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Hagerty, Karen H MVR

From: LINDA PETERSEN

Sent: Thursday, January 02, 2003 2:39 PM

To: CampDayBreakEA@mvr02.usace.army.mil

Subject: comments on MYCA environmental assessment

Please see my comments in the attached files.

Wayne Petersen

I am writing to express my thoughts on the Muslim Youth Camp of America's proposed development near North Liberty.

30-5

While there are some valid environmental concerns over this - or any development - I believe that these concerns can be overcome. If green development or low-impact development techniques are employed I believe that any negative environmental impact can be avoided. In many cases, green development when used in conjunction with land management that is focused on restoration of native ecosystems can actually enhance and improve the ecological functioning of a site that is "left alone to go natural". In my opinion, removing active human interaction and management of ecosystems is contrary to the healthy function of native ecosystems which evolved with human influence such as annual fire management, harvesting and foraging of edible and medical plant materials, and the human influence in serving as a check on prey species that typically graze and impact natural systems.

30-5 [While construction site erosion and sediment control is a concern, it can be controlled.]

30-5 [While post-construction stormwater runoff is a concern, it can be mitigated.]

30-5 [Perhaps the most challenging environmental concern on this site is wastewater management. While I can't speak with authority on this issue, I believe there are options to traditional septic system waste treatment (such as wetlands for wastewater) that could be incorporated into an effective and safe system for treating wastes.]

22-7 [I can't speak with any technical or professional credibility on such issues as adequacy of roads and emergency services. But I feel that there are certainly alternatives and compromises that could be reached to address any valid concerns that might exist for these issues.]

30-5 [In general, I favor the proposed MYCA if it follows a green development design approach. I would welcome the opportunity to interact with a more diverse culture in the Johnson County community. I would appreciate the opportunity to learn more about a major religion of the world. I would welcome the opportunity to utilize the center for meetings, conventions and so forth during the off-season. I would be proud of the distinction of my home community being the first and only site in the nation to have a Muslim Youth Camp.]

33-10

AT the request of the Johnson County Board of Supervisors, I reviewed and commented on the Environmental Assessment prepared by Zambrana Engineering, Inc. for the MYCA camp proposal. I am attaching these comments here, which will offer a more detailed summary of my thoughts on the project. Thanks for the opportunity to comment.

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Comments on Environmental Assessment of Proposed MYCA Lease at Coralville Lake

Submitted by
Wayne Petersen, Urban Conservationist, Natural Resources Conservation Service
December 2002

Background information: After reading the Environmental Assessment, I returned to Table 3-6 "Summary of Findings" to organize my comments. I have addressed each line item, referring back to text within the Assessment as needed. In some cases, I did not have the technical expertise to speak with any authority but occasionally offered thoughts/opinions as a concerned or interested citizen. I tried to note where I was offering "professional opinions" versus "personal opinions". As a Soil and Water Conservationist, I felt most qualified to address Soils and Geology, Terrestrial Ecology, Aquatic Ecology, Wetland Resources, and Surface Water Resources. These items constitute the bulk of my comments. I also included ecological and green development background information that hopefully explains and supports the basis of many of my comments.

I mainly addressed the findings only for Alternative 1—MYCA Lease, which was identified as the preferred alternative.

Item 1: Soils and Geology. The finding for the preferred alternative was "**focalized soil erosion during construction**".

Page 40 of the Assessment states there would be "Only minor impacts to the project area soils ... Erosion of the site soils will be controlled using best management practices. NO lasting impacts to the soils and geologic features of the project site are anticipated."

8-3 [I'm not qualified to speak with authority on geological issues, but it seems likely that no impact to the geology of the site would occur.]

8-4 [I can speak to impacts to the soil resources. I did not necessarily agree with the findings regarding impacts to soils.]

I feel that construction of roads, parking areas, buildings and other infrastructure will probably create "significant" erosion potentials. With high erosion potentials comes high potential for offsite delivery of sediment to Coralville Lake. The report statement that erosion will be controlled. I suspect that what was meant was "sediment will be controlled."

In most cases it is difficult to control erosion on construction sites. In most cases, sediment control practices are employed rather than erosion control practices. The difference is that erosion control means preventing the detachment, the transportation, and the off-site deposition of soil particles. Sediment control means that that soil particles moving in the erosion process will be retained on site and prevented from moving to an off-site point of deposition (which in this case would be Coralville Lake).

It may be nit picking about semantics. This may be a minor point. But I see too many silt fence installations referred to as erosion control systems and too many construction sites with inadequate erosion and sediment control plans in place. So I feel it is important to understand and discuss the difference between erosion and sediment control and to take seriously the need to exercise caution to prevent negative impacts.

8-5 [While erosion potentials are high on most construction sites, erosion can be reduced and sediment delivery to offsite receiving waters can be controlled if an adequate Erosion and Sediment Control Plan is developed, implemented, and maintained throughout the construction period. The goal should be zero discharge of sediment to off-site receiving waters. Minimizing the amount of erosion will allow sediment

control practices to perform better and help achieve the objective zero discharge of sediment to off-site points of deposition.

8-5 cont.

Controlling construction site erosion usually involves practices such as:

- phased grading to minimize exposed soil
- mulching to provide protective cover on exposed soil surfaces
- temporary seedings to provide protective cover
- applying compost blankets or erosion control matting to cover exposed soil surfaces
- or others

Sediment control usually involves practices such as:

- silt fence/geo-ridges/compost socks
- sediment control basins
- vegetative buffers around perimeter of the site
- or others

8-6 This may be another minor point, but in a number of places throughout the document reference was made to the need for the applicant to acquire needed permits associated with this proposed development (401, 404, variance for wastewater treatment). It should be noted that as of March of 2003, any land disturbing activities that will impact more than one acre of land will require a NPDES permit (National Pollution Discharge Elimination System). This site will need an NPDES permit. To receive an NPDES permit from the Iowa Department of Natural Resources the applicant must certify that an adequate Pollution Prevention Plan (PPP) has been developed for the planned activity on the site. The most critical component of a PPP for a construction site is a sound erosion and sediment control plan.

8-7 The other significant concern that needs to be considered is the altering of soil profiles and compaction that occurs with land disturbing activities. Later in these comments I will talk about stormwater management and the need for "green" stormwater BMP's to mitigate the impact of impervious surfaces. Green BMP's utilize natural features of a site whenever possible to help reduce stormwater runoff. The soil profile provides tremendous potential to serve as a green stormwater infrastructure. Soil resources can serve as an infiltration system, a water storage facility, and partitioning mechanism that releases rainfall in a slow and stable manner to down-gradient receiving waters.

8-8 The Fayette soils that dominate this site have the capacity to infiltrate anywhere from 0.6 to 2 inches of rainfall per hour. Fayette soil should be able to store about 2 inches of rain per foot of soil profile. A four-foot profile of Fayette soils could store up to 8 inches of rainfall. A 100-year storm is about 7 inches of rain in 24 hours. Because of these potential benefits, I find it of critical importance to protect and enhance soil resources on this or any development site.

8-9 Measures that need to be taken to protect and enhance soil resources include:

- Protecting the soil profile from disturbance and compaction. Compaction is a significant and lasting negative impact. Compaction prevents infiltration and rids the soil profile of pore space needed for storing water. Design developments to fit the existing landscape to minimize grading needs and use a building envelop. Contain land disturbing activities and traffic within the envelope to keep the amount of land impacted to a minimum.
- Enhancing soil quality to increase infiltration rates (i.e. applying compost to achieve a desired level of organic matter content, which can be specified according to the desired level of rainfall to be absorbed.)
- Ensuring a healthy community of deep-rooted native vegetation is present to enhance soil quality, to maintain OM content, and to transpire water out of the soil profile into the atmosphere.

8-9- Mass grading and random traffic patterns - so typical on most construction sites - creates significant and lasting impacts to the soil resources. Therefore, I was not comfortable with terms like "localized erosion" and "minor impacts" and "no lasting impacts" when discussing soil resources.

Item 2: Terrestrial Ecology, The finding for the preferred alternative was "a loss of 403 trees, displacement of biota, loss of 4.8 acres of terrestrial habitat."

2 10
2-16
This finding was compared to reduced numbers for Alternative 2 and 3. For Alternative 4 (do nothing) a finding of "no impact" was listed. What I would like to know is whether the listed impacts for Alternative 1 were considered significant or not. I tended to feel they would not be significant and would certainly not be significant if green development techniques and restoration based land management practices were implemented on the rest of the property I disagreed with the finding of "no impact" if nothing is done. Doing nothing to "natural areas" creates negative ecological impacts. I will offer background information that will hopefully explain and support my comments on impacts to Terrestrial Ecology.

I have come to believe that the emerging discipline of restoration ecology, which is based on the native ecosystem model, should be the guiding light of natural resource management. While I will not take the time to explain all of what I believe restoration ecology or the native ecosystem model involves, I will say that most of the landscapes of Iowa are much different and significantly altered from the historical landscapes of the tallgrass prairie region prior to European influence and settlement. I believe that the indigenous people were active managers of their ecosystems and that the stable and sustainable prairie, savanna, woodland, and aquatic ecosystems that evolved on this landscape did so in conjunction with human influence. Therefore, to remove the human influence eliminates an ecological factor that our native ecosystems were dependant on to continue to be stable and sustainable. To remove the human influence is as unnatural as removal of the influence of bison or elk or the predator species that once kept the population of deer and other prey species in check.

2-11
That is why I disagree with the finding listed for Alternative 4 - that "No Action" would have "no impact". It is my professional opinion that this site and much of the woodlands of Iowa are in a state of decline due to lack of human influence and active management. The primary management tool of the indigenous people was fire. A growing body of evidence is building to support the theory that much of the Iowa landscape, including wooded systems, was burned and usually burned on an annual basis. Since the time of European settlement, fire suppression has been a goal of woodland management. This has led to a significant change in the composition and function of woodlands. In my professional opinion these changes are generally detrimental. (See the discussion of hydrologic impacts associated with the conversion of native ecosystems in the next section.)

Where modern human involvement and active management is employed today (i.e. timber stand improvement practices) the results often yield a different result than what would have been seen from fire management on the Iowa woodlands of old. There were references in the report to the archeological sites on and around this property. I must conclude that this area was richly populated and utilized areas for millennia prior to modern history. Therefore, I suspect that human influence was an important part of the maintenance of a stable and sustainable ecosystem on this site and the surrounding areas. I am attaching an article, written by Professor Thomas MacBride in 1896. In the article he describes the Iowa landscapes of "fifty to sixty years" prior - the Iowa landscapes of the 1830's and 1840's when Iowa was just starting to be settled by Europeans and the original land surveys were being conducted. He describes how the woodlands had changed by the end of the 1800's due, in his opinion, to fire suppression. The landscapes of 1896 that MacBride described sound much like those we see today. The landscapes of the 1830's sound like woodlands and savannas that are being managed with restoration ecology and the native ecosystem model.

30-5
Which brings me back to the impact of the terrestrial ecology of this site. It is my professional opinion that development on this or almost any site could be done and the terrestrial (and aquatic) ecology can be simultaneously improved if restoration ecology is employed as the management strategy for the site and if green development principals are adhered to in the design, construction, and maintenance of infrastructure.

I refer people to the definition of "green development" that is found on the webpage of the Rocky Mountain institute - a sustainability think tank (see www.rmi.org). They define green development as development that adds or creates no negative environmental impacts. While this seems impossible, if not counter-intuitive at a first glance, there are a growing number of models of green development on the ground that seem to be achieving no negative impact and perhaps actually improving the ecology of a site.

identified on the site, the list of bird species observed on the site, and the lists of mammals, reptiles, and amphibians potentially occurring on the site that were in the Environmental Assessment. While I do not claim to be a restoration ecologist, I have received training and have field experience with identifying native ecosystems and assessing conditions where degradation is occurring and restoration is needed. AS is typical of many sites considered "natural" I felt that much of this site was in need of a restoration based management plan (i.e. understory removal, elimination of invasive non-native species, fire management, and reconstruction of native plant communities).

I certainly make no claim to having done a full ecological evaluation and I commend much of the fieldwork done by the consultants preparing this report. I do not mean to disrespect the qualifications of the team that the Environmental ecology

Item 3: Aquatic Ecology. The finding for the preferred alternative was "*Localized mortality of aquatic biota due to beach construction, alternation, of 0.2 acre of habitat.*"

Once again, without green development and restoration based land management I feel impacts to aquatic ecology of this area will be significant and involve much more than beach construction. In my professional opinion, stormwater management after development is the most significant long-term ecological impact of this or any development site. Very little was done to discuss or describe stormwater management. I only found the following comments on stormwater management: "Replacement of natural soils with impermeable surfaces such as roofs and pavement will likely increase total runoff from the site. However, this increased runoff may be mitigated through the installation of appropriate site detention structures to prevent any appreciable impact to Coralville Lake."

I must spend some time on background information once more to make my comments on this item pertinent (as well as comments on impacts to surface and ground water resources - Items 6 & 7).

AS the native ecosystems of the tallgrass prairie were altered one of the most significant and detrimental impacts was the change in the hydrology of our landscapes. As Professor MacBride and others have indicated, the historical landscapes of our area were able to absorb and infiltrate most of the rainfall that occurred during the growing season. The high organic matter content of our soils and the deep rooted grasses and forbs (as well as the woodland sedges that would have been a significant component of the ground cover on this site) would have held and infiltrated rainfall during the growing season and shed very little surface runoff. Runoff would have most likely been confined to periods of rapid snowmelt and/or rainfall on frozen ground and perhaps the rare catastrophic rainfall event that exceeded the landscape's capacity to absorb and infiltrate. But the vast majority of rainfall events would have been absorbed and infiltrated where water fell.

The hydrology of old was an infiltration-based groundwater driven system. Wetlands, streams, and other surface water bodies were fed by rain falling directly on the water body *and* by a constant supply of ground water seep that had infiltrated on the uplands and moved down gradient through the soil profile to emerge as a stable and constant source of clean water.

A shift in the hydrology of our landscapes occurred with the plowing of the prairies, the draining of the wetlands, the loss of the graminoid-based ground cover of the woodlands (due to increased understory that resulted from fire suppression and the consequent shading of the forest floor). The disturbance and compaction and the creation of impervious surfaces associated with development also contributed to this hydrological shift.

Instead of an infiltration-based, ground water driven hydrology we now have a runoff driven hydrology. With almost every rainfall event, we have surface runoff that causes flashiness of flows, increased flooding, gully and streambank erosion, and the delivery of pollutants to surface water bodies.

20-5 [The aquatic ecology of this area will be impacted with every runoff event if Alternative 1 is implemented unless green development and restoration based management practices are employed. (This would also be true for the other alternatives discussed). Here is where the restoration-based management and the green development discussed in the previous item would be so critical. With the restoration / reconstruction of native ecosystems, with green building designs, and with a green stormwater management system it would be possible to absorb, hold, and infiltrate most rainfall events. It would be possible to restore an infiltration-based, groundwater-driven hydrology for this site. Without restoration based management of the terrestrial ecology, without green design of the buildings, and without a green stormwater management system, the aquatic ecology will be impacted beyond the finding of this report.]

Consider the following information on water quantities that need to be managed on this site:

- One inch of rain falling on one acre of land delivers 27,152 gallons of water.
- With an average annual precipitation of 36 inches of rainfall, an acre of land receives = 977,500 gallons per year.
- The 106 acres that constitutes this site potentially receives almost 104 billion gallons of water per year.
- Assume the 4.8 acres of terrestrial habitat estimated to be impacted equates to the impervious and compacted surfaces that will be created from development. These 4.8 acres will receive = 4.7 million gallons of water per year.
- 3 About 55% of rainfall on impervious and compacted surfaces is shed as runoff.
- Therefore, = 2.6 million gallons of runoff could be shed from the developed area on this site per year (unless provisions are designed into the development to hold, absorb, and infiltrate the majority of it.)
- 3 On the remaining 100 acres, a conservative estimate of 20% of annual precipitation would be shed. That would add another 19.5 million of gallons shed, for a total of 22 million gallons of water shed as runoff in an average year.

9-24 30-5 [Adopting a restoration based management plan and green development would reduce potential runoff by over 50% and yield the rain that falls on this site in a manner that mimics the stable and sustainable hydrology of the native ecosystems. Under this scenario, it is possible to actually improve the aquatic ecology of this site over current conditions. A restoration based management plan would be recommended for this site to restore a more stable hydrology and improve the terrestrial and aquatic ecology, even if no development were undertaken on this site (i.e. if Alternative 4 was the preferred alternative.)]

Item 4: Wetland Resources. The finding for the preferred alternative was "Conversion of ~0.1 acre wetland."

11-1 While I have not field verified the conditions of the wetland on this site I suspect they are already significantly altered/degraded (the presence of reeds canarygrass as mentioned in the report is a strong indicator of degraded wetland conditions). I would, however, reconfigure designs to avoid any land disturbing activities to the wetlands, which the report indicated would be possible to do.

30-5 [I would also suggest that the wetland areas would benefit from the restoration of an infiltration-based, groundwater-driven hydrology on this site. Increased runoff that would result from traditional development practices would negatively impact wetlands further. Surges of sediment-laden runoff would further degrade them and gully erosion might bisect the upper reaches of wetlands in ravines. The formation or aggravation of gullies would tend to draw down the water tables of ravine wetland systems.]

Item 5: Threatened and Endangered species. The finding for the preferred alternative was "Selected removal of trees potentially used by bald eagle and Indiana bat, no significant impact to Federal or state listed species."

Perhaps there would be no significant impact. Perhaps there would be. Perhaps conditions might improve for threatened and endangered species, if a restoration management regime were employed.

Item 6: Surface Water Resources. The finding for the preferred alternative was "Localized siltation/sedimentation, short term increases in turbidity, requires issuance of variance for wastewater treatment setback limits from IDNR."

13-7 [Much of what was said in prior comments applies to surface water resources. I disagree with characterizing siltation and sedimentation as "localized". Any siltation or sedimentation adds negative impacts to the whole. The water treatment plant for Iowa City and the University of Iowa is potentially affected by siltation and sedimentation on this site. It is easy to say this is a small aspect of the 3,000+ square miles of land that drains into the Iowa River above this site, and consequently creates only minor or localized impacts. But only through doing development that adds or creates no negative environmental impacts on every development site will water quality and flooding concerns be addressed.]

13-2 [With regard to the impacts from wastewater treatment, I can only offer a personal opinion. Wastewater treatment is beyond the scope of my professional responsibilities but I do have concerns about the wastewater treatment system for this site. With this site's proximity to Coralville Lake, I would want special precautions taken with regard to treating wastewater. Although I lack technical and professional experience, I like what I have seen with regard to using wetlands for wastewater treatment. I would encourage the use of wetlands in conjunction with a leach field be investigated. Perhaps running outflow through a wetland as a pre-treatment before discharge into a leach field would yield a more effective wastewater treatment system.]

Item 7: Ground Water Resources: The finding for the preferred alternative was "no impact".

30-5 [Once again, I lack professional standing to comment much on impacts to groundwater resources. However, my personal opinion is that restoring an infiltration-based groundwater-driven hydrology would yield a net benefit to groundwater resources.]

Under "natural conditions" it is estimated that about 10% of annual precipitation is shed as surface runoff. About 45% of rainfall is held in the root zone of the soil profile, utilized by plants, and transpired back into the atmosphere. About 45% of rainfall is absorbed and infiltrated. About half of this moves down to recharge deep aquifers. About half of the infiltrated moves as groundwater baseflows to recharge surface waters.

13-26 [The Center for Watershed Protection has data on its website (www.cwp.org) that supports the growing concerns over negative impacts to groundwater recharge from the creation of impervious surfaces. While this is a small site in a large setting, we must address environmental concerns on a site-by-site basis and ensure that no negative impacts are added or created. Anything that creates impervious and compacted conditions without being mitigated, in my opinion, negatively impacts hydrology and groundwater resources.]

Item 8: Floodplains. The finding for the preferred alternative was "no impact".

14-2 [It appeared to me that proposed development would be above floodplain elevations, so I concur with this finding.]

Item 9 & 10: Recreation & Land use. The findings for the preferred alternative was "consistent with the Corps' objective for site, provides additional recreational resource in Coralville Lake Project area" and "Consistent with the Corps' Master Plan."

6-20 While I find it somewhat difficult to believe that this is the best site for development of this type within the 25,000 acres of federal lands associated with Coralville Lake, I must respect the history of the land use on the site, whether I agree or disagree with the Corps' Master Plan or objective for this site.

Item 11: Community and Regional Growth. The finding for the preferred alternative was "Provides 105 construction jobs and 16 permanent jobs at camp, construction cost would result in statewide increase in output, operation of camp would result in annual increase in statewide output."

30-5 [My opinion is that if development occurs on this site it should be required (by the Corps) to be done in a way that it adds or creates no negative environmental impacts. If this were done, it would provide a model for green development and a demonstration of how low impact development can be accomplished. If this were to happen, the green model it provided could help shape future growth and development of the community and the region in a positive manner.] This would provide one positive outcome for a controversial situation that could result in negative impacts to things like community cohesion, which ultimately could have a negative effect on community and regional growth.]

22-8 [The other concern I thought should be mentioned with regard to this issue is the concern raised by the County about impacts to road systems and emergency services. While I felt there were valid points to these concerns, as usual, there is a flip side. With future development potential in the area likely to exceed capacity of infrastructure and services, it seems logical to plan for future upgrades with the maximum needs considered now. With the Corps objective of intensive use for the site stated in their Master Plan, with the historical use of the site, and with County Land Use and zoning policies not being applicable to federal land, it seems likely that the Corps could proceed with the proposed MYCA. Therefore, it seems to make sense to plan for the maximum needs now. Perhaps considering road upgrades for this area should be prioritized in the recently released the five-year road plan and roadwork in other parts of the North Corridor made a lower priority.]

Item 12: Community Cohesion: The finding for the preferred alternative was "no significant impact".

17-1 [I found this finding to be perhaps the most surprising of all the items in Table 3-6. It is my sense that there are some significant potential impacts to community cohesion with this project. In light of the concerns expressed by the County and local residents, this item deserved more attention.] 3

Item 13 & 14: Demographics & Displacements. The finding for the preferred alternative was "Temporary increase in seasonal populations at local level due to attendance at camp, no significant impact" and "no displacements".

No comment.

Item 15: Property Values and Tax Revenues: The finding for the preferred alternative was "no impact to property values or tax base, possible minimal increases in regional sales tax revenue."

I can understand why neighboring residents may have concern over decreased property values but I would hope this would not be the case. If an environmentally sensitive development were to occur, if a conference center brought people to a showcase of sustainability, if cultural exchange facilitated greater understanding between people of different ethnic or religious backgrounds, if natural resources were managed under a restoration-based plan and if access was made available to the neighborhood I could envision a scenario where property values could not only be maintained but perhaps enhanced.

33-11 [Issues like increased traffic or noise levels are valid concerns that should be considered and addressed with sound planning, sensitive design, and good management of the facilities and activities in a post-developed state.]

Finally, I return to the historic use of the site and the objectives stated in the Corps' Management Plan that have been on record for decades. I find it hard to not respect this aspects of the debate and those who have made investments in homes in the vicinity hopefully considered the history and the future of adjacent land prior to this proposal and their investment in property.

Item 16: Public Facilities and Services: The finding for the preferred alternative was "no impact"

No comment.

Item 17: Life, Health & Safety: The finding for the preferred alternative was "no impact."

I have no basis or expertise to argue with the finding that the proposed development and the 1% increase in the areas current population would not significantly impact the ability to provide emergency services. I would like to comment on the concern over having adequate supply of water for potential fire fighting capabilities, though.

30-5 [The report states that ensuring an adequate water supply for fire fighting "would be required as part of the overall design" for the site. I would suggest that the green development principals I have repeatedly referred to could and should include a cistern system to help manage impervious service runoff. A cistern system could help address non-potable water needs, which could include fire fighting. The capture and on-site storage of runoff from impervious surfaces will also reduce demand on aquifers, which should have a positive effect on groundwater resources. >

Item 18: Traffic and Parking. The finding for the preferred alternative was "no significant impact."

I have no technical basis for commenting on traffic issues. I read with interest the concerns expressed by the County P&Z staff concerning traffic and road standards. I read with interest the comments from the traffic and transportation engineering firm that reviewed the Environmental Assessment. They seemed to discount the traffic and road adequacy questions raised by the county.

22-8 [Having driven the road as part of my review process, I have to say I tend to agree with the County's concern over the adequacy of the road system for any significant increase in traffic. But that concern extends beyond the development of the youth camp to include future private residential development.]

22-9 [I would like to add a few brief comments on parking. The county expressed concern over the adequacy of parking space proposed for the site. The consultants responded to these concerns by citing alternative numbers for potential users. Bottom line is that parking needs must be accommodated on site and that parking along public roadways is not an option. It seems almost impossible to ever adequately address parking needs. Therefore an off-site parking and shuttle system would seem to be a need that should be addressed if the youth camp development moves ahead. It also appeared to me that there was potential to create additional parking capacity by utilizing environmentally sensitive parking options along the north edge of the existing old road grade 3

20-5 [Parking is one of the primary generators of impervious surfaces and one of the biggest contributors to the runoff driven hydrology and pollutant delivery problems that were previously discussed. Pervious (infiltrating) parking surface options should be required if development occurs on this site to prevent surges of hydrocarbon-laced runoff into Coralville Lake. I would also reconsider the proposed parking scheme as shown in figure 3-1. I do not like the location of the parking lot to the east of the proposed Lodge, due to the proximity to the Lake and the limited land for infiltration based stormwater control and treatment before discharge into the Lake.]

23-3 In fact, I would prefer that the whole complex be moved farther up the hill and to the west to provide more buffer space between impervious surfaces and the lake. The location of the existing well could create limitations with this option. [The benefit of the proposed location is that it keeps development at a low enough elevation to avoid negative impacts to the viewshed of the residential sites to the north of the property. During the growing season, leafed out tree cover would alleviate such concerns.]

13-9 [Wellhead protection measures should also be considered, which I do recall being mentioned in the Environmental Assessment.]

30-5 [Finally, I would require that the traffic system within the site be infiltrating surfaces rather than impervious surfaces. Just like infiltrating parking lots, road and trails surfaces (and their sub-bases) should be designed as part of a green stormwater management system so that they infiltrate, store, and slowly release rainfall.]

Item 19: Aesthetic Values. The finding for the preferred alternative was “*no significant impact, change in visual character of site as viewed from lake from natural landscape to landscape with development*”.

23-4 [I appreciate the attempt to mitigate aesthetic impacts to the viewshed by trying to site buildings appropriately and create no “significantly aesthetic impact due to the incorporation and integration of the architectural design and site development into the landscape.” But I think people will find the change in what they see from the lake and perhaps from the residential site to the north to be significant. This would be especially true if restoration based management was employed on the grounds – which would create a more open woodland complex (See the attached MacBride article.)]

30-5 [I think the report should state there could be significant change and then talk about how utilizing green development and restoration based land management open up the landscape will differ from the rest of the shoreline and how it can benefit terrestrial and aquatic ecology. People might find they like the open model of the restoration-based management alternative compared to the dense understory of woody growth that closes off most woodlands. People might like the view of sensitively design green buildings fit nicely into a landscape with minimal disturbance.]

83-9 [I think there would be significant visual changes with this development, but I don't think they would have to be negative. In fact, people boating on the Lake might find the alternative they see to be educational and aesthetically pleasing.]

Item 20: Noise. The finding for the preferred option was “... no significant impact.”

It's hard to argue with the technical findings on noise level increases as described on pages 55-56. I just know that under certain conditions, when I'm sitting outside on a summer evening in my neighborhood with high ridges and a large tree mass, I can hear many sounds from significant distances. The scream of a startled child walking the trail to a cabin at night will likely carry a significant ways on a calm summer night or if there is a slight breeze blowing toward Cumberland Ridge.

25-10 [Therefore, I think it's only realistic to anticipate some increase in noise levels. Perhaps it would not be significant. Hopefully it would be the joyful noise of children having fun or pleasant singing around a campfire. But still I would anticipate increased noise. (Certainly this is a personal and not a professional opinion.)]

Item 21: Cultural Resources. The finding for the preferred alternative was "no impact."

26- [I trust this finding. It sounds like this site has been well studied and documented.]

Item 22: Solid/Special Waste. The finding for the preferred alternative was "no impact."

27-1 [I trust this finding.]

Item 23: Manmade Resources. The finding for the preferred alternative was "Removal of existing structures, no significant impact."

28-1 [I concur with this finding.]

Attach macbride article.