistent regarding primary conservation areas and riparian buffers. Consensus was reached separately concerning riparian buffer width (100- year floodplain or Hellbranch overlay formula or 100 ft per side, whichever is greater) and steep slope protection (NRCS HEL soils or slopes greater than 15% where soils don't apply plus 50 at the top of slope.) The consensus definition of steep slopes should be used in the definition of riparian slopes that do not count towards buffer width.

Resolution: The definition of steep slopes in the Riparian Corridors section differs with that found in the Conservation Subdivisions section. The definition for steep slopes in the Riparian Corridor section, slopes over 25%, came from a handout of buffer width options presented to the group for their consideration. These buffer width options were based on the literature presented on the ESDA EAG project web site as well as on the presentations given by the various speakers. The definition of steep slopes found in the Conservation Subdivisions section, slopes which include National Resource Conservation Service (NRCS) and Highly Erodable Land (HEL) defined soils plus a 50-foot setback on top of the slope, was developed by the EAG during discussions. A note was added to the text of the report in the Riparian Corridors section to clarify this difference. (See page 14.)

Comment: Riparian Corridors - To clarify the District's position, frequent or periodic monitoring of riparian buffers is essential to ensuring compliance with buffer standards. A complaint-driven process does not adequately provide the necessary vigilance or record of condition required for permanent buffer establishment. The most effective defense of these buffer areas requires regular monitoring that includes documentation of the condition of these buffers.

Resolution: The language above was added to the non-consensus views portion of the Enforcement section of Riparian Corridors.

Comment: Conservation Subdivisions - Franklin SWCD should be added in name as a viable and willing third party jurisdiction/land trust possibility. Franklin Soil and Water Conservation District, a subdivision of the State of Ohio is authorized by Section 5301.69 of the Ohio Revised Code to acquire conservation easements in the name of the FSWCD for the purpose of protecting the natural resources of Franklin County.

Resolution: FSWCD was added as an example of a land trust/conservation organization in the list of three suggestions for acceptable types of permanent protection.

Comment: This concept should be more clearly explained. District's opinion relates to the need to have defined maximum densities under any circumstances including density credits or other net buildable agreement. Land developers should never have free will to determine maximum density regardless of open space trade-offs.

Resolution: The first part of this comment that the concept of net developable or total developable should be more clearly explained was not addressed in the report due to the fact that the terms have been clearly defined in the text of the report. The second part of the above comment regarding maximum defined densities will be forwarded Directors for consideration.

Comment: Consensus was not reached regarding the frequency of sediment and erosion control inspections. Specifically, the District favored defined periodic inspections as every two weeks, after significant rain events, or as needed more often for a non-compliant site. The District was mentioned in name as a possible mechanism for more regular construction site inspections. It would be advantageous to jurisdictions in the watershed to consider the District as a willing, viable and cost-effective mechanism and partner for increased construction site enforcement.

The District strongly recommends that local governments strive to have construction site inspections every two weeks or more frequently for storm events and non-compliant sites. We want to work with local governments to make sure all construction site projects are in compliance. We have been doing this for Franklin County for over 10 years and currently work with Grove City and Gahanna, with a visible improvement on construction sites. We can provide services either through a grant agreement with local governments by collecting fees directly from developers, depending on the local government's preference. All conservation agreements have working agreements through ODNR with Ohio EPA on Construction Site management. We are a recognized tool at the state level for this purpose. If a local government cannot do regular inspections that result in 80% or higher compliance on sites throughout the construction project, the District's services should be considered.

Resolution: The above comment will be forwarded to the Directors for consideration.

Metro Parks

Comment: The acronym for the Central Scioto Water Quality Management Plan is used two different ways on page 3 of the draft report.

Resolution: Corrections have been made in the text of the report.

Comment: Under the agreed upon riparian corridor width on pages 6 and 15 of the draft report, does the 200 feet refer to a total width or the width per side?

Resolution: The text of the report was clarified to state that this is an assumed 100 feet on each side.

Comment: Under Riparian Corridors, the permitted use of “disturbances,” what type of disturbances are permitted?

Resolution: A clarification was made in the text regarding the types of permitted disturbances in the text of the report.

Comment: Under Riparian Corridors, Enforcement, “approved by the director” refers to the Director of whom?

Resolution: The text of the report was changed from “director” to a specific position for each individual jurisdiction.

Comment: Under Conservation Subdivisions, Acceptable Open Space, “riparian zones of at least 75 feet,” is that each side or total width (see pages 7 and 33 of draft report)?

Resolution: The 75-foot designation was deleted and the 200-foot consensus designation added.

Comment: Under Conservation Subdivisions, Acceptable Open Space, please define HEL and what is “plus 50 feet”?

Resolution: The report was changed to reflect clarifications. (See pages 7 and 31.)

Comment: Under Conservation Subdivisions, Design and Review Process, did the group not include a field review step?

Resolution: Prairie Township had presented recommendations for a design and review process requirement. The first recommendation was that technical parties walk the site prior to the development of a site plan. The second recommendation was that Randell Arendt's four-step review process be implemented. The group reached consensus on the four-step review process, however, the meeting minutes do not reflect anything further regarding the site visit. No changes were made in the text of the report.

Comment: Under Conservation Subdivisions, open space management criteria, "line" should be changed to lien.

Resolution: Corrections were made to the report.

Comment: Under Riparian Corridor Ownership, Option 3, change the sentence to read, "no public access unless dedicated or sold to a public agency."

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Under Riparian Corridors, Permitted Uses, could we add "stream restoration by a public agency"?

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Under Riparian Corridors, Prohibited Uses, add "except on roadways" to the motorized vehicles use category.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Under Riparian Corridors, Definition for Vegetation Consensus Recommendation, add "for improvement of hydrology and/or water quality" (See page 24 of draft report.)

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Under Stormwater Management, Groundwater Recharge, under C change form to from (page 47 of original draft report.)

Resolution: Correction has been made in the report.

Ohio EPA

Comment: Under Riparian Corridors, permitted uses, the bullet point disturbances” is misleading or confusing by itself. It needs to be put in proper context somehow; I believe disturbances associated with, or needed to carry out, other permitted uses is the intended meaning (page 6 of draft report.)

Resolution: A clarification was made in the text regarding the types of permitted disturbances in the text of the report.

Comment: The terms “floodway” and “floodplain” are used, but no definitions are provided. The EAG recommends the buffer be the greater of the width of the floodplain or the width of the Hellbranch Overlay formula. I recall that these terms were discussed and explained during our meetings, perhaps the meeting minutes captured this? It is important that the final report include a workable definition of what is meant by each of these terms.

Resolution: Clarification was provided on the two terms in the text of the report. Floodplain is referred to as the 100-year regulatory floodplain as defined by FEMA Flood Insurance Rate Maps (FIRMs). Floodway is also as defined by FEMA FIRMs.

Comment: Riparian corridor enforcement recommendation uses the term “stream corridor protection zone,” and the term appears in many places in the body of the text. I think EAG members assume this is synonymous with the width of the riparian corridor protection zone. The report should clearly attribute the term in question to the Hellbranch Overlay zoning ordinance (City of Columbus) and affirm that the EAG considered it synonymous with the riparian zone of protection it considered (pages 15-23 of draft report.)

Resolution: Text clarifying that the stream corridor protection zone is synonymous with the EAG’s riparian zone of protection was added to the report.

Comment: Design and Review Process – Regarding the recommendation for OEPA to mandate a set of prescribed steps in the design and review process, Ohio EPA will need to carefully consider the legal authority to impose these design and review principles for open space/ conservation subdivision zoning ordinances.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Riparian Corridor Width – The consensus recommendation is the formula for the Hellbranch Overlay, or the floodplain, with a minimum of 200 feet. The report presents several sets of options and formulas, but does not make clear which formula is the Hellbranch Overlay formula. My notes indicate that the equations presented in Option 2 on page 15 of draft report is that formula. Again for clarity, the terms W and DA should be defined. The entire formula should be repeated in the consensus recommendation for ease of use later.

In addition, the text for riparian corridor width describes the use of “Equation A” for the analyses that Ohio EPA gave. To improve clarity, state items 2 and 3 at the bottom of page 15 of the draft report as:

Equation A equals width calculated using the Hellbranch Overlay formula with a minimum of 50 feet.

Equation A' equals width calculated using the Hellbranch Overlay formula with a minimum of 200 feet.

Resolution: Clarifications were made in the text of the report.

Comment: The abbreviation C.C.C. is used; please indicate what this refers to.

Resolution: Clarifications were made in the text that C.C.C. refers to Columbus City Code.

Comment: Make clear what “it” refers to in the following statement: ...”OEPA pointed out that where comprehensive plans are in existence, conservation subdivisions should be consistent with these plans but that OEPA cannot mandate it.” Without benefit of researching the meeting minutes, I believe the reference is that Ohio EPA cannot mandate that a jurisdiction have a comprehensive plan.

Resolution: Clarifications were added to the text.

Ohio Department of Natural Resources – Scenic Rivers Program

Comment: Throughout the course of the EAG meetings, OEPA made reference to “letting the air out of the balloon slowly.” I would like to recommend that a formal commitment to this process be included within the EAG recommendations. Such a commitment should include a procedure for controlling the rate of development “letting the air out slowly” once the EAG recommendations have been codified by the political subdivisions in the watershed. A subsequent biological monitoring program should be established, for the Hellbranch Subwatershed at a minimum, to determine if the recommendations set forth by the EAG are going to be effective in the long term protection of the Big Darby’s Exceptional Warmwater Habitat and Outstanding State Resource Water designations. The EAG document should also contain a provision to re-evaluate its recommendations should it be determined through this process that the natural integrity of the Big Darby Creek is not going to be sufficiently protected.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: As part of the Total Maximum Daily Load (TMDL) development for the Darby Watershed, OEPA will be determining a total % of impervious cover the Big and Little Darby Creeks will be able to endure within their watersheds and still maintain the Exceptional Warmwater Habitat and Outstanding State Resource Water designations. Once this number is determined, it should be utilized to guide the future development of comprehensive land use

plans by communities throughout the ESDA and the rest of the watershed. By incorporating data of this nature into the development of comprehensive land use plans, political subdivisions will be able to greatly limit the negative impacts associated with increases in imperviousness. This limit of imperviousness should also be included in the EAG recommendations as an addendum or supplemental document so that it can be utilized to augment the controls set forth in the document.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: The document needs a statement reiterating that the local political subdivisions within the ESDA must adopt the controls recommended by the EAG before the OEPA will issue Permits to Install for sanitary sewer infrastructure in this region. It is imperative that these controls are adopted throughout the ESDA if they are to be effective in the protection of the Big Darby Creek.

Resolution: There is a step missing in the comment above. Political jurisdictions must adopt the requirements established by the Director of the Ohio EPA which will be based, in part, on the EAG's recommendations. The EAG's recommendations are not binding on jurisdictions, unless the Director updates the 208 Plan to make them so.

The report and the EAG efforts deal with technical recommendations not the process by which centralized sanitary sewers can be extended. The process for the extension of centralized sanitary sewer service is outlined in the 208 Plan. No changes have been made to the report.

Ohio Environmental Council

Comment: Permanent corridor protection should be enhanced with permanent riparian deed restrictions. Conservation easements should be methodically purchased from creek side ESDA contiguous land owners. The Franklin County SWDA is a logical easement holder as is the Metropolitan Park District, but all options including formation of a Darby Creeks Land Trust should be considered for perpetual protection.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Recommendations contained in the ESDA EAG report must be considered minimum requirements. The EAG in the best case scenario should be thought of as working on behalf of the creek's health and future, not for Columbus, OEPA or USEPA. The EAG gives voice to the Creek. In this scenario consensus driven recommendations are not voluntary recommendations for the OEPA to consider but rather rules by which any subsequent land disturbing activity can be permitted.

Resolution: The EAG's authority is only to provide the Directors with recommendations. The EAG does not have the authority to dictate to the Director of the Ohio EPA. No changes have been made to the report.

Comment: The OEPA has concluded a strong effort to evaluate the health of the Darby watershed. The Technical Support Document identifies significant technical findings that need to be the foundation for framing development activities. Furthermore, the EAG report should significantly highlight that Big Darby Creek has Outstanding State Waters status. Protection requirements for land development in the ESDA and the watershed generally must be forced through this higher level of protection from water quality degradation.

Resolution: Streams within the ESDA vary across the entire spectrum of designations as outlined in other Ohio EPA documents. No changes have been made in the report. This report presumes that all applicable State Water Quality Standards and regulations, including aquatic life uses and anti-degradation protection categories, remain in effect and are appropriately applied throughout the ESDA and the Darby watershed.

Comment: Subsequent TSD documents published during regular basin studies and other citizen based or volunteer monitoring efforts producing credible water quality data should cause elevated protection if data trends do not demonstrate that protection to the resource is occurring. In other words, demonstrable decline means tougher standards.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: The ESDA should not be the only area receiving the minimum EAG recommended protection. The entire Hellbranch Run must be protected. Likewise the other watershed areas not specifically within the borders of the ESDA need the same level of protection if the system as a whole is to be saved.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: The ESDA EAG brokered many hard decisions including recommending conservation development requirements and other open land or open space concepts. These discussions included determining what land use is appropriate in what area of the landscape. The Report should highlight these important consensus based decisions including conventional definitions that are agreed upon by all. As such a subsequent meeting or email based discussion may be needed.

Resolution: While the group had discussions regarding land use, these are outside of the mission as established by Ohio EPA. Participants may forward land use comments to the Directors and/or to local agencies responsible for land use.

The Nature Conservancy

Comment: Introduction and Executive Summary - Because these are the most likely portions of the report to be read, they should be expanded. One major area would be to list and highlight

the most significant aspects of the report. Also, the report should clearly note all areas that were discussed at length, but for which consensus was not achieved.

Resolution: Resources are not available to address these changes.

Comment: Introduction and Executive Summary - The EAG recommendations are to be considered by Ohio EPA. The report should emphasize that those that are determined by the Agency to be appropriate, plus additional requirements determined by the Agency, must be implemented by local jurisdictions for any development served by central sewers to receive a permit from Ohio EPA.

Resolution: The report and the EAG efforts deal with technical recommendations, not the process by which centralized sanitary sewers can be extended. The process for the extension of centralized sanitary sewer service is outlined in the 208 Plan. No changes have been made to the report.

Comment: Introduction and Executive Summary - Also, the EAG deferred some key decisions to the Ohio EPA, such as determinations of the amount of protection necessary to ensure adequate protection in terms of water quality and hydrology. Other discussion of the EAG only supports, or at least addresses, these points. Ohio EPA must use regular and extensive adaptive management controls and adjustments in the forthcoming process.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: The report, including the Executive Summary, should emphasize the recommendation of key points, especially the water quality and water quantity environmental performance goals, which most of the EAG's other recommendations are designed to support. Without these goals, it is not clear what any EAG recommendations would achieve, and it is entirely possible they would not achieve protection of Big Darby Creek or Hellbranch Run. The directive from Ohio EPA was that the EAG was charged with making recommendations related to those "sufficient to protect water quality."

Perhaps the most important item to emphasize is the importance of the tasks assigned to Ohio EPA by the EAG. These addressed water quality and water quantity sufficient to protect the streams in the ESDA.

Resolution: Water quality and water quality performance goals were discussed and consensus was achieved in the context of stormwater management and are highlighted in that section of the Executive Summary.

Comment: Throughout the report, many "consensus recommendations" are stated using "should" rather than "shall." "Shall" denotes a requirement, while "should" is usually considered advisory. Use of "should" substantially weakens a recommendation, even to the point of making them ineffective or meaningless. I believe the EAG members' intent was to make these recommendations requirements so that they would be put in place in all jurisdictions, and not be merely guidance that is often not followed.

For example, on Page 18 of the draft report under “Consensus Recommendation,” the report states “Dredging and filling should be a prohibited use.” It was the intent of the EAG to not allow such activity, so it must be stated as “Dredging and filling *shall* be a prohibited use.” Another example - on page 31 of the draft report, the Primary Conservation Areas “should be considered, which is a weak statement and sounds advisory, rather than meaning that these areas “shall” be required to be protected, as was the intent of the EAG. Another example, the EAG meant that native vegetation be planted and maintained in the riparian buffer, and that revegetation would be a permitted use. However, the “Consensus Recommendation” on page 16 of the draft report states “revegetation and/or reforestation *should* be permitted.” It should say “shall be permitted.”

Resolution: The EAG’s authority is only to provide the Directors with recommendations. The EAG does not have the authority to dictate to the Director of the Ohio EPA. No changes have been made to the report.

Comment: The report must emphasize the important distinction that the recommendations made supporting the perpetuation of Outstanding State Waters status for Big Darby Creek, and the Superior High Quality Waters for Hellbranch Run. Perhaps the main reason for the establishment of the EAG by Ohio EPA was for the protection of this status, if not for improved protection. The report states, such as on page 38 of the draft report:

“The group listed several options for water quality performance goals:
Meet current water quality standards as set by the Ohio EPA, including anti-degradation rules and specifications of the TMDL.”

Other occurrences of references to anti-degradation goals are on pages 8, 39 and 46 of the draft report. The discussion clearly emphasized maintaining Outstanding State Waters (OSW) status – the phrase “including anti-degradation rules” is not clear. This OSW status is granted to the Big Darby Creek because of its “special significance ... because of ... exceptional ecological values” (OAC 3545-1-05(A)(1)(c) (the Ohio anti-degradation rules).) In its presentation of April 22, 2004, and at other times in these meetings, The Nature Conservancy emphasized that the Big Darby Creek should be protected at least at the Outstanding State Waters level, and Hellbranch Run should be protected at least at the Superior High Quality Waters level. These terms help clarify, but still might not adequately address, the Ohio EPA’s directive to the EAG to make recommendations “sufficient to protect water quality.” Achievement of OSW might still mean a substantial loss of Big Darby species, so further caution and analysis is recommended.

Resolution: Anti-degradation rules apply to all stream designations not just Outstanding State Waters and Superior High Quality Waters. In addition, streams within the ESDA fall under all Ohio EPA stream classifications. Therefore, references to anti-degradation should be sufficient. This report presumes that all applicable State Water Quality Standards and regulations, including aquatic life uses and anti-degradation protection categories, remain in effect and are appropriately applied throughout the ESDA and the Darby watershed.

Comment: Several times during EAG meetings, the concept of an ecological threshold or “tipping point” was discussed. This concerned the level of stress caused by urban or suburban development which would cause substantial and irreversible harm to stream quality and send

the stream beyond a threshold of acceptable quality. This issue should be included as an item in the report. It was covered in Ohio EPA's June 2004 report, "Darby at the Crossroads." More discussion of this point in the report is warranted.

Resolution: No consensus recommendations were developed with regard to the "tipping point." Please refer to Ohio EPA's June 2004 report, "Darby at the Crossroads" for further discussion on this topic and related topics.

Comment: Several times during the EAG meetings, the concept of "adaptive management" was discussed, particularly by Ohio EPA. The report should include substantial discussion of this point. It was covered in Ohio EPA's June 2004 report, "Darby at the Crossroads."

Resolution: This topic is covered in detail in Ohio EPA's "Darby at the Crossroads" report, and the reader is referred to that document for additional detail.

Comment: Since adaptive management will likely expose shortcomings in the present EAG recommendations and the Ohio EPA's subsequent permit requirements, Ohio EPA must clarify a mechanism for adjusting requirements to protect stream integrity.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: The EAG discussed the issue of inclusion of the entire Hellbranch Run watershed. This must be mentioned in the report. The area generally east of Hellbranch Run presently is subject only to the City of Columbus' Hellbranch Overlay ordinance. The ESDA EAG recommendations and subsequent Ohio EPA requirements should be applied to this area. Without inclusion of the large area in the eastern portion of the Hellbranch Run watershed, this watershed would be overloaded and very unlikely to maintain its ecological integrity. The EAG recommendations will have little net positive impact if this area is excluded.

Page 35 of the draft report states: "The Darby Creek Association recommended that all protections that come out of the EAG be extended to the entire Darby watershed in western Franklin County." The Nature Conservancy strongly supports this watershed approach.

Also, areas outside of Franklin County – especially Madison and Union Counties – must also be adequately managed for stream protection if the ESDA effort is to provide long-term improvement and protection. It seems at best challenging to address only stresses such as development on one side of the stream, or only at the downstream points. The EAG members discussed this issue.

Resolution: The comments listed above will be forwarded to the Directors for consideration.

Comment: The report uses several terms, such as "conservation development" and "open space," which are not generally well known to the general public. These should be defined in the report, or it should provide a description of what was referred to in the course of the EAG effort as to the meaning of these terms. From personal experience, there is not a standard definition of what "open space" means, as one example.

Resolution: Although the group did not reach consensus on the definition of conservation development, the group relied on Randall Arendt's definition for conservation subdivisions throughout the discussions on that issue. The term "open space" was never defined by the group.

Comment: Because of the importance and complexity of these recommendations and their subsequent recommendations, the Ohio EPA and all jurisdictions must make a major educational effort to enforce these recommendations, all of which are technically complicated and depend on the very diligent implementation of all officials, businesses, regulatory and technical assistance agencies, and residents.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: The full titles and URLs of reference documents at the (perhaps temporary) EAG WWW site, http://utilities.ci.columbus.oh.us/project/eag_documents.htm should be listed in an appendix to the report. There should be a permanent WWW location for these documents.

Resolution: FMSM will take and provide the City of Columbus and the Ohio EPA, along with all members of the EAG, with a CD with all of the information from the web site. This will allow for the information to be distributed freely.

Comment: It was understood that the EAG members have the right to make further comments on the EAG draft report or final report after the document is submitted to Ohio EPA.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Page 5 of the draft report, last paragraph – "Information from the presentations as well as from any additional resources, such as Internet resources is provided." I do not believe the report provides all of these resources. It should list them, with full titles, as an appendix at the end of the report, and provide the WWW address. The WWW site should be maintained indefinitely for public access to these files.

Resolution: No action will be taken. The link to the web site with all of the resources utilized by the EAG is included in the report and a CD of all of the references will be provided to the City of Columbus, the Ohio EPA, and all group members.

Comment: Page 7 and Page 30 of the draft report, Acceptable Open Space – In order to maintain adequate water quality and quantity, it is reasonable to expect that considerable additional open space, perhaps well beyond that listed in these sections, will have to be included in the ESDA. Because no description, definition or recommendation addressing additional open space that would be needed to achieve environmental goals is provided in the report, the reader could be misled that these are the only open spaces the EAG members might believe are necessary. At least, the report should state "The EAG did not reach consensus on the amount of open space necessary to be "sufficient to protect water quality."

In addition, as I stated in my April 20, 2004, email to EAG members, "Not all "open space" is equally ecologically beneficial, and some can even be detrimental to stream quality, such as stormwater ponds in the floodplain or incompatible agriculture. To some, "open space" is not necessarily green space (*Note: with native vegetation, or other ecologically beneficial conditions.*) Also, there is no optimization of open space locations at a watershed scale as the ESDA is presently being discussed, which might lead to less likelihood that protection goals like that above can be assured."

Resolution: No additional action was taken due to the fact that under 'Percentage of Open Space, Fixed or Variable,' the report states that the EAG could not reach consensus on the percentage of open space required. The remaining parts of the comment are forwarded to the Directors for consideration.

Comment: Page 7 and Page 30 of the draft report, Acceptable Open Space: Primary Conservation Areas – "Riparian areas of at least 75 feet" – Because the EAG set riparian buffers at a minimum of 100 feet (each side) on all streams, this mention of "75 feet" could be misleading. It should just say "Riparian zones" to avoid confusion.

There is other discussion of open space in the "Open Space Minimum Requirements" on page 33 of the draft report. In the report, this discussion did not address the amount of open space necessary to be "sufficient to protect water quality." The EAG did discuss this point, but did not reach consensus.

Resolution: The change relative to riparian buffers has been made. The Non-consensus Views under Percentage of Open Space speak to the open space and water quality linkage.

Comment: Water Quality Performance Goals, Page 8, paragraph 1 and Page 38 of the draft report, last paragraph - The phrase "including anti-degradation rules" does not clearly capture the goal of "Outstanding State Waters" for Big Darby Creek and "Superior High Quality Waters" for Hellbranch Run. These terms specifically were discussed by the EAG and should be stated here in the recommended performance goal statement.

Resolution: Anti-degradation rules apply to all stream designations, not just Outstanding State Waters and Superior High Quality Waters. In addition, streams within the ESDA fall under all Ohio EPA stream classifications. Therefore, reference to anti-degradation should be sufficient. No changes have been made. This report presumes that all applicable State Water Quality Standards and regulations, including aquatic life uses and anti-degradation protection categories, remain in effect and are appropriately applied throughout the ESDA and the Darby watershed.

Comment: Water Quantity Performance Goals, Page 8, paragraph 2 and Page 46 – On Page 8 of the draft report, the phrase "including anti-degradation rules" does not clearly capture the goal of "Outstanding State Waters" for Big Darby Creek and "Superior High Quality Waters" for Hellbranch Run. These terms specifically were discussed by the EAG and should be stated here in the recommended performance goal statement. Page 46 does not include this same language as consensus recommendations as in found on page 8 of the draft report. This is very

confusing as to what was recommended by the EAG. Certainly the EAG meant to include the first four recommendations listed on page 8 of the draft report also.

Resolution: The additional two performance goals were added to the text of the report. Anti-degradation rules apply to all stream designations, not just Outstanding State Waters and Superior High Quality Waters. In addition, streams within the ESDA fall under all Ohio EPA stream classifications. Therefore, reference to anti-degradation should be sufficient. No changes have been made. This report presumes that all applicable State Water Quality Standards and regulations, including aquatic life uses and anti-degradation protection categories, remain in effect and are appropriately applied throughout the ESDA and the Darby watershed.

Comment: Riparian Corridors, Page 9 of the draft report, Paragraphs 1 and 2 – The word “guidebooks” is used; “guidance documents” would be a better term.

Resolution: The wording was changed from “guidebooks” to “guidance documents.”

Comment: Page 9 of the draft report, Paragraph 4 – Dr. Ward’s presentation addressed belt width or meander width, perhaps his most important concept and the basis for the Hellbranch Overlay formula. This formula, or the Ohio Department of Natural Resources formula which is recommended by ODNR elsewhere in the state (and which might be more stringent), was a key part of the basis for the EAG’s recommendation on riparian corridor protection. Belt width should be stated as one of Dr. Ward’s key points, and the ODNR formula should be provided in the report.

Resolution: The report does not include the formula presented by Dr. Ward due to the fact that Dr. Ward did not include that formula in his Summary of Key Items and Responses Presented to the ESDA EAG on August 29, 2003. The formula is also not present within the meeting minutes for that meeting.

Comment: Definition of a Stream, Page 12 of the draft report, Paragraph 5 – The report should note that creation of maps to designate streams to be protected prior to development was strongly favored by conservation organizations present. As a comment, such maps can create consistency and objectivity if developed according to standards. Given today’s computer mapping capabilities, this is not an overly burdensome effort, especially for an issue of this level of importance, and should be performed by an organization such as the Franklin Soil and Water Conservation District. However, because such maps can have errors, they must be verified in the field before plan approval proceeds. Maps could be favored by developers, who should want to and need to know the limitations of a property in advance.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Page 13 of the draft report – Option 1 – The first line under Option 1 states “40 feet on each side” as the distance. This was supposed to say “80 feet on each side,” and was corrected in a later EAG meeting, but apparently not in the record and the draft report.

Resolution: This change was made.

Comment: Page 15 of the draft report – Floodplain – “4. The width of the floodplain or the Hellbranch Overlay ...” should say “4. The width of the 100 year floodplain or the Hellbranch Overlay ...”

Resolution: The changes have been made. The floodplain is referred to as the 100-year regulatory floodplain as defined by FEMA FIRMs.

Comment: Page 15 of the draft report - Consensus Recommendation - Buffer width - "The group recommends that the buffer width be the width of the floodplain or the Hellbranch Overlay formula, whichever is largest, with a minimum of 200 feet." The report should note there was discussion of using the Ohio Department of Natural Resources formula recommended by ODNR elsewhere in the state (and which is more stringent.) This new formula is in the process of adoption in ODNR's "Rainwater and Land Development" Manual. It is likely to be stated as: $W = 129 DA^{0.43}$.

While there was extensive discussion of adding additional distance to this minimum buffer width, neither the text or recommendation include items such as additional width for slopes, impervious surfaces or wetlands adjacent to the buffer. *To be effective, the buffer should be extended where these are present.* The buffer also should be extended where certain surface water flow conditions exist, such as swales and other watercourses that are not streams, but cause buffers to be ineffective because they are bypassed, with direct delivery and impacts to the stream.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Page 16 of the draft report, c. Revegetation and/or Reforestation – Plant species for Floodplains – ODNR’s Bob Gable supplied a list of native plant species to be planted and encouraged in floodplains and riparian buffer areas. This list has been reviewed by Ohio botanists and should be included in the EAG report. The draft text refers to a list of “shrubs and vines.” While there might be such species in the ODNR list, it is more extensive and includes trees and other vegetation types. It should be in the report. Also, there might be a list in the Hellbranch Overlay. In either case, these species should be native.

Resolution: The requested changes were made. Reference was made to the list supplied by ODNR and the text “shrubs and vines” was changed to “vegetation.”

Comment: Page 17 of the draft report- Consensus Recommendation, Arterial Streets – Stream corridor protection related to arterial streets is not clear. It is noteworthy that the EAG’s recommendation as stated in the draft report is significantly less stringent than the statement in the City of Columbus’ Hellbranch Overlay, which states conditions such as “no other existing access” and “shall minimize disturbance to stream corridor protection zones.” It is not clear that the EAG recommendations incorporate such requirements, although they should and I believe it was the intent of the EAG to do so.

“Arterial streets” must be defined in the report.

Resolution: The following definition of an arterial street was added to the text of the report on page 17:

“An arterial street is a street whose primary function is traffic movement. Major arterial streets serve the major centers of activity of the urbanized area, the highest traffic volume corridors, the longest trips and the highest proportion of vehicle miles of travel to the amount of centerline mileage. Trips on major arterial streets may be either inter or intra-regional.” (Definition came from the Draft Regional Thoroughfare Plan developed by MORPC)”

Comment: Page 19 of the draft report - Consensus Recommendation - Disturbance of Natural (should be *Native*) Vegetation - "Disturbance of natural vegetation should be a prohibited use with the addition that the term “noxious weeds” will be as defined by ODNR." Besides noxious weeds, at one of the EAG meetings Bob Gable of ODNR supplied a list of native plants recommended for use in native vegetation plantings in the ESDA. The report should mention this and include the list as an appendix. Again, this section should refer to *native* (see below), not "natural" vegetation.

Resolution: No changes have been made. In this context the term “natural” is correct because it refers to the existing vegetation. Existing vegetation may be natural or it may be native – either way it cannot be disturbed. If, however, a person or entity desires to replant or plant additional vegetation, than it must be “native” vegetation as prescribed by ODNR.

Comment: Page 22 and 23 of the draft report - Native vegetation - "There shall be no disturbance of the *natural* vegetation..."

"Native vegetation" is the more appropriate term and should be used in the report. At the December 18, 2003, ESDA EAG meeting, I brought up the point that some of the draft language in EAG material uses the term "natural vegetation" to refer to plants that should be encouraged to grow in the streams' riparian areas. "Natural vegetation" is not a technically, and I suggest legally, meaningful term, since all vegetation is "natural." This could include non-native species. (We are trying to discourage non-native, exotic and invasive species in order to establish the most complete and functional stream ecosystem, and healthy Big Darby Creek watershed. I believe it was the intent of the EAG to encourage control of these non-native species.) "Native vegetation" is a more appropriate term, and native vegetation is more likely to establish and maintain a higher quality stream ecosystem.

After consulting with Steve Studenmund of Metro Parks and Tim Peterkoski of ODNR, we suggested the EAG adopt:

Native vegetation: "Plant species that were found in the local area prior to substantial European settlement."

The use of the term "natural vegetation" may have come from the Hellbranch Run Watershed Protection Overlay, as it appeared in the Columbus City Bulletin of June 15, 2002, page 1250, Columbus City Code Section 3372.705 and 706.

The report should use the term "native vegetation" in any recommendations and documents for the Big Darby Creek Environmentally Sensitive Development Area. This would include those referring to riparian corridors and other open space.

Again, in this section the report should refer to the ODNR list of native plants recommended for use in native vegetation plantings in the ESDA.

Resolution: No changes have been made. In this context the term "natural" is correct because it refers to the existing vegetation. Existing vegetation may be natural or it may be native – either way it cannot be disturbed. If, however, a person or entity desires to replant or plant additional vegetation, then it must be "native" vegetation as prescribed by ODNR.

Comment: Page 25 of the draft report, Summary of Technical Information, Paragraph 4 – The discussion of LESA should be expanded, since the concept of such environmentally-based planning is fundamental to the EAG mission. LESA uses natural resource features to prioritize planning, and the model can be expanded to address ESDA-relevant issues such as water quality, hydrology and riparian corridors. For example, a data layer could map, quantify and rank groundwater recharge areas, riparian corridors, impervious surfaces or areas of steep slopes. According to the Natural Resources Conservation Service (<http://www.nrcs.usda.gov/programs/lesa/>), LESA can be used to provide guidance such as the following, which are relevant to the ESDA:

- Identify important farmland.
- Prepare and update comprehensive land use plans.
- Purchase or transfer development rights.
- Prepare environmental impact statements as they relate to agricultural land.
- Plan water and natural resource projects.
- Plan sewage, water, and transportation systems.

LESA can be expanded to more fully focus on natural resources and their protection, a main point of Tim DeWitt's presentation.

Resolution: Additions were made to the text regarding Tim DeWitt's presentation.

Comment: Page 29 of the draft report, Conservation Subdivisions discussion, Consensus Recommendation – While the recommendation includes "traditional development," the report is not clear what this term means. Are traditional development and conventional development the same? What characteristics of traditional development differ from conservation development? Some might argue that traditional, high density development has considerably lower overall impervious surface, and therefore is "as good as" conservation development for stream quality.

Also, the EAG never defined how "overall water quality goals are being achieved" (page 28, third paragraph), or how they would be achieved, by traditional developments.

This discussion also appears to mix the terms "traditional development" and "conventional development."

Resolution: Usage of the term “traditional development” was changed to “conventional subdivisions.”

Comment: Page 29 of the draft report, Open Space and Water Quality Protection – The consensus recommendation includes “new arterial streets” within the open space. The report should note the extended discussion of the impacts of arterial streets on stream quality. In hindsight, The Nature Conservancy and the EAG should have encouraged such arterial streets as a conditional use, and the EAG should have established stringent conditions on their limits and design.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Page 30 of the draft report, “conditional uses within open space” – Stormwater BMPs are listed as conditional uses within the open space, which might include floodplains. There are a number of reasons stormwater BMPs such as ponds are undesirable in floodplains. Floodplains might be one of the types of open space in the ESDA. The Nature Conservancy can supply further comments on the impacts of stormwater ponds in floodplains.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Page 31 of the draft report, Consensus Recommendation – “Riparian areas of at least 75 feet” will confuse the reader, since the EAG established that the minimum riparian buffer would be 100 feet on each side of all streams. This section should just say “Riparian zones.”

Resolution: The 75-foot designation was deleted and the 200-foot consensus designation added.

Comment: Is there a typo? “NRCS and HEL defined soils?” Should it be “NRCS HEL defined soils?”

Resolution: The clarification has been made.

Comment: Page 31 of the draft report, Non-consensus Views – The draft states that the EAG did not arrive at consensus of 100-year floodplain as a primary conservation area. The report should note that there was extensive discussion of the value of protecting the 100-year floodplain, especially because of its essential functions that help protect stream ecology and hydrology. In particular, this value was emphasized by the Ohio Department of Natural Resources. Beyond this mention on page 31, the protection of the 100 year floodplain was established by the riparian buffer requirements that the EAG did recommend.

Spell out “ORAM” – Ohio Rapid Assessment Method.

Resolution: As part of the riparian buffer width requirement, allotments were made for the inclusion of the 100-year regulatory floodplain. The riparian buffer was included as a primary conservation area, affording protection to the 100-year regulatory floodplain. Text has been added following riparian zones specifying the inclusion of the 100-year regulatory floodplain in the list of primary conservation areas. The first time that ORAM was used in the paragraph, it was fully spelled out.

Comment: “Stated the need to look at peer-reviewed literature” - The report should reflect that The Nature Conservancy submitted peer reviewed scientific literature regarding wetland buffers. The suggested buffer, based on the scientific literature review and an Ohio study supplied to the EAG, was 200 m (about 656 feet.) The primary reference was Conservation Biology Volume 17 Issue 5 Page 1219 - October 2003 doi:10.1046/j.1523-1739.2003.02177.x Biological Criteria for Buffer Zones around Wetlands and Riparian Habitats for Amphibians and Reptiles, Raymond D. Semlitsch and J. Russell Bodie.

Resolution: Text was added to the report that states that TNC provided peer-reviewed literature for the group’s consideration.

Comment: Wetland buffers are necessary to maintain diverse animal life in the wetlands, especially where they might be surrounded by impervious surfaces. This area could be a significant factor for open space and conservation development by supporting groundwater recharge and therefore streamflow and water quality. At the EAG meeting, The Nature Conservancy stated that a discussion of alterations to the suggested buffer area was possible. After a short discussion and in the interest of time, the EAG moved on to the next topic without considering these options.

In an email distributed to the EAG May 27, 2004, I offered the following:

“Hydrologic contribution of wetlands and buffers to stream flow and quality - Points for additional consideration. Wetlands have a number of hydrologic benefits, including flood pulse control and groundwater recharge. In the Big Darby Creek watershed and most Ohio streams, the recharging of groundwater was a significant, and larger, route of water flow prior to agriculture and development. This recharged groundwater makes its way to streams and keeps them flowing, and therefore more likely to maintain higher quality, during dry weather periods. In some agricultural areas, wooded and wetlands area, there is probably still some significant function of groundwater recharge, the extent of which is unknown, but could be estimated. Larger buffers around wetlands therefore would serve at least two basic functions: 1) preserving the biological integrity of the wetland (the main focus of the above points); and 2) serving this additional groundwater recharge function to assist in maintaining stream health, which would be roughly commensurate with the size of the wetland buffer. This additional groundwater recharge function will be needed to partially mitigate impacts of development.”

These points are necessary to explain the wetland buffer proposal and should be considered for the report’s content. Wetland buffers, because of their role as open space and for groundwater

recharge, obviously affect water quality and The Nature Conservancy believes they are clearly within the EAG's purview, especially when primary conservation areas are considered.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Page 32 of the draft report, Permanent Protection, Consensus Recommendation – The Nature Conservancy notes that homeowners associations/condominium associations are listed as an option for enforcing conservation easements. We feel this type of easement ownership, because of the inexperience of these associations, is likely to have oversight problems and we do not recommend it.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Page 34 of the draft report, Non-Buildable Areas – It is not clear that these non-buildable areas include steep slopes. Using “NRCS HEL defined” does not make it clear that all steep slopes are non-buildable. The EAG discussed restricting building on steep slopes. “How steep” must be defined.

Resolution: No changes have been made. The EAG reached consensus on using the NRCS designated HEL plus 50 feet in lieu of determining a percentage that would define a steep slope.

Comment: Page 34 of the draft report, Percentage of Open Space, Non-consensus Views – “The Nature Conservancy voiced concerns that a ... range ... of open space will not meet Warmwater Habitat Use Designation.” Please note that The Nature Conservancy is concerned that inadequate open space will not meet the *Exceptional* Warmwater Habitat use designation, a more stringent goal than Warmwater Habitat, and absolutely necessary to provide at least partial protection for Big Darby Creek.

Resolution: The word “exceptional” was added to TNC's concerns.

Comment: Page 36 of the draft report, Note – “The group reached consensus that regional planning with a natural resource protection focus was an important element to water quality protection.” This is a very important point and should be included in the Executive Summary of the EAG report.

Resolution: A reference to the last section of the report entitled “Other Recommendations Outside the EAG's Mission” was added to the Executive Summary.

Comment: Page 37 of the draft report, Consensus Recommendation, paragraph 1 – “Applicant must submit a Plan ... that maximizes ecological function of the open space.” The Nature Conservancy notes that this open space must not just “maximize,” but be *adequate* to protect stream health. ***The adequacy of protection is the key test throughout the ESDA,*** and The Nature Conservancy emphasized this point in EAG meetings.

Resolution: No changes have been made. The meeting minutes from April 22, 2004 reflect that consensus was reached on the wording within the report "...maximizes ecological function of the open space."

Comment: Page 37 of the draft report, General Performance Criteria, Discussion – The report states "The following recommended performance goals were found to be within the purview of the group." Other recommended goals also should be listed in the report. Those found "not to be within the purview" should be listed, and reasons for not including them should be provided. I do not recall the EAG determining what was within the purview.

Resolution: The section was modified to include the comprehensive list of recommended performance goals.

Comment: Page 39 of the draft report, Water Quality Performance Goals, Consensus Recommendation – There appears to be a conflict between the statement "Water quality performance goals should be as listed above" and the "Water Quality Performance Standards, Consensus Recommendation" listed below on the same page. The former appears to require Best Management Practices to meet water quality goals, while the latter only appears to ask them to be "Designed in accordance with specific design criteria." The former was preferred by the EAG.

And how does this fit with the Consensus Recommendation on page 41, "The EAG recommends Option 2, instituting more rigorous design standards..." especially the water quality performance goals?

Resolution: The order of the sections was flipped so that the options would appear first, followed by the discussions on water quality performance standards to increase clarity.

Comment: Page 42 of the draft report, Funding Mechanisms, Paragraph 1 – In order to ensure that adequate protection is possible, Ohio EPA must review appropriate funding mechanisms for stormwater utilities.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Page 41 of the draft report, Specific Pollutants and Pollutant Removal Efficiencies, Discussion – Ohio EPA needs to specify how often it will prepare "future planned updates to the 208 Plan." This is critical to ensure adequacy, and must be much more frequent. In the past, the update frequency has been too long, and significant and irreversible damage has occurred between 208 reviews.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Page 44 of the draft report, Inspection and Enforcement, Paragraph 2 – "Short-term impact" is unclear, and might imply that the enforcement's impact is only meant to be temporary.

A better term (and I believe the intent of the EAG) would be “immediate and lasting,” or “immediate and permanent.”

Resolution: In the context of the discussion, short-term means immediate, i.e., stop work, but not “long lasting” i.e., never start up again. No changes have been made.

Comment: Page 45 of the draft report, Water Quantity Performance Goals, Discussion - In the fifth line of the first paragraph of this discussion, the draft states "... The Nature Conservancy stated that they felt that the group did not have the technical background to be making recommendations on water quantity performance goals." I would change this to "water quantity and quality goals." It is also notable that the recommendation was meant to state that the group did not have adequate time or technical background for the details of the water quantity and quality content, but the group did recommend goals which included protection of Outstanding State Waters and Superior High Quality Waters.

Resolution: The text was changed to state “water quantity and quality goals.”

Comment: Line 10, “base level adequate provisions” – I would change this to “adequate stream baseflow and channel stability protection and the Ohio Environmental Council agreed with this statement.

Resolution: The requested changes were made.

Comment: Page 48 of the draft report, Adequate Public Facilities – The Nature Conservancy believes that “adequate public facilities” was not adequately reviewed or discussed by the EAG. It is also important to note that public services, such as design, operations and maintenance, and enforcement, must accompany the physical facilities.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Page 49 of the draft report, Other Recommendations, third bullet - "The Darby Creek Association asked that in regards to general performance criteria for open space and water quality protection, the EAG recommend to the Ohio EPA that there be no loss of fish and mussel species." This suggestion addresses the Ohio EPA directive, the "sufficient to protect water quality" recommendation, and therefore is in the scope of the EAG. Fish and mussel species are part of the State of Ohio's measure of water quality. Also, please note The Nature Conservancy proposed this goal, among others, in its April 22, 2004, presentation to the EAG.

Resolution: TNC was added along with the Darby Creek Association as proposing that recommendation.

Comment: Throughout the report, the Ohio Environmental Protection Agency should be referred to by its preferred abbreviation, which is “Ohio EPA,” not “OEPA” or “EPA.” This helps avoid confusion, such as when the report refers to "Wetlands as defined by the Army Corps of

Engineers or the EPA " on page 7 of the draft report. Wetlands as defined by the (U.S.?) EPA are different from Ohio's because of the isolated wetlands issue.

Page 3, Paragraph 1 – "CSPU" not "CPSU."

Page 9, Paragraph 3 – Spell out "Ohio Department of Natural Resources" the first time it is used.

Page 38 - ODNR's John Mathews' name is misspelled.

Resolution: Corrections have been made.

Vorys, Sater, Seymour and Pease LLP

Comment: Application of Development Standards in Darby Creek Watershed – The Darby Creek is a unique resource and it is because of this resource that stringent development standards are under consideration. We do not believe that these standards should be applied to other areas in Central Ohio because resources are adequately protected by state and federal permitting requirements, zoning requirements and otherwise. Accordingly, the BIA believes that the EAG recommendations should include a statement clarifying that these standards are not designed or intended to be applicable to other areas.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Recognition of Potential Economic Impact of Development Standards – The EAG's recommendations gloss over the significant economic impact the proposed standards are likely to impose on many property owners in the affected area of the Darby Creek watershed. The BIA was the sole representative on the EAG of entities with direct economic interests affected by the proposed standards (there was no other representative of the interests of property owners in the affected area) and we feel bound to raise this issue. Because of the significant impact on residential density, the cost of special development design and the establishment and maintenance of open space, conservation areas and stormwater controls, raw land will be worth less money. In many instances, individuals and entities have invested in property in this area, whether for agriculture purposes or otherwise, and, to the extent to which there was hope to sell the land for development purposes in the future, this investment will be diminished. We believe the EAG recommendations should recognize this cost. Moreover, the types of standards proposed will, undeniably, increase the cost of developing residential housing and these costs will be reflected in the price of homes in this area. As an industry, we believe that affordable housing is essential to a productive and fair economy and that it is necessary and appropriate to factor in, or at least acknowledge, these costs in the EAG's recommendations.

Resolution: The EAG discussed and could not reach consensus on including cost. During the discussion on the purpose statement for riparian corridors, the BIA suggested that the additional element of implementability and affordability to the purpose statement. However, consensus was not reached on inclusion of this element. No changes have been made to the report.

Comment: The Importance of Flexibility – The recommendations suggest many stringent standards to be applied to development in the area of the Darby Creek watershed. It does not, however, provide for an opportunity to review the application of these standards to individual developments on a case-by-case basis. While we understand the need for consistent application of these standards, we believe it is essential to provide for an opportunity for property owners to seek a variance from the standards where they can demonstrate that such variance will not result in any degradation to the Darby Creek. In many instances, it may be preferable to allow minor incursions into riparian corridors and/or streams in order to allow for the protection or enhancement of other important ecological resources on the site. Accordingly, we believe that variances should be available in any local land planning plan implementation of these types of requirements.

Resolution: Most, if not all, of these recommendations will be implemented through an ordinance. Even if implemented by regulation, the regulation will be referred to in an ordinance. In order for an ordinance to be legally enforceable, it must include variance provisions. No changes have been made.

Comment: Limitations of the 208 Process – It will be important for the EAG to recognize that there are certain limitations imposed on the Ohio EPA in the 208 Plan process. A 208 Plan provides the agency with the authority to evaluate comprehensive waste water management plans and to assure that these plans provide adequate protection of water quality. It does not authorize or require the Ohio EPA to consider or approve of municipalities' land planning decisions. Accordingly, it may be difficult to concretely address issues related to density, open space, conservation development design, etc., in the 208 Plan. In that regard, we would encourage the EAG to develop resources that can be used by local governments to develop a protective comprehensive development plan. We understand that effort is underway.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Many of the goals/requirements contained in the EAG report are not specifically defined. What is meant by “conservation development”? What percentage of a parcel would be designated as open space? What are the specific design requirements/goals for stormwater retention and/or treatment? Without the ability to evaluate how these types of issues will affect construction in the watershed, it is difficult for our members to evaluate whether the recommendations are workable.

Resolution: A consensus definition for conservation subdivisions was not reached by the group. However, Randall Arendt's definition of conservation subdivisions was assumed by the group in their discussions. In terms of the percentage of a parcel that would be designated as open space, the group did not reach consensus. In terms of the specific design requirements / goals for stormwater retention and/or treatment, the group chose to have the Ohio EPA set this criteria.

Comment: We support the aggressive establishment of riparian buffers to protect the Darby Creek where the buffers are demonstrated to be necessary to protect the creek. In fact, we support the establishment of 200-foot minimum buffers on perennial streams. However, as

discussed below, we do not believe that requiring a minimum 200-foot buffer on or along intermittent streams or ephemeral streams is either necessary or appropriate to protect the Darby Creek.

While it may be acceptable to include ephemeral, intermittent and perennial streams in the definition of what constitutes a stream, it is wholly inappropriate to treat these resources the same and to apply the same restrictive standards. A 200-foot buffer on an ephemeral stream that is one-foot wide and conveys water only during and shortly after a rain event is not required to maintain water quality. The goal of the development standards is the preservation of the Darby Creek, not the blanket preservation of open space and undeveloped areas. A more reasonable standard would be to apply the riparian corridor calculation model set forth in the Hellbranch Overlay or the floodplain, whichever is greater, for intermittent streams and ephemeral streams and with a minimum width of 50 feet for drainage areas less than 90 acres.

Appreciation of a blanket 200-foot minimum riparian buffer may dramatically affect, and perhaps prohibit, development on smaller or irregularly-shaped parcels of property. This could significantly diminish the value of some properties and may trigger takings claims against the local jurisdiction applying this standard.

Additionally, the blanket prohibition against other impacts to ephemeral or intermittent streams, particularly, is neither necessary nor practical. It may lead to grossly distorted development designs and/or loss of other, more valuable ecological resources due to efforts to protect these draining features. Moreover, there are stringent federal and state permitting programs which already restrict impacts to these areas. In addition, local land planning requirements should require the land developer to avoid impacts to ephemeral and smaller intermittent streams “to the extent practicable.” This would allow a measure of flexibility, yet still protect the overall functionality of these resources.

We are concerned that there may be discrepancies over identifying what truly constitutes a stream. Most local governments do not have individuals on staff qualified to make that determination. In that regard, reference to the U.S. Geological Survey (USGS) maps and the NRCS maps should be standard for the identification of perennial and intermittent streams. To the extent that local jurisdictions and the Army Corps of Engineers differed on stream identification and classification, the Corps determination would prevail. The definition should also specifically exclude drainage swales and manmade drainage features. In addition, all stream channels should be mapped by local jurisdictions and this information made easily available to property owners and prospective purchasers. This would allow property owners and/or developers to make informed decisions prior to investing significant time and financial resources in a property.

Similarly, it is our understanding that the current FEMA floodplain designations in the Darby Creek/Hellbranch watershed are no longer accurate. A study to properly define the floodway and floodplain should be performed for the watershed and focusing at first on areas where development is likely to begin.

With respect to acceptable uses in the riparian corridor, we believe the following issues must be addressed:

- The requirement should make allowances for some sort of stormwater outlet to be constructed through the buffer, whether a pipe outlet (with head wall) or an open channel.

- The construction of sanitary sewer and waterline stream crossing could become inordinately expensive if directional boring is required beneath the entire width of the riparian corridor. Although some EAG members object to boring pits within the buffer, the reasons are not provided.
- Directional boring should not be required to cross ephemeral or intermittent streams provided that construction is conducted during periods of negligible water flow and the affected area is promptly revegetated with appropriate native vegetation.
- The proposal to categorize construction of non-arterial streets as conditional uses allowed only when the parcel has no other existing access or when such crossing is necessary for public health and safety is impracticable and unnecessary, particularly when applied to ephemeral and smaller intermittent streams. The minimal ecological benefit from this approach may be far outweighed by limiting flexibility in the land planning process which might otherwise allow for significantly greater protection of ecological resources. Again, we would recommend that impacts to ephemeral streams and smaller intermittent streams be avoided to the extent practicable. Impacts to larger intermittent streams and perennial streams would need to meet the more stringent standard.
- Setback distances for unpaved/paved trails are excessive when compared to the riparian corridor width requirements. In many areas, the buffer would be significantly narrower than the prescribed distance and the trail would then be well outside of the buffer. It will also detract from enjoyment of the stream.

Resolution: These comments will be forwarded to the Directors for consideration.

Comment: Conservation Development – We are certainly not opposed to “conservation development,” although it is, at present, an ill-defined term. At the same time, we continue to believe that traditional development, designed in accordance with these watershed protection standards, can and will be more than sufficient to protect aquatic resources in the Darby watershed. Accordingly, we do not believe any distinction should be drawn between the two approaches – both should be allowed “of right.”

Resolution: The EAG reached consensus that conservation subdivisions should be by-right and conventional subdivisions are a conditional use and must go through a special approval process.

Comment: Open Space – The BIA and its members recognize both the ecological and aesthetic value of “open spaces” in the context of residential development. Our members work to maintain valuable and unique resources in their individual developments. The EAG’s recommendations on this issue are too vague to provide much in the way of specific comments. In particular, it does not discuss in any meaningful way how “open space” may be used. Must it be maintained in a natural state? Can it be used for active or passive recreational purposes? The BIA believes that it is important to consider the public use and benefits of open space, not just ecological issues.

The proposed “primary conservation areas” are over-inclusive and may have negative and unintended consequences. For example, wetlands as small as .01 acre are delineated under today’s regulatory program. A parcel of property may have multiple areas of small, isolated wetlands. To require the preservation of each of them is impracticable.

Moreover, a blanket prohibition against impacting wetlands, in concert with the other suggested development restrictions; i.e., extensive riparian corridors, restrictions on locations of streets and utilities, etc. may drastically affect the ability to develop property. We would suggest that both the size and the quality of the wetland be taken into account when determining if it should be categorized as a primary conservation area. Perhaps wetlands of greater than one acre in size and which are classified as a Category 2 or 2 wetland under Ohio's Rapid Assessment Method would be a suitable standard. Regardless, we recognize that impacts to wetlands would need to be mitigated within the Darby Creek watershed.

Similarly, the designation of "healthy forests" as primary or secondary conservation areas is troublesome. First, there is no definition of what constitutes a "healthy forest." Who will make this distinction? Second, the existence of a forest does not necessarily impact water quality and this is the goal of the EAG, not habitat preservation. Similarly, designating "prime agricultural land of at least five contiguous acres" as secondary conservation areas is puzzling. Active farm land contributes significant quantities of sediment, fertilizers and pesticides to stormwater runoff. Moreover, farmers are unlikely to continue to farm properties as small as five acres, particularly as an area develops. What is the goal of this designation?

Resolution: These comments will be forwarded to the Directors for consideration.

Comment: Ownership of Open Space – As noted in the introduction, the EAG should recognize that it may be difficult for the Ohio EPA to address open space and open space management in the 208 Plan process. The 208 Plan is not a land use plan. It is a process to manage and evaluate area waste treatment management plans in the context of water quality. In the long run, it will probably be more effective to develop resources which local governments can use in crafting their individual land use plans incorporating open space requirements. We understand that the relevant local jurisdictions involved in the Darby Accord have requested bids to being this process. That said, we believe that any open space requirement must be as flexible as possible to allow our members and local communities to evaluate all options to maximize benefits to both the public and the environment when designating and managing open space areas.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: Stormwater Management – The BIA and its members generally agree with the EAG's approach to stormwater control and management. We believe that it will be essential for any stormwater requirements to be specific and well defined and provide the necessary detail to allow interested parties to comply with these requirements. We would point out that the EAG's recommendation that local communities have "stop work" authority exceeds the authority of the Ohio EPA's stormwater permit program. To the extent to which communities adopt "stop work" authority, a timely and effective appeal mechanism must be provided, along with adequate time to correct any deficiencies.

With respect to protection of groundwater resources, we want to point out that it will be very difficult for local communities to identify mechanisms for evaluating groundwater quantity and quality. Rather than a specific requirement to maintain or improve the groundwater regime, a more realistic solution would be to require implementation of appropriate and practical best

management practices, such as minimizing impervious surfaces, etc. while still providing adequate access and services.

Resolution: These comments will be forwarded to the Directors for consideration.

Brown Township

Comment: Executive Summary – The Executive Summary is a critical component of the report and will undoubtedly be read by more people than the entire report itself. Consequently, the Executive Summary should be augmented to clearly represent the EAG's discussions and recommendations including significant aspects of non-consensus and key areas of discussion and disagreement. References to relevant page numbers of the main report should be included in the Executive Summary text.

Resolution: Page numbers for the major sections of the report were included in the Executive Summary. Beyond those additions, no further changes were made due to the lack of resources available to make the changes.

Comment: Page 3 of the draft report references "CSPU." Change "CPSU" typos.

Resolution: The corrections have been made.

Comment: The note (p.39 of the draft report) relative to water quality performance goals and a "margin of safety" is a Consensus Recommendation and should be included in the Executive Summary. It states: "Appropriate margins of safety are included in the TMDL and anti-degradation rules."

Resolution: The Executive Summary is only intended to provide the "primary" recommendations. The reader is referred to the detailed report for all recommendations; therefore, no changes have been made.

Comment: Page 6 of the draft report Riparian Corridors identifies "disturbances" and "arterial streets" as Permitted Uses. This requires added explanation per pages 17 and 18 in the draft report to accurately reflect EAG intent.

Resolution: Page number references and additional clarification were added to the Executive Summary to address this issue.

Comment: Page 7 of the draft report, Open Space, (also p. 32 of the report) should include the significant discussions regarding the need for third party oversight of open space areas, for example by FSWCD.

Resolution: Under ‘Permanent Protection,’ FSWCD was added as an example of a land trust/conservation organization.

Comment: Clarify Open Space “slope” component NRCS HEL as “Natural Resource Conservation Service designated Highly Erodable Land plus a 50-foot setback from the top of the slope.”

Resolution: The requested change has been made.

Comment: Change the Executive Summary’s use of the word “should” to “shall” to capture the intent of the EAG consensus recommendations. Use “shall” throughout the report’s consensus recommendations in the same manner. For example, See page 18 of the draft report, Consensus Recommendation on Dredging and Filling, the word “shall” is used in the body of the discussion and “should” is in the Consensus Recommendation. “Shall” is the appropriate word for the Consensus Recommendation.

Resolution: The EAG’s authority is only to provide the directors with recommendations. The EAG does not have the authority to dictate to the Director of the Ohio EPA. No changes have been made to the report. (Many of the instances in which “shall” appears in the text are due to excerpts from the Hellbranch Overlay text which were used for consideration of things like uses, etc.)

Comment: Page 8 of the draft report, Stormwater Management, Water Quality Performance Goals, reference Ohio EPA’s anti-degradation rules. Use of anti-degradation references in the Executive Summary as well as throughout the report (example p.38) should specifically mention “Outstanding State Waters” and “Superior High Quality Waters” designations.

Resolution: Anti-degradation rules apply to all stream designations, not just Outstanding State Waters and Superior High Quality Waters. In addition, streams within the ESDA fall under all Ohio EPA stream classifications. Therefore, reference to anti-degradation should be sufficient. No changes were made to the report. This report presumes that all applicable State Water Quality Standards and regulations, including aquatic life uses and anti-degradation protection categories, remain in effect and are appropriately applied throughout the ESDA and the Darby watershed.

Comment: Riparian Corridors, Page 15 of the draft report, Consensus Recommendation on the Riparian Corridor Width should reference the width of the “100-year” floodplain.

Resolution: Changes were made throughout the report so that the floodplain is referred to as the “100-year regulatory floodplain as defined by FEMA FIRMs.”

Comment: Page 11 of the draft report, Purpose Statement Consensus Recommendation, no. 3 references “stream functionality.” For purposes of clarity, add “hydrology in order to maintain Outstanding State Waters and Superior High Quality Waters designation status”.

Resolution: The group reached consensus on the three elements of the purpose statement included in the report, with no additional provisions for the hydrology. No changes to the report have been made. This report presumes that all applicable State Water Quality Standards and regulations, including aquatic life uses and anti-degradation protection categories, remain in effect and are appropriately applied throughout the ESDA and the Darby watershed.

Comment: Page 13 of the draft report, Riparian Corridor Ownership, Option 3, “Existing Development” Totally grand-fathered exempted from restrictions- should be clarified with a definition for “existing development”. How is an undeveloped lot in an “existing development” to be dealt with?

Resolution: Option 3 comes from the text of the Hellbranch Overlay. The Hellbranch Overlay defines “development” as the following:

“Any human-made change to improved or unimproved real estate, including but not limited to buildings or structures, mining, dredging, filling, grading, paving, excavating or drilling operations or storage of equipment or materials.”

The Overlay text does not provide a definition for “existing development.”

Comment: Page 19 of the draft report, Riparian Corridor Width, Uses, Roads and Driveways as a conditional use is actually a Consensus Recommendation and should be so referenced.

Resolution: Under Riparian Corridor Uses, Roads and Driveways is listed as a consensus item in the report.

Comment: Page 20 of the draft report, Stream bank Stabilization/erosion control measures, Consensus Recommendation, second bullet, second sentence-should include the word “protection” after “purposes of water quality” to read “purposes of water quality protection”.

Resolution: The requested change has been made to the report.

Comment: Page 22, when referencing “natural” vegetation, use the word “native” vegetation here and throughout the document.

Resolution: Natural and native vegetation mean two different things and they are appropriately used in the report. No changes have been made to the report.

Comment: Conservation Subdivisions, Page 25 of the draft report, discussion by second speaker, Tim DeWitt. The small paragraph included in the report does not do justice to Mr. DeWitt’s presentation. Additional information is warranted regarding the value of the LESA program as a land use planning and natural resource preservation tool in a Darby Watershed context.

Resolution: Additions were made to the text regarding Tim DeWitt’s presentation.

Comment: Page 31 of the draft report, Non-consensus Views states EAG did not arrive at consensus of 100 year floodplain being designated a primary conservation area. Include here a reference that EAG did reach consensus on floodplain protection in that the Consensus Recommendation for Riparian Corridor Width includes “the width of the floodplain (100 year) or the Hellbranch Overlay formula, whichever is largest, with a minimum of 200 feet” (page 15 of draft report).

Resolution: As part of the riparian buffer width requirement, allotments were made for the inclusion of the 100-year regulatory floodplain. The riparian buffer was included as a primary conservation area, affording protection to the 100-year regulatory floodplain. Text has been added following riparian zones specifying the inclusion of the 100-year regulatory floodplain in the list of primary conservation areas.

Comment: Page 36 of the draft report includes a Consensus Recommendation on the importance of regional planning with a natural resource protection focus. This Consensus Recommendation should be included in the Executive Summary.

Resolution: A reference to the last section of the report entitled “Other Recommendations Outside the EAG’s Mission” was added to the Executive Summary.

Comment: Page 37 of the draft report, General Performance criteria, discussion should include all TNC discussion points including ecological preservation, no loss of species and importance of water temperature on stream ecology.

Resolution: The section was modified to include the comprehensive list of recommended performance goals.

Comment: Page 38 of the draft report, Water Quality Performance Standards should be connected with the Water Quality Performance Goals – top of same page and bottom of page 37 – to clarify they are not in conflict.

Resolution: Clarifications were made in the text of the report. The order of the sections was flipped so that the options would appear first, followed by the discussions on water quality performance standards to better connect the sections.

Comment: Stormwater Management, Page 43 of the draft report, Stormwater Management, Construction control, Consensus Recommendation uses the term “short term” impact. Substitute the word “immediate and lasting” impact to be clear on the EAG conclusion here.

Resolution: In the context of the discussion, “short-term” means immediate, i.e. stop work, but not “long lasting,” i.e. never start up again. No changes have been made.

Comment: Other Recommendations, Question: Page 49 of the draft report, what is the origin of the last bullet statement, “These recommendations should not be interpreted to diminish authorities that political jurisdictions have to protect health, safety and welfare”? Doesn’t this statement “go without saying?” Did EAG discuss this for inclusion in the report?

Resolution: This statement was requested by the EAG, therefore no changes have been made to the report.

Comment: The EAG recommendations on page 49 of the draft report should be included in the Executive Summary or at least referenced in that component of the report. EAG’s considerable discussions regarding the importance of a watershed imperviousness “tipping point” and subsequent environmental impacts merits inclusion here.

Resolution: A reference to the last section of the report, Other Recommendations, was added to the Executive Summary. Ohio EPA’s June 2004 report entitled, “Darby at the Crossroads” can be found on the CD distributed to the EAG members and the Directors.

Comment: Page 49 of the draft report, Other issues discussed at length in the EAG process which should be included in this part of the report are: importance of water quality monitoring for impacts from development on a regular basis; Ohio EPA’s “letting the balloon out slowly” adaptive management proposal; need for local jurisdictions to adopt EAG recommendations into local codes prior to extension of sanitary sewer service; inclusion of strong stormwater protection measures in conjunction with public road construction; lack of success in meeting EAG mandate and subsequent lack of complete product due to time constraints inherent in the EAG process; and discussions that eastern Hellbranch “sliver” should be included as part of the EAG process.

Resolution: The intent of this report is to summarize the consensus recommendations and defined points of non-consensus. This report is not intended to summarize all discussions of the EAG. The reader is referred to EAG meeting minutes for summaries of all discussions.

Darby Creek Association

Comment: The Executive Summary should have much more of a narrative thread and be less focused on bullet points listing those measures that achieved complete consensus. This section is most likely to be read by the public, and thus should be written for a layman, concentrating on educating readers to the core of the EAG’s work. Such a narrative should contain some of the most important and influential “whys” of what the EAG is recommending. It should also define some of the important phrases such as “conservation development” and “primary conservation areas.” As it stands, the Summary is a confusing laundry list of items with a lot of legalistic language. We believe it is critical that the Summary tell the complete story of the EAG in order to give the reader the context of why it was convened, what it achieved, what remains to be done, and where the group members expect it to lead.

Resolution: No further changes were made to the Executive Summary due to the lack of resources available to make those changes.

Comment: Another general comment: When consensus was not reached, and there was only one dissenting opinion, the report should specifically state that “all other groups supported the proposed language.” There are too many instances in which the impression is given that there was a disagreement over an issue, when in fact there was broad agreement with only one dissension. It would be a disservice to the Director and the public if we do not emphasize that in many cases all jurisdictions, agencies, and all but one environmental group were in agreement on an issue.

Resolution: Text was added to the report under non-consensus items to address this concern, reflecting where only one discussion was evident.

Comment: Also, in some places the text reflects an interim position on various issues, rather than the final status on these issues. This is apparently due to copying text from meeting summaries from before issues were revisited. The final report should document the final status of issues. An example of this is riparian corridors, the details of which were not finalized until near the end of the group’s activities. We are certainly not opposed to the report giving an account of the deliberations; but the final status on issues such as riparian corridors should be clearly expressed wherever that issue is discussed in the report.

Resolution: Any instances of this were corrected.

Comment: In the interest of clarity, we would suggest putting all final consensus items in bold text.

Resolution: Each consensus recommendation item is noted by a border around the text.

Comment: Also, the text should include the number of groups that recommended that the ESDA be expanded to include the entire watershed in Franklin County, that it should be expanded beyond Franklin County, and that it should include development on septic systems.

Resolution: This leads into a discussion of the group’s difficulty with accepting its mission, which is not the intent of the report. No changes have been made.

Comment: The report needs to reflect that the Ohio EPA clarified and modified the EAG’s charge during the course of our existence. Specifically, we were instructed not to consider landscape wide planning, impervious surface and total open space, and the concept of a “tipping point” for development levels in the watershed. We were informed that these topics were inappropriate for our group, either because we did not have the political or legal authority (land use planning), or because we did not have the scientific capability (impervious surface, tipping point, and total open space.) Our group therefore did not make recommendations on a number of absolutely vital issues, but left these to the EPA and future planning initiatives. We came to understand our mission as a partial task in a larger effort, the latter being described by

the EPA as a multi-pronged adaptive management process. This all needs to be communicated in the Executive Summary and the report because it greatly impacted our recommendations, and will greatly impact how the Director and the public view our conclusions.

Resolution: This comment will be forwarded to the Directors for consideration.

Comment: The last section on recommendations outside the mission of the EAG is not very effective by itself. We would prefer to have these points put into the context in which they arose, and to have them put directly into the Executive Summary.

A final general comment: DCA has reviewed the Nature Conservancy's comments on the draft and strongly supports those comments.

Resolution: Where appropriate, this has been done.

The Darby Creek Association also provided an annotated copy of the draft plan with additional comments. These comments are addressed below:

Comment: In the introduction, paragraph 4, add the phrase "and be judged by the Director to be "sufficient to protect water quality" to the last sentence.

Resolution: This phrase has been added.

Comment: In the first paragraph on page 5 of the draft report, delete the word "help" from that sentence.

Resolution: This change was not made. "Help" must be used because these recommendations implemented alone will not be sufficient to protect the ESDA.

Comment: In the Executive Summary under Ownership, delete the second sentence that reads: "Existing development is exempted from riparian corridor restrictions."

Resolution: This change has been made.

Comment: In the Executive Summary under Riparian Corridor Width, add "100-year" to floodplain.

Resolution: This change has been made – the floodplain is referred to as the 100-year regulatory floodplain as defined by FEMA FIRMs.

Comment: In the Executive Summary under Riparian Corridors, Permitted Uses, clarify the use of disturbances and add "under certain conditions" after arterial streets.

Resolution: Regarding disturbances, a clarification was made in the text regarding the types of permitted disturbances. Clarifications were also made to arterial streets with the addition of the following language: "...provided disturbances due to construction of arterial streets are minimized and mitigated."

Comment: In the Executive Summary under Conservation Subdivisions, Acceptable Open Space, it is suggested that riparian zones of at least 75 feet be changed to the consensus recommendation for riparian corridors width and that HEL is spelled out.

Resolution: The requested changes have been made.

Comment: In the Executive Summary under Conservation Subdivisions, Acceptable Open Space, it is suggested that secondary conservation areas be added.

Resolution: The requested additions were made to the Executive Summary.

Comment: In the Executive Summary under Conservation Subdivisions, Open Space Management Criteria, it was suggested that this section be summarized.

Resolution: Due to limited resources, this change has not been made.

Comment: In the Executive Summary under Stormwater Management, the comment states that this section needs to emphasize that the EAG has concluded that it is beyond the capabilities of the group to recommend scientifically rigorous standards, and that we are asking the EPA to undertake the setting of these standards. This is one of the key conclusions of the group, and it needs to be emphasized in the Executive Summary.

Resolution: The requested additions were added to the Executive Summary.

Comment: In the Executive Summary under Stormwater Management, Inspection and Enforcement, the phrase "of Construction Controls" should be added.

Resolution: The requested additions were made.

Comment: The following should be added to the riparian corridors section of the report: general statement of how we didn't fully accomplish our charge of providing recommendations that would be sufficient to protect water quality; why we didn't; and why we think we have provided a road map that can, in conjunction with future multi-jurisdictional planning and EPA guidance, lead to ultimate success in the goal of protecting water quality in the Darby watershed in the ESDA area.

Resolution: A statement as such described above will not be added to the report due to two factors: 1) resources are not available, and 2) the Ohio EPA has stated that it appreciates the format and straight forward writing style of the report.

Comment: In the Riparian Corridors section, under Institutional Controls, ordinances should be added as an institutional control for riparian corridor protection.

Resolution: The requested additions were made.

Comment: In the Riparian Corridors section, under Purpose Statement Non-consensus Views, the word “those” should be deleted from sentences five and six and replaced with “one camp” and “another camp,” respectively. The word “also” should be deleted from sentence six.

Resolution: The word “those” was changed to “one group” and “another group” respectively. The word “also” was deleted from sentence six.

Comment: In the Riparian Corridors section, under Enforcement Non-consensus Views, the following question is posed: Didn’t we later reach consensus on this? Near the end, Columbus revisited this issue and said that it could live with the idea of periodic inspections as long as the jurisdiction retains its authority to say when and how they occur.

Resolution: The report was updated to reflect the final consensus that was reached on the inspection issue.

Comment: In the Conservation Subdivisions section, under Should Conservation Subdivisions Be Required Everywhere in the ESDA, the following comment was made: This discussion ended with many members seeming to agree that if the other restrictions we were recommending and the future planning we were recommending were accepted by the Director, the issue of whether to require conservation development would be moot, because every development would have to have significant conservation features regardless of how the houses were configured on the property.

Resolution: There was nothing found in the meeting minutes from March 11, 2004 or August 20, 2004 when these discussions took place regarding the points raised above. No changes have been made to the report.

Comment: In the Conservation Subdivisions section, under Should Conservation Subdivisions Be Required Everywhere in the ESDA, the number of members who favored requiring conservation subdivisions throughout the ESDA should be added to the text.

Resolution: The number of members who favored requiring conservation subdivisions throughout the ESDA was added to the text.

Comment: In the Conservation Subdivisions section, under Permissible and Prohibited Uses, the permitted uses of new arterial streets and disturbances need clarification.

Resolution: Regarding disturbances, a clarification was made in the text regarding the types of permitted disturbances. Clarifications were also made to arterial streets with the addition of the following language: "...provided disturbances due to construction of arterial streets are minimized and mitigated."

Comment: In the Conservation Subdivisions section, under Acceptable Open Space, it is suggested that the phrase "in the Atlanta document" be added after primary conservation areas and secondary conservation areas.

Resolution: This phrase was not added due to the fact that reference is made to the Atlanta document in the previous sentence in that section.

Comment: In the Conservation Subdivisions section, under Acceptable Open Space Consensus Recommendation, the suggestion is made to change the riparian zones of at least 75 feet to the consensus recommendation on riparian corridor widths.

Resolution: The 75-foot designation was deleted and replaced by the 200-foot consensus designation.

Comment: In the Conservation Subdivisions section, under Acceptable Open Space Consensus Recommendation, it is suggested that the following phrase be added at the end of the note: "because they do not have a direct impact on water quality."

Resolution: The requested change has been made.

Comment: In the Conservation Subdivisions section, under Acceptable Open Space Consensus Non-Consensus Views, with regard to the statement that consensus was not reached on the designation of 100-year floodplains as primary conservation areas, the following comment was made: This is wrong. At the time this was considered, consensus was not reached, but later it was. Keep in mind that this final report should document the final status of issues, and does not need to reflect interim decision stages. If issues were revisited, the report should reflect the final status.

Resolution: Consensus was reached on riparian corridors as a primary conservation area. Due to the fact that the consensus-based definition for riparian corridor width is the formula for the Hellbranch Overlay or the 100-year regulatory floodplain as defined by FEMA FIRMs, with a minimum of 200 ft, 100-year regulatory floodplains are included as a primary conservation area.

Comment: Under Conservation Subdivisions, Permanent Protection, the word "only" should be added at the beginning of the consensus recommendation.

Resolution: The group reached consensus that conservation easements (with the defined restrictions) were acceptable, they did not discuss that they were the only acceptable option. The group did not reach consensus that the other two identified options were acceptable, as indicated in the report.

Comment: Under Conservation Subdivisions, Percentage of Open Space, Fixed or Variable, it is suggested that the following is added in the discussion:

“The EPA’s recommendation that impervious cover, and the concept of a tipping point, should not be taken up by the EAG, and its statement that the agency would take this topic up in a more scientific treatment, must be included in this report. This was a critical juncture of the EAG’s deliberations, and it determined that we were not capable of answering the question of open space. It was about this time that the EPA put forth its adaptive management approach of letting the air out of the balloon slowly.”

This all needs to be in the report.

Resolution: There were no consensus recommendations for the concept of a “tipping point.” The concept of a tipping point is covered in Ohio EPA’s June 2004 report entitled, “Darby at the Crossroads.” Please refer to this document for further discussion on this topic and related topics.

Comment: Also under Conservation Subdivisions, Percentage of Open Space, Fixed or Variable, it is suggested that the following be added to the Non-consensus Views: “DCA also voiced concern that the amount of open space needed to protect water quality is unknown at this time, and that the EPA’s proposal for using an adaptive management approach was preferable.”

Resolution: The requested language was added to the text of the report.

Comment: Under Conservation Subdivisions, Contiguity of Open Space, it is suggested that the following be added under the discussion: “The City of Columbus recommended that the ESDA provisions apply to septic systems.”

Resolution: This addition was not made in the text of the report because the group’s focus is on the extension of centralized sanitary sewers.

Comment: Under Conservation Subdivisions, Open Space Management Criteria, two comments were made under the Consensus Recommendation. It was suggested that clarification be made on letters c and d of the requirements for a management plan.

Resolution: Under letter c, the phrase “Board of Directors” was replaced with “[local governing body.]” Under letter d, no additional clarifications were made due to the fact that the EAG reached consensus on the language.

Comment: Under Stormwater Management, Margins of Safety, the following language should be applied to the discussion due to the fact that it was added to the minutes: “Anti-degradation also applies to streams that are not meeting the recommended performance standards. If a

stream is not meeting standards for a given pollutant, no additional inputs of that pollutant will be allowed.”

Resolution: The requested additions were added to the text of the report.

Comment: Under Stormwater Management, Specific Pollutants and Pollutant Removal Efficiencies, it is suggested that the following text be added to the Discussion at the end of the third sentence: “or other future analyses (*note: we were advised that the TMDL may not be adequate, and the EAG is requesting additional study by the Ohio EPA as needed to ensure that performance goals are met.*” This must be made very clear here.

Resolution: The text regarding future analyses was added, but the text of the note was not.

Comment: Again under Stormwater Management, Specific Pollutants and Pollutant Removal Efficiencies, it is suggested that the following language be added to the Consensus Recommendation: “...and instead requested that the Ohio EPA take on this responsibility.

Resolution: The requested additions were added to the text of the report.

Comment: Under Stormwater Management, Construction Control, it is suggested that the Consensus Recommendation simply state that sediment basins should be required on all construction sites so that it does not imply that basins are only required on larger sites.

Resolution: The requested changes have been made to the report.

APPENDIX 2 – EAG Comments

Franklin County Soil and Water Conservation District



FRANKLIN SOIL AND WATER CONSERVATION DISTRICT

*Promoting responsible land use decisions for the conservation of soil and water resources
by providing information assistance through effective partnering and technical guidance.*

1328 Dublin Road, Columbus, OH 43215

Phone: (614) 486-9613

Fax: (614) 486-9614

October 12, 2004

Don Armour
Fuller, Mossbarger, Scott, and May
6600 Busch Boulevard, Suite 100
Columbus, Ohio 43229

Re: Darby ESDA External Advisory Group (EAG) Draft Report

Dear Mr. Armour:

The Franklin Soil and Water Conservation District has reviewed the "Draft Report to the Director of the Ohio EPA and the Director of Public Utilities for the City of Columbus". The following comments apply to the report and reflect the District's opinion concerning several key areas of opportunity.

General Comment:

Over all, this preliminary draft summarizes the activities and decisions of the EAG well. We do recommend expanding the executive summary in order to ensure key decisions and concepts are clearly and completely stated in a manner that anyone can understand. It is important to refrain from oversimplification. The District has also contributed to several "edits" of the document where several grammatical and stylistic comments and certain inconsistencies in terms such as riparian corridor width have been addressed. Our greatest concern is in making sure District recommendations are clearly stated and that it is clear how the District can best contribute towards a mechanism that supports the implementation of these recommendations for water quality benefit.

Riparian Corridors:

Definition of a Stream: It is stated that consensus was not reached on the issue of stream mapping and the creation of a common multi-jurisdictional map to be used as a standard for stream determination and riparian buffer width implementation. The report should clearly state that the Franklin Soil and Water Conservation District stated that it is available to house, and

implement a common map to be used in all stream and buffer determinations and would recommend that such a map exist and be easily available.

Riparian Buffer Width and Steep Slopes: The definition of steep slopes is not consistent regarding primary conservation areas and riparian buffers. Consensus was reached separately concerning riparian buffer width (100- year floodplain or Hellbranch overlay formula or 100 ft per side, whichever is greater) and steep slope protection (NRCS HEL soils or slopes greater than 15% where soils don't apply plus 50 at the top of slope). The consensus definition of steep slopes should be used in the definition of riparian slopes that do not count towards buffer width.

Buffer Enforcement: To clarify the District's position, frequent or periodic monitoring of riparian buffers is essential to ensuring compliance with buffer standards. A complaint driven process does not adequately provide the necessary vigilance or record of condition required for permanent buffer establishment. The most effective defense of these buffer areas requires regular monitoring that includes documentation of the condition of these buffers, in

Conservation Subdivisions:

Permanent Protection: Franklin SWCD should be added in name as a viable and willing third party jurisdiction/land trust possibility. Franklin Soil and Water Conservation District, a subdivision of the State of Ohio is authorized by Section 5301.69 of the Ohio Revised Code to acquire conservation easements in the name of the FSWCD for the purpose of protecting the natural resources of Franklin County.

Open Space Minimum Requirements (Net Developable or Total Developable): This concept could be more clearly explained. District's opinion relates to the need to have defined maximum densities under any circumstances including density credits or other net buildable agreement. Land developers should never have free will to determine maximum density regardless of open space trade-offs.

Storm Water Management:

Inspection and Enforcement: Consensus was not reached regarding the frequency of sediment and erosion control inspections. Specifically, the District favored defined periodic inspections as every two weeks, after significant rain events, or as needed more often for a non-compliant site. The District was mentioned in name as a possible mechanism for more regular construction site inspections. It would be advantageous to jurisdictions in the watershed to consider the District as a willing, viable and cost-effective mechanism and partner for increased construction site enforcement.

The District strongly recommends that local governments strive to have construction site inspections every two weeks or more frequently for storm events and non-compliant sites. We want to work with local governments to make sure all construction site projects are in compliance. We have been doing this for Franklin County for over 10 years and currently work with Grove City and Gahanna, with a visible improvement on construction sites. We can provide services either through a grant agreement with local governments by collecting fees directly from developers, depending on the local government's preference. All conservation agreements have working agreements through ODNR with Ohio EPA on Construction Site management. We are a recognized tool at the state level for this purpose. If a local government cannot do regular inspections that result in 80% or higher compliance on sites throughout the construction project, the District's services should be considered.

Concluding Remarks:

The Franklin Soil and Water Conservation District is highly supportive of multi-jurisdictional partnerships that result in sound and implementable resource management policies. We appreciate the opportunity to be a part of this process. Any feedback you can provide regarding how we can assist with the recommendations in this document or effectively participate in similar efforts is welcome.

Sincerely,

Hector R. Santiago
Riparian Conservationist

Metro Parks

-----Original Message-----

From: Studenmund@MetroParks.net [<mailto:Studenmund@MetroParks.net>]

Sent: Monday, October 11, 2004 1:04 PM

To: DArmour@fmsengineers.com

Subject: EAG Comments

Don / Katie

Thank you for facilitating this important project.

I have only a few comments:

Page 3:

- * Acronym for Central Scioto Water Quality Management Plan. It is used two different ways, CPSU and CSPU

Page 6:

- * Riparian Corridor Width, "200 ft", is it each side or a total width ?
- * Permitted Uses, "disturbances", what type are permitted?
- * Enforcement, "approved by the director", Director of who ?

Page 7:

- * Acceptable Open Space, "riparian zones of at least 75 feet", Is that each side or total width ?
- * Acceptable Open Space, please define "HEL" and what "+50 feet" means.
- * Design and Review Process, did we not include a field review step ?
- * Open Space Management Criteria, "line" should be lien. ??? (typical through out document)

Page 13:

- * Riparian Corridor Ownership, Option 3, change sentence to, "No public access" unless dedicated or sold to a public agency ?

Page 15:

- * Permitted Uses, could we add "stream restoration by a public agency"?

Page 18:

- * Prohibited Uses, add "except on roadways" Motorized Vehicles.

Page 23:

- * Definition for vegetation..., removal to allow, "for improvement of hydrology and/or water quality", i.e. stream restoration.

Page 47:

- * Groundwater Recharge, under "C", change form to from. ...annual recharge from the post development site....

Thanks, Steve

Steve Studenmund
Strategic Planning Manager
Franklin County Metro Parks
1069 W. Main Street
Westerville, Ohio 43064
614-895-6231
614-895-6208 fax

Ohio EPA

-----Original Message-----

From: Dan Dudley [<mailto:Dan.Dudley@epa.state.oh.us>]

Sent: Tuesday, October 12, 2004 10:44 AM

To: DArmour@fmsm.com

Cc: Mike Gallaway

Subject: Re: Draft Report

Don,

Attached are comments of Ohio EPA on the September draft report. Overall I like the format and straight forward writing. Our comments are minor in nature. I trust you'll be in touch if other comments raise issues, or if a meeting seems in order.

Dan Dudley

Manager, Standards & Technical Support

Division of Surface Water, Ohio EPA

(614) 644-2876

dan.dudley@epa.state.oh.us

Comments from Ohio EPA on draft ESDA EAG recommendations dated Sept. 2004.

Page 6

Permitted Uses - the bullet point "disturbances" is misleading or confusing by itself. It needs to be put in proper context somehow; I believe disturbances associated with, or needed to carry out, other permitted uses is the intended meaning.

Page 6 & again on pages 13 - 15

The terms "floodway" and "floodplain" are used, but no definitions are provided. The EAG recommends the buffer be the greater of the width of the floodplain or the width of the Hellbranch Overlay formula. I recall that these terms were discussed and explained during our meetings, perhaps the meeting minutes captured this? It is important that the final report include a workable definition of what is meant by each of these terms.

Page 6 & again on pages 15 - 23

Riparian corridors enforcement recommendation uses the term "stream corridor protection zone", and the term appears in many places in the body of the text. I think EAG members assume this is synonymous with the width of the riparian corridor protection zone. The report should clearly attribute the term in question to the Hellbranch Overlay zoning ordinance (City of Columbus) and affirm that the EAG considered it synonymous with the riparian zone of protection it considered.

Page 7 & again on page 35

Design and Review Process - Regarding the recommendation for OEPA to mandate a set of prescribed steps in the design and review process, Ohio EPA will need to carefully consider the legal authority to impose these design and review principles for open space / conservation subdivision zoning ordinances.

Page 15

Riparian corridor width. The consensus recommendation is the formula for the Hellbranch Overlay, or the flood plain, with a minimum of 200 feet. The report presents several sets of options and formulas, but does not make it clear which formula is the Hellbranch Overlay formula. My notes indicate that the equations presented in option 2 on page 15 is that formula. Again for clarity the terms W and DA should be defined. The entire formula should be repeated in the consensus recommendation for ease of use later.

In addition, the text for riparian corridor width describes use of "Equation A" for the analyses that Ohio EPA gave. To improve clarity, state items 2 and 3 at the bottom of page 15 as:

Equation A equals width calculated using the Hellbranch Overlay formula with a minimum of 50 feet

Equation A` equals width calculated using the Hellbranch Overlay formula with a minimum of 200 feet

Page 17 & 18

The abbreviation C.C.C is used; please indicate what this refers to.

Page 35

Make clear what "it" refers to in the following statement: ..."OEPA pointed out that where comprehensive plans are in existence, conservation subdivisions should be consistent with these plans but that OEPA cannot mandate it." Without benefit of researching the meeting minutes, I believe the reference is that Ohio EPA cannot mandate that a jurisdiction have a comprehensive plan.

Ohio Department of Natural Resources – Scenic Rivers Program

Division of Natural Areas & Preserves
Nancy Strayer, Acting Chief
1889 Fountain Square, Bldg. F-1
Columbus, OH 43224-1388
Phone: (614) 265-6453 Fax: (614) 267-3096

October 12, 2004

Mr. Don Armour, P.E.
FMSM Engineers
6600 Busch Blvd., Suite 100
Columbus, OH 43229

Dear Mr. Armour:

On behalf of the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Scenic Rivers Program, I would like to submit the following comments on the *Report to the Director of the Ohio EPA and the Director of Public Utilities for the City of Columbus, ESDA EAG Recommendations, September 2004*. The Scenic Rivers Program appreciates the commitment of the Ohio Environmental Protection Agency, the City of Columbus, FMSM Engineers and all the other stakeholders that worked persistently and diligently to produce these draft recommendations for submission to the Director of the OEPA.

While I am not offering a line by line review of the draft document, I would like to submit the following as general comments that I believe are important to the overall meaning and effectiveness of the document with regard to protecting the Big Darby Watershed in Western Franklin County.

- Throughout the course of the EAG meetings, OEPA made reference to “letting the air out of the balloon slowly”. I would like to recommend that a formal commitment to this process be included within the EAG recommendations. Such a commitment should include a procedure for controlling the rate of development “letting the air out slowly” once the EAG recommendations have been codified by the political subdivisions in the watershed. A subsequent biological monitoring program should be established, for the Hellbranch Subwatershed at a minimum, to determine if the recommendations set forth by the EAG are going to be effective in the long term protection of the Big Darby’s Exceptional Warmwater Habitat and Outstanding State Resource Water designations. The EAG document should also contain a provision to re-evaluate its recommendations should it be determined through this process that the natural integrity of the Big Darby Creek is not going to be sufficiently protected.
- As part of the Total Maximum Daily Load (TMDL) development for the Darby Watershed, OEPA will be determining a total % of impervious cover the the Big and Little Darby Creeks will be able to endure within their watersheds and still maintain the Exceptional Warmwater Habitat and Outstanding State Resource Water designations. Once this number is determined, it should be utilized to guide the future development of comprehensive land use plans by communities throughout the ESDA and the rest of the watershed. By incorporating data of this nature into the development of comprehensive land use plans, political subdivisions will be able to greatly limit the negative impacts

associated with increases in imperviousness. This limit of imperviousness should also be included in the EAG recommendations as an addendum or supplemental document so that it can be utilized to augment the controls set forth in the document.

- The document needs a statement reiterating that the local political subdivisions within the ESDA must adopt the controls recommended by the EAG before the OEPA will issue Permits to Install for sanitary sewer infrastructure in this region. It is imperative that these controls are adopted throughout the ESDA if they are to be effective in the protection of the Big Darby Creek.

The Scenic Rivers Program believes that these measures are the basic elements needed for the long-term protection of the Big and Little Darby Creeks and their tributaries. We would appreciate the incorporation of these concerns into the final report to the OEPA.

If you have any questions or concerns, please contact me at 614-265-6814.

Sincerely

Robert L. Gable Jr.
Scenic River Program Administrator
Division of Natural Areas & Preserves

Ohio Environmental Council

October 12, 2004

To: Don Armour, Darby EAG facilitator

From: Dan Binder, EAG member, OEC

RE: Comments on the 9/2004 ESDA EAG Draft Report

The Darby EAG was a lengthy, daunting process. Congratulations to all participants for their dedication. As well, thanks to Don Armour for his efforts in facilitation. The group would not have brought forth such a worthy conclusion to our efforts without Don's tutelage. Our work, however, will be unrewarded if these recommendations are unable to meld with previous protection efforts and efforts yet to conclude in resulting in a creek that maintains the biological vigor synonymous with the Big Darby. The OEPA will ultimately be tested during subsequent development in the ESDA and elsewhere in the watershed. Recommendations cannot completely take the place of the sound science and the good judgment that is sorely needed if the Big and Little Darbys creeks and their delightful riparian corridors are to be preserved for our future generations.

- ❖ Permanent corridor protection should be enhanced with permanent riparian deed restrictions. Conservation easements should be methodically purchased from creek side ESDA contiguous land owners. The Franklin County SWDA is a logical easement holder as is the Metropolitan Park District, but all options including formation of a Darby Creeks Land Trust should be considered for perpetual protection.
- ❖ Recommendations contained in the ESDA EAG report must be considered minimum requirements. The EAG in the best case scenario should be thought of as working on behalf of the creek's health and future, not for Columbus, OEPA or USEPA. The EAG gives voice to the Creek. In this scenario consensus driven recommendations are not voluntary recommendations for the OEPA to consider but rather rules by which any subsequent land disturbing activity can be permitted.
- ❖ The OEPA has concluded a strong effort to evaluate the health of the Darby watershed. The Technical Support Document identifies significant technical findings that need to be the foundation for framing development activities. Furthermore the EAG report should significantly highlight that Big Darby Creek has Outstanding State Waters status. Protection requirements for land development in the ESDA and the watershed generally must be forced through this higher level of protection from water quality degradation.
- ❖ Subsequent TSD documents published during regular basin studies and other citizen based or volunteer monitoring efforts producing credible water quality data should cause elevated protection if data trends do not demonstrate that protection to the resource is occurring. In other words demonstrable decline means tougher standards.
- ❖ The ESDA should not be the only area receiving the minimum EAG recommended protection. The entire Hellbranch Run must be protected. Likewise the other watershed areas not specifically within the borders of the ESDA need the same level of protection if the system as a whole is to be saved.
- ❖ The ESDA EAG brokered many hard decisions including recommending conservation development requirements and other open land or open space concepts. These discussions included determining what land use is appropriate in what area of the landscape. The Report should highlight these important consensus based decisions including conventional definitions that are agreed upon by all. As such a subsequent meeting or email based discussion may be needed.

- ❖ Finally BMPs or other practices recommended by the EAG must be couched in performance based language. Particularly significant are stormwater controls that address multiple concern issues including reducing negative hydraulic impacts, groundwater recharge and treatment quality standards. Controls must have performance criteria and qualified monitoring must establish whether controls are working.

The Ohio Environmental Council believes that a necessary component of any environmental protection strategy must include education at many levels of society from the legislature to city and town councils as well as watershed landowners and school children. This job is not only OEPAs to do or the City and its contractors but the OEPA and the City are primary partners and should have educational components including appropriate news release that seek to demonstrate the protection required when the moratorium is lifted and development re-occurs.

Once again thank-you, Don, for your important role in all of this, I appreciate your work.

Sincerely,

Dan Binder
Director of Watershed Programs
Ohio Environmental Council
www.theOEC.org

The Nature Conservancy

Don:

Some minor comments on the draft ESDA EAG report are below. I expect to have comments on the content by Tuesday.

Thanks,

AS

Throughout the report, the Ohio Environmental Protection Agency should be referred to by its preferred abbreviation, which is "Ohio EPA," not "OEPA" or "EPA." This helps avoid confusion, such as when the report refers to "Wetlands as defined by the Army Corps of Engineers or the EPA " on page 7. Wetlands as defined by the (U.S.?) EPA are different from Ohio's because of the isolated wetlands issue.

Page 3, Paragraph 1 – "CSPU" not "CPSU."

Page 9, Paragraph 3 – Spell out "Ohio Department of Natural Resources" the first time it is used.

Page 38 - ODNR's John Mathews' name is misspelled.

Anthony Sasson
Freshwater Conservation Coordinator
The Nature Conservancy, Ohio Chapter
6375 Riverside Dr., Suite 50
Dublin, OH 43017
614-717-2770 X 23
fax - 717-2777
asasson@tnc.org
<http://bigdarby.org>
<http://nature.org/wherewework/northamerica/states/ohio/preserves/art165.html>
www.nature.org

RECEIVED

OCT 13 2004

FMSM ENGINEERS

October 12, 2004

Don Armour
Fuller, Mossbarger, Scott and May
6600 Busch Blvd, Suite 100
Columbus, OH 43229

Re: Comments on 9/3/04 draft of
ESDA EAG report

Dear Mr. Armour:

The following are The Nature Conservancy's comments on the September 2004 draft "Report to the Director of the Ohio EPA and the Director of Public Utilities for the City of Columbus – EAG Recommendations." The Nature Conservancy appreciates the effort by FMSM to facilitate the meetings, prepare meeting notes and assemble the comments of the External Advisory Group (EAG). The report makes a good effort to record comments.

At times, the EAG's effort seemed unfocused, or concentrated on items which were less likely to yield adequately protective results, but the report has many very good items that will positively direct Ohio EPA decisions. To improve the ability of readers who were not part of the process to follow the EAG's intent, the report should list the EAG's major points.

It is in the best interest of all to make the concerns of this group and the challenges of protecting stream quality from the impacts of development clearly known. Based partly on these recommendations, we expect Ohio EPA and the general public to continue moving forward with the important job of protecting Big Darby Creek's ecological integrity. The EAG effort is one part of that effort, which will include the very important Total Maximum Daily Load report. The EAG strongly supported the permanent protection of Big Darby Creek at a level as good as, and better than, its current condition. In fact, improvement is required by Ohio law.

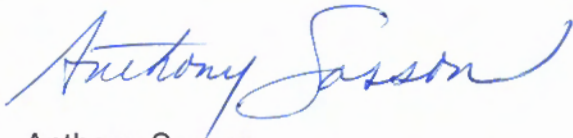
We must do this job of planning, regulating and allowing future development wisely, deliberately and correctly. Few, if any, mistakes can be made without serious consequences to the Big Darby ecosystem. This is especially true given the present major threats and precarious condition of the Big Darby Creek in the ESDA and elsewhere. Much of the Environmentally Sensitive Development Area (ESDA) already is not attaining Clean Water Act standards, as recorded in documents such as Ohio EPA's 2004 report on Big Darby Creek, and its preface, "Darby at the Crossroads."

The EAG effort addressed new ground in stream protection – in a very limited amount of time together and with few technical resources, we attempted to craft a new system of protection. Notably, the EAG recommended some very important stream quality goals. Even these goals should be reviewed and improved to ensure biodiversity protection.

I appreciate the efforts of the EAG members who volunteered to give so much of their time and energy. Also, I support the comments on the draft EAG report of the Darby Creek Association, whose president, John Tetzloff, provided exceptional insight into the purpose of the EAG and the protection of the Big Darby Creek ecosystem.

Thank you for the opportunity to comment. My comments are attached. I can be reached at 614-717-2770 x 23.

Sincerely,



Anthony Sasson
Freshwater Conservation Coordinator

Attachment

Cc: Dan Dudley, Ohio EPA, DSW

General comments

Introduction and Executive Summary:

Because these are the most likely portions of the report to be read, they should be expanded. One major area would be to list and highlight the most significant aspects of the report. Also, the report should clearly note all areas that were discussed at length, but for which consensus was not achieved.

The EAG recommendations are to be considered by Ohio EPA. The report should emphasize that those that are determined by the Agency to be appropriate, plus additional requirements determined by the Agency, must be implemented by local jurisdictions for any development served by central sewers to receive a permit from Ohio EPA.

Also, the EAG deferred some key decisions to the Ohio EPA, such as determinations of the amount of protection necessary to ensure adequate protection in terms of water quality and hydrology. Other discussion of the EAG only supports, or at least addresses, these points. Ohio EPA must use regular and extensive adaptive management controls and adjustments in the forthcoming process.

Emphasis:

The report, including the Executive Summary, should emphasize the recommendation of key points, especially the water quality and water quantity environmental performance goals, which most of the EAG's other recommendations are designed to support. Without these goals, it is not clear what any EAG recommendations would achieve, and it is entirely possible they would not achieve protection of Big Darby Creek or Hellbranch Run. The directive from Ohio EPA was that the EAG was charged with making recommendations related to those "sufficient to protect water quality."

Perhaps the most important item to emphasize is the importance of the tasks assigned to Ohio EPA by the EAG. These addressed water quality and water quantity sufficient to protect the streams in the ESDA.

"Should" vs. "shall":

Throughout the report, many "consensus recommendations" are stated using "should" rather than "shall." "Shall" denotes a requirement, while "should" is usually considered advisory. Use of "should" substantially weakens a recommendation, even to the point of making them ineffective or meaningless. I believe the EAG members' intent was to make these recommendations requirements so that they would be put in place in all jurisdictions, and not be merely guidance that is often not followed.

For example, on Page 18 under "Consensus Recommendation," the report states "Dredging and filling should be a prohibited use." It was the intent of the EAG to not allow such activity, so it must be stated as "'Dredging and filling *shall* be a prohibited use.'" Another example - on page 31, the Primary Conservation Areas "should be considered, which is a weak statement and sounds advisory, rather than meaning that these areas "shall" be required to be protected, as was the intent of the EAG. Another example, the EAG meant that native vegetation be planted and maintained in the riparian buffer, and that revegetation would be a permitted use. However,

the “Consensus Recommendation” on page 16 states “revegetation and/or reforestation *should* be permitted.” It should say “shall be permitted.”

Outstanding State Waters:

The report must emphasize the important distinction that the recommendations made supporting the perpetuation of Outstanding State Waters status for Big Darby Creek, and the Superior High Quality Waters for Hellbranch Run. Perhaps the main reason for the establishment of the EAG by Ohio EPA was for the protection of this status, if not for improved protection. The report states, such as on page 38:

“The group listed several options for water quality performance goals:
Meet current water quality standards as set by the Ohio EPA, including anti-degradation rules and specifications of the TMDL.”

Other occurrences of references to antidegradation goals are on pages 8, 39 and 46. The discussion clearly emphasized maintaining Outstanding State Waters (OSW) status – the phrase “including antidegradation rules” is not clear. This OSW status is granted to the Big Darby Creek because of its “special significance ... because of ... exceptional ecological values” (OAC 3545-1-05(A)(1)(c) (the Ohio antidegradation rules)). In its presentation of April 22, 2004, and at other times in these meetings, The Nature Conservancy emphasized that the Big Darby Creek should be protected at least at the Outstanding State Waters level, and Hellbranch Run should be protected at least at the Superior High Quality Waters level. These terms help clarify, but still might not adequately address, the Ohio EPA’s directive to the EAG to make recommendations “sufficient to protect water quality.” Achievement of OSW might still mean a substantial loss of Big Darby species, so further caution and analysis is recommended.

Ecological threshold related to development impacts:

Several times during EAG meetings, the concept of an ecological threshold or “tipping point” was discussed. This concerned the level of stress caused by urban or suburban development which would cause substantial and irreversible harm to stream quality and send the stream beyond a threshold of acceptable quality. This issue should be included as an item in the report. It was covered in Ohio EPA’s June 2004 report, “Darby at the Crossroads.” More discussion of this point in the report is warranted.

Adaptive management:

Several times during EAG meetings, the concept of “adaptive management” was discussed, particularly by Ohio EPA. The report should include substantial discussion of this point. It was covered in Ohio EPA’s June 2004 report, “Darby at the Crossroads.”

Since adaptive management will likely expose shortcomings in the present EAG recommendations and the Ohio EPA’s subsequent permit requirements, Ohio EPA must clarify a mechanism for adjusting requirements to protect stream integrity.

Hellbranch Run watershed and other areas adjacent to the ESDA:

The EAG discussed the issue of inclusion of the entire Hellbranch Run watershed. This must be mentioned in the report. The area generally east of Hellbranch Run presently is subject only to the City of Columbus’ Hellbranch Overlay ordinance. The ESDA EAG recommendations and subsequent Ohio EPA requirements should be applied to this area. Without inclusion of the

large area in the eastern portion of the Hellbranch Run watershed, this watershed would be overloaded and very unlikely to maintain its ecological integrity. The EAG recommendations will have little net positive impact if this area is excluded.

Page 35 of the draft report states: “The Darby Creek Association recommended that all protections that come out of the EAG be extended to the entire Darby watershed in western Franklin County.” The Nature Conservancy strongly supports this watershed approach.

Also, areas outside of Franklin County – especially Madison and Union Counties – must also be adequately managed for stream protection if the ESDA effort is to provide long-term improvement and protection. It seems at best challenging to address only stresses such as development on one side of the stream, or only at the downstream points. The EAG members discussed this issue.

Definitions:

The report uses several terms, such as “conservation development” and “open space,” which are not generally well known to the general public. These should be defined in the report, or it should provide a description of what was referred to in the course of the EAG effort as to the meaning of these terms. From personal experience, there is not a standard definition of what “open space” means, as one example.

Public official and general public education effort:

Because of the importance and complexity of these recommendations and their subsequent recommendations, the Ohio EPA and all jurisdictions must make a major educational effort to enforce these recommendations, all of which are technically complicated and depend on the very diligent implementation of all officials, businesses, regulatory and technical assistance agencies, and residents.

Reference documents:

The full titles and URLs of reference documents at the (perhaps temporary) EAG WWW site, http://utilities.ci.columbus.oh.us/project/eag_documents.htm should be listed in an appendix to the report. There should be a permanent WWW location for these documents.

Further comments:

It was understood that EAG members have the right to make further comments on the EAG draft report or final report after the document is submitted to Ohio EPA.

Specific comments

Page 5, last paragraph – “Information from the presentations as well as from any additional resources, such as Internet resources is provided.” I do not believe the report provides all of these resources. It should list them, with full titles, as an appendix at the end of the report, and provide the WWW address. The WWW site should be maintained indefinitely for public access to these files.

Page 6 and Page 30, Acceptable Open Space – In order to maintain adequate water quality and quantity, it is reasonable to expect that considerable additional open space, perhaps well

beyond that listed in these sections, will have to be included in the ESDA. Because no description, definition or recommendation addressing additional open space that would be needed to achieve environmental goals is provided in the report, the reader could be misled that these are the only open spaces the EAG members might believe are necessary. At least, the report should state "The EAG did not reach consensus on the amount of open space necessary to be "sufficient to protect water quality."

In addition, as I stated in my April 20, 2004, email to EAG members, "Not all "open space" is equally ecologically beneficial, and some can even be detrimental to stream quality, such as stormwater ponds in the floodplain or incompatible agriculture. To some, "open space" is not necessarily green space (*Note: with native vegetation, or other ecologically beneficial conditions*). Also, there is no optimization of open space locations at a watershed scale as the ESDA is presently being discussed, which might lead to less likelihood that protection goals like that above can be assured."

Page 7 and Page 30, Acceptable Open Space: Primary Conservation Areas – "Riparian areas of at least 75 feet" – Because the EAG set riparian buffers at a minimum of 100 feet (each side) on all streams, this mention of "75 feet" could be misleading. It should just say "Riparian zones" to avoid confusion.

There is other discussion of open space in the "Open Space Minimum Requirements" on page 33. In the report, this discussion did not address the amount of open space necessary to be "sufficient to protect water quality." The EAG did discuss this point, but did not reach consensus.

Water Quality Performance Goals, Page 8, paragraph 1 and Page 38, last paragraph - The phrase "including anti-degradation rules" does not clearly capture the goal of "Outstanding State Waters" for Big Darby Creek and "Superior High Quality Waters" for Hellbranch Run. These terms specifically were discussed by the EAG and should be stated here in the recommended performance goal statement.

Water Quantity Performance Goals, Page 8, paragraph 2 and Page 46 – On Page 8, the phrase "including anti-degradation rules" does not clearly capture the goal of "Outstanding State Waters" for Big Darby Creek and "Superior High Quality Waters" for Hellbranch Run. These terms specifically were discussed by the EAG and should be stated here in the recommended performance goal statement. Page 46 does not include this same language as consensus recommendations as in found on page 8. This is very confusing as to what was recommended by the EAG. Certainly the EAG meant to include the first four recommendations listed on page 8 also.

Riparian Corridors, Page 9, Paragraphs 1 and 2 – The word "guidebooks" is used; "guidance documents" would be a better term.

Page 9, Paragraph 4 – Dr. Ward's presentation addressed belt width or meander width, perhaps his most important concept and the basis for the Hellbranch Overlay formula. This formula, or the Ohio Department of Natural Resources formula which is recommended by ODNR elsewhere in the state (and which might be more stringent), was a key part of the basis for the EAG's recommendation on riparian corridor protection. Belt width should be stated as one of Dr. Ward's key points, and the ODNR formula should be provided in the report.

Definition of a Stream, Page 12, Paragraph 5 – The report should note that creation of maps to designate streams to be protected prior to development was strongly favored by conservation organizations present. As a comment, such maps can create consistency and objectivity if developed according to standards. Given today's computer mapping capabilities, this is not an overly burdensome effort, especially for an issue of this level of importance, and should be performed by an organization such as the Franklin Soil and Water Conservation District. However, because such maps can have errors, they must be verified in the field before plan approval proceeds. Maps could be favored by developers, who should want to and need to know the limitations of a property in advance.

Page 13 – Option 1 – The first line under Option 1 states “40 ft. on each side” as the distance. This was supposed to say “80 ft. on each side,” and was corrected in a later EAG meeting, but apparently not in the record and the draft report.

Page 15 – Floodplain – “4. The width of the floodplain or the Hellbranch Overlay ...” should say “4. The width of the 100 year floodplain or the Hellbranch Overlay ...”

Page 15 - Consensus Recommendation - Buffer width - "The group recommends that the buffer width be the width of the floodplain or the Hellbranch Overlay formula, whichever is largest, with a minimum of 200 ft." The report should note there was discussion of using the Ohio Department of Natural Resources formula recommended by ODNR elsewhere in the state (and which is more stringent). This new formula is in the process of adoption in ODNR's "Rainwater and Land Development" Manual. It is likely to be stated as: $W = 129 DA^{0.43}$.

While there was extensive discussion of adding additional distance to this minimum buffer width, neither the text or recommendation include items such as additional width for slopes, impervious surfaces or wetlands adjacent to the buffer. *To be effective, the buffer should be extended where these are present.* The buffer also should be extended where certain surface water flow conditions exist, such as swales and other watercourses that are not streams, but cause buffers to be ineffective because they are bypassed, with direct delivery and impacts to the stream.

Page 16, c. Revegetation and/or Reforestation – Plant species for Floodplains – ODNR's Bob Gable supplied a list of native plant species to be planted and encouraged in floodplains and riparian buffer areas. This list has been reviewed by Ohio botanists and should be included in the EAG report. The draft text refers to a list of “shrubs and vines.” While there might be such species in the ODNR list, it is more extensive and includes trees and other vegetation types. It should be in the report. Also, there might be a list in the Hellbranch Overlay. In either case, these species should be native.

Page 17 - Consensus Recommendation, Arterial Streets – Stream corridor protection related to arterial streets is not clear. It is noteworthy that the EAG's recommendation as stated in the draft report is significantly less stringent than the statement in the City of Columbus' Hellbranch Overlay, which states conditions such as “no other existing access” and “shall minimize disturbance to stream corridor protection zones.” It is not clear that the EAG recommendations incorporate such requirements, although they should and I believe it was the intent of the EAG to do so.

“Arterial streets” must be defined in the report.

Page 19 - Consensus Recommendation - Disturbance of Natural (should be Native) Vegetation - "Disturbance of natural vegetation should be a prohibited use with the addition that

the term "noxious weeds" will be as defined by ODNR." Besides noxious weeds, at one of the EAG meetings Bob Gable of ODNR supplied a list of native plants recommended for use in native vegetation plantings in the ESDA. The report should mention this and include the list as an appendix. Again, this section should refer to *native* (see below), not "natural" vegetation.

Page 22 and 23 - Native vegetation - "There shall be no disturbance of the *natural* vegetation ..."

"Native vegetation" is the more appropriate term and should be used in the report. At the December 18, 2003, ESDA EAG meeting, I brought up the point that some of the draft language in EAG material uses the term "natural vegetation" to refer to plants that should be encouraged to grow in the streams' riparian areas. "Natural vegetation" is not a technically, and I suggest legally, meaningful term, since all vegetation is "natural." This could include non-native species. (We are trying to discourage non-native, exotic and invasive species in order to establish the most complete and functional stream ecosystem, and healthy Big Darby Creek watershed. I believe it was the intent of the EAG to encourage control of these non-native species.) "Native vegetation" is a more appropriate term, and native vegetation is more likely to establish and maintain a higher quality stream ecosystem.

After consulting with Steve Studenmund of Metro Parks and Tim Peterkoski of ODNR, we suggested the EAG adopt:

Native vegetation: "Plant species that were found in the local area prior to substantial European settlement."

The use of the term "natural vegetation" may have come from the Hellbranch Run Watershed Protection Overlay, as it appeared in the Columbus City Bulletin of June 15, 2002, page 1250, Columbus City Code Section 3372.705 and 706.

The report should use the term "native vegetation" in any recommendations and documents for the Big Darby Creek Environmentally Sensitive Development Area. This would include those referring to riparian corridors and other open space.

Again, in this section the report should refer to the ODNR list of native plants recommended for use in native vegetation plantings in the ESDA

Page 25, Summary of Technical Information, Paragraph 4 – The discussion of LESA should be expanded, since the concept of such environmentally-based planning is fundamental to the EAG mission. LESA uses natural resource features to prioritize planning, and the model can be expanded to address ESDA-relevant issues such as water quality, hydrology and riparian corridors. For example, a data layer could map, quantify and rank groundwater recharge areas, riparian corridors, impervious surfaces or areas of steep slopes. According to the Natural Resources Conservation Service (<http://www.nrcs.usda.gov/programs/lesa/>), LESA can be used to provide guidance such as the following, which are relevant to the ESDA:

- Identify important farmland.
- Prepare and update comprehensive land use plans.
- Purchase or transfer development rights.
- Prepare environmental impact statements as they relate to agricultural land.
- Plan water and natural resource projects.

- Plan sewage, water, and transportation systems.

LESA can be expanded to more fully focus on natural resources and their protection, a main point of Tim DeWitt's presentation.

Page 29, Conservation Subdivisions discussion, Consensus Recommendation – While the recommendation includes “traditional development,” the report is not clear what this term means. Are traditional development and conventional development the same? What characteristics of traditional development differ from conservation development? Some might argue that traditional, high density development has considerably lower overall impervious surface, and therefore is “as good as” conservation development for stream quality.

Also, the EAG never defined how “overall water quality goals are being achieved” (page 28, third paragraph), or how they would be achieved, by traditional developments.

This discussion also appears to mix the terms “traditional development” and “conventional development” (see page 29).

Page 29, Open Space and Water Quality Protection – The consensus recommendation includes “new arterial streets” within the open space. The report should note the extended discussion of the impacts of arterial streets on stream quality. In hindsight, The Nature Conservancy and the EAG should have encouraged such arterial streets as a conditional use, and the EAG should have established stringent conditions on their limits and design.

Page 30, “conditional uses within open space” – Stormwater BMPs are listed as conditional uses within the open space, which might include floodplains. There are a number of reasons stormwater BMPs such as ponds are undesirable in floodplains. Floodplains might be one of the types of open space in the ESDA. The Nature Conservancy can supply further comments on the impacts of stormwater ponds in floodplains.

Page 31 Consensus recommendations – “Riparian areas of at least 75 feet” will confuse the reader, since the EAG established that the minimum riparian buffer would be 100 feet on each side of all streams. This section should just say “Riparian zones.”

Is there a typo? “NRCS and HEL defined soils?” Should it be “NRCS HEL defined soils?” This same term is on page 34.

Page 31 Non-consensus Views – The draft states that the EAG did not arrive at consensus of 100-year floodplain as a primary conservation area. The report should note that there was extensive discussion of the value of protecting the 100-year floodplain, especially because of its essential functions that help protect stream ecology and hydrology. In particular, this value was emphasized by the Ohio Department of Natural Resources. Beyond this mention on page 31, the protection of the 100 year floodplain was established by the riparian buffer requirements that the EAG did recommend.

Spell out “ORAM” – Ohio Rapid Assessment Method.

Page 31 - Wetland buffers - “Stated the need to look at peer-reviewed literature” - The report should reflect that The Nature Conservancy submitted peer reviewed scientific literature regarding wetland buffers. The suggested buffer, based on the scientific literature review and an Ohio study supplied to the EAG, was 200 m (about 656 feet). The primary reference was

Wetland buffers are necessary to maintain diverse animal life in the wetlands, especially where they might be surrounded by impervious surfaces. This area could be a significant factor for open space and conservation development by supporting groundwater recharge and therefore streamflow and water quality. At the EAG meeting, The Nature Conservancy stated that a discussion of alterations to the suggested buffer area was possible. After a short discussion and in the interest of time, the EAG moved on to the next topic without considering these options.

In an email distributed to the EAG May 27, 2004, I offered the following:

Hydrologic contribution of wetlands and buffers to stream flow and quality - Points for additional consideration

Wetlands have a number of hydrologic benefits, including flood pulse control and groundwater recharge. In the Big Darby Creek watershed and most Ohio streams, the recharging of groundwater was a significant, and larger, route of water flow prior to agriculture and development. This recharged groundwater makes its way to streams and keeps them flowing, and therefore more likely to maintain higher quality, during dry weather periods. In some agricultural areas, wooded and wetlands area, there is probably still some significant function of groundwater recharge, the extent of which is unknown, but could be estimated. Larger buffers around wetlands therefore would serve at least two basic functions: 1) preserving the biological integrity of the wetland (the main focus of the above points); and 2) serving this additional groundwater recharge function to assist in maintaining stream health, which would be roughly commensurate with the size of the wetland buffer. This additional groundwater recharge function will be needed to partially mitigate impacts of development.

These points are necessary to explain the wetland buffer proposal and should be considered for the report's content. Wetland buffers, because of their role as open space and for groundwater recharge, obviously affect water quality and The Nature Conservancy believes they are clearly within the EAG's purview, especially when primary conservation areas are considered.

Page 32, Permanent Protection, Consensus Recommendation – The Nature Conservancy notes that homeowners associations/condominium associations are listed as an option for enforcing conservation easements. We feel this type of easement ownership, because of the inexperience of these associations, is likely to have oversight problems and we do not recommend it.

Page 34, Non-Buildable Areas – It is not clear that these non-buildable areas include steep slopes. Using "NRCS HEL defined" does not make it clear that all steep slopes are non-buildable. The EAG discussed restricting building on steep slopes. "How steep" must be defined.

Page 34, Percentage of Open Space, Non-consensus Views – "The Nature Conservancy voiced concerns that a ... range ... of open space will not meet Warmwater Habitat Use Designation." Please note that The Nature Conservancy is concerned that inadequate open space will not meet the *Exceptional* Warmwater Habitat use designation, a more stringent goal

than Warmwater Habitat, and absolutely necessary to provide at least partial protection for Big Darby Creek.

Page 36, Note – “The group reached consensus that regional planning with a natural resource protection focus was an important element to water quality protection.” This is a very important point and should be included in the Executive Summary of the EAG report.

Page 37, Consensus Recommendation, paragraph 1 – “Applicant must submit a Plan ... that maximizes ecological function of the open space.” The Nature Conservancy notes that this open space must not just “maximize,” but be *adequate* to protect stream health. ***The adequacy of protection is the key test throughout the ESDA***, and The Nature Conservancy emphasized this point in EAG meetings.

Page 37, General Performance Criteria, Discussion – The report states “The following recommended performance goals were found to be within the purview of the group.” Other recommended goals also should be listed in the report. Those found “not to be within the purview” should be listed, and reasons for not including them should be provided. I do not recall the EAG determining what was within the purview.

Page 39, Water Quality Performance Goals, Consensus Recommendation – There appears to be a conflict between the statement “Water quality performance goals should be as listed above” and the “Water Quality Performance Standards, Consensus Recommendations” listed below on the same page. The former appears to require Best Management Practices to meet water quality goals, while the latter only appears to ask them to be “Designed in accordance with specific design criteria.” The former was preferred by the EAG.

And how does this fit with the Consensus Recommendation on page 41, “The EAG recommends Option 2, instituting more rigorous design standards ...,” especially the water quality performance goals?

Page 42, Funding Mechanisms, Paragraph 1 - In order to ensure that adequate protection is possible, Ohio EPA must review appropriate funding mechanisms for stormwater utilities.

Page 42, Specific Pollutants and Pollutant Removal Efficiencies, Discussion – Ohio EPA needs to specify how often it will prepare “future planned updates to the 208 Plan.” This is critical to ensure adequacy, and must be much more frequent. In the past, the update frequency has been too long, and significant and irreversible damage has occurred between 208 reviews.

Page 44, Inspection and Enforcement, Paragraph 2 – “Short-term impact” is unclear, and might imply that the enforcement’s impact is only meant to be temporary. A better term (and I believe the intent of the EAG) would be “immediate and lasting,” or “immediate and permanent.”

Page 45, Water Quantity Performance Goals, Discussion - In the fifth line of the first paragraph of this discussion, the draft states “... The Nature Conservancy stated that they felt that the group did not have the technical background to be making recommendations on water quantity performance goals.” I would change this to “water quantity and quality goals.” It is also notable that the recommendation was meant to state that the group did not have adequate time or technical background for the details of the water quantity and quality content, but the group did recommend goals which included protection of Outstanding State Waters and Superior High Quality Waters.

Line 10, "base level adequate provisions" - I would change this to "adequate stream baseflow and channel stability protection and the Ohio Environmental Council agreed with this statement."

Page 48, Adequate Public Facilities - The Nature Conservancy believes that "adequate public facilities" was not adequately reviewed or discussed by the EAG. It is also important to note that public services, such as design, operations and maintenance, and enforcement, must accompany the physical facilities.

Page 49, Other Recommendations, third bullet - "The Darby Creek Association asked that in regards to general performance criteria for open space and water quality protection, the EAG recommend to the Ohio EPA that there be no loss of fish and mussel species." This suggestion addresses the Ohio EPA directive, the "sufficient to protect water quality" recommendation, and therefore is in the scope of the EAG. Fish and mussel species are part of the State of Ohio's measure of water quality. Also, please note The Nature Conservancy proposed this goal, among others, in its April 22, 2004, presentation to the EAG.

Minor comments/Typos:

Throughout the report, the Ohio Environmental Protection Agency should be referred to by its preferred abbreviation, which is "Ohio EPA," not "OEPA" or "EPA." This helps avoid confusion, such as when the report refers to "Wetlands as defined by the Army Corps of Engineers or the EPA " on page 7. Wetlands as defined by the (U.S.?) EPA are different from Ohio's because of the isolated wetlands issue.

Page 3, Paragraph 1 – "CSPU" not "CPSU."

Page 9, Paragraph 3 – Spell out "Ohio Department of Natural Resources" the first time it is used.

Page 38 - ODNR's John Mathews' name is misspelled.

Vorys, Sater, Seymour and Pease LLP

Insert PDF file 9 pages

Vorys, Sater, Seymour and Pease LLP

52 East Gay Street • Post Office Box 1008 • Columbus, Ohio 43216-1008 • Telephone (614) 464-6400 • Facsimile (614) 464-6350 • Cable VORYSATER

Arthur J. Vorys
JD 10, 1977
E-MAIL: A.Vorys@vss.com
JD 10, 1977
Vorys, Sater, Seymour & Pease
130, 1997
E-MAIL: A.Vorys@vss.com
JD 10, 1977

In Washington
130, 1977
E-MAIL: A.Vorys@vss.com
JD 10, 1977
Vorys, Sater, Seymour & Pease
130, 1997
E-MAIL: A.Vorys@vss.com
JD 10, 1977

In Cleveland
130, 1977
E-MAIL: A.Vorys@vss.com
JD 10, 1977
Vorys, Sater, Seymour & Pease
130, 1997
E-MAIL: A.Vorys@vss.com
JD 10, 1977

In Cincinnati
130, 1977
E-MAIL: A.Vorys@vss.com
JD 10, 1977
Vorys, Sater, Seymour & Pease
130, 1997
E-MAIL: A.Vorys@vss.com
JD 10, 1977

In Alexandria
130, 1977
E-MAIL: A.Vorys@vss.com
JD 10, 1977
Vorys, Sater, Seymour & Pease
130, 1997
E-MAIL: A.Vorys@vss.com
JD 10, 1977

Scott M. Doran
Direct Dial (614) 464-8248
Facsimile (614) 719-4692
E-Mail: smdoran@vss.com

October 12, 2004

VIA US MAIL AND EMAIL

Don Armour
Fuller, Mossbarger, Scott & May, Engineers, Inc.
6600 Busch Boulevard
Suite 100
Columbus, OH 43229-8240

Re: Comments of the Building Industry Association of Central Ohio on the
Draft Report of the Darby Creek Watershed EAG

Dear Don:

On behalf of the Building Industry Association of Central Ohio ("BIA"), I am submitting the enclosed revised comments on the draft report to the Director of the Ohio EPA and the Director of Public Utilities for the City of Columbus concerning the ESDA EAG recommendations dated September 2004. These comments reflect the clarifications we discussed today and I would request that these revised comments replace those submitted by email yesterday. To the extent to which you have any questions, please feel free to call either me at the above number or Malcolm Porter at (614) 252-5447.

Very truly yours,



Scott M. Doran

SMD/dlc
Enclosure

cc: Jim Hilz (with enclosure, via email)
Malcolm Porter (with enclosure, via email)

**COMMENTS OF
THE BUILDING INDUSTRY ASSOCIATION OF CENTRAL OHIO
ON THE DRAFT REPORT TO
THE DIRECTOR OF THE OHIO EPA AND
THE DIRECTOR OF PUBLIC UTILITIES FOR THE CITY OF COLUMBUS
CONCERNING THE ESDA EAG RECOMMENDATIONS
DATED SEPTEMBER 2004**

PREFACE

The Building Industry Association of Central Ohio (“BIA”) is submitting these comments on behalf of its members, many of which are involved in residential development in Central Ohio. These comments do not constitute the positions of individual members nor should they in any way be viewed to preclude individual builders or developers to take contrary positions or to otherwise challenge the ultimate findings and recommendations of the External Advisory Group (“EAG”) Environmentally Sensitive Development Area (“ESDA”) process and/or the standards ultimately imposed by the Ohio EPA or local communities.

INTRODUCTION

The BIA and its members acknowledge the importance of protecting the Darby Creek and its tributaries. The stream is both a remarkable resource and a wonderful amenity in Central Ohio and it deserves special attention and protection. We are also confident that properly designed and constructed development can take place within the watershed and still protect this resource. There is a general perception that development within many areas of the Darby Creek watershed is at a standstill, but nothing could be further from the truth. Development in the rural areas is occurring. Development will happen, it's just a matter of how. Without careful planning and central sewer systems, hundreds of acres of ground will be transformed into single family, large lot developments with septic systems. There will be no meaningful storm water controls. Infrastructure will be insufficient. Ultimately, the Darby Creek will suffer.

The BIA is encouraged by the EAG's efforts to reach consensus on the types of development standards needed to protect the Darby Creek. We are further encouraged by the City of Columbus' stated willingness to discuss with neighboring municipalities and townships a cooperative approach to future development and the provision of utilities. We believe that significant technical issues with the development standards remain unresolved, but we are committed to working with the interested parties to put in place development standards which will protect and preserve the Darby's ecologic and recreational values.

GENERAL OBSERVATIONS

1. Application of Development Standards in Darby Creek Watershed

The Darby Creek is a unique resource and it is because of this resource that stringent development standards are under consideration. We do not believe these standards should be applied to other areas in Central Ohio because resources are adequately protected by state and federal permitting requirements, zoning requirements and otherwise. Accordingly, the BIA believes that the EAG recommendations should include a statement clarifying that these standards are not designed or intended to be applicable to other areas.

2. Recognition of Potential Economic Impact of Development Standards

The EAG's recommendations gloss over the significant economic impact the proposed standards are likely to impose on many property owners in the affected area of the Darby Creek watershed. The BIA was the sole representative on the EAG of entities with direct economic interests affected by the proposed standards (there was no other representative of the interests of property owners in the affected area) and we feel bound to raise this issue. Because of the significant impact on residential density, the cost of special development design and the establishment and maintenance of open space, conservation areas and storm water controls, raw land will be worth less money. In many instances, individuals and entities have invested in property in this area, whether for agriculture purposes or otherwise, and, to the extent to which there was hope to sell the land for development purposes in the future, this investment will be diminished. We

believe the EAG recommendations should recognize this cost. Moreover, the types of standards proposed will, undeniably, increase the cost of developing residential housing and these costs will be reflected in the price of homes in this area. As an industry, we believe that affordable housing is essential to a productive and fair economy and that it is necessary and appropriate to factor in, or at least acknowledge, these costs in the EAG's recommendations.

3. The Importance of Flexibility

The recommendations suggest many stringent standards to be applied to development in this area of the Darby Creek watershed. It does not, however, provide for an opportunity to review the application of these standards to individual developments on a case-by-case basis. While we understand the need for consistent application of these standards, we believe it is essential to provide for an opportunity for property owners to seek a variance from the standards where they can demonstrate that such variance will not result in any degradation to the Darby Creek. In many instances, it may be preferable to allow minor incursions into riparian corridors and/or streams in order to allow for the protection or enhancement of other important ecological resources on the site. Accordingly, we believe that variances should be available in any local land planning plan implementing these types of requirements.

4. Limitations of the 208 Plan Process

It will be important for the EAG to recognize that there are certain limitations imposed on the Ohio EPA in the 208 Plan process. A 208 Plan provides the agency with the authority to evaluate comprehensive waste water management plans and to assure that these plans provide adequate protection of water quality. It does not authorize or require the Ohio EPA to consider or approve of municipalities' land planning decisions. Accordingly, it may be difficult to concretely address issues related to density, open space, conservation development design, etc., in the 208 Plan. In that regard, we would encourage the development of resources that can be used by local governments to develop a protective comprehensive development plan. We understand that effort is underway in connection with the Darby Accord.

5. Many of the goals/requirements contained in the EAG report are not specifically defined. What is meant by "conservation development"? What percentage of a parcel would be designated as open space? What are the specific design requirements/goals for storm water retention and/or treatment? Without the ability to evaluate how these types of issues will affect construction in the watershed, it is difficult for our members to evaluate whether the recommendations are workable.

SPECIFIC ISSUES

1. Riparian Corridors

We support the aggressive establishment of riparian buffers to protect the Darby Creek where the buffers are demonstrated to be necessary to protect the creek. In fact, we support the establishment of 200-foot minimum buffers on perennial streams. However, as discussed below, we do not believe that requiring a minimum 200-foot buffer on or along intermittent streams or ephemeral streams is either necessary or appropriate to protect the Darby Creek.

While it may be acceptable to include ephemeral, intermittent and perennial streams in the definition of what constitutes a stream, it is wholly inappropriate to treat these resources the same and to apply the same restrictive standards. A 200-foot buffer on an ephemeral stream that is one-foot wide and conveys water only during and shortly after a rain event is not required to maintain water quality. The goal of the development standards is the preservation of the Darby Creek, not the blanket preservation of open space and undeveloped areas. A more reasonable standard would be to apply the riparian corridor calculation model set forth in the Hellbranch Overlay or the floodplain, whichever is greater, for intermittent streams and ephemeral streams and with a minimum width of 50 feet for drainage areas less than 90 acres.

Application of a blanket 200-foot minimum riparian buffer may dramatically affect, and perhaps prohibit, development on smaller or irregularly-shaped parcels of property. This could significantly diminish the value of some properties and may trigger takings claims against the local jurisdiction applying this standard.

Additionally, the blanket prohibition against other impacts to ephemeral or intermittent streams, particularly, is neither necessary nor practical. It may lead to grossly distorted development designs and/or loss of other, more valuable ecological resources due to efforts to protect these draining features. Moreover, there are stringent federal and state permitting programs which already restrict impacts to these areas. In addition, local land planning requirements should require the land developer to avoid impacts to ephemeral and smaller intermittent streams “to the extent practicable.” This would allow a measure of flexibility, yet still protect the overall functionality of these resources.

We are concerned that there may be discrepancies over identifying what truly constitutes a stream. Most local governments do not have individuals on staff qualified to make that determination. In that regard, reference to the U.S. Geological Survey (“USGS”) maps and the “NRCS” maps should be standard for the identification of perennial and intermittent streams. To the extent that local jurisdictions and the Army Corps of Engineers differed on stream identification and classification, the Corps determination would prevail. The definition should also specifically exclude drainage swales and manmade drainage features. In addition, all stream channels should be mapped by local jurisdictions and this

information made easily available to property owners and prospective purchasers. This would allow property owners and/or developers to make informed decisions prior to investing significant time and financial resources in a property.

Similarly, it is our understanding that the current FEMA floodplain designations in the Darby Creek/Hellbranch watershed are no longer accurate. A study to properly define the floodway and floodplain should be performed for the watershed and focusing at first on areas where development is likely to begin.

With respect to acceptable uses in the riparian corridor, we believe the following issues must addressed:

- The requirement should make allowances for some sort of storm water outlet to be constructed through the buffer, whether a pipe outlet (with head wall) or an open channel.
- The construction of sanitary sewer and waterline stream crossing could become inordinately expensive if directional boring is required beneath the entire width of the riparian corridor. Although some EAG members object to boring pits within the buffer, the reasons are not provided.
- Directional boring should not be required to cross ephemeral or intermittent streams provided that construction is conducted during periods of negligible water flow and the affected area is promptly revegetated with appropriate native vegetation.
- The proposal to categorize construction of non-arterial streets as conditional uses allowed only when the parcel has no other existing access or when such crossing is necessary for public health and safety is impracticable and unnecessary, particularly when applied to ephemeral and smaller intermittent streams. The minimal ecologic benefit from this approach may be far outweighed by limiting flexibility in the land planning process which might otherwise allow for significantly greater protection of ecological resources. Again, we would recommend that impacts to ephemeral streams and smaller intermittent streams be avoided to the extent practicable. Impacts to larger intermittent streams and perennial streams would need to meet the more stringent standard.
- Setback distances for unpaved/paved trails are excessive when compared to the riparian corridor width requirements. In many areas the buffer will be significantly narrower than the prescribed distance and the trail would then be well outside of the buffer. It will also detract from enjoyment of the stream.

2. Conservation Development

We are certainly not opposed to “conservation development”, although it is, at present, an ill-defined term. At the same time, we continue to believe that traditional development, designed in accordance with these watershed protection standards, can and will be more than sufficient to protect aquatic resources in the Darby watershed. Accordingly, we do not believe any distinction should be drawn between the two approaches -- both should be allowed “of right.”

3. Open Space

The BIA and its members recognize both the ecological and esthetic value of “open spaces” in the context of residential development. Our members work to maintain valuable and unique resources in their individual developments. The EAG’s recommendations on this issue are too vague to provide much in the way of specific comments. In particular, it does not discuss in any meaningful way how “open space” may be used. Must it be maintained in a natural state? Can it be used for active or passive recreational purposes? The BIA believes that it is important to consider the public use and benefits of open space, not just ecological issues.

The proposed “primary conservation areas” are over-inclusive and may have negative and unintended consequences. For example, wetlands as small as .01 acre are delineated under today’s regulatory program. A parcel of property may have multiple areas of small, isolated wetlands. To require the preservation of each of them is impracticable.

Moreover, a blanket prohibition against impacting wetlands, in concert with the other suggested development restrictions; i.e., extensive riparian corridors, restrictions on locations of streets and utilities, etc. may drastically affect the ability to develop property. We would suggest that both the size and the quality of the wetland be taken into account when determining if it should be categorized as a primary conservation area. Perhaps wetland of greater than one acre in size and which are classified as a Category 2 or 3 wetland under Ohio’s Rapid Assessment Method would be a suitable standard. Regardless, we recognize that impacts to wetlands would need to be mitigated within the Darby Creek watershed.

Similarly, the designation of “healthy forests” as primary or secondary conservation areas is troublesome. First, there is no definition of what constitutes a “healthy forest.” Who will make this determination? Second, the existence of a forest does not necessarily impact water quality and this is the goal of the EAG, not habitat preservation. Similarly, designating “prime agricultural land of at least five contiguous acres” as secondary conservation areas is puzzling. Active farm land contributes significant quantities of sediment, fertilizers and pesticides to storm water runoff. Moreover, farmers are unlikely to continue to farm

properties as small as five acres, particularly as an area develops. What is the goal of this designation?

4. Ownership of Open Space

As noted in the introduction, the EAG should recognize that it may be difficult for the Ohio EPA to address open space and open space management in the 208 Plan process. The 208 Plan is not a land use plan. It is a process to manage and evaluate area waste treatment management plans in the context of water quality. In the long run, it will probably be more effective to develop resources which local governments can use in crafting their individual land use plans incorporating open space requirements. We understand that the relevant local jurisdictions involved in the Darby Accord have requested bids to begin this process. That said, we believe that any open space requirement must be as flexible as possible to allow our members and local communities to evaluate all options to maximize benefits to both the public and the environment when designating and managing open space areas.

5. Storm Water Management

The BIA and its members generally agree with the EAG's approach to storm water control and management. We believe it will be essential for any stormwater requirements to be specific and well defined and provide the necessary detail to allow interested parties to comply with these requirements. We would point out that the EAG's recommendation that local communities have "stop work" authority exceeds the authority of the Ohio EPA's storm water permit program. To the extent to which communities adopt "stop work" authority, a timely and effective appeal mechanism must be provided, along with adequate time to correct any deficiencies.

With respect to protection of groundwater resources, we want to point out that it will be very difficult for local communities to identify mechanisms for evaluating groundwater quantity and quality. Rather than a specific requirement to maintain or improve the groundwater regime, a more realistic solution would be to require implementation of appropriate and practical best management practices, such as minimizing impervious surfaces, etc. while still providing adequate access and services.

CONCLUSION

The BIA appreciated the opportunity to participate in the EAG process and we look forward to continuing to work with the EAG, the Ohio EPA and the affected communities to establish meaningful and workable protections for the Darby Creek and its tributaries.

Brown Township

Memo

To: Don Armour, P.E., FMSM

Fr: Tim A. Richardson, Exec. Asst., Brown Township Trustees

Oct. 1, 2004

Re: Comments on EAG final draft

Following are my comments on the draft EAG document.

- **EXECUTIVE SUMMARY:** The Executive Summary is a critical component of the report and will undoubtedly be read by more people than the entire report itself. Consequently, the Ex. Summary should be augmented to clearly represent the EAG's discussions and recommendations including significant aspects of non- consensus and key areas of discussion and disagreement. References to relevant page numbers of the main report should be included in the Ex. Summary text.
- Page 3 references "CSPU". Change "CPSU" typos.
- The "note" (pg. 39) relative to water quality performance goals and a "margin of safety" is a Consensus Recommendation and should be included in the Ex. Summary. It states: "Appropriate margins of safety are included in the TMDL and anti-degradation rules".
- Page 6, Riparian Corridors identifies "disturbances" and "arterial streets" as Permitted Uses. This requires added explanation per pgs. 17 and 18 in the report to accurately reflect EAG intent.
- Page 7, Open Space, (also pg. 32 of the report) should include the significant discussions regarding the need for third party oversight of open space areas, for example by FSWCD.
- Clarify Open Space "slope" component NRCS HEL as "Natural Resource Conservation Service designated Highly Erodable Land plus a 50-foot setback from top of slope".
- Change the Ex. Summary's use of the word "should" to "shall" to capture the intent of the EAG consensus recommendations. Use "shall" throughout the report's consensus recommendations in the same manner. For example, see page 18, Consensus Recommendations on Dredging and filling, the word "shall" is used in the body of the discussion and "should" is in the Consensus Recommendation. "Shall" is the appropriate word for the Consensus Recommendation.
- Page 8, Stormwater Management, Water Quality Performance Goals, reference OEPA's anti-degradation rules. Use of anti-degradation references in the Ex. Summary as well as throughout the report (example pg. 38) should specifically mention "Outstanding State Waters" and "Superior High Quality Waters" designations. The Ex. Summary should inform readers of the important nature of these additional protection measures as discussed by the EAG.
- **RIPARIAN CORRIDORS**, Page 15, Consensus Recommendation on the Riparian Corridor Width should reference the width of the "100 year" floodplain.
- Page 11, Purpose Statement Consensus Recommendation, no. 3 references "stream functionality". For purposes of clarity, add "hydrology in order to maintain Outstanding State Waters and Superior High Quality Waters designation status".
- Page 13, Riparian Corridor Ownership, Option 3, "Existing Development" Totally grandfathered exempted from restrictions- should be clarified with a definition for "existing development". How is an undeveloped lot in an "existing development" to be dealt with?

- Page 19, Riparian Corridor Width, Uses, Roads and Driveways as a conditional use is actually a Consensus Recommendation and should be so referenced.
- Page 20, Stream bank Stabilization/erosion control measures, Consensus Recommendations, second bullet, second sentence-should include the word “protection” after “purposes of water quality” to read “purposes of water quality protection”.
- Page 22, when referencing “natural” vegetation, use the word “native” vegetation here and throughout the document.
- **CONSERVATION SUBDIVISIONS**, Page 25, discussion by second speaker, Tim DeWitt. The small paragraph included in the report does not do justice to Mr. DeWitt’s presentation. Additional information is warranted regarding the value of the LESA program as a land use planning and natural resource preservation tool in a Darby Watershed context.
- Page 31, Non-Consensus Views states EAG did not arrive at consensus of 100 year floodplain being designated a primary conservation area. Include here a reference that EAG did reach consensus on floodplain protection in that the Consensus Recommendation for Riparian Corridor Width includes “the width of the floodplain (100 year) or the Hellbranch Overlay formula, whichever is largest, with a minimum of 200 feet”, see page 15.
- Page 36 includes a Consensus Recommendation on the importance of regional planning with a natural resource protection focus. This Consensus Recommendation should be included in the Ex. Summary.
- Page 37, General Performance criteria, discussion should include all TNC discussion points including ecological preservation, no loss of species and importance of water temperature on stream ecology.
- Page 38, Water Quality Performance Standards should be connected with the Water Quality Performance Goals -top of same page and bottom of page 37- to clarify they are not in conflict.
- **STORMWATER MANAGEMENT**, Page 43, Stormwater Management, Construction control, Consensus Recommendation uses the term “short term” impact. Substitute the word “immediate and lasting” impact to be clear on the EAG conclusion here.
- **OTHER RECOMMENDATIONS**, Question: Page 49, what is the origin of the last bullet statement, “These recommendations should not be interpreted to diminish authorities that political jurisdictions have to protect health, safety and welfare”? Doesn’t this statement “go without saying?” Did EAG discuss this for inclusion in the report?
- The EAG recommendations on page 49 should be included in the Ex. Summary or at least referenced in that component of the report. EAG’s considerable discussions regarding the importance of a watershed imperviousness “tipping point” and subsequent environmental impacts merits inclusion here.
- Page 49, Other issues discussed at length in the EAG process which should be included in this part of the report are: importance of water quality monitoring for impacts from development on a regular basis; OEPA’s “letting the balloon out slowly” adaptive management proposal; need for local jurisdictions to adopt EAG recommendations into local codes prior to extension of sanitary sewer service; inclusion of strong storm water protection measures in conjunction with public road construction; lack of success in meeting EAG mandate and subsequent lack of complete product due to time constraints inherent in the EAG process; and discussions that eastern Hellbranch “sliver” should be included as part of the EAG process.

Thank you for considering the above comments, questions and recommendations.

City of Grove City

Don Armour

From: Blackburn, Jim [jblackburn@grovecityohio.gov]
Sent: Friday, October 08, 2004 12:07 PM
To: Don Armour
Subject: RE: Draft Report

Don, I actually read the whole document. It appears to be a workable document. My only thought is that if we could cooperation from other groups we would have had more consensus on some issues that are outstanding. Otherwise outstanding work by you and you staff. jmb

-----Original Message-----

From: Don Armour [mailto:DArmour@fmsm.com]
Sent: Friday, September 03, 2004 5:02 PM
To: ASasson@tnc.org; mail@beallowephd.com; eaclark@columbus.gov; Bob Gable; norwichtwp@aol.com; crausch@cityofhilliard.com; laiinee@aol.com; dannybinder@hotmail.com; Dan.Dudley@epa.state.oh.us; djniche@co.franklin.oh.us; dtyndall@mihomes.com; nindav@macol.com; dgreene624@yahoo.com; dporej@tnc.org; febeasley@columbus.gov; mike.gallaway@epa.state.oh.us; hector-santiago@oh.nacdnet.org; Blackburn, Jim; jtaylor@tnc.org; excell@ameritech.net; jeff_franklin@fclass.hilliard.k12.oh.us; jennifer-fish@oh.nacdnet.org; dambrosio.9@osu.edu; Joseph_wharton@tax.state.oh.us; o'meara@metroparks.net; barristersinc@aol.com; jftetzloff@aol.com; shabbyroadstudios@yahoo.com; malcolmjporter@aol.com; msherman@FCEO.CO.FRANKLIN.OH.US; Grossman, Mayor; marida@wideopenwest.com; parosile@co.franklin.oh.us; tim.peterkoski@dnr.state.oh.us; clroberto@cmhmetro.net; millerpavement1@cs.com; cseidle@cityofhilliard.com; scaplinger@mihomes.com; cscampbell@columbus.gov; studenmund@metroparks.net; smsmith@amwater.com; satilgner@co.franklin.oh.us; tbeidler@fceo.co.franklin.oh.us; tim_hamilton@fclass.hilliard.k12.oh.us; lawrence.53@osu.edu; tim.richardson6@gte.net; tdshockl@co.franklin.oh.us; thatmaker@prairietownship.org
Subject: Draft Report

Members, attached pls find a draft of the final report for your review. As requested by OEPA, the format for the report follows a similar report developed for the TMDL EAG process. Therefore, pls restrict your comments to the information in the report, not the format. There should not be anything new in the report; it is simply a compilation of information from the meeting minutes.

Action: Please review the attached report and get any comments back to FMSM by no later than COB, October 4, 2004. That gives you a full 31 days to review and provide comments. During the week of the 4th we will attempt to review all comments received and prepare a second draft. A meeting will only be scheduled if there are conflicting comments regarding the information that is contained within the report. Also, as we discussed, if you desire, you may provide a letter, or addendum to the report that we will include in its entirety, without revision. The addendums that we received by COB on October 4th will be included in the second draft. We will also provide the comments we receive and a description of how those comments were addressed in the second draft.

If you have any questions or concerns, pls call.

Happy reading

Don

Don Armour
 FMSM Engineers
 6600 Busch Blvd; Suite 100
 Columbus, OH 43229
 614-846-1400 (main line)
 614-844-4001 (direct line)

10/14/2004

Darby Creek Association

Darby Creek Association comments on first draft of EAG report

In general, the EAG draft report does a good job of capturing the content of the EAG process. DCA feels that the document can be made more useful to the Director and to the public if some clarifications and expansions are made to the draft.

The Executive Summary should have much more of a narrative thread and be less focused on bullet points listing those measures that achieved complete consensus. This section is most likely to be read by the public, and thus should be written for a layman, concentrating on educating readers to the core of the EAG's work. Such a narrative should contain some of the most important and influential "whys" of what the EAG is recommending. It should also define some of the important phrases such as "conservation development" and "primary conservation areas." As it stands, the Summary is a confusing laundry list of items with a lot of legalistic language. We believe it is critical that the Summary tell the complete story of the EAG in order to give the reader the context of why it was convened, what it achieved, what remains to be done, and where the group members expect it to lead.

Another general comment: When consensus was not reached, and there was only one dissenting opinion, the report should specifically state that "all other groups supported the proposed language." There are too many instances in which the impression is given that there was a disagreement over an issue, when in fact there was broad agreement with only one dissension. It would be a disservice to the Director and the public if we do not emphasize that in many cases all jurisdictions, agencies, and all but one environmental group were in agreement on an issue.

Also, in some places the text reflects an interim position on various issues, rather than the final status on these issues. This is apparently due to copying text from meeting summaries from before issues were revisited. The final report should document the final status of issues. An example of this is riparian corridors, the details of which were not finalized until near the end of the group's activities. We are certainly not opposed to the report giving an account of the deliberations; but the final status on issues such as riparian corridors should be clearly expressed wherever that issue is discussed in the report.

In the interest of clarity, we would suggest putting all final consensus items in bold text.

Also, the text should include that a number of groups recommended that the ESDA be expanded to include the entire watershed in Franklin County, that it should be expanded beyond Franklin County, and that it should include development on septic systems.

The report needs to reflect that the EPA clarified and modified the EAG's charge during the course of our existence. Specifically, we were instructed not to consider landscape wide planning, impervious surface and total open space, and the concept of a "tipping point" for development levels in the watershed. We were informed that these topics were inappropriate for our group, either because we did not have the political or legal authority (land use planning), or because we did not have the scientific capability (impervious surface, tipping point, and total open space). Our group therefore did not make recommendations on a number of absolutely vital issues, but left these to the EPA and future planning initiatives. We came to understand our mission as a partial task in a larger effort, the latter being described by the EPA as a multi-

pronged adaptive management process. This all needs to be communicated in the Executive Summary and the report, because it greatly impacted our recommendations, and will greatly impact how the Director and the public view our conclusions.

The last section on recommendations outside the mission of the EAG is not very effective by itself. We would prefer to have these points put into the context in which they arose, and to have them put directly into the Executive Summary.

A final general comment: DCA has reviewed the Nature Conservancy's comments on the draft and strongly supports those comments.

DCA is also supplying a draft of the report using the "Track Changes" function of Word to imbed more specific comments and suggested edits.

(FMSM has pulled those "Track Changes" from the supplied document and made a listing of them, starting on the following page.)

Background

Along with the creation of the ESDA, the CSPU mandated that the City of Columbus convene an External Advisory Group (EAG). The EAG is composed of diverse stakeholders who are charged with studying and recommending criteria or standards by which fulfillment of each condition could be measured and be judged by the Director to be "sufficient to protect water quality."

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EAG Purpose and Scope

These [delete or clarify "non-binding". As stated it this sentence is misleading. The phrase in the 208 refers only to the fact that the EAG recommendations are only recommendations; the provisions that are ultimately chosen by the Director will be binding.] will be forwarded to the Director of the Ohio EPA and the Director of Public Utilities for the City of Columbus. The Director of the Ohio EPA will determine if the EAG recommendations are sufficient to protect water quality and will update the CSPU accordingly.

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Discussion of Technical Elements within Institutional Controls.

Once the individual elements were identified, the group discussed each element and attempted to reach consensus on the minimum technical standard, or criteria necessary to protect the unique aquatic and prairie land ecosystem within the ESDA.

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Riparian Corridors

Ownership

The group recommends that for new development, ownership will remain with the parcel, but may be dedicated at the option of the owner.

Deleted: Existing development is exempted from riparian corridor restrictions.

Riparian Corridor Width

The group recommends that the buffer width be the width of the 100-year floodplain or the Hellbranch Overlay formula, whichever is largest, with a minimum of 200 ft.

Permitted Uses

The following are the recommended permitted uses for riparian corridors:

- Passive recreational activity
- Removal of damaged or diseased trees
- Revegetation or reforestation
- Disturbances (clarify)
- Arterial streets under certain conditions

Acceptable Open Space: Primary Conservation Areas

The EAG recommends that the following elements should be considered as primary conservation areas and should be included in the open space:

- Riparian zones of at least 75 feet (change to the consensus recommendation for riparian corridor width)
- Slopes which include NRCS and Highly Erodible Land (HEL) defined soils + 50 feet
- Wetlands as defined by the Army Corps of Engineers or the EPA
- Populations of endangered or threatened species as defined by either the state or the federal government
- forests of at least one contiguous acre

Deleted: HEL

Deleted: Healthy

Add Secondary conservation areas

Open Space Management Criteria this section should be summarized—unreadable as is. Don't give the language we approved, give the gist of what we approved.

In terms of open space management criteria, the EAG recommends the following language:

In the event the party responsible for maintenance of the Open Space fails to maintain all or any portion in reasonable order and condition, [the jurisdiction] may assume responsibility for its maintenance and may enter the premises and take corrective action, including the provision of extended maintenance. The costs of such maintenance may be charged to the homeowners association, or to the individual property owners that make up the homeowners association and may include administrative costs and penalties. Such costs shall become a line lien on all subdivision properties.”

Stormwater Management This section needs to emphasize that the EAG has concluded that it is beyond the capabilities of the group to recommend scientifically rigorous standards, and that we are asking the EPA to undertake the setting of these standards. This is one of the key conclusions of the group, and it needs to be emphasized in the Ex. Summary.

Inspection and Enforcement of Construction Controls

The EAG recommends that local communities must demonstrate to the Ohio EPA that they have enforcement mechanisms in place that have a short-term impact, including the ability to stop work. Periodic inspections are recommended.

Adequate Public Facilities

Add: general statement of what how we didn't fully accomplish our charge of providing recommendations that would be sufficient to protect water quality; why we didn't; and why we think we have provided a road map that can, in conjunction with future multi-jurisdictional planning and EPA guidance, lead to ultimate success in the goal of protecting water quality in the Darby watershed in the ESDA area.

Institutional Controls

Consensus Recommendation The ESDA EAG recommends that a political jurisdiction be required to implement at least one of the following institutional controls for riparian corridor protection within the ESDA prior to the extension of centralized sanitary sewer service:

- Watershed-based zoning;
- Subdivision, zoning, stormwater and/or floodplain regulations; and/or
- Council resolution.
- Ordinances (which we added in the conservation development topic)

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Technical Elements of Riparian Corridors

Purpose Statement

Non-consensus Views The group did not come to a consensus on the inclusion of an additional element of implementability and affordability to the purpose statement.

The Building Industry of Central Ohio suggested that the elements of implementability and affordability be added to the list of elements for inclusion in the purpose statement. The BIA as well as other supporters of the addition believe that the cost of any action must be taken into account in determining if the action can be implemented. The supporters also believe that cost is a factor in determining social acceptability of an action and that whatever recommendations the group comes up with must be based on sound science and must make economic sense. One camp who were opposed to the addition of the elements of implementability and affordability believe that while affordability may be a factor in social acceptability, its inclusion in the purpose statement would imply that it is more important than other aspects of community acceptability. Another camp in opposition believe that a price cannot be placed on the uniqueness of the Darby ecosystem, that affordability is not part of social acceptability, and that if affordability was added to the purpose statement, a loophole would be created that would allow some who opposed the restrictions to bypass their implementation by arguing that they were not “affordable.”

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Enforcement

Non-consensus

Didn't we later reach consensus on this?? Near the end, Columbus revisited this issue and said that it could live with the idea of periodic inspections as long as the jurisdiction retains its authority to say when and how they occur. Consensus was not reached on the issue of inspection. There were two opposing views on the inspection issue.

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Views

1. Those that favored a complaint-driven process; and
2. Those that favored frequent change frequent to “periodic” monitoring.

Should Conservation Subdivisions Be Required Everywhere in the ESDA?

Discussion

The group clarified what was meant by the definition of by right development. Common understanding was achieved by considering “by-right” to mean that a variance was not required in order for the specific form of development to be approved. Initially group members were evenly split on whether conservation subdivisions should be required everywhere within the ESDA. Those in favor felt that if conservation subdivisions were not required, they would not be used. Those in favor also felt that conservation subdivisions were necessary to provide overall water quality protection. Those opposed to requiring conservation subdivisions everywhere within the ESDA felt that some parcels are not suitable for conservation subdivisions and as long as the overall water quality goals are being achieved, it is best to have a combination of conventional development, preservation and conservation subdivisions. Opponents also pointed out that if conservation subdivisions were required, it may be more difficult to combine large tracts of land for preservation purposes.

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This discussion ended with many members seeming to agree that if the other restrictions we were recommending, and the future planning we were recommending, were accepted by the Director, the issue of whether to require conservation development would be moot, because every development would have to have significant conservation features regardless of how the houses were configured on the property.

Consensus
Recommendation Conservation development should be by-right and traditional development is a conditional use and must go through a special approval process.

Non-Consensus
Views On the issue of adding language stating that conventional subdivisions must protect water quality, water quantity and groundwater recharge goals, Prairie Township raised concerns about the enforceability and legality of implementing those conditions. On the issue of requiring conservation subdivisions, X number of members favored requiring conservation development throughout the ESDA. 4 members could not live with that statement due to the following:

Open Space and Water Quality Protection

Permissible and Prohibited Activities

Consensus
Recommendations The following should be permitted uses within open space:

- Passive recreation
- Removal of damaged or diseased trees
- Revegetation and reforestation
- New arterial streets under certain conditions
- Disturbances clarify

Acceptable Open Space

Discussion The first question raised in regards to acceptable open space was whether primary and secondary conservation areas should be included as open space. Primary conservation areas are defined as areas that must be conserved. Secondary conservation areas are defined as those areas that should be conserved to the extent feasible.

The group considered the Atlanta Regional Commission's document entitled "Conservation Subdivisions" which outlined elements of primary and secondary conservation areas:

The following are primary conservation areas in the Atlanta document:

- 100-year floodplain
- Riparian zones of at least 75 feet width along all perennial and intermittent streams
- Slopes above 25% of at least 5,000 square feet contiguous area
- Wetlands that meet the definition used by the Army Corps of Engineers pursuant to the Clean Water Act

- Populations of endangered or threatened species, or habitat for such species
- Archeological sites, cemeteries and burial grounds

The following are secondary conservation areas in the Atlanta document:

- Important historical sites
- Existing healthy, native forests of at least one acre of contiguous area
- Individual existing healthy trees greater than 8 inches caliper, as measured from their outermost drip line
- Other significant natural features and scenic viewsheds such as ridge lines, peaks and rock outcroppings, particularly those that can be seen from public roads
- Prime agricultural lands of at least five acres contiguous area
- Existing trails that connect the tract to neighboring areas

Consensus
Recommendations

Primary Conservation Areas. The following elements should be considered primary conservation areas:

- Riparian zones of at least 75 feet this should be changed to the consensus recommendation on riparian corridor widths
- Slopes which include NRCS and HEL defined soils + 50 feet (the additional 50 feet is a setback from the slope)
- Wetlands as defined by the Army Corps of Engineers or the EPA
- Populations of endangered or threatened species as defined by either the state or the federal government
- Healthy forests of at least one contiguous acre

Note: Archeological sites, cemeteries and burial grounds were not recommended for consideration for primary conservation areas because they do not have a direct impact on water quality.

Secondary Conservation Areas. The following elements should be considered secondary conservation areas:

- Existing healthy forests less than one contiguous acre
- Other significant natural features and scenic viewsheds
- Prime agricultural lands of at least five acres contiguous area

Note: Important historical sites and existing trails that connect the tract to neighboring areas were removed from consideration as secondary conservation areas because they do not have a direct impact on water quality.

Non-consensus
Views

Consensus was not reached on the designation of 100-year floodplains as a primary conservation area. (this is wrong: at the time this was considered, consensus was not reached, but later it was. Keep in mind that this final report should document the final status of issues, and does not need to reflect interim discussion stages. If issues were

revisited, the report should reflect the final status.) The OSU Extension and the BIA of Central Ohio could not agree to that designation. The group also discussed wetland buffers. The Nature Conservancy recommended that in terms of wetland buffer width, ORAM be used or a 200 meter (650 foot) designation, whichever is greater. TNC also specified that the wetland buffer be large enough to maintain flow into wetlands, including both surface and groundwater. Several members raised concerns with this recommendation and stated the need to look at peer-reviewed literature. The City of Columbus suggested that the focus be placed on achieving the two goals of maintaining quality and hydrology, but that the local jurisdictions should choose the methods for achievement. Several members disagreed with this statement, stating that local jurisdictions won't have the expertise to choose appropriate methods for achievement and that it is unrealistic to assume that the jurisdictions will look in depth at hydrology. The Sierra Club stated that they are not comfortable with using ORAM to determine buffer widths because ORAM is used to classify wetlands that can then be removed and mitigated. The Sierra Club believes that no wetlands should be disturbed within the ESDA and that mitigation of wetlands within the ESDA should not be permitted. The OSU Extension stated that a 650 foot wetland buffer is out of the group's purview due to the fact that 650 feet is for habitat quality and not water quality.

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Permanent Protection

Consensus Only Conservation easements are an acceptable form of permanent protection

Open Space Minimum Requirements

Discussion **Percentage of Open Space, Fixed or Variable?** If fixed, open space would be based on a certain chosen number, and if variable, open space would be based on density. Several suggestions were made for percentage ranges for the group to consider. (The EPA's recommendation that impervious cover, and the concept of a tipping point, should not be taken up by the EAG, and its statement that the agency would take this topic up in a more scientific treatment, must be included in this report. This was a critical juncture of the EAG's deliberations, and it determined that we were not capable of answering the question of open space. It was about this time that the EPA put forth its adaptive management approach of letting the air out of the balloon slowly. This all needs to be in the report.

Non-consensus Views Consensus could not be reached relative to the percentage of open space required. The BIA of Central Ohio was concerned that the numbers were arbitrary. The Nature Conservancy voiced concerns that a range of open space percentages will not meet Warmwater Habitat use designation (WWH). TNC also stated that the percentage of open space should be based on performance. The Darby Creek Association stated that evidence shows that water quality cannot be maintained with the level of development that was proposed during the discussion. DCA also

voiced concern that the amount of open space needed to protect water quality is unknown at this time, and that the EPA's proposal for using an adaptive management approach was preferable. The DCA also voiced concerns about not being able to take into account regional planning.

Consistency with Comprehensive Plans

Non-consensus Views Several members raised concerns over whether the plans are protective of water quality. A provision is included here in the report stating that the EAG feels that a water quality plan for the ESDA must be prepared out of the results of the TMDL. The Darby Creek Association recommended that all protections that come out of the EAG be extended to the entire Darby watershed in western Franklin County. The city of Columbus recommended that ESDA provisions apply to septic systems.

Open Space Management Criteria

Consensus Recommendations In terms of open space management criteria, the EAG recommends the following language:

“Applicant shall submit a Plan for Management of Open Space and Common Facilities that maximizes ecological function of the open space, has been prepared by a qualified person or entity and contains at least the following:

- a. Allocates responsibility and guidelines for the maintenance and operation of the Open Space and any facilities located thereon, including provisions for ongoing maintenance and for long-term capital improvements;
- b. Estimates the costs and staff requirements needed for maintenance and operation of, and insurance for, the Open Space and outlines a means by which such funding will be obtained or provided;
- c. Provides for any changes to the Plan to be approved by the Board of Commissioners and.....; and
- d. Provides for enhancement (unclear) of the Plan.

Water Quality Performance Goals

Margins of Safety

Discussion The Darby Creek Association asked about other standards in addition to the aquatic life use designations included above, specifically anti-degradation rules. The EPA explained that anti-degradation is intended to provide additional protection to those stream segments that are performing better than their aquatic life use designations. (The following language was added to the minutes and should be added here for clarification: “Anti-degradation also applies to streams that are not meeting the recommended performance standards. If a stream is not meeting standards for a given pollutant, no additional inputs of that pollutant will be allowed.” If a stream is doing better than the standard,

additional inputs will be allowed as long as the stream can assimilate that pollutant, plus a safety margin depending on the stream's classification. The EPA informed the group that there is a margin of safety beyond what the standard indicates and that for the Darby, the margin of safety will be higher due its uniqueness. The TMDL must describe the margin of safety within its scenarios.

Specific Pollutants and Pollutant Removal Efficiencies

Discussion	The group discussed setting numeric standards for pollutant removal efficiencies. The Darby Creek Association suggested that the group put off developing numerical criteria for pollutants because it feels that the EAG is not capable of coming up with reliable numbers due to the fact that these numbers need to be supplied during multi-jurisdictional planning with the guidance of scientific assessments, including the TMDL. The EPA suggested that the group recommend that the director of the Ohio EPA integrate the output of the TMDL <u>or other future analyses (note: we were advised that the TMDL may not be adequate, and the EAG is requesting additional study by the EPA as needed to insure that performance goals are met. This must be made very clear here.)</u> in setting removal efficiencies. A suggestion was made to use 80% as a floor and if the TMDL advocates a higher level, the percentage can be increased in the future. The Sierra Club raised concerns about when the group would address the specific figures if not now and about how it will be done.
Consensus Recommendations	The EAG agreed not to look at specific pollutants and removal efficiencies, <u>and instead requested that the EPA take on this responsibility.</u>

Construction Control

Consensus	Sediment basins should be required on sites < 10 acres <u>just say "on all construction sites."</u> <u>The way it is written could imply that they aren't required on larger sites.</u>
Recommendation	