

U. S. ARMY CORPS OF ENGINEERS

ZOAR LEVEE AND DIVERSION DAM / DAM SAFETY MODIFICATION STUDY STAKEHOLDER MEETING NOTES MCDONALD MARLITE CONFERENCE CENTER NEW PHILADELPHIA, OHIO MARCH 6, 2013

SCHEDULE NOTE

Technical difficulties delayed the beginning of the meeting 25 minutes; the meeting officially began at 9:55 AM. Because of the delay there was no morning break, and the afternoon schedule began one-half hour earlier than the published agenda.

MEETING WELCOME AND PURPOSE

Aaron Smith (USACE) Mr. Smith welcomed everyone to the meeting. He asked that everyone introduce themselves and then reviewed the meeting agenda and the hand-outs provided, including the agenda, a copy of the Zoar Levee and Diversion Dam, Dam Safety Modification Study schedule milestones, and a list of acronyms the Corps uses regularly.

The following summarizes a PowerPoint and resulting discussions. The PowerPoint will be referred to as 06March2013PowerPoint. The PowerPoint has been uploaded to USACE webpage for the Zoar Levee & Diversion Dam, Dam Safety Modification Study:

<http://www.lrh.usace.army.mil/Missions/CurrentProjects/Zoar.aspx>

It can be found at:

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%206%202013%20PowerPoint2.pdf>

PARTICIPANTS

Honorable Larry Bell, Mayor (Zoar Village)

Scott Gordon, Village Councilman (Zoar Village)

Jon Elsasser, President (Zoar Community Association)

Jennifer Donato, Zoar Site Manager (Zoar Community Association)

Bill Bjork (Zoar Community Association / Zoar Resident)

Steve Shonk (Zoar Community Association / Zoar Resident)

Kathy Fernandez (Retired Ohio Historical Society Site Director, Zoar employee – via telephone)

Darrell Kick, Field Representative (Congressman Bob Gibbs, OH-18)

George Kane, Director of Historic Sites & Facilities (Ohio Historical Society)

Lisa Adkins, Architecture Reviews Manager (Ohio Historic Preservation Office)

David Snyder, Archeology Reviews Manager (Ohio Historic Preservation Office)

Bob Genheimer, President (Ohio Archaeological Council – via telephone)

Jennifer Sandy, Senior Field Officer (National Trust for Historic Preservation)

Betsy Merritt, Deputy General Counsel (National Trust for Historic Preservation – via telephone)

Tom McCullough, Senior Archeologist (Advisory Council for Historic Preservation – via telephone)

Rodney Cremeans, Project Manager (USACE – Huntington)

Jami Buchanan, Economist (USACE – Huntington)

Gus Drum, Community Planner (USACE – Huntington)
Aaron O. Smith, Lead Planner (USACE – Huntington)
Matt Folk, Muskingum Area Resident Engineer (USACE- Huntington)
Brian Maka, Chief of Public Affairs (USACE – Huntington)
Tom Leach, Muskingum Area Operations Manager (USACE – Huntington)
Jean Siedel, Assistant Muskingum Area Operations Manager (USACE – Huntington)
Darin White, Lead Engineer (USACE Mandatory Center for Expertise in Dam Safety & Great Lakes & Rivers Division, Dam Safety Production Center)
Adam Kays, Geotechnical Engineer (USACE Mandatory Center for Expertise in Dam Safety & Great Lakes & Rivers Division, Dam Safety Production Center)
Mike Nield, Engineer Geologist (USACE Great Lakes & Rivers Division, Dam Safety Production Center)
Chris Kelly, Technical Advisor (USACE – Risk Management Center)
Paul Rubenstein, Federal Historic Preservation Officer (USACE, Headquarters– via telephone)
Anne Lee, Director of Cultural Resources Management (Hardlines Design Company)
Ben Riggle, Historian (Hardlines Design Company)
Andrew Sewell, Principal Investigator (Hardlines Design Company)
Michael Lawrence, President and Chief Economist (Jack Faucett Associates)
Paul Nguyen (Jack Faucett Associates)
Dave Moore, Project Manager (Tetra Tech)

ACRONYMS USED IN THESE MINUTES

ACHP – Advisory Council for Historic Preservation

DSMS – Dam Safety Modification Study

HDC – Hardlines Design Company

IRRM – Interim Risk Reduction Measures:

JFA – Jack Faucett Associates

NTHP – National Trust for Historic Preservation

OAC – Ohio Archaeological Council

OHPO – Ohio Historic Preservation Office

OHS – Ohio Historical Society

OSE – Other Social Effects

USACE – U.S. Army Corps of Engineers

ZCA – Zoar Community Association

06March2013PowerPoint – PowerPoint given at 06 March 2013

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%206%202013%20PowerPoint2.pdf>

- Please visit the following links for more comprehensive lists of acronyms:

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/Commonly%20Used%20Acronyms.pdf>

<http://www.lrh.usace.army.mil/Portals/38/docs/USACE%20Acronyms%20and%20Definitions.pdf>

SUMMARY OF ZOAR LEVEE AND DIVERSION DAM HISTORY, THE DAM SAFETY MODIFICATION STUDY PROCESS AND STATUS

Aaron Smith (USACE) Mr. Smith provided a refresher on the purpose and history of the Zoar Levee and Diversion Dam project as well as the history of performance issues at the project. Mr. Smith reminded the audience of the 6 Step Dam Safety Modification Study Process that the DSAC 1 classification for Zoar Levee and Diversion Dam had triggered. Mr. Smith also presented a summary of the Interim Risk Reduction Measures (IRRM) that had been implemented to date, and provided a status update on the Study and Report Schedule and the Review and Approval Schedule.

- Please refer to Slides 1-13 on the 06March2013PowerPoint.

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%202013%20PowerPoint2.pdf>

Q: Jon Elsasser (ZCA) Mr. Elsasser asked whether the presentations would be available for distribution to attendees and others.

A: Aaron Smith (USACE) Mr. Smith replied that the presentations would be available on the USACE's Zoar Project website.

<http://www.lrh.usace.army.mil/Missions/CurrentProjects/Zoar.aspx>

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%202013%20PowerPoint2.pdf>

Q: Dave Snyder (OHPO) Mr. Snyder asked if the September 2013 Risk Management Measures Identification meeting would focus on project alternatives or if that would come later.

A: Aaron Smith (USACE) Mr. Smith made the distinction between how the USACE uses the terms 'measures' and 'alternatives.' Measures are stand alone means for addressing risk that would then be combined into various alternatives. For example, 40 measures could be combined into six separate alternatives. Alternatives would be formulated at a later date.

OVERVIEW OF TOTAL BASELINE CONDITION

Aaron Smith (USACE) Mr. Smith summarized the current status of the total baseline condition, which includes engineering baseline studies as well as the planning baseline studies, and reviewed upcoming schedule milestones for both components of the total baseline condition.

- Please refer to Slide 15 on the 06March2013PowerPoint.

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%202013%20PowerPoint2.pdf>

- There were no comments or questions on the total baseline condition overview presentation.

BASELINE RISK ASSESSMENT PURPOSE & PROCESS

Aaron Smith (USACE) Mr. Smith provided an overview of the purpose and process of the Baseline Risk Assessment portion of the total baseline condition. In particular, the baseline risk assessment seeks to identify the risk to the public, specifically the risks without the project and if no action is taken. In addition, the risk assessment was intended to determine what, if any

significant failure modes need to be addressed. The process is overseen by the Risk Management Center (RMC); characterization of the site and background data is generated by the Dam Safety Production Center; and the identification of potential and credible failure modes and Expert Opinion Elicitation, which assigns probabilities of failure, is completed by a Risk Cadre. Aaron Smith added that this baseline risk assessment was the first time Zoar Levee & Diversion Dam were being formally analyzed concerning what level or category of risk the project presented to project.

- Please refer to Slides 17-18 on the 06March2013PowerPoint.

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%206%202013%20PowerPoint2.pdf>

- There were no comments or questions on the baseline risk assessment purpose and process presentation.

BASELINE GEOLOGIC DATA

Mike Nield (USACE) Mr. Nield presented information on the bedrock and glacial geology of the study area.

Adam Kays (USACE) Mr. Kays presented information on the soils of the study area and how they relate to performance issues Zoar Levee has had. In particular, Mr. Kays described the flow of groundwater through pervious materials underlying the levee, which can remove material from the levee, creating a void and undermining the levee's foundation.

- Please refer to Slides 20-38 on the 06March2013PowerPoint.

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%206%202013%20PowerPoint2.pdf>

- There were no comments or questions on the baseline geologic data presentation.

BASELINE PLANNING STUDIES PURPOSE AND PROCESS

Aaron Smith (USACE) Mr. Smith presented an overview of the purpose of the baseline planning studies and described the four accounts that the USACE employs in their planning studies: NED (National Economic Development); EQ (Environmental Statutes); OSE (Other Social Effects) and RED (Regional Economic Development). Mr. Smith also described the process by which the baseline planning studies were conducted and the goals of the studies (have baseline data to measure the efficiency and acceptability of alternatives against).

- Please refer to Slides 40-42 on the 06March2013PowerPoint

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%206%202013%20PowerPoint2.pdf>

- There were no comments or questions on the baseline planning studies purpose and process presentation.

BASELINE ECONOMIC STUDY

Jami Buchanan (USACE) Ms. Buchanan provided an overview of the goals and process for the NED study. Goals include assessing the economic benefits and costs of various alternatives and

finding the alternative with the highest net benefit, not the least costly. The process involves NED analysis that determines the benefit to cost ratio of alternatives. Ms. Buchanan emphasized that there were strict rules governing the types of things that could be considered as costs associated with flood damages and summarized how costs were classified as Emergency Costs and Physical Damages. The creation of a structure inventory assists with evaluating/assessing the physical damages that might occur during a maximum flood event.

- Please refer to Slides 45-51 on the 06March2013PowerPoint.

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%206%202013%20PowerPoint2.pdf>

- Also please visit the following map and follow the instructions on the map to help USACE improve its NED analysis. Comments would be appreciated by 3 May 2013.

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/Econ%20Baseline%20Structures%20Map3.pdf>

Q: Lisa Adkins (OHPO) Ms. Adkins asked how a quality such as historic value can be reconciled with the type of information considered within the NED account if studies of historic properties were grouped with the environmental account.

A: Aaron Smith (USACE) Mr. Smith acknowledged that historic value is not included in the calculations used in the NED account, but also noted that while they need to identify the NED account, they do not need to select this account. Mr. Smith also commented that since Zoar Levee & Diversion Dam was not formulated to protect a large population center or for traditional economic benefits, the different accounts will have to be relied on as USACE proceeds through the comparison and evaluation process.

Q: Dave Snyder (OHPO) Mr. Snyder asked that Ms. Buchanan briefly describe how the age of a structure figures in the NED calculations.

A: Jami Buchanan (USACE) Ms. Buchanan replied that age does impact value because the analysis looks at the depreciated replacement cost (DRC) of structures – i.e., what the insurance company would pay to replace the structure. Marshall and Swift is software used to determine the DRC. Software requires the "effective age" of the structure, which is the date of construction minus the date of improvements.

Q: Jennifer Donato (ZCA) Ms. Donato asked whether a certified general real estate appraiser is hired to assess the property value.

A: Jami Buchanan (USACE) Ms. Buchanan replied that an appraiser could be used, but in-house USACE staff could also use the appropriate software and arrive at the values sufficient for the study purposes.

Comment: Aaron Smith (USACE) Mr. Smith commented that the depreciated replacement cost calculation does not ordinarily consider historical integrity, but historical integrity can be taken into account through the value of the original workmanship and materials and by acknowledging use of replacement-in-kind materials.

Comment: Jami Buchanan (USACE) Ms. Buchanan commented that this might be of one of the only projects where the depreciated replacement cost (DRC) might be higher than the fair market value.

Q: Scott Gordon (ZCA) Mr. Gordon asked if the USACE was utilizing information about the value of on-going rehabilitation projects in the calculations.

A: Jami Buchanan (USACE) Ms. Buchanan replied that the USACE was using this information and were updating their data over time. Ms. Buchanan provided the example of the Bimeler House, which was currently in poor condition, but whose condition and value would increase after rehabilitation was completed.

Comment: Aaron Smith (USACE) Mr. Smith commented that actual dollars invested in historic structures do not get captured in the NED account.

Q: Unidentified stakeholder An unidentified stakeholder noted that there are structures in Zoar that have both a residential and commercial function, and asked whether the functional category a structure is placed within impacts the value determined for the structure.

A: Jami Buchanan (USACE) Ms. Buchanan replied that, yes, the functional category does impact value. The value of structures with multiple functions is calculated based on the category that will yield the highest value (i.e., a structure that has a residential and commercial function is evaluated as a commercial structure).

BASELINE HABITAT STUDY

Jean Siedel (USACE) Ms. Siedel presented the findings of the Baseline Habitat Study. The study delineated six streams and 12 wetlands, but did not identify any threatened or endangered aquatic species in the study area. No ecologically significant terrestrial habitat was identified, but the Indiana Brown Bat and the Bald Eagle may use portions of the study area.

- Please refer to Slides 53-56 on the 06March2013PowerPoint.

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%206%202013%20PowerPoint2.pdf>

- A copy of the Baseline Habitat Study can be found online at:

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/Zoar%20Environmental%20Baseline%20Study.pdf>

Comment: Dave Snyder (OHPO) Mr. Snyder commented that he was glad to see that the habitat study included portions of the study area that were part of the built or constructed environment.

Comment: Aaron Smith (USACE) Mr. Smith commented that more intensive evaluations of waters will be done once alternatives had been identified because they would like to limit further study to those wetlands they think they might actually have to impact. Mr. Smith also noted that the study has been sent to all environmental partners for comment (e.g., OEPA, USFW, ODNR, etc.).

BASELINE HTRW STUDY

Aaron Smith (USACE) Mr. Smith presented the findings of the Baseline HTRW (Hazardous, Toxic, and Radioactive Waste) Study. The USACE completed a Phase I Environmental Site Assessment (ESA) for entire study area. The Phase I ESA was based on records search and observation. Potential HTRW concerns include materials associated with structures (e.g., asbestos, heating oil tanks, lead paint, etc.), and materials associated with historical industries such as the blacksmith shop, the tannery, the tin smith shop, the foundry, the machine shop, and chemicals linked to agriculture.

- Please - Please refer to Slides 58-62 on the 06March2013PowerPoint.

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%206%202013%20PowerPoint2.pdf>

- There were no comments or questions on the baseline HTRW presentation.

GENERAL DISCUSSION

Because the meeting was ahead of schedule after the HTRW presentation, the floor was opened for discussion before the group broke for lunch.

Q: Steve Shonk (ZCA) Mr. Shonk asked if, given the current conditions, were there any unforeseen issues with thaws (like boils) anticipated, especially given the mild winter.

A: Tom Leach (USACE) Mr. Leach responded no, right now all the projects in the basin are looking good. Dover Dam personnel checked the piezometers at Zoar within the last few days and did not observe anything significant.

Comment: Scott Gordon (ZCA) Mr. Gordon commented that historically natural substances were used in the industries that were in Zoar, so he would not anticipate finding any HTRW issues from those industries.

A: Aaron Smith (USACE) Mr. Smith responded that 19th century tanneries tend to have toxic chemicals associated with them.

A: Andrew Sewell (HDC) Mr. Sewell reiterated the use of arsenic in tanneries and also stated that a battery industry had been located in Zoar in the early twentieth century, which could have left toxic substances behind. Mr. Sewell did acknowledge that there are differences between modern industries and 19th century industries in terms of the types of substances used and the level of toxicity of those substances.

Q: Unidentified stakeholder An unidentified stakeholder asked if the USACE knew at what pool elevation seepage begins.

A: Adam Kays (USACE) Mr. Kays responded that seepage is generally observed when water reaches the 896' elevation and that the USACE begins to monitor the situation closely at that stage. Mr. Kays, with input from Tom Leach, stated that the levee has been recently loaded to at least elevation 896 feet three times over the past seven years (2005, 2008, 2011).

Q: Aaron Smith (USAACE) Mr. Smith asked Mr. Kays to discuss the 2011 event.

A: Adam Kays (USACE) Mr. Kays noted that during the 2011 event the Dover Dam impoundment reached the 900.6' elevation, and the amount of seepage observed was less than expected thanks to implemented Interim Risk Reduction Measures (IRRM).

A: Aaron Smith (USACE) Mr. Smith reiterated that USACE does have a degree of confidence in the project up to elevation 909', there is a surveillance plan, and stressed that earthen dams often provide warning signs /clues that problems are occurring.

Q: Jennifer Donato (ZCA) Ms. Donato noted that in the spring of 2012, two historic buildings had standing water in the basements (approximately 4' in the Kitchen/Dining Room/Magazine complex and 7" in the Sewing House basement). Ms. Donato asked if boils could ultimately lead to the creation of a sinkhole.

A: Adam Kays (USACE) Mr. Kays noted that basement flooding that occurred in 2012 was most likely the result of a high aquifer, as Zoar Levee was not loaded with Dover Dam's impoundment.

Mr. Kays explained that sink holes usually form with underlying soil is displaced into another void, usually by an underground river. He said the only possible scenario he could think of in Zoar Village, is if a basement collapsed casing surrounding soil to fill this space, thus, creating a void elsewhere.

A: Aaron Smith (USACE) Mr. Smith remarked that this was the first time he was learning of water in basements without water being held at Dover Dam. Mr. Smith also asked that Ms. Donato send him the dates for the basement flood events.

Q: George Kane (OHS) Mr. Kane asked if the levee could create the reverse problem because it retards drainage away from the village. For example, is the issue of basement flooding exacerbated by the levee? Could this problem become worse depending on the type of solution proposed for the levee seepage problems?

A: Aaron Smith (USACE) Mr. Smith responded that the levee does not retard drainage away from the village. Dover Dam's impoundment might cause groundwater to back up for a longer period of time.

A: Adam Kays (USACE) Mr. Kays reiterated that Zoar Levee was a fairly superficial structure that water flowed under, but acknowledged that some types of alternatives, such as impervious cut-off walls, might back up ground water in the village that would otherwise exit to the Tuscarawas River. However, this feature would also serve to cut of seepage from Dover Dam's impoundment.

Q: Lisa Adkins (OHPO) Ms. Adkins asked if it is possible that one of the proposed measures for the levee problems would create a situation where buildings will need some provision to drain groundwater.

A: Adam Kays (USACE) Mr. Kays responded that the answer to the question depends on the measure(s) implemented, but that, yes, something like a cut-off wall might require mitigating drains.

Q: Lisa Adkins (OHPO) Ms. Adkins followed up on her previous question by asking if, in the case of an impervious wall, would buildings be susceptible to additional drainage.

Q: Dave Snyder (OHPO) Mr. Snyder asked if it would be possible to study the movement of groundwater and changes in the elevation of the water table over the next two years so we could know how the levee and the impounding of water at Dover Dam is affecting the groundwater table.

A: Aaron Smith (USACE) Mr. Smith responded that the USACE already has piezometers in place, has developed a groundwater contour map for the village, and can see changes over time as the pool load changes. All of this information is being captured as part of the risk estimate.

A: Adam Kays (USACE) Mr. Kays added that the contour map can be animated to show changes in the groundwater as the load at Dover Dam changes.

A: Aaron Smith (USACE). Mr. Smith noted that USACE would have to consider affects to historic properties all alternatives considered to remedy any identified dam safety issues at Zoar Levee & Diversion Dam,

GROUP BROKE FOR LUNCH (11:30 AM-1 PM)
MEETING RECONVENED AT 1:00 PM

BASELINE HISTORIC PROPERTIES STUDY

- A draft copy of a Management Summary Baseline Historic Properties Study can be found online at:

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/Draft%20Historic%20Property%20Baseline%20Summary%20Report.pdf>

- Hard copies of the draft Baseline Historic Properties Study area available at the Zoar Store & Visitors Center.

Aaron Smith (USACE) Mr. Smith provided an introduction to the Baseline Historic Properties Study, including a review of the guiding statute, the National Historic Preservation Act and the Section 106 Process. Mr. Smith emphasized that the accuracy of the data is paramount, but dependent in part on stakeholder feedback, especially regarding unpublished information.

Andrew Sewell (HDC) Mr. Sewell presented an overview of the goals of the Baseline Historic Properties Study, as well as the research and field methods employed in the study. The above-ground resources were classified according to two categories, depending on whether their primary association was Separatist or non-Separatist. Separatist resources were further classified

according to one of eight socioeconomic themes. A total of 82 Separatist resources were identified within the study area and three Separatist resources were confirmed outside the study area. Non-Separatist resources were analyzed according to whether or not they pre-dated 1962, the fifty year milestone adopted for establishing historical eligibility for the National Register. A total of 263 above-ground resources were identified by the study, 86 of which are over 50 years of age. The above-ground study also re-evaluated the National Register eligibility of all surveyed resources and assessed the existing National Register boundary. The study recommended an expansion of the period of significance to include non-Separatist developments in the study area up to 1962 and an expansion of the district boundary to include newly identified themes and resources.

Anne Lee (HDC) Ms. Lee provided an overview of the goals and methods of the archeological probability assessment. Results of the disturbance assessment depict portions of the study area where there is little or no probability that significant archeological resources survive. Results of the pre-contact archeological probability assessment were presented according to time period and landform. In general, well-drained, undisturbed portions of the floodplain and terraces hold the best chance of containing significant pre-contact resources, if they exist within the study area.

Andrew Sewell (HDC) Mr. Sewell presented the results of the probability assessment for historical archeological resources within the study area. Resources were classified according to two categories (Separatist and Non-Separatist), with subclasses following the classification scheme employed in the above-ground resources study. The high probability locations for significant historical archeological resources are closely linked to documentary and map evidence indicating the former locations of Separatist and non-Separatist activities in the study area.

- Please refer to Slides 64-84 on the 06March2013PowerPoint.

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%206%202013%20PowerPoint2.pdf>

There was extensive discussion regarding the baseline historic properties study throughout the presentation. Discussion, comments, and questions have been compiled for these minutes to facilitate use by the reader.

Comment: Dave Snyder (OHPO) Mr. Snyder commented that from the perspective of the OHPO would prefer to see alternatives evaluated independently of whether or not historic properties exist. The OHPO is not at the point of concurring with identification efforts.

Response: Aaron Smith (USACE) Mr. Smith acknowledged the OHPO's position, but felt that the study provided good baseline data. Mr. Smith also acknowledged that alternatives may be developed that impact resources outside the defined study area.

Q: Lisa Adkins (OHPO) Ms. Adkins commented that it appeared HDC had scanned research documents and asked whether or not these documents would be available. Ms. Adkins also commented that the annotated bibliography was well-done.

A: Aaron Smith (USACE) Mr. Smith replied that the digital research documents would be on a CD that was included in the final report.

Comment: Aaron Smith (USACE) Mr. Smith asked for a clarification on the outlier map. Mr. Smith asked that the word "possible" be added to "outliers" since the map showed confirmed Separatist land holdings but perhaps not *all* Separatists landholdings.

Comment: Lisa Adkins (OHPO) Ms. Adkins requested that dates be added to the outlier map because the extent of landholdings changed over time and the reader needs to be aware that the depicted landholdings reflect a specific point in time. This distinction is important as it may influence assessment of impacts.

Request: Participants via telephone & web asked that the mouse be moved over the digital presentation maps because they could not see the pointer.

Q: Aaron Smith (USACE) Mr. Smith asked what the linear features on the Separatist resources map were.

A: Mr. Sewell (HDC) Mr. Sewell described the linear features, such as the canal bed and old roadways.

Comment: Dave Snyder (OHPO) Mr. Snyder asked if the USACE (COE) numbers used for above-ground structures were systematically organized or tied to a geospatial grid.

A: Aaron Smith (USACE) Mr. Smith replied that the numbers were used by the USACE for the structure inventory. Numbers do have a corresponding GIS database entry but were not assigned based on a mapping coordinate.

Q: Aaron Smith (USACE) Mr. Smith asked why the Canal Inn Hotel was not inside the revised National Register boundary.

A: Mr. Sewell (HDC) Mr. Sewell replied that this was a mapping error on the part of HDC and a carry over from the original boundary.

Comment: Jennifer Sandy (NTHP) Ms. Sandy noted that there are some mapping inconsistencies in the report documents.

Comment: Lisa Adkins (OHPO) Ms. Adkins commented that all changes needed to be ready for the Ohio State Historic Preservation Advisory Board (OSHPAB) hearing on the revised Zoar National Register nomination package in June.

Q: Lisa Adkins (OHPO) Ms. Adkins asked if Separatist activities extended outside the Separatist land holdings.

A: Andrew Sewell (HDC) Mr. Sewell replied that, to our knowledge, Separatist activities did not extend outside the land holdings. Mr. Sewell also noted that the Separatist did not get contracted to build all canal locks located within their land holdings.

Q: Lisa Adkins (OHPO) Ms. Adkins asked if a bigger district boundary could be recommended since the extent of all Separatist land holdings is not confirmed.

A: Andrew Sewell (HDC) Mr. Sewell replied that this was possible but could not confirm the extent of land holdings at this time.

Q: Aaron Smith (USACE) Mr. Smith asked if reconstructions were eligible for the National Register.

A: Lisa Adkins (OHPO) Ms. Adkins replied that sometimes reconstructions are eligible.

Q: Steve Shonk (ZCA) Mr. Shonk commented that the tin shop is a reconstruction done with the original brick, but other materials were new and then asked how materials figure into the evaluation of reconstruction.

A: Andrew Sewell (HDC) Mr. Sewell responded that his understanding was that the bricks used in the tin shop reconstruction were new.

A: Kathy Fernandez (former OHS employee) Ms. Fernandez also commented that the bricks used in the tin shop were new.

A: Steve Shonk (ZCA) Mr. Shonk replied that this did not match the information that he was given when he was a tour guide in Zoar.

Q: Lisa Adkins (OHPO) Ms. Adkins asked if pre-1962 changes to structures were considered when integrity was determined. Ms. Adkins asked why integrity was listed as "good" for nearly all structures.

A: Andrew Sewell (HDC) Mr. Sewell responded that HDC staff may not have been able to tell if the materials were replacements-in-kind.

Q: Lisa Adkins (OHPO) Ms. Adkins commented that the HABS documentation should be reviewed because some structures (e.g., the Gunn House) look different now than did in the 1930s. Ms. Adkins felt that this was a topic for discussion because the National Historic Landmark nomination process was underway concurrently with the USACE study.

Comment: Aaron Smith (USACE) Mr. Smith commented that we need to keep in mind the intent and purpose of the USACE study. The baseline study area was defined in order to collect baseline data on historic properties. Mr. Smith acknowledged that the OHPO is not being asked to concur on an area of potential effects (APE) or effects to resources within an APE, but the study has collected a large amount of information that serves the planning purposes of the USACE study.

Comment: Dave Snyder (OHPO) Mr. Snyder commented that the context and justification for determining whether a property is a contributing resource is somehow missing or not explicit in the report. Mr. Snyder also commented that the above-ground resources survey was overly focused on structures to the exclusion of landscape features.

Comment: Lisa Adkins (OHPO) Ms. Adkins commented that she felt the historic properties study also needed to look at landscape features. For example, fruit trees were important to the Separatists, but are not mentioned in the above-ground report. In addition, Ms. Adkins commented that she felt she would like to know how parcel boundaries changed over time as the community shifted from communal ownership to private ownership.

Comment: Aaron Smith (USACE) Mr. Smith agreed that once get specific alternatives may need to refine findings of baseline survey, but is confident that the baseline study provides a good overall understanding of the boundaries of resources and the type of resources that may need to be considered.

Comment: Lisa Adkins (OHPO) Ms. Adkins feels that the present study was a good start, but is still a work in progress. The study is on the right track, but perhaps only 80% complete. OHPO will not be able to concur that the identification effort is complete.

Comment: Aaron Smith (USACE) Mr. Smith remarked that he thought the conversation was productive and gave him a better understanding of the OHPO's perspective.

Comment: Andrew Sewell (HDC) Mr. Sewell commented that Ms. Adkins' comments gave him pause. Mr. Sewell stated that perhaps the Garden should be considered a pre-1962 preservation effort because reconstructed in the 1930s, including replacement of the large central tree.

Comment: Aaron Smith (USACE) Mr. Smith suggested that some of Ms. Adkins' comments regarding integrity of the district should be reflected in the discussion of the district boundary in the report.

Comment: Lisa Adkins (OHPO) Ms. Adkins commented that she felt there should be a discussion regarding differences between local and national significance in light of the National Historic Landmark (NHL) nomination and the USACE study.

Comment: Aaron Smith (USACE) Mr. Smith commented that he thought it was important to make that distinction (local vs. regional vs. national significance), but the USACE study is not involved with the NHL nomination.

Comment: Lisa Adkins (OHPO) Ms. Adkins pointed out the differences in terms of period of significance and themes as embodied by the USACE study and the nomination. Ms. Adkins is concerned that may end up with a series of historic districts because the period of significance and relevancy to local versus national significance differs between the work being completed by OHS and the work included in the USACE baseline study. This is an issue OHPO will need to

reconcile before they can provide comments on how to improve the USACE study moving forward.

Q: Aaron Smith (USACE) Mr. Smith asked Mr. Kane to provide an update on the NHL nomination.

A: George Kane (OHS) Mr. Kane reported that OHS' consultant is updating the National Register nomination before proceeding with the NHL nomination, per National Park Service instructions, and that the revised National Register nomination will go before the OSHPAB in June. Mr. Kane noted that the revised National Register nomination focuses on what makes Zoar significant on the national level and that the USACE study covered a larger area and broader time period. The NHL boundaries may be in flux for up to another year. Mr. Kane remarked that there are three things going on simultaneously with regard to the same set of resources: revision of the National Register nomination package and creation of a NHL nomination by OHS, and the USACE baseline conditions study.

A: Lisa Adkins (OHPO) Ms. Adkins noted that some of the delay in OHS' efforts is related to necessary house keeping tasks with the 1975 National Register nomination package. Errors in the 1975 package will be corrected in June. OHS and OHPO also hope that by improving the 1975 National Register package they can also strengthen the case for national significance. The nomination may still move to the higher NHL level.

Comment Aaron Smith (OHPO) Mr. Smith wanted to clarify that the work of OHS will ultimately be useful to the USACE, but that the work of the USACE is not in conflict with the work of the OHS.

Q: George Kane (OHS) Mr. Kane responded in the affirmative and recommended that there be closer coordination between the USACE consultants and OHS' consultants. OHS staff and consultants will need to talk about the differences. For example the district boundary proposed by the USACE baseline study is largely delineated on the basis of 19th century resources because most of the 20th century resources fall within the same area.

Comment: Lisa Adkins (OHPO) Ms. Adkins concurred with Mr. Kane, but added that another difference is that the USACE study does not recommend listing Zoar as nationally significant for the watershed control efforts, which the OHS-revised National Register nomination does. Conversely, the OHS documentation does not include the levee as a historic resource.

Comment: Aaron Smith (USACE) Mr. Smith clarified that the district boundary proposed by the baseline historic properties survey is being defined to include 20th century resources.

A: George Kane (OHS) Mr. Kane agreed with Mr. Smith's statement, but added that he doesn't see any instance where the baseline study district boundary extends outward simply to include a 20th century resource.

A: Mr. Sewell (HDC) Mr. Sewell remarked that the one place the boundary proposed in the baseline study may extend outward to pick up a 20th century resource is around the fish

hatchery, although this is also in the area of the canal mills (potential for historic archeological site).

Q: Lisa Adkins (OHPO) Ms. Adkins asked Mr. Kane if the boundary proposed in the OHS nomination revision included the entire length of the canal.

A: George Kane (OHS) Mr. Kane replied that the revised boundaries do not include the entire length of the canal. Mr. Kane also noted that the boundary defined by HDC has the cemetery being contiguous while the boundary in the OHS-revised nomination has the cemetery being discontinuous.

A: Mr. Sewell (HDC) Mr. Sewell noted that the path historically connected the cemetery to the rest of Zoar so the cemetery was included within a contiguous district boundary.

Q: Aaron Smith (USACE) Mr. Smith noted that the boundary proposed by HDC extends over the diversion channel and then it dips south. Why?

A: Mr. Sewell (HDC) Mr. Sewell stated the proposed boundary followed existing parcel boundaries and because it extended out to include the diversion channel (a 20th century resource).

Comment: Lisa Adkins (OHPO) Ms. Adkins commented that one of the reasons she remains uncertain about proposed boundaries is because the extent of Separatist land holdings do not necessarily correspond to modern property boundaries.

Q: Aaron Smith (USACE) Mr. Smith asked Mr. Kane what he meant when he mentioned that better coordination was needed.

A: George Kane (OHS) Mr. Kane replied that he will go back and speak with the OHS consultants and the OHPO National Register staff regarding HDC's reasoning for the boundary and comments made at today's meeting. Mr. Kane mentioned that he may need to speak with the folks at HDC about this as well.

A: Aaron Smith (USACE) Mr. Smith indicated that he was supportive of that because he does not want boundaries to be completely discordant, if that can be avoided by working together now.

Q: Aaron Smith (USACE) Mr. Smith asked why Goose Run Impoundment was designated as a major disturbance.

A: Anne Lee (HDC) Ms. Lee replied that discussions with Mr. Sewell led to the designation based on fact that soil erosion likely occurred as a result of repeated historical flooding and draining of Goose Run and the erosion would have moved remains out of their primary context.

Comment: Aaron Smith (USACE) Mr. Smith believes that a better case needs to be made for designation as a major disturbance.

A: Mr. Sewell (HDC) Mr. Sewell remarked that HDC may need to reconsider the major disturbance designation.

Comment: Aaron Smith (USACE) Mr. Smith questioned the appropriateness of the phrase "high probability" on the maps because it implies to the reader that remains will be found.

A: Anne Lee (HDC) Ms. Lee replied that the validity of the phrase is related to the quality of the data, but acknowledged that it could be better worded to reflect the idea that "high probability areas" demarcate the most likely places that a particular site type will be found, if they occur anywhere in the study area.

Comment: Dave Snyder (OHPO) Mr. Snyder commented that the way he read the maps is that the maps begin to tell the USACE how much money might need to be spent to test a particular location. The maps do not predict where sites are located because no one has ever been able to do that - predictive modeling does not help predict where sites will be, but they do help for planning purposes.

Comment: Aaron Smith (USACE) Mr. Smith suggested changing wording from high probability to something else (perhaps "preferred locations"?)

Comment: Dave Snyder (OHPO) Mr. Snyder commented that with the pre-contact context for the area, so little is known that the probability models are all just wildly speculative. The maps indicate where one might want to excavate different densities of shovel tests and the question is not one of whether will do work, but how much work will be done. Moving forward Mr. Snyder would like to have more discussions about testing and analytical methods.

Comment: Aaron Smith (USACE) Mr. Smith commented that he thought testing methods were beyond HDC's scope, but that the present study provided good baseline data to build on once the USACE got to the point in the process where an area of potential effects (APE) had been defined.

Comment: Aaron Smith (USACE) Mr. Smith commented that the archeological probability assessment needs to be consistent with the USACE wetlands survey in terms of defining well-drained landforms -- the USACE data may be more refined than the USDA soil survey data.

Q: Lisa Adkins (OHPO) Ms. Adkins asked if there is a summary map for the USACE to use for pre-contact probability assessment, specifically a map that indicates which areas do not need to be tested if an undertaking were to impact them.

A: Aaron Smith (USACE) Mr. Smith replied, yes – the disturbance map.

Comment Dave Snyder (OHPO) Mr. Snyder commented that he appreciated Mr. Sewell's comment about using archeological remains to compare former Separatist households with non-Separatist households in the early 19th century. Mr. Snyder would like to see the importance of archeology stressed and more discussion of how archeology may influence eligibility –

archeology has the potential to greatly increase our understanding of Zoar. Mr. Snyder emphasized his desire to see more discussion of testing and research methods.

A: Aaron Smith (USACE) Mr. Smith commented that the Scope of Work did include definition of the types of data that might make different site types from different time periods significant under the National Register criteria. Mr. Smith indicated that additional discussion of these types of topics might be more appropriate once APEs had been defined.

Comment Dave Snyder (OHPO) Mr. Snyder commented that he would like to see an answer to the question 'what would be lost if the preferred alternative would result in the razing of Zoar?' because he feels that a major source of information would be lost if the archeology is not preserved.

Response: Aaron Smith (USACE) Mr. Smith clarified that what Mr. Snyder was saying is that he would like to see is an understanding of how the archeology could contribute to the historical significance of Zoar.

Q: Lisa Adkins (OHPO) Ms. Adkins referred to the earlier conversation about landscape features and commented that she would like to see more discussion of who, moving forward, has the responsibility for identifying and evaluating resources such as ruins and landscape features -- the above-ground specialists or archeologists?

A: Andrew Sewell (HDC) Mr. Sewell responded that Ms. Adkins' question is a good one. Given his background in industrial archeology, Mr. Sewell tends to blur the lines himself and sees the connection between structures and landscape features in the present and past. Mr. Sewell suggested that many resources, like a former roadway or path, should be documented and evaluated as archeological resources.

Comment: Lisa Adkins (OHPO) Ms. Adkins commented that she felt the report failed to convey how long many practices and behaviors persisted, for example the use of paths for foot traffic. Ms. Adkins wants to make sure that the historic properties report accurately reflects persistence of behaviors in Zoar that may have been exchanged for more modern behaviors and materials remains in other parts of Ohio. Ms. Adkins feels that a more thorough examination of the landscape features may capture this type of information.

AFTERNOON BREAK (10 MINUTES)

Q: Bob Genheimer (OAC) Mr. Genheimer commented that the data for the pre-contact archeological probability models is weak, and asked if, in light of this weakness, the data set could be expanded, particularly by looking at similar landforms or similar drainages.

A/Q: Aaron Smith (USACE) Mr. Smith replied he would need to look at the Scope of Work to determine if an expansion of the data set (search area) was warranted, but asked Mr. Genheimer

if, in his professional experience, an expansion of the search area would yield data in sufficient quantities to significantly improve the pre-contact probability models.

A: Bob Genheimer (OAC) Mr. Genheimer replied that he would need to look at the online OHPO data before he could answer that question.

BASELINE COMMUNITY IMPACTS STUDY

- A draft copy of a Baseline Community Impacts Study can be found online at:

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/Final%20CIBS%20Report%20Adobe%20PDF%20Version1.pdf>

Gus Drum began the presentation with an overview of the CIBS' purpose. The CIBS establishes a complete social profile of Zoar Village, identifies other social effects and regional economic development information, and documents the existing conditions also known as the "without project" condition.

Gus Drum stated the Corps would use this socioeconomic data to avoid, minimize and design mitigation to social or community life, and regional economic development.

Gus Drum discussed the purpose of the Other Social Effects (OSE) account. OSE were defined as the potential changes in core elements of life that influence personal and group definitions of satisfaction, well-being and happiness because of a condition or proposed action.

Gus Drum stated that CIBS was completed using a methodology established by the Corps in the "Handbook for Applying "Other Social Effects Factors in Water Resource Planning." He summarized key OSE indicators including identify, health and safety, economic vitality, social connectedness, group participation and leisure and recreation patterns.

Gus Drum emphasized that data presented were only collected from publically available sources such as the US Census and state/county databases. These sources are often referred to as "secondary sources". In compliance with the Paperwork Reduction Act of 1995, the Corps did not collect data directly from individual citizens. Direct or "primary source" data collection requires Office of Budget and Management (OMB) approval.

Gus Drum noted that demographic data for Tuscarawas County and three other communities (Parral, Rosewell, and Stone Creek) were collected and a comparative analysis was completed in order to place Zoar's characteristics in a regional context and highlight unique attributes. Data comparisons were not intended to not rank or judge Zoar Village or the other communities.

Gus Drum summarized the findings of each of the three major CIBS components: 1) demographics data, 2) Community social interactions and groups, and 3) Potentially Significant Community Characteristics.

Gus Drum stated that Zoar's characteristics indicate that it is a unique community. He noted that before Zoar was historic, it was a community. When the Separatists founded the village, it was a community. Zoar became historic in time and that is why it exists today. He noted that it is

important to remember that Zoar was a community first. Zoar is still is a vibrant, live community today where people live and work.

- Please refer to Slides 86-101 on the 06March2013PowerPoint.

<http://www.lrh.usace.army.mil/Portals/38/docs/zoar/March%206%202013%20PowerPoint2.pdf>

Q: Mayor Bell (Village of Zoar) Mayor Bell asked if the Zoar of today is unique because of its history. Is the community today a descendent of the community 100+ years ago?

A: Aaron Smith (USACE) Mr. Smith responded that he thought that was a question that the USACE needed to ask the residents.

A: Gus Drum (USACE) Mr. Drum asked if the Mayor wanted his opinion and, once confirmed that an opinion was desired, responded that he believes that the Zoar of today is unique because of the Separatist heritage. There is a unique appreciation on the part of the residents for the place they live, a willingness to fight for the place, and a willingness to work together as a team to reach their goals. In general, a community of 169 does not survive as a municipality in this day and age without some shared reason to do so. Mr. Drum also commented that it is important to remember that Zoar was a community before it was historic and is still a vibrant community.

Mr, Drum summarized data illustrating commute and employment patterns of residents. Residents commute alone to work and work in a wide range of private sector industries. This diversity and geographic distribution of employment helps make the community resilient from economic shock. For example, if the majority of residents were employed at the same place and that business closes, the community would not have the resources to support itself.

Comment: John Elsasser (ZCA) Mr. Elsasser commented that he thought that the USACE/JFA might want to add two entities to the Zoar Community Group Interaction visual aid: the Muskingum Watershed Conservancy District (MWCD) and the State Of Ohio (behind OHS).

Comment: John Elsasser (ZCA) Mr. Elsasser commented that he thought that the visitor numbers for 2011 were low.

Comment: Mayor Bell (Village of Zoar) Mayor Bell commented that he thinks a monetary value can now be assigned to the historical value of buildings in Zoar based on cost of restoration work completed on structures such as the Bimeler Museum. For example, the \$1 million that OHS invested in the Bimeler Museum could be used as an average dollar figure applied to each historical structure.

Comment Aaron Smith (USACE) Mr. Smith commented that he thinks it is important to note that the OSE and RED studies do capture the investments. Mr. Smith did stress, however, that the USACE needs more data to complete the baseline Community Impacts Study. He asked stakeholders let him know if the study is missing data. If stakeholders provide information, the Corps will include and consider it.

Comment Gus Drum (USACE) Mr. Drum stressed that the report will include statements about the types of activities occurring in Zoar and the sentiment that this is a place that has a future because the residents have the willingness to invest in the future of Zoar.

Q: Mayor Bell (Village of Zoar) Mayor Bell commented that the data has shown that Zoar is unique in terms of the living community and asked how important is community in the final analysis compared to the cost of the alternatives? Can community be extracted from the history?

A: Gus Drum (USACE) Mr. Drum acknowledged that the USACE have asked the same question and that he and Mr. Smith will have to address the interconnectedness in the DSMS.

A: Aaron Smith (USACE) Mr. Smith reiterated that life safety is priority 1 for the USACE. Traditionally, the USACE relies on large economic benefits or population area to justify projects. It is rare that we utilize historic preservation or community cohesion as primary drivers in making decisions. However, USACE is very aware that Zoar is not a typical project. There is no weighting of accounts; although life safety having the highest priority and with all decisions, stewardship to the taxpayer must be considered. However, USACE processes can and do collect the intangibles and they are considered as well.

A: Gus Drum (USACE) Mr. Drum emphasized that because the Zoar Levee and Diversion Dam project was not formulated in the traditional way (i.e., for life safety and economic benefits alone), the present study will likely not go the traditional route either..

Comment: Aaron Smith (USACE) Mr. Smith thanked everyone for their participation. Mr. Smith stressed the USACE's desire to get public input, which is needed by March 29, 2013, and emphasized that now is the time to comment and have input.

MEETING ADJOURNED AT 4:55 PM

*Minutes Prepared by:
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