

**Zoar Levee & Diversion Dam, Dam Safety Modification Study
Community Advisory Committee Meeting
February 9, 2012 at Zoar School House**

The U.S. Army Corps of Engineers (USACE), Huntington District (District) held a regularly scheduled Zoar Village Community Advisory Committee (CAC) meeting at the Zoar School House on February 9, 2012. The meeting was scheduled to take place between 7:00 and 8:30 pm and it ran until approximately 9:15 pm. Those present included: Mayor Larry Bell (Zoar), Jon Elsasser (Zoar), George Kane (Ohio Historic Society), Karen Hassel (Ohio Historic Society), Ellen Seabrook (Zoar), Sandy Worley (Zoar), Judy Meiser (Zoar), Chuck Meiser (Zoar), Hans Fischer (Zoar), Aaron Smith (USACE), Rodney Cremeans (USACE), Gus Drum (USACE), and Nick Krupa (USACE).

1) Rodney Cremeans welcomed the group and expressed appreciation for continuing to participate in the CAC and helping the District with its study process.

2) Gus Drum addressed the minutes of the December 8, 2011 CAC meeting. The minutes of that CAC meeting had been emailed to everyone present and there were no comments or changes to the minutes offered by the group.

3) Aaron Smith began the meeting with a quick update of the current activities. Several items were discussed including:

a. The District is assembling the baseline condition data now for the study. The baseline data is a required study element to establish the current conditions of the Village and the levee structure and appurtenances, as well as assess what is at risk from the reliability issues and from potential risk management alternatives.

b. The various failure modes for Zoar Levee & Diversion Dam are being provided by the risk cadre and being lead by the Risk Management Center (RMC). The current schedule indicates that these failure modes will be provided to the District in March. This new date represents a two-month extension in the study schedule as reported last December.

c. Aaron Smith and Travis Holly (USACE) conducted field work in the baseline study area to support the economic analysis. This data is now being assembled at the District for input into databases. Data was gathered for the entire study, not because any specific action is planned for any portion of the study area, but so that we have consistent data to evaluate against when formulating alternatives.

d. The District is also hoping to execute agreements/contracts in the near-term to collect baseline data concerning historic properties, aquatic and terrestrial habitat, and community impacts to support the formulation, evaluation and comparison of alternatives. This data will also be used to help forecast what would happen to these resources in a no action scenario.

4) Aaron Smith reported that USACE was developing the list of agency and external reviewers for the study who would include people from both within and outside of USACE. Aaron Smith indicated that when that group had been selected and approved, the group would likely be making a field visit to Zoar to tour the project, meet with Village leadership and see the community first-hand.

5) Aaron Smith indicated that the District was beginning to discuss various nonstructural measures including removal of the levee and/or diversion dam. There is more discussion about this study under Items #8 and #9.

Aaron Smith encouraged the members of the CAC to be engaged with the District during the development of the alternatives and mitigation strategies (especially removal of the levee) because the USACE could not and will not do this successfully in a vacuum. Aaron Smith asked that the CAC members share this important message with their friends and neighbors and encourage them to join future meetings, even if they had not signed up for the CAC.

6) Aaron Smith gave an update on a proposed Data Logger to be placed at the Zoar Diversion Dam as an Interim Risk Reduction Measures (IRRM). The purpose of the data logger is to alert Government personnel of when water was impounding behind the dam so that we could monitor the dam's performance, and if necessary, take emergency action and/or alert County and local officials in the area accordingly.

The proposed data logger would be located on a newly constructed concrete pad located on Government property near the right abutment (west-side) of the Diversion Dam. Unfortunately, an existing concrete pad built by the Ohio Historical Society to intake water off the impoundment area for the Zoar Garden's is not located on U.S. Government property. A new building enclosure will be erected covering the instrumentation to protect it from damage or vandalism.

Aaron Smith stated that the District wants to construct a building that would be sympathetic to the village in terms of aesthetics, but did not want to design it without community input. Aaron Smith clarified that the District has some constraints, including the need for a non-metal roof and we would prefer a building that could be stained as opposed to painted.

Nick Krupa brought a brochure of examples of small out-buildings (Weaver Barns - a local fabricator) that could be used to cover and protect the instrumentation. Nick Krupa also indicated that the District may attempt to duplicate a Canal Toll Booth, similar to one on Front Street in Dover, Ohio.

Mayor Bell requested that the building be placed closer to the tree line so that it wouldn't block visitor's views of the Civil Wars Day battle enactments at the dam site.

Nick Krupa indicated that the District would locate the building as far back as possible and still have a visual sight of the control structure in the impoundment area.

Aaron Smith asked the CAC members to provide input on what style of building would be appropriate at that location no later than May 1, 2012.

Mayor Bell and Nick Krupa committed to work together on a suitable building style and location.

7) Aaron Smith discussed on the requirements of Section 106 of the National Historic Preservation Act and the processes required meeting the requirements of that Act.

Aaron Smith provided a brief overview of the act and explained that the purpose of the act was to ensure that federal agencies consider how they might affect historic properties when planning an

undertaking or action, with the goal being to avoid, minimize, and if necessary mitigate for adverse effects.

Aaron Smith provided a flow chart that quickly defined how the Section 106 process works as set for in 36 CFR 800.

The key steps include

- 1) Establish the Undertaking: Determine what action is being taken.
- 2) Identify Consulting Parties: Consulting Parties are those agencies and organizations that have concerns about historic properties or financial or political concerns with the undertaking and want to be involved in consultation. For this project, there are several identified consulting parties: (1) Village of Zoar; (2) Zoar Community Association; (3) Ohio Historical Society; (4) Ohio Historic Preservation Office; (4) Ohio & Erie Canalway Coalition/Association; (5) Tuscarawas County Commissioners; (6) Heritage Ohio; (7) Ohio Archeological Council; (8) President's Advisory Council on Historic Preservation; and (9) three Federally recognized Tribal Nations. The National Park Service and National Trust for Historic Preservation have also requested interested party status.
- 3) Plan to Involve Public: This plan includes the CAC, monthly office hours and milestone public meetings to be held during formulation, evaluation and comparison of alternatives.
- 4) Establish the APE (Area of Potential Effects): The APE is the area which effects to historic properties may occur. There can be multiple APE for multiple types of effects, both direct (physical) and indirect (visual, audible).
- 5) Identification Efforts: Those studies undertaken to identify historic properties within the APE. Historic Properties are those properties that are listed in, or eligible for listing in, the National Register of Historic Places.
- 6) Assess Effects: Apply the Criteria of Adverse Effects to identified historic properties to determine if the undertaking will significantly alter a characteristic that qualifies the historic property as eligible for, or listed in, the National Register of Historic Places.
- 7) Resolve Adverse Effects: If adverse effects are identified, consulting parties then work together to attempt to resolve these affects. There are no prescribed outcomes and it is a negotiation process.
- 8) Aaron Smith then discussed how the District proposes to consider effects to historic properties and shared a schedule that itemized historic property consideration milestones the District would like to achieve by schedule item. As discussed above, one of the first steps of Section 106 work is to establish the undertaking, or establish what action would be taken. However, the purposes of a feasibility study, such as a Dam Safety Modification Study are to undertake an analysis of alternatives that captures effects and benefits to all kinds of resources, including historic properties and the analysis must be done before we establish what kind of action or undertaking would be accomplished. This analysis is required

by the National Environmental Policy Act and the Principles and Guidelines for Water Resources Planning.

Aaron Smith clarified, that for many feasibility studies, USACE does this analysis when there is really not a wide variety of reasonable alternatives, so effects can easily be accounted for in consultation with appropriate parties. In some instances we programmatically defer intensive identification efforts until a final decision is made, because it is easy to categorize the significance of impacts by alternatives and assign a potential cost associated with avoiding, minimizing, or mitigating for those impacts using past experience and some contingency.

However, Aaron Smith went on to explain that in the case of the Zoar Levee & Diversion Dam, Dam Safety Modification Study, we would be examining a broad range of alternatives and some of the potential alternatives had a potential to cause severe impacts. USACE feels it is important to involve consulting parties and stakeholders in the evaluation process to help consider effects during formulation of alternatives and also consider what types of efforts might be associated with avoidance, minimization, and if necessary mitigation for some of these effects. Aaron Smith clarified that the District did not feel comfortable doing this in a “black box” given the circumstances.

To aid in this consultation during the feasibility study, the District is going to conduct a baseline historic property assessment for the Study Area previously provided the public on November 15, 2011. As previously communicated, the District has developed this study area to be large based on past experience with other types of similar studies and also to take into account the incorporated boundaries of the Village, the current National Register of Historic Places boundary for the Zoar State Memorial Site, area upstream of the diversion dam, and the limits of elevation 916’ behind the levee. Then the Corps added some extra area. The goal of such a broad study area is to be able to identify all kinds of resource constraints so when designing feasibility level alternatives, we can be aware of them to try to avoid, minimize or if necessary, mitigate for them.

This will be a contracted study and will focus on inventorying what is at risk from performance issues, but more focused toward gaining baseline data that can be used to help identify APEs and historic property potentials from multiple alternatives during the study process in an efficient manner. This should allow consulting parties to help the District identify, at a feasibility level, the significance of impacts and potential costs associated with avoiding, minimizing, or mitigating for those effects.

The study includes several tasks, including: 1) background research on the Zoar area, 2) identification of above ground resources, 3) archeological probability assessments and 4) completion of a technical report. All information uncovered in the investigation would be mapped in a GIS format and shared with consulting parties for review and comment.

Aaron Smith shared that during a consulting party meeting held on December 7, 2011, many parties including the Ohio Historic Preservation Office and Advisory Council for Historic Preservation were concerned that the District was undertaking historic property identification efforts prior to establishing the undertaking and defining an APE. The District explained that it will often undertake baseline studies to provide informed consideration of these issues during formulation of alternatives. The District is also broadening the historic property baseline study to include research on the impact of Zoar on the

landscape in the region and to have background research broad enough to use if necessary to understand impacts outside the study area.

Aaron Smith also clarified that if during formulation, evaluation and comparison of alternatives, we identify measures that could have impacts beyond the study area; we would take the steps necessary to understand impacts to those areas as well.

Aaron Smith stated that the ultimate goals of the study, as it pertains to historic properties (and other resources), were to: (a) understand the severity of impacts by alternatives and the costs associated with impacts, so that understanding can be used to inform decisions; and (b) be able to capture and make clear to all parties what impacts will occur, if any, from the recommended plan and how the District proposes to minimize or mitigate for those impacts that could not be avoided.

Aaron Smith reiterated that the District feels strongly that this analysis needs to be informed by regular and meaningful consultation with stakeholders. The results of the analysis also needs take into account stakeholder concerns, otherwise they will not be legitimate. In other words, waiting until we had defined the preferred risk management plan to assess effect to historic properties would also make our costs and assessment of impacts inaccurate.

9) Mayor Bell questioned the need for collecting and analyzing so much baseline data, especially as it pertains to potential failure modes, and why we couldn't begin to develop the "fixes" at the same time thus reducing the study time.

Aaron Smith, Gus Drum, and Rodney Cremeans explained that initiating engineering work on potential structural alternatives prior to completing the failure modes analysis by the risk cadre (scheduled to arrive in March 2012) could result in expending money studying alternatives that do not address potential failure modes. Also having the baseline data in hand before formulating measures and alternatives would enable the District to better try to avoid significant impacts to discovered resources and minimize impacts and achieve reasonable mitigation costs for alternatives.

Aaron Smith noted two things. One, we had made significant progress on a Major Rehabilitation Report prior to shifting to a Dam Safety Modification Report and that the data we achieved there will certainly be used to help define structural alternatives. However, the Dam Safety Modification study required different technical analyses and may identify significantly different issues that need to be dealt with, which is one of the reasons the USCAE has gone to this more risk based process.

Two, the District was proceeding with formulating the acquisition alternative. Per law, Section 2033 WRDA 2007 and regulation, ER 1110-2-1156, we are required to evaluate non-structural solutions on an equal basis and that removal of the structure is a required alternative in our guidance. As we know that removal of the structure and the potential subsequent acquisition could remove the public from harm, we don't need to await potential failure modes to begin by studying if this alternative is feasible. However, that in no way means that removal of the project is favored – only that we want to proceed in the most expeditious manner possible to study how to reduce risk to the public. Toward that goal, this was one avenue we could pursue while awaiting completion of the baseline risk assessment. Once we

received the baseline risk data, structural and likely other non-structural alternatives would receive the same level of analysis and be evaluated and then compared against one another.

10) Mayor Bell said he saw only two alternatives, fix the levee or buy the town.

Rodney Cremeans noted that the word alternative had a specific meaning in this study and the USACE has not defined any alternatives to date and that there are likely to be other types of alternatives.

Gus Drum noted that we may study creating other impoundments upstream or operating Dover, Bolivar, Atwood, and Leesville Dam's differently to reduce the frequency of loading on the levee and or repairing the levee and removing the Diversion Dam and flood-proofing those structure impacted by flooding caused by Goose Run.

Mayor Bell stated that he doubted any of these were viable alternatives, especially considering that the USACE is spending millions to upgrade Dover Dam and he maintained that his perception is there are two basic outcomes, repair the levee or buy the town.

11) Aaron Smith discussed the wide spread speculation that relocating the Village might be an alternative. He explained that at this time nothing was off the table nor ruled out. However, current understanding of the authority granted USACE, is that physical relocation or re-establishing the Village of Zoar in a new location may not be an alternative risk management plan that gets carried forward. He said the District was checking closely on this issue and was not ruling anything out at this time, as all possibilities need to be considered.

However, it is likely that we could study the feasibility of the physical relocation of the entire Village (or parts thereof) as mitigation for the impacts that may occur due to the breaching or removing the levee. However, this would also require careful consideration of the technical ability, reasonability, and authorization associated with such a mitigation plan.

First and foremost, Aaron Smith pointed out that we would need to know from consulting parties and the public if relocation is a mitigation feature they would like us to consider. Aaron Smith pointed out that there would be many logistics to consider. For example, would this be a relocation of structures only for historical interpretation, or people too? If a historical site, who would operate and maintain the site and do they have the organizational ability and desire to do so in the foreseeable future? These are the types of issues that need to be resolved in consultation.

Mayor Bell noted that this sounded like, "Let's Make a Deal".

Aaron Smith noted that this analogy had some validity. Consultation concerning resolving potential adverse effects to historic properties has no prescribed outcomes and we can think out of the box.

Aaron Smith provided an example of a highway in W.V. that crossed U.S. Forest Service land. Instead of focusing on intensive archeological surveys and historic property identification efforts, an agreement was made that the highway would adversely affect historic properties and that these effects could be mitigated for by funding positions at the U.S Forest Service to study known historic properties on its lands. The point being that we can consider a broad array of mitigation alternatives.

Gus Drum noted that District office has started to discuss the requirements for studying removing the levee and are beginning to consider what information would be needed to develop mitigation for the alternative.

Mayor Bell stated that Zoar was an irreplaceable treasure and an important part of America and the American Story. He did not know how you would ever compensate for its loss.

Aaron Smith said the number and nature of comments received to date from the public, stakeholders and resource agencies made that clear that the acceptability of removal of the levee was low and severity of the impact very high. However, the District had to study this alternative. Part of doing that is to understand how to mitigate for impacts and what the costs of mitigation would be. We have to give this alternative equal consideration, in terms of impacts and costs, with other potential alternatives that included non-structural and/or structural measures. He stressed that the District could not develop mitigation options alone and needed the community to be engaged in that process. He noted that mitigation may never off-set or compensate for the loss of Zoar on a one-to-one ratio and that would be captured.

George Kane noted that the goal is to preserve Zoar. However, if consulting parties are to help the USACE consider the alternatives it must study, we may have to put that goal aside, at least for discussion's sake, and consider what types of mitigation we would like to see done in the worst case scenario to make sure our input is considered.

12) Mayor Bell expressed his concerns that the last 150 years of Zoar history could be lost to future generations and that such an impact would be irreversible should Zoar be acquired and dispersed or relocated in such a way that the historic nature of the community was compromised. He said a concern was the educational value that Zoar provided to school children and adults of all ages and he would want to see that any mitigation option included a way of ensuring that the educational benefit of Zoar would survive. He also asked if the town or a historical site was reestablished how you would ensure its survivability.

Aaron Smith answered that this was very good feedback and critical thought on the issue. Knowing that the educational experience of Zoar was important could help guide potential mitigation options. Considering the survivability of a "potential" relocated Zoar needs to be carefully considered. Considered mitigation options should account for a reasonable expectation of their success. Therefore, we all need to consider as a group what the possibilities are for a relocated Zoar. Who would own or run it? Would they have the mission and financial ability to do so? These are the types of questions that need to be answered if that is a mitigation alternative to be studied.

Karen Hassel agreed that the educational experience Zoar provided to the region's school children was substantial. Karen suggested that there were methods of determining the level of that experience has on students, but that such a study would take many years to complete.

Aaron Smith noted that it was already clear that Zoar offered educational experience through the visitation numbers and opportunities presented by OHS and ZCA. At the feasibility level, understanding that importance and knowing that the loss of it would be significant is probably enough.

Karen Hassel said she understood.

13) The meeting was adjourned around 9:15pm and the next meeting of the CAC was scheduled for March 8, 2012 between 7:00-8:30 pm at the Zoar School House.

Notes Prepared by

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