

GP 19

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Dr. David E. Elliott, M.D., Ph.D.
3480 Cumberland Ridge Road
North Liberty, Iowa 52317
(319) 665-6099

Ms. Karen Hagerty
USACE, Rock Island District
Clock Tower Building
P.O. Box 2004
Rock Island, IL 61204-2004

Dear **Ms.** Hagerty,

This letter is a response to the draft finding of no significant impact (**FONSI**) for the proposed lease to the Muslim Youth Camp of America (MYCA) released by the Army Corps of Engineers (Corps) November 19th, 2002. The **FONSI** is based on an Environmental Assessment (EA) prepared by Zambrana Engineering, Inc. of St. Louis Missouri (Zambrana). The EA was approved by Colonel William J. Bayles, District Engineer. **I** find that a **FONSI** cannot be determined because the EA has significant errors and omissions. The range and degree of errors in the EA make it impossible to determine that the proposed use would have no significant environmental impact.

31-1

This response is organized into 9 sections. Each section independently shows that the EA is not valid and therefore a **FONSI** cannot be determined. The sections are titled:

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Section 1) The EA inappropriately re-interprets land designation in the Master Plan.

A basis for the **FONSI** by the EA is that the Daybreak area was designated as an intensive use recreational area by the Coralville Lake master plan. This is asserted on page 33:

“Under the current Master Plan (1977), the site is identified as one of seven out-grant parcels at the Coralville Lake Project. In addition, the Master Plan identifies Corps “zoning” for the majority of the 106-acre tract as recreational/intensive use, which is described in the 1977 Revised Corps Master Plan as follows:
Operations: Recreational/Intensive Use lands are those allocated for developments as public use areas for intensive recreational activities, including areas for concession and quasi-public development”

b1

This assertion is reiterated on page 47:

“The Corps has applied zoning classifications to all the lands above the conservation pool. The classifications were established in the original 1961 Corps Master Plan as priority uses. The Corps zoning for the site is “Recreation/Intensive Use” which is described in the 1977 Revised Corps Master Plan as follows:

Operations: Recreation/Intensive Use lands are those allocated for developments as public use areas for intensive recreational activities, including areas for concession and quasi-public development.”

These assertions form a basis for the conclusions of the EA. This is shown on page 48.

“With respect to the current land use and zoning, Alternatives 1 and 2 are considered to be compatible with 1977 Coralville Lake Master Plan as it designates the site for recreational/intensive use including concessionaire development..Consequently, no significant impacts to land use or zoning are anticipated with these project alternatives.

Because the Corps Master Plan designates the project site for recreational/intensive use and the site is currently not being used for recreation, neither Alternative 3: Alternate Use or Alternative 4: No Action would be consistent with the Corp’s intended use of the site.”

The assertion that the 1977 Coralville Lake Master Plan designated the proposed lease area as recreational/intensive use forms a basis for the recommendation of Alternative 1 as shown on pages 63 and 64:

“Alternatives 1 and 2 were found to be consistent with the Master Plan’s designation of the use of the site as high intensity recreation.. . In contrast, Alternatives 3 and 4 provide some recreational use of portions of the site. However, these alternatives do not meet the criteria for high intensity recreational use of the premises and do not serve the intended use of the land as set forth in the Master Plan.. .Alternative 1:MYCA Lease is recommended as the preferred alternative. This alternative was selected for the following reasons: ...consistent with the Corps’ Master Plan and designated land use for the site,”

Similar conclusions based on the assertion that the Master Plan designates the site as high intensity occur on pages viii and 16. Diagrammatic description of the site as intensive use is provided on Figure 4-3 “Land use of Project Area”

However, the assertion that the Master Plan designates the site as high intensity recreational use is false. The site is not designated as high intensity recreational use in the Master Plan. The site (E-411) is designated as “leased land” in Plate C-2 of Appendix B, Do of the 1979 appendix to the 1977 Master Plan. We can find no support in text, table, or figure within the Master Plan that the site is designated “high intensity recreation”. Leased land does not equate with “high intensity recreation”. Indeed, the Master Plan distinguishes between leased land and high intensity recreation. Figure 10 (page 67) of the 1977 Master Plan shows that the Girl Scout camp is not “recreation – intensive use”. The electronically reproduced version (PDF) of Figure 10 is degraded and does not show this contrast. Perhaps this is the source of the Corps error. However, in the original bound version of the 1977 Master Plan, Figure 10 clearly distinguishes between the designations “leased land” and “recreation – intensive use.”

The Corps never interpreted the “leased land” designation as dictating the recreational intensity of the land use. Table 1 contains the designation for the site as detailed in the NRIS data sheet (1990) and re-confirmed in 1995. Note that none of the proposed site segments are designated intensive use recreation. The land category for high density recreation is “HR”. The management use code for high intensity recreation is C3. These designations were in place during the time the land was leased by the Girl Scouts of America. The actual NRIS designations for

| Segment | Category ^a | Management Use Code ^b | Acreage |
|---------|-----------------------|----------------------------------|---------|
| 7 | LR | C2 | 9.0 |
| 8 | LR | C2 | 20.0 |
| 9 | LR | C2 | 21.0 |
| 10 | LR | C2 | 4.0 |
| 11 | LR | C2 | 18.0 |
| 12 | RF | C2 | 29.0 |
| 15 | RF | C2 | 8.0 |

a) LR = Low density recreation
 RF = Reserve Forestland
 b) C2 = Forest Management

the site are low density recreation and reserve forestland. Indeed, segment 15, the location for the proposed two story 17,500 square foot lodge is designated as reserve forestland by the NRIS. Thus, until 1995 the *Corps* interpreted the 1977 Master Plan designation of the site as leased-land, low density recreation or reserve forest. The use of the site by the Girl Scouts was in keeping with a low density recreation designation. Low density recreation permits primitive camping as performed by the Girl Scouts.

The interpretation of the site designation as reserve forest and low density recreation by the *Corps* continued up to at least 1997. The first ospreys were released for eventual nesting at the site in 1997. Ospreys require undeveloped nesting sites and shoreline. Therefore, in 1997 the *Corps* interpreted the site as reserve forest as designated in the 1990 NRIS.

Also note that the shoreline at the Camp Daybreak site is designated "Protected Lakeshore". Sites that are designated "recreation – intensive use" do not have a protected lakeshore designation. Protected lakeshore is defined in exhibit 4 of Appendix F of the Master Plan, "Protected Lakeshore – No private or public development. Environmental area." This designation prevents development of a recreational beach as proposed by MYCA. **The 1977 Master Plan prohibits development of this site as proposed by MYCA.**

It was not until *MYCA* proposed using the site for a conference center that the *Corps* re-interpreted the "leased land" designation as equivalent to high intensity use. Therefore, the claim that there is no environmental impact because the land is designated high intensity recreation is unfounded. The assertion that "the *Corps* Master Plan designates the project site for recreation intensive use" is false and misleading.

The EA is not a valid study because it asserts that "the *Corps* Master Plan designates the project site for recreation intensive use." This assertion is false and misleading. Yet, this assertion is the main basis for the **FONSI**. A FONSI cannot be determined because the EA is not a valid study.

Section 2) The EA misstates facts about the osprey nesting site.

Osprey were significantly impacted by pesticide use in the 1970's. The osprey population will not recover without human intervention. Osprey do not naturally expand their range. Instead, they decrease their reproductive capacity to maintain their range. Young birds need to be physically moved into areas where the osprey population was previously decimated. The new nesting site must have unique features. It should be on a peninsula with unobstructed view of the water. It should be remote from human activity. It should be protected from vandals. **The** osprey nest meets these conditions. Furthermore, it is directly across the river from the McBride Raptor center. The nesting site is optimal and cannot be reproduced elsewhere on the reservoir.

9-7

The EA misstates facts about the osprey nesting site. These misstatements form a basis for the **FONSI**. The EA states on page 41:

"Despite the concerns expressed, no significant impacts to osprey nesting are anticipated with any of the alternatives for the following reasons:

1. **The onsite platform, located in the northeastern portion of the site, is currently not in use for nesting.**
2. **Coralville Lake is frequently used by recreational watercraft, which represents a frequent form of disturbance to osprey.**
3. **The on-site nest platform is located in an area which will not be developed with trails and therefore, not be frequented by camp users.**
4. **The osprey nest platform is located more than 1,000 feet from the higher activity areas represented in Alternatives 1 and 2"**

First, as confirmed by Jodeane Cancilla, the nesting site is active. Osprey take approximately 3 to 4 years to mature. The first pair was released in 1997. Osprey were released through 2001. Nesting would not be anticipated until 2001-2002 and will achieve full use by 2006. Last year the site was used by osprey. Continued use is anticipated. The assertion that there will be no significant impact because the "onsite platform, ... is currently not in use for nesting" is not valid. A FONSI cannot be determined because the EA is not valid.

Second, osprey are not troubled by boat traffic. If boat traffic posed a significant obstruction to osprey re-introduction, then the osprey project on Coralville Lake would never have started. Indeed, Jodeane Cancilla informed Zambrana in an e-mail dated July 23, 2000, that osprey are not disturbed by boat traffic on the lake but are disturbed by activity near their nesting site. Zambrana has chosen to ignore this expert opinion. No counter expert opinion is offered. The assertion that there will be no significant impact because the "Coralville Lake is frequently used by recreational watercraft, which represents a frequent form of disturbance to osprey" is not valid and demonstrates profound bias by Zambrana. A FONSI cannot be determined because the EA is not valid and is biased.

Third, the nesting platform is located very close to the proposed development. The floating boat dock will be just below the nesting platform. The area will be used by campers at enormously high frequency. Perhaps Zambrana is misinformed about the actual location of the osprey nest. The location of the osprey nest platform is N41°47.1834' W091°34.8425' as measured by global positioning (GPS). The importance of prohibiting human activity near osprey nests has been previously reported by VanDaele and VanDaele "Factors Affecting Productivity of Ospreys.. ." *Condor* 84:292-299, 1982. The authors state that nests more than 1500 meters from human disturbance have greater productivity. The assertion that there will be no significant impact because the "on-site nest platform is located in an area which will not be developed with trails and therefore, not be frequented by camp users" is not valid. A FONSI cannot be determined because the EA is not valid.

Fourth, the osprey nesting platform is located very close to the proposed parking lot. The location of the osprey perch is N41°47.1834' W091°34.8425' as measured by GPS. The location of the south-eastern edge of the central lodge 52 space parking lot is N41°47.1680 W091°34.9282 as measured by GPS. The actual distance between the nesting site and the parking lot is 390 feet (±15 feet). The actual location of the osprey nesting site is readily available to the Corps and to Zambrana. Therefore, it appears that the assertion "The osprey nest platform is located more than 1,000 feet from the higher activity areas represented in Alternatives 1 and 2" is purposefully misleading and likely constitutes intrinsic fraud. The EA is not a valid study because it asserts that the "osprey nest platform is located more than 1,000 feet from the higher activity areas." This assertion is false and misleading. A FONSI cannot be determined because the EA is not a valid study.

Section 3) The EA incorrectly evaluates vehicular traffic and parking.

The EA evaluates the access and parking requirements on page 5. The EA states: "Based on information provided by MYCA, Average Daily Traffic (ADT) is expected to be 50 vehicles per day (vpd, 25 round trips) during camp operation (please refer to section 5.4.10, Traffic Generation and to Appendix F: Supplemental Traffic Analysis). This estimate is based upon 45 trips per day plus an additional 2-4 bus trips per day (rounded to 50 vehicle trips/day). The lease applicant originally proposed acquiring an off-site parking/staging area to shuttle camp users during high use periods (e.g., pick-up and drop off of campers, retreats, etc.). Upon further analysis, MYCA has indicated that this off-site parking/staging area would not be needed during the camping season, and would only be required for

events during the non-camping season. Arriving and departing campers would be staggered over a three-day period (Friday through Sunday) in order to ensure sufficient onsite parking. Traffic would consist of the drop-off and pick-up of campers (Friday through Sunday), staff arrivals and departures, periodic deliveries and day trips (primarily by bus to off-site locations). Certain special events at the site, such as weddings or meetings, could produce traffic volumes in excess of 100 vpd (50 round trips per day) at times throughout the year."

Zambrana has not properly assessed the proposed use. MYCA proposes to stagger arrivals and departing campers over Friday, Saturday, and Sunday. MYCA proposes 120 campers will use the site. MYCA has no experience running youth camps. It is very unlikely that most (if indeed any) campers will stay for more than 1 week. Longer stays become too expensive to be affordable for most families. Three methods of "staggering" the campers exist.

22-16

Method 1: Uniform staggering. Forty campers will leave on Friday (Group 1a), and another forty campers will arrive on Friday (Group 1b). Forty campers will leave on Saturday (Group 2a), and another forty campers will arrive on Saturday (Group 2b). Forty campers will leave on Sunday (Group 3a), and another forty campers will arrive on Sunday (Group 3b). Forty campers leaving on Friday (Group 1a) will generate 40 cars driving to the camp and 40 car driving from the camp (80 trips total). Forty campers arriving on Friday (Group 1b) will generate 40 cars driving to the camp and 40 cars driving from the camp (80 trips total). Friday traffic for picking up and dropping off campers will be 80 (Group 1a) plus 80 (Group 1b) or 160 vehicles per day. Day staff will be coming and leaving the site. There will need to be approximately 18 day staff (cooks (4), dishwashers(2), additional maintenance worker (1), life guards (2), bus-drivers (2), guest speaker (1), activity specialists [to service the number of children proposed, these activities would be concurrent - archery (1), canoeing (1), woodsmadecologist (1), computer trainer (1), crafts specialist (2)]) This will generate 36 trips (18 round trips). The vpd estimate therefore increases to 196 vpd. There will be 2 to 4 bus trips each day. The vpd estimate again increases to 200 vpd. There will be food delivery, garbage pick-up etc. Correct assessment of traffic by Method 1 results in more than 204 vpd (and assumes the overnight staff and caretaker never leave). The same traffic will occur on Saturday and on Sunday. In the very unlikely event that all campers must stay for two weeks instead of one, the correct assessment of traffic by Method 1 results in 124 vpd (20 departing (40 vpd), 20 arriving (40 vpd), day staff (36 vpd), bus (4 vpd), other services (4 vpd)). The EA is incorrect in determining 50 vpd as the basis for its traffic analysis if MYCA plans to use Method 1.

Method 2: Non-uniform staggering. Sixty campers leave on Friday (Group 1a). Sixty campers leave on Saturday (Group 2a). Sixty campers arrive on Saturday (Group 1b). Sixty campers arrive on Sunday (Group 2b). Sixty campers leaving on Friday (Group 1a) will generate 60 cars driving to the camp and 60 car driving from the camp (120 trips). Day staff arriving and leaving will generate 36 trips. Bus trips produce another 4 vpd. There will be food delivery, garbage pick-up etc. Correct assessment of traffic by Method 2 for Friday results in more than 164 vpd (and assumes the overnight staff and caretaker never leave). Saturday has higher traffic. Sixty campers leaving on Saturday (Group 2a) will generate 60 cars driving to the camp and 60 cars driving from the camp (120 trips total). Sixty campers arriving on Saturday (Group 1b) will generate 60 cars driving to the camp and 60 car driving from the camp (120 trips total). Saturday traffic for picking up and dropping off campers will be 120 (Group 2a) plus 120 (Group 1b) or 240 vehicles per day. Day staff will generate 36 vpd. Bus trips produce another 4 vpd. There will be food delivery, garbage pick-up etc. Correct assessment of traffic by Method 2 for Saturday results in more than 284 vpd (and assumes the overnight staff and caretaker never leave). Sunday traffic will be similar to Friday (164 vpd). In the very unlikely event that all

campers must stay for two weeks instead of one, the correct assessment of traffic by Method 2 for Saturday results in 164 vpd (30 departing (60 vpd), 30 arriving (60 vpd), day staff (36 vpd), bus (4 vpd), other services (4 vpd)). The EA is incorrect in determining 50 vpd as the basis for its traffic analysis if MYCA plans to use Method 2.

Method 3: Depart Friday, Arrive Sunday. One hundred and twenty (120) campers depart Friday. One hundred and twenty (120) campers arrive Sunday, One hundred and twenty (120) campers leaving on Friday will generate 120 cars driving to the camp and 120 cars driving from the camp (240 trips total). Day staff arriving and leaving will generate 36 trips. There would be no bus trips expected on Friday. There will be food delivery, garbage pick-up etc. Correct assessment of traffic by Method 3 for Friday results in more than 280 vpd (and assumes the overnight staff and caretaker never leave). Saturday would have less traffic as the camp prepares for Sunday arrivals. Perhaps the overnight staff will be allowed to leave. On Sunday, the arrival of one hundred and twenty (120) campers will generate 120 cars driving to the camp and 120 cars driving from the camp (240 trips total). Day staff arriving and leaving will generate 36 trips. There would be no bus trips expected on Sunday. There will be food delivery, garbage pick-up etc. Correct assessment of traffic by Method 3 for Sunday results in more than 280 vpd (and assumes the overnight staff and caretaker returned before Sunday). In the very unlikely event that all campers must stay for two weeks instead of one, the correct assessment of Friday or Sunday traffic by Method 3 results in 284 vpd (60 leaving (120 vpd), 60 arriving (120 vpd), day staff (36 vpd), bus (for alternate week student outings, 4), other services (4 vpd)). The EA is incorrect in determining 50 vpd as the basis for its traffic analysis if MYCA plans to use Method 3, unless the EA focused only on Saturday traffic.

Note that Methods 1 and 2 are not practical from a staffing standpoint. Recall that MYCA has no experience running camps. Usual camp turnover is by Method 3. Method 3 allows counselors and overnight staff to have weekends off. Method 1 and Method 2 require counselors and overnight staff to work 24 hours a day, seven days a week, for the entire summer. The most practical traffic pattern is that produced by Method 3 that produces 280 vpd if the campers stay for one week (6 days) or 284 vpd if the campers stay for two weeks (13 days). **There is no usage pattern that produces 50 vpd as used by the EA for its traffic assessment.**

In addition, this traffic estimate is for the proposed use of the camp, not the design capacity use of the camp. Occupancy rates are functionally impossible to police. Therefore, traffic estimates must be made by the maximum the design will permit. MYCA plans 12 tent platforms at 14 foot by 14 foot each (196 sq ft). This is similar to the tent platforms used by the girl scout camp (13X15 = 195 sq ft). The design capacity of the girl scout tents is given on page 2 of the EA as "eight wooden platforms for tents.. The lodge could hold 32 campers and the tents up to 96 campers." This provides 12 campers/tent (96/8). The design capacity of the MYCA tents is $12 * 12 = 144$ occupants rather than 48 occupants as proposed. For proper supervision, one occupant of each tent will be a counselor or junior counselor. The number of campers in tents becomes 144 - 12 or 132. The number of campers increases from 120 (72 cabin plus 48 tent) to 204 (72 cabin plus 132 tent). The traffic estimate for Method 1 according to design capacity use is 312 vpd on Friday, Saturday, or Sunday. The traffic estimate for Method 2 according to design capacity use is 452 vpd for Saturday. The traffic estimate for Method 3 according to design capacity use is 448 vpd for Friday or Sunday.

The EA incorrectly calculates vehicular traffic load for summer use. A FONSI cannot be determined because the EA does not perform a valid evaluation of summer traffic.

The **EA** incorrectly evaluates off-season traffic flow and parking needs, **As** stated on page 5, “Certain special events at the site, such **as** weddings or meetings, could produce traffic volumes in excess of 100 vpd (50 round trips per day) at times throughout the year.” First, these are not “special events” but the usual projected off-season usage for the complex. The conference center **is** designed to hold 200 people. Zambrana does not state what model was applied to determine the projected traffic and parking needs a meeting **of** 200 people or a wedding with 200 attendees would create. However, a value of one vehicle for every 4 attendees will **be** difficult to defend. **A** more practical estimate is less than two attendees per vehicle. Assuming 1.5 persons per vehicle, a conference of 200 would require 133 cars (133 round trips) or 266 vpd total if on-site parking were available. If on-site parking is not available, this number will decrease to about 170 vpd: (60 onsite parking (90 attendees, 60 round trips = 120 vpd) plus 25 shuttle round trips (110 attendees, 4.4 passengers per trip, 50 vpd). If adequate shuttle service is not provided, attendees will need to **be** dropped-off and picked-up by family and friends. **This** activity could increase the number of trips greatly (60 onsite parking (120 trips) plus 110 dropped-off (220 trips) plus 110 picked-up (220 trips); total 560 vpd.

The **EA** incorrectly calculates vehicular traffic load for off-season use. **A FONSI** cannot be determined because the EA does not perform a valid evaluation of off-season traffic.

Another difficulty with the EA is that it has not sufficiently evaluated the practicality of off-site parking. Successful off-site parking requires 1) structured parking environment with fines for transgressors, and 2) easy walking distance to the destination, or if more distant, a mass transit or shuttle system with scheduled 10 to 15 minute service times throughout the use period (for late comers and early leavers). The MYCA proposal has neither of these conditions. First, the attendees will have a voluntary association with MYCA, so MYCA will not **be** able to fine transgressors. All parking enforcement in the vicinity of the complex will fall to the county or homeowners. The EA does not address the cost of this enforcement (including the psychological effect of having irate attendees searching for their towed cars). Second, the lease agreement does not require MYCA to purchase off-site parking and, the lease agreement does not require MYCA to provide an effective shuttle service. There is no mechanism in place to ensure that MYCA complies with their proposed solution.

The EA does not adequately evaluate the parking problem created by the MYCA design. The lease agreement does not ensure that MYCA will supply the required parking and shuttle service as the EA assumes the lease will stipulate. **A FONSI** cannot be determined because the EA and lease agreement do not adequately ensure that proper parking will be enforced at the site.

Section 4) The EA incompletely and inaccurately accounts for water demand.

The EA uses incomplete numbers for calculating wastewater discharge rates. The EA provides the discharge calculations on page 7. Those figures are reproduced in Table 2.

Table 2: Estimated water demand from EA Table 3-2, page 7.

| Facility | Use Assumptions | Water use (GPD) |
|-----------------------------------|---------------------|-----------------|
| Cabin occupants: 10 x 8=80 | 10 x 8 x 50 gal | 4,000 |
| Tent occupants: 12 x 4 | 12 x 4 x 35 gal | 1,680 |
| Care taker's residence (4) | 4 x 75 gal | 300 |
| Food Preparation | 128 x 10 gal | 1,280 |
| Laundry | 128 x 0.25 x 50 gal | 1,600 |
| Total Water Demand | | 8,860 |

13-18

It is significant to note that **FAST** systems are designed for water demand rates of up to 9000 GPD. Interestingly, Zambrana concludes that the MYCA proposal will use **8,860 GPD**. However, their calculations are faulty.

The MYCA proposal calls for **136** campers and staff (not including the caretaker), not **128** as used in these calculations. Eight additional **24** hour staff are not included (page **4** “**MYCA** foresees providing four-season lodging for up to **80 users/night** during the non-camping season and up to **136** campers and **staff/night** during the summer camping season”). Furthermore, the **EA** water usage estimates do not include the daytime support **staff required** to operate a camp for **136** persons with activities outlined in the **MYCA** proposal. A non-exhaustive list of the required support staff include cooks (**4**), dishwashers (**2**), additional maintenance worker (**1**), life guards (**2**), bus-drivers (**2**), guest speaker (**1**), activity specialists [to service the number of children proposed, these activities would **be** concurrent - archery (**1**), canoeing (**1**), woodsman/ecologist (**1**), computer trainer (**1**), crafts specialist (**2**)]. This list of **18** would use a similar amount of water as do day campers ($18 \times 10 \text{ GPD} = 180 \text{ GPD}$, Table 3-1, page **6**) and eat **1** or **2** meals on site (10 GPD/meal) ($1.5 \times 18 \times 10 \text{ GPD} = 270 \text{ GPD}$). The estimated water usage by the daytime support **staff** is **450 GPD**. The missing **8** “**24hr**” staff are not included in the daytime staff calculation.

The **MYCA** proposal does not include counselors or junior counselors for the tent campers. There are **12** tent pads with **4** campers each. To ensure proper supervision, each occupied tent will require one counselor or junior counselor. This would provide **5** campers/staff per tent. Correcting the calculations from page **7**, $12 \times 5 \times 35 \text{ GPD} = 2100 \text{ GPD}$. This is an increase of **420 GPD**. Inclusion of these counselors corrects the “missing” **8** staff members and provides the supervision required by the proposal.

The wastewater calculations do not include visitors to the camp picking-up and dropping-off campers and counselors. MYCA has no experience running youth camps. It is very unlikely that **most** (if indeed any) campers will stay for more than **1** week. Longer stays become too expensive to **be** affordable for most families. As outlined on page **5** of the EA, the **MYCA** proposal expects that **1/3** of the campers “turnover” on Friday, **1/3** on Saturday, and **1/3** on Sunday. There will **be** a total of **120** campers which gives **40** campers leaving on each of these days. In addition there will **be** **40** new campers arriving on each of these days. Many of these campers will be leaving to or arriving from the **400** mile use radius. Thus the families will **be** driving up to **800** miles round trip (**12** hours). It is reasonable (and customary) to expect that the families picking their children up will have a light brunch and those dropping their children off will have a light dinner. They will at the very least need to use toilet facilities! Also, most families drop children off at camp, as a family. That is, most members of the family come to “see the camp”. Mothers and fathers like to meet their child’s counselors and feel secure that they will **be** in “good hands.” Younger siblings want to see the camp and tents. This is an important aspect for promoting repeat business and “word of mouth” sales. It is usually promoted not prohibited. However, some families with older children that live distant and are familiar with the camp will carpool. Best estimates are that each arriving camper will have **2** visitors and each departing camper will have **1** visitor. Each visitor will use water at the rate of **10 GPD** (restaurant rate). This provides $40 \times 2 \times 10 = 800 \text{ GPD}$ for visitors of arriving children and $40 \times 1 \times 10 = 400 \text{ GPD}$ for visitors of departing children. This results in **1200 GPD** for visitors and is a conservative estimate. The result of correcting Table 3-2 “Estimation of Water Demand” with the above figures is given in Table **3**.

Table 3: Corrected Estimation of Water Demand Based on Proposed Use.

| Facility | Use Assumptions | Water use (GPD) |
|----------------------------|-----------------------------|-----------------|
| Cabin occupants: 10 x 8=80 | 10 x 8 x 50 gal | 4,000 |
| Tent occupants: 12 x 5 | 12 x 5 x 35 gal | 2,100 |
| Care taker's residence (4) | 4 x 75 gal | 300 |
| Food Preparation | 140 x 10 gal | 1,400 |
| Laundry | 140 x 0.25 x 50 gal | 1,750 |
| Day staff | (18 x 10) + (18 x 1.5 x 10) | 450 |
| Visiting families | (40 x 2 x 10)+(40 x 1 x 10) | 1200 |
| Total Water Demand | | 11,200 |

Note that wastewater calculations are by expected normal peak flows not by average over a week. The additional expected usage by visitors is 1200 GPD and occurs on three days each week. It would not be “averaged” over the week but rather calculated as 1200 GPD. If the children “turn over” on one day or two days of the week (Method 3 in Section 3) water usage by visitors will increase up to 3600 GPD.

The wastewater disposal system is estimated to require 2.0 sq feet/gal/day at a soil percolation rate of 45 minutes/inch (page 6). The corrected value for the proposed water usage (Table 3) is 11,200 GPD. This will require a 1.29 acre soil absorption field.

This is the minimal water usage estimated by the project proposal. However, it is not the minimal water usage estimated by the project design. Wastewater calculations are by the project design (maximum designed occupancy) not by the proposed occupancy. Occupancy rates are functionally impossible to police. Therefore, water usage is estimated by the maximum the design will permit. MYCA plans 12 tent platforms at 14 foot by 14 foot each (196 sq ft). This is similar to the tent platforms used by the girl scout camp (13X15 = 195 sq ft). The design capacity of the girl scout tents is given on page 2 of the EA as “eight wooden platforms for tents...The lodge could hold 32 campers and the tents up to 96 campers.” This provides 12 campers/tent (96/8). The design capacity of the MYCA tents is 12 x 12 = 144 occupants rather than 60 occupants as proposed above. The design estimate of water usage for the tent occupants is 12 x 12 x 35=5,040. Estimating by design capacity will influence other estimates. The number of campers increases from 140 to 224. The number of campers arriving and departing on Friday, Saturday, or Sunday becomes 68 ((120+84)/3). Camp day staffing levels would not change except for the addition of an extra kitchen staff (to make 19 instead of 18). The estimated water demand for the proposed design is given in Table 4.

| Facility | Use Assumptions | Water use (GPD) |
|----------------------------|-----------------------------|-----------------|
| Cabin occupants: 10 x 8=80 | 10 x 8 x 50 gal | 4,000 |
| Tent occupants: 12 x 5 | 12 x 12 x 35 gal | 5,040 |
| Care taker's residence (4) | 4 x 75 gal | 300 |
| Food Preparation | 224 x 10 gal | 2,240 |
| Laundry | 224 x 0.25 x 50 gal | 2,800 |
| Day staff | (19 x 10) + (19 x 1.5 x 10) | 475 |
| Visiting families | (68 x 2 x 10)+(68 x 1 x 10) | 2,040 |
| Total Water Demand | | 16.895 |

The wastewater disposal system is estimated to require 2.0 sq feet/gal/day at a soil percolation rate of 45 minutes/inch (page 6). The corrected values for the proposed water usage 16,895 GPD. This will require a 1.95 acre soil absorption field.

The EA is incomplete and inaccurate in its calculation of total water demand (Table 3-2). A FONSI cannot be determined because the EA is not valid.

Section 5) The EA has an incomplete assessment of well drawdown.

The EA states (on page 6) that “according to Iowa Geological Survey Records” the well located on the campground is 185 feet deep and capable of producing 20 GPM (or about 28,000 GPD) with no appreciable drawdown. However, the EA does not provide any data to back that opinion. No actual drawdown tests have been performed on this well. Instead, the EA attempts to support this assertion (on page 32) by speculating “Most wells in the surrounding area produce from deeper zones, most likely from the lower Silurian aquifer.” No data is given. The main well supporting the Cumberland Ridge community is 210 feet deep. However the elevation of the land this well is located on is approximately 30 feet higher than the Girl Scout well. According to U. S. Geological Survey Records both wells are at equivalent depths. This data was available to Zambrana but apparently neglected. There are two other nearby wells (at 2153 Lorie Lane and 3568 Cumberland Ridge Road) that also will be affected.

13-11

Note that the well water usage rates are not equivalent to the total water demand as calculated in Section 4. The water usage must be corrected for summertime watering. Any green spaces (lawns), gardens, plantings, and recently displaced trees, will require watering. Furthermore, water games (hose fights, etc..) that are utilized in most summer camps will need water. Employing a 4.8 acre footprint for the facility, the additional water usage would add at least 300 GPD to the total water demand. The well water usage for the proposed design is 16,895+300 or 17,195 GPD.

Zambrana did not perform a customary well drawdown test. A drawdown test using 17,195 GPD rate is required to assess the risk of drawdown to surrounding community and homeowner wells. The EA is incomplete because no drawdown was performed. A FONSI cannot be determined because the EA is not valid.

Section 6) The EA incorrectly locates community wells and occupied residences.

On page 45, the EA states that “no areas exist within the present boundaries for the installation of a wastewater disposal system under the existing criteria for either Alternatives 1 (MYCALease) or 2 (Reduced Use) (5-1). ... If a variance is applied for and granted, a facility may be located on-site. Areas potentially available for on-site are indicated on Figure 5-1.” A brief inspection of Figure 5-1 shows enormous irregularities. First, none of the community or private wells that abut the site are included. Second, the occupied residences are incorrectly located. Third, the “approximate” location of the Girl Scout well is incorrect (even for an “approximation”). And fourth, the north-south span of the land is greatly exaggerated. It is difficult to understand how Zambrana achieved this level of inaccuracy.

31-17

Table 5 (next page) provides global positioning (GPS) coordinates for the wells and occupied residential structures. The locations are accurate to within 15 feet but do not replace an actual land survey.

Zambrana must have the data needed to properly locate the **main** Girl Scout well (GS Well 1). Indeed GS Well 1 **is** correctly located on Figure 4-2. It **is** difficult to understand how Zambrana managed to mislocate the well **by** at least 300 feet east of its actual location in Figure 5-1.. Figure 4-2 incorrectly locates one of the Cumberland Ridge wells (CR Well 1) at least 800 feet north of its actual location. The well location is evident **from** the road. The well location is recorded in the U.S. Geological Survey Records. It is difficult to understand how Zambrana managed to mislocate CR Well 1.

The **EA** is not a valid study. The **EA** does not locate the three wells that are immediately adjacent to the property. The **EA** does not correctly locate the residential structures that are immediately adjacent to the property. A FONSI cannot be determined because the **EA** is not valid.

| Structure | Location | |
|---------------|---------------------|-----------------------|
| CR Well 1 | N41°47.2562' | W091°35.4747' |
| CR Well 2 | N41°47.3704' | W091°34.9 136' |
| Well (LL2153) | N41°47.1547' | W091°35.6461' |
| GS Well 1 | N41°47.2441' | W091°35.0856' |
| GS Well 2 | N41°47.3 165' | W091°34.8490' |
| | | |
| LL2153 | N41°47.1462' | W091°35.6464' |
| CR3458 | N41°47.2745' | W091°35.5325' |
| BH2017 | N41°47.28 17' | W091°35.4363' |
| CR3480 | N41°47.2734' | W091°35.3872' |
| CR3500 | N41°47.2760' | W091°35.33 14' |
| CR3510 | N41°47.2724' | W091°35.2903' |
| CR3518 | N41°47.2749' | W091°35.2264' |
| CR3524 | N41°47.2677' | W091°35.1556' |
| CR3538 | N41°47.2849' | W091°35.1213' |
| CR3548 | N41°47.3624' | W091°35.0521' |
| CR3564 | N41°47.3804' | W091°34.9960' |
| CR3568 | N41°47.3726' | W091°34.9403' |

Section 7) The EA exaggerates the north-south span of the proposed lease property.

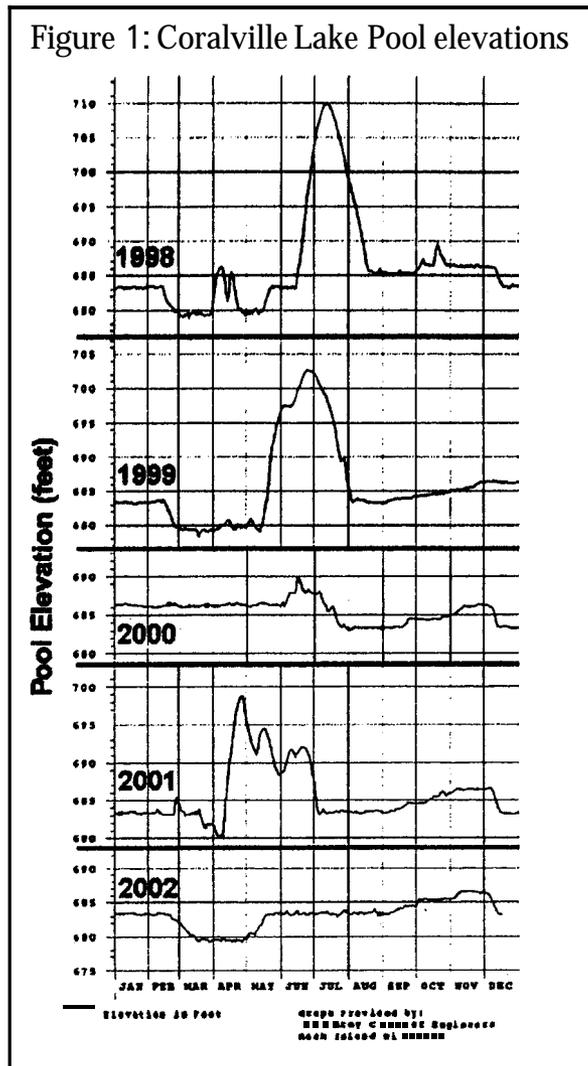
The north-south span of the site provided in Figure 5-1 is greatly exaggerated. Using the scale provided, the north-south span of the site 300 feet west of the **main** Girl Scout well (GS Well 1) is 780 feet. However, by **GPS** the span of the site at this location (300 feet west of GS Well 1) is 615 feet (± 15 feet). The GPS readings were taken when the Coralville lake pool elevation was at 686 feet. The EA does not report the pool elevation used for Figure 5-1. However, 686 feet is a low figure to use. Figure 1 (next page) shows the pool elevations of Coralville Lake for the last 5 years. **This** information was readily available to Zambrana. Note that for most years the pool elevation was greater than 690 for more than two months each year. Flood stage is not reached until the pool elevation is above 707 feet. The months when the **pool** level is 690 or above coincide with the highest use periods for the camp. The proper pool elevation to use for Figure 5-1 would **be** 690 feet or higher. The span of the site is less than 615 feet if an appropriate pool elevation is used.

The EA is not a valid study. The EA incorrectly determined the north-south span of the property as approximately 780 feet, at least 165 feet greater (nearly 30% error) than the actual width. It is difficult to understand the lack of precision evident in the EA. A FONSI cannot be determined because the **EA** is not a valid study.

Another problem with the **EA** is that it only sites the need for one absorption field. This does not allow for failure of the **field** during the life of the project. Failure of the absorption field is not only likely, it is expected. First, FAST systems are not recommended for the episodic and seasonal uses proposed. The bacterial biomass will "crash" during periods of lower use and not **be** able to adequately process the waste generated at peak use. Second, FAST systems are not

recommended for water usages greater than 9,000 GPD. The estimated water demand for the project's proposed use is 11,200 GPD. The estimated water demand for the project's design capacity is 16,895 GPD. The FAST system is expected to fail due to excessive demand using either estimation. Third, the absorption field is in a wooded environment and will become root bound. The absorption field is expected to fail due to root plugs. And fourth, even if the system managed to operate efficiently beyond normally recommended parameters and avoided plugging by roots, the absorption field still would be expected to fail within the life of the complex and require prolonged rest. Proper planning requires that area for more than one septic field be available. Indeed, residential lots in the Coralville Lake watershed area are required to be 3 or more acres for the only purpose of allowing for replacement of failed septic fields. The absorption field area required for the designed occupancy will be 1.95 acres plus at least another 1.95 acres to allow for field failure. Approximately 4 acres is the absolute minimum area needed and 6 acres would be preferable to allow for the expected future failure of the drainage field.

Figure 1: Coralville Lake Pool elevations



Section 8: The EA incorrectly evaluates the impact of noise.

The EA evaluates the impact of noise generated by MYCA on the surrounding neighborhood. This evaluation is detailed on pages 36 through 37.

“For the purposes of assessing noise related impacts for each alternative, four single-family residences and one location at the Macbride Nature Recreation Area were selected as “receptors” for consideration in this analysis. No field measurements of ambient noise levels were made. Each of these receptors is described in Table 4-19 and is illustrated in Figure 4-2.”

The EA incorrectly evaluates the impact of noise. First, no ambient noise levels were made. This is a troubling oversight. The receptors were in place. Representative values are not sufficient,

25-8

Second, the EA does not describe the season when the assessment took place. Vehicular noise levels will be significantly higher in the fall and winter when the foliage is off the trees. Vehicular noise levels should be performed in the fall or winter.

Third, the EA does not comment on noise produced by amplified announcements. The campground and conference center will likely have a public address system. This may be difficult to model but cannot be simply dismissed.

25-9

Fourth, the Traffic Noise Model analysis was done incorrectly. The scale on Figure 4-2 is incorrect. The noise inputs (generators) used for the modeling were in the Cabin and Beach Areas and were further from the receptors than indicated by the scale. This would have the effect of over estimating the degree of dampening by vegetation. Note that it is not sufficient to simply change the scale of the **map**. There is no assurance that modeling was performed correctly. The modeling will need to **be repeated and ambient noise levels should be obtained.** 25-6

The EA incorrectly estimates the noise impact **of the MYCA** proposal. The **EA is not a valid study.** A **FONSI** cannot be determined because the EA is not valid.

Section 9) The EA does not evaluate the effect of light pollution.

Artificial lighting will be required at the site. Outside lighting will be needed in the parking lot, road, cabins, bath facility, and beach. Light pollution is a well-recognized problem requiring national attention. The EA is incomplete because it does not address the effects of light pollution **from** the site. A FONSI cannot **be** determined because the **EA is incomplete and therefore not a valid study.** 23-7

Conclusion:

This response to the EA **has** demonstrated that the EA **has** significant misstatements, errors, and incomplete evaluations. Nine sections detail these significant faults. The sections **are** as follows:

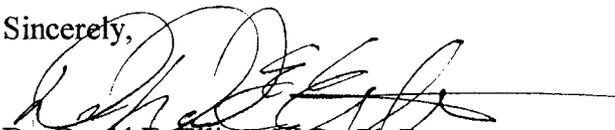
- Section 1) The EA inappropriately re-interprets land designation in the Master Plan.
- Section 2) The EA misstates facts about the osprey-nesting site.
- Section 3) The EA incorrectly evaluates vehicular traffic and parking.
- Section 4) The EA incompletely and inaccurately accounts for water demand.
- Section 5) The EA **has** an incomplete assessment of well drawdown.
- Section 6) The EA incorrectly locates community wells and occupied residences.
- Section 7) The EA exaggerates the north-south span of the proposed lease property.
- Section 8) The EA incorrectly evaluates the impact of noise.
- Section 9) The EA does not evaluate the effect of light pollution.

Each section independently shows that the EA is not valid and therefore a FONSI cannot be **determined.**

The Corps released the EA for public comment on November 19th. The response period falls over three major holidays. This makes gathering data to respond to the EA difficult. The Corps allowed no extensions to the response time period. Thus, this response should not be considered exhaustive. I know that others are responding to the EA, and I hope they comment on other significant errors that I have not had time to fully evaluate. 29-1

Taken together, my observations, and those of other respondents, demonstrate that the EA is a fatally flawed and severely biased study. The FONSI cannot **be** defended by the EA as prepared by Zambrana.

Sincerely,



Dr. David E. Elliott, M.D., Ph.D.
3480 Cumberland Ridge Road
North Liberty, Iowa 52317

