Statement regarding the Big Darby Accord Watershed Master Plan
Columbus City Council meeting
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- First, we would like to thank Columbus City Council for their long-standing support for the protection of Big Darby Creek. The Accord advances the effort of the Hellbranch Overlay adopted by the City of Columbus in 2002. And we thank City of Columbus employees Mike Reese, Kevin Wheeler, Susan Ashbrook, Vince Papsidero, Cheryl Roberto and others for their outstanding efforts and support.
- The Conservancy supports the Big Darby Accord Watershed Master Plan (the Accord) as the local option that has demonstrated an organized, and largely sound, approach to Big Darby Creek protection. While it has a need for considerable additional work, the present proposal should be supported, adopted in local ordinances, and used as a base for moving forward, with appropriate adaptive management in the immediate near future and over time.
- The Accord is an experiment in environmental protection. In other words, no one has done this before - in particular, developing an area and maintaining the highest quality streams. Therefore, it must be approached cautiously and with scientifically conservative environmental protections. We need to do an adequate, excellent job of protection, and significantly better than in the past.
- We need the Accord, Ohio EPA's stormwater permit and 208 plan, and future improvements because we already have damaged Big Darby, Hellbranch Run and Little Darby Creek. Information provided with my remarks shows the recent problems in Hellbranch Run, as documented by the State of Ohio.
- Governments in Franklin County must demonstrate excellent leadership and set a good example for other counties in the watershed.
- Ohio EPA has led by proposing a stormwater permit and 208 plan that would apply to the whole watershed, and not just Franklin County. We ask that you support the Accord and incorporate Ohio EPA's actions as proposed, including the stream buffers, floodplain protection, groundwater recharge goals and other protections.
- Other sources of environmental degradation must be addressed, including agriculture, large lot development, septic systems and land application systems.

We encourage the City, with the other local jurisdictions, to consider supporting an administrator that would oversee operations of the Accord, serve as a source of information and help manage the process. Well-managed implementation is the key to success of this complicated administrative and technical effort. Because this plan calls for a level of effort significantly exceeding all others known in Ohio and locally, we feel the need for full-time staff is justified.

Proper and adequate implementation of the Accord could result in an excellent example of integrating environmental protection and development, and provide Columbus and the Central Ohio area with an economically attractive, positive feature and a showcase to be proud of.

Additional comments

We would like to make some comments in support of the Big Darby Accord. While some of these might sound critical, we support the Accord as the local option that has demonstrated the most comprehensive, organized, and largely sound, approach to Big Darby Creek protection. It has shortcomings, but the present proposal should be supported and used as a base, with appropriate adaptive management in the immediate near future and continuing over time. It will need to move slowly and be continually improved for the foreseeable future.

The Accord is an experiment in environmental protection. In other words, no one has done this before; no government has shown they have saved such an outstanding stream's ecology by developing a comparably large portion of the watershed; no other known urbanizing jurisdiction has achieved the proposed level of protection for such a high quality stream. Numerous national and Ohio studies have shown degradation from urbanization, at much lower levels of development, and even in recent years when required stormwater management was in place.[1] Urbanization, even with modern engineering approaches, has not shown it can protect rare and sensitive aquatic species at the level needed. The rare species and biological diversity are what the Big Darby is known for, and the protection level must be far above that done elsewhere. In spite of over 5 years of searching for a comparison, we know of no stream protection effort that has actually achieved the proposed level of protection needed for Big Darby Creek.

Anything we do under the Accord must be approached cautiously and with scientifically conservative environmental protections. That's why the adaptive management portion of the Accord is so important. Even the Ohio EPA's protection levels, though stronger than usual for Ohio, do not yet establish clear protection for the special biological

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[1] Miltner, R.J., D. White and C. Yoder. 2004. The biotic integrity of streams in urban and suburbanizing landscapes. Landscape and Urban Planning 69: 87-100.

Yoder, C.O., R.J. Miltner, and D. White. 2000. Using biological criteria to assess and classify urban streams and develop improved landscape indicators, pp. 32-44. in S. Minamyer, J. Dye, and S. Wilson (eds.), National Conference on Tools for Urban Water Resource Management and Protection. U.S. EPA, Cincinnati, OH. EPA/625/R-00/001.

Yoder, C.O., R.J. Miltner, and D. White. 1999. Assessing the status of aquatic life designated uses in urban and suburban watersheds, pp. 16-28. in Everson, A. et al. (eds.), National Conference on Retrofit Opportunities for Water Resource Protection in Urban Environments. U.S. EPA, Offc. Res. Dev., Washington, D.C. EPA/625/R-99/002.

Yoder, C.O., R.J. Miltner, and D. White. 1999. Assessing biological quality and limitations to biological potential in urban and suburban watersheds in Ohio, pp. 139-148. in M. Malone (ed.), Comprehensive Stormwater & Aquatic Ecosystem Management, First South Pacific Conference, Volume I. ISBN 1-877134-18-X. Auckland Regional Council, Auckland, New Zealand.

conditions in Big Darby. While there might be inappropriate efforts to weaken the proposed protections, such as the stream buffers (supported by technical justification and a national review of buffers necessary for adequate ecological protection, e.g., see Wenger 1999[2]) or prohibitions against floodplain development, these should not be weakened, as protections are already limited. Scientifically adequate and conservative standards are needed because there is little to no information yet demonstrating success of environmental controls on development at the levels needed to protect the Big Darby.

We need the Accord, Ohio EPA's stormwater permit and future improvements because we already have damaged Big Darby Creek, Little Darby and Hellbranch Run.[3,4] Scientific studies show that Big Darby Creek is failing to meet Clean Water Act goals in the northern portion of the Accord area. Hellbranch Run, where most of the recent development has occurred, including with the most modern stormwater management, has declined significantly. Little Darby Creek has seen declines and is under the threat of much more development. For the Big Darby watershed in Franklin County, we are already above development thresholds that cause degradation, and so further development must not cause any further damage, and conservation efforts need to repair the present damage.

Development is well known to cause stream quality degradation at development levels lower than that already found in Franklin County portion of the Big Darby watershed. As documented in Ohio and nationally, development of just 3 to 5% of a watershed causes decline.[5] The Hellbranch Run watershed already is at at least 12% impervious surface, well above these thresholds. This harmful development impact has been documented in Hellbranch Run.

One of the criticisms of the Accord is that this is only a small part of the watershed. While it is about 15% of the watershed's land area, there are at least two major reasons for achieving the best model of protection in Franklin County. First, this portion of the watershed is the most biologically important, with the most rare and sensitive aquatic species, and some of the best biological diversity in Ohio and the Midwest. More development could directly damage this condition. Because of higher diversity, streams of the Big Darby watershed are more sensitive than others. If they are damaged further, the Big Darby will lose its outstanding character. Second, Franklin County has, by far, the greatest population – at least two-thirds of the population in the watershed - and the most imminent development. It also poses a threat to the stream's quality downstream,

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[2] Wenger, S. 1999. A Review of the Scientific Literature in Riparian Buffer Width, Extent and Vegetation. Institute of Ecology, University of Georgia, Athens. 59 pp.

[3] Miltner, R.J. 2004. http://utilities.ci.columbus.oh.us/project/docs/Biotic Integrity of Small Streams in Franklin Co.ppt.

[4] See attachment "An overview of the biological condition of Hellbranch Run"

[5] Couch, C. and P. Hamilton. 2002. Effects of urbanization on stream ecosystems. Fact Sheet FS-042-02, U.S. Geological Survey. http://pubs.water.usgs.gov/fs-042-02

Robinson, K.W., S.M. Flanagan, J.D. Ayotte, K.W. Campo, A.Chalmers, J.F. Coles, and T.F. Cuffney. 2004. Water Quality in the New England Coastal Basins Maine, New Hampshire, Massachusetts, and Rhode Island, 1999–2001. U.S. Geological Survey Circular 1226. http://pubs.usgs.gov/circ/2004/1226/

in Pickaway County, probably the area ranked second in terms of the Big Darby's biological diversity. And we already have significant degradation, such as recently documented by the State of Ohio in Hellbranch Run. If we do not provide adequate protection here, how can we expect others, such as Union, Madison and Pickaway County, to do the right thing?

Much more does need to be done outside of and within Franklin County to protect Big and Little Darby Creeks. But this cannot be an excuse for dismissing the Accord and its present limitations. Jurisdictions in the Accord must reach out to these other counties and get them to participate in protection at the same or better level. Ohio EPA has led such an effort by proposing a stormwater permit that would apply to the whole watershed, and not just Franklin County. Again, we ask that you support Ohio EPA's stormwater permit, at least at the level of protection proposed.

We ask that the jurisdictions not add more environmental risk from more development than that already proposed in the Accord. In fact, it could be argued that presently proposed development already is above thresholds for degradation. For example, significant questions remain about the ability to adequately manage stormwater quality and quantity at the protection level needed, especially in the proposed Hilliard expansion area and proposed Town Center. Most of the proposed Town Center drains to the degraded Hellbranch Run, possibly two-thirds or more. Perhaps the Big Darby can only handle less development and impact than what is proposed, not more. It is possible that the Accord needs more acreage designed as conservation development, but, since we are already operating with an environmental degradation handicap, not at the expense of lowering protection standards through more development on this same acreage. The Accord should extend adequately protective conservation development, and making conservation development the "by-right" option.

Besides development, other sources of environmental degradation that should be addressed, at least partially, through the Accord and its implementation and successors. Development is a permanent feature, and once damage is done, it is not practically reversed. While agriculture is certainly having an impact on the streams, many conservation measures can be taken, at relatively low cost, to improve these problems. Adequate and better large lot development, such as the conservation development just mentioned, and better septic system standards and resident education (such as more environmentally sound lawn care) must be developed before the Accord takes effect.

The Big Darby Creek watershed has one of the most extensive histories of protection in Ohio, going back for decades. For over thirty-five years, Franklin County residents and others have worked to protect the quality of the Big Darby. For example, this support for protection opposed two dams on the creek and an upland reservoir in Franklin County. For at least 15 years, those involved in the watershed's conservation have warned of negative development impacts.

Big Darby Creek is a major part of Ohio's heritage. We need to do an adequate, excellent job of protection, and not just better than in the past. Both Ohio EPA and ODNR have warned of the major threat of development, and have taken unprecedented positions on the part of the State of Ohio. If we fail to do an adequate job, we will lose a major part of Central Ohio's identity. We must take the time and make the effort to do this right and make the investment for our future.

An overview of the biological condition of Hellbranch Run

Hellbranch Run trends - Hellbranch Run ecological integrity and trends for the fish community show biological problems. The stream's recent decline should serve as a warning for entire Accord area, ESDA and Big and Little Darby Creeks. The State of Ohio's 2001 survey of Hellbranch Run[6] showed a decline in fish diversity and sensitive species (see graphs below). A presentation by the Division of Surface Water of Ohio EPA on this problem can be found at http://utilities.ci.columbus.oh.us/project/docs/Biotic Integrity of Small Streams in Franklin Co.ppt.

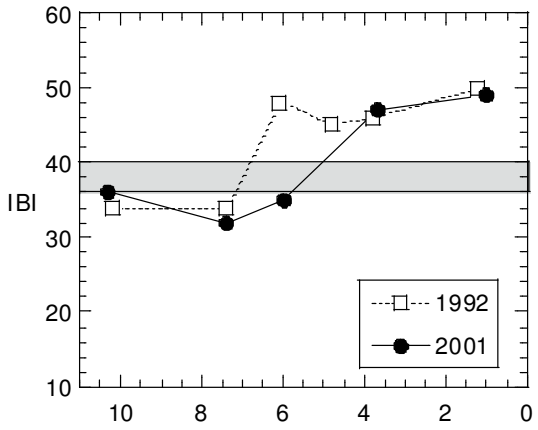

Figure 1 Hellbranch Run IBI scores 1992 compared to 2001 (source: Ohio EPA)

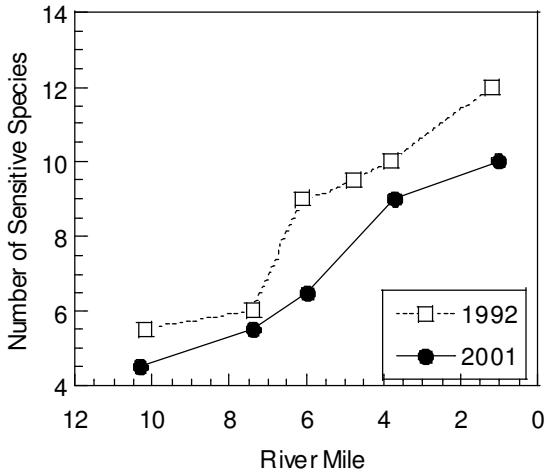

Figure 2 Hellbranch Run Sensitive Species 1992 compared to 2001 (source: Ohio EPA)

[6] EPA's "Biological and Water Quality Study of the Big Darby Creek Watershed, 2001/2002."

The numbers of fish species declined in Hellbranch Run between 1992 and 2001. Based on data that was incorporated into the Ohio EPA's Technical Support Document, in a September 14, 2001, statement by ODNR, "Recommendations for All New Development in Western Franklin County," a comparison of fish species numbers is provided, as below:

Hellbranch Watershed Comparison of Fish Species Diversity 1992 vs. 2001

River Mile	Species # 1992	Species # 2001
10.2	25	15
7.4	20	20
5.8	26	19
3.7	34	22 + 1 hybrid
1	35	22 + 1 hybrid
0.5	32	21 + 1 hybrid

Further discussion of Hellbranch Run problems can be found in pages B.8.41 through 47 of Ohio EPA's "Biological and Water Quality Study of the Big Darby Creek Watershed, 2001/2002." This discussion recognizes the present stormwater runoff and other stresses.

Mussels of Hellbranch Run - Dr. G. Thomas Watters of The Ohio State University's Museum of Biological Diversity, stated the following in 2002 (see attached letter of March 25, 2002):

> "Beyond the mussel fauna found within it, Hellbranch Run has a direct impact on the health of Big Darby and its mussels beyond its borders. Hellbranch Run empties into Big Darby Creek at the upper end of the rage of the Northern Riffleshell, a federal and state endangered mussel. This mussel occurs in no more than a handful of sites in the world.
>
> "By any barometer of riverine health it is clear that Hellbranch Run has been dramatically degraded. Habitat loss, contaminants, urban sprawl, and a host of related insults have assailed Hellbranch Run. There is no doubt that the run has not only lost much of its mussel fauna, but that it is deleteriously affecting mussels (and other biota) downstream in Big Darby itself."