

Mason Elementary, Akron Public Schools, Grade 4 Students  
Zoar Village Visit, Thursday, May 17, 2012

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**Students' questions regarding the future of the Zoar Levee and the town of Zoar in Black**

*U.S. Army Corps of Engineers, Huntington District Answers in Blue*

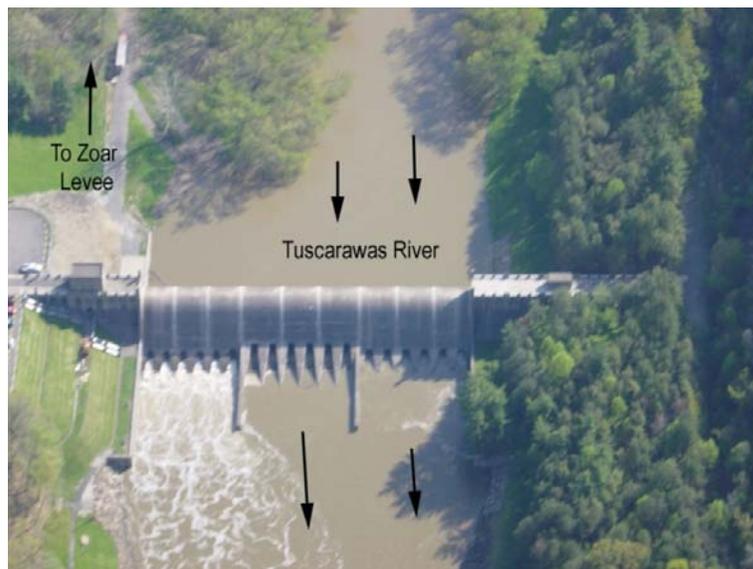
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**GENERAL BACKGROUND**

*Zoar Levee was built to stop water being held by Dover Dam out of the Village of Zoar.*

*Dover Dam is a concrete wall built in the middle of the Tuscarawas River. On a sunny day, the river flows through several tunnels underneath Dover Dam. However, when there is a lot of rain, the Corps of Engineers shuts doors, called gates, which close these tunnels. When the gates are closed, the river stops flowing through the dam and water backs up behind it. This water is then gradually released by slowly opening the gates to help reduce flooding in Dover, New Philadelphia and many other cities located in front of or downstream of Dover Dam.*



**Picture of Dover Dam on a sunny day. The Tuscarawas River runs from the top of the picture to the bottom.**

*The Village of Zoar is located behind or upstream of Dover Dam. So when the gates are shut, Dover Dam pushes water up against the Zoar levee. Zoar levee was built to keep the water behind Dover Dam out of Zoar Village.*



**Map showing Zoar Levee in Relation to Dover Dam.**



**Picture from the air looking down on Zoar Village and Zoar Levee.**

*Water is now leaking, or what we call “seeping”, underneath Zoar Levee when Dover Dam holds water and this could cause the levee to break and water to rush in and harm people and property.*

*The Corps of Engineers is now studying the best way to fix that problem. We have been told by the U.S. Congress that we have to study options like taking down dams and levees that have problems as well as studying ways to fix their problems.*

*If the Corps of Engineers decided it would be best to take down Zoar Levee instead of fixing it, the Government would have to buy buildings and help move people to higher ground so they wouldn't be harmed by waters being held by Dover Dam.*

*However, the Corps of Engineers is not allowed to take down Zoar Levee, buy buildings or move any buildings without permission. We would need our leaders in Washington D.C. to give us those permissions if we decided that it was a better idea to take down the levee instead of fixing it.*

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**If the decision is made to move the town to another location, how would they move the buildings? Johnne'**

*Good Question Johnne'. We don't know right now. In that case, our planners and engineers will have to study how we would move any buildings. Typically, beams are placed beneath the building and then the beams are raised slowly by jacks and a truck trailer is backed underneath the beams and the building is moved by the truck trailer.*

**Where would they move it? Kenyatta**

*Good Question Kenyatta. We don't know right now. In that case, we would find a place to move the buildings to by working with the people in the village and those who want them moved.*

**Would you put it by itself or make it part of another town or city? Noni**

*Good question Noni. We don't know yet. In that case, we would make these decisions with the people who live in the village and those who want them moved.*

**Why is one of the options to destroy the town? You cannot replace history.  
D'Ashontae**

*Good question D'Ashontae. You are right, we cannot replace history.*

*Congress has told the Corps of Engineers that we have to study options like buying homes and businesses that could be hurt if the levee broke and then help move people who live in Zoar to higher ground. After people are moved, the levee could be taken down. We are also studying ways to make the levee work better so people in the village of Zoar can live safely behind it.*

*We have to think very carefully about how all options might help or harm people, places, and historical sites that teach us about our past. We are working with lots of people in Zoar Village and historical groups who care a lot about the history of Zoar to help us try not to damage it.*

*If we do have to damage an important historical site, we have to look for ways to make up for that damage. We have been asked if we can move the historical buildings to make up for that damage and we are studying that option.*

**Why do you want to flood the town? Aaliyah**

*Good question Aaliyah. We do not want to flood Zoar Village and our # 1 goal is to protect people from getting flooded. In fact, we built Zoar Levee 75 years ago to protect Zoar Village from flooding. Now that Zoar Levee is not working correctly, we are looking for the best way to keep people and their homes and businesses safe from flooding that might happen if the levee breaks.*

**How exactly would you repair the levee that it would cost \$130,000,000?**

**Allissa**

*Good Question Allissa. We are studying different ways to repair the levee's problems. We have not designed any plans yet for Zoar Levee so we don't know how much it will cost.*

*However, Zoar levee is about 12 football fields long and water maybe seeping as deep as 145 feet below the levee, or nearly the height of the Statue of Liberty on top of its pedestal. It may take millions of dollars to address these types of problems.*

*The Corps of Engineers has fixed similar problems at other locations by building a solid wall underneath the levee that stops the water from seeping. These are called “cut-off walls” because they cut off the pathway the water takes under the levee.*

*We can also pump grout (grout is like watery cement) into the ground to seal up any holes in the bedrock where water is leaking. This is called “grouting”.*

*We also have ways of collecting the seeping water under the levee and pumping it back out to the river. These are called different things, like “relief wells”, “interior collector systems” and “pump stations”.*

*Sometimes we place large amounts of dirt and gravel against the levee to slow the leaking water and stop it from eroding the soil from underneath the levee. These are called “seepage berms” or “seepage blankets”.*

*There are other solutions as well that we will carefully study and consider.*

### **How many towns in Ohio are affected by flooding? Kiara**

*Good Question Kiara. Like many states, Ohio has a lot of towns built next to rivers because they provide fresh water, good transportation and flat ground for development. Unfortunately, most rivers flood during heavy rain storms.*

*In 1913, a terrible flood in Ohio caused millions of dollars in damage and many people lost their lives.*

*Because of this flood, the Ohio State Legislature in Columbus, Ohio passed the Conservancy Act of Ohio in 1914 that allowed for the creation of Water Conservancy Districts to help control flooding.*

*In 1933, the Muskingum Watershed Conservancy District (MWCD) was established to help control flooding in east-central Ohio. The MWCD developed a plan to build 14 dams, including Dover Dam to help hold back rain water and reduce flooding.*

*The Corps of Engineers built these 14 dams and many levees, just like Zoar Levee, between 1934 and 1937 for the MWCD. In 1939, the U.S. Congress turned these dams over to the Corps of Engineers to operate them and to maintain them.*

*Since that time the Corps of Engineers has built 11 other dams in the state of Ohio and many other levees and flood walls to help reduce impacts from flooding. For example, Dover Dam helps prevent about \$15 million dollars in flood damages every year.*

*However, these projects only help reduce flooding and many towns throughout Ohio still have flood problems.*

**How many times over the years has Zoar flooded? Before the current levee was built in 1938, how was the town protected? Mrs. Brown**

*Good Question Mrs. Brown. We do not have data on how many times, if any, the Village of Zoar flooded prior to the construction of Dover Dam. We do know that the original Zoarite settlers built a rock flood wall along the Tuscarawas River to help protect them from flooding. You can still see the remnants of this wall today.*

**Does the Dover Dam have an impact on the flooding in Zoar? Mrs. Brown**

*Good Question Mrs. Brown. Please refer to the general background provided above. Zoar Levee was built to keep the impounded water behind Dover Dam out of Zoar Village. In other words, if Zoar Levee was not constructed portions of the village located in Dover Dam's flowage easement (where we store water) would have had to have been evacuated in the 1930s.*

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**Comments on the Zoar Levee & Diversion Dam, Dam Safety Modification Study  
can be submitted to the  
Study Manager, Aaron Smith:**

**Via email at:  
[zoarlevee@usace.army.mil](mailto:zoarlevee@usace.army.mil)**

**Via mail at:  
Attention Zoar Levee:  
CELRH-PM-PD-R  
Huntington District  
U.S. Army Corps of Engineers  
502 Eighth Street  
Huntington, WV.25701**

**Via Telephone:  
(304) 399-5720**