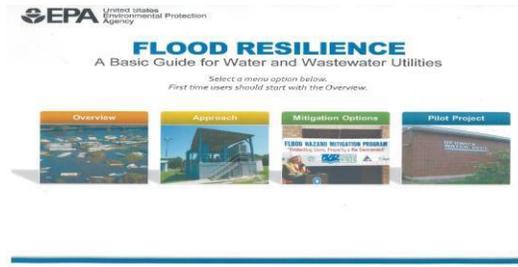


DRAFT 7-7-15



Flood Resilience Planning Berwick, ME

What they did and why

Berwick, Maine had two 100 year floods* in May 2006 and April 2007. The Berwick Water Department was cut off to road access in both cases. Worried that they may be vulnerable to other future floods, the Berwick Water Department requested that their water utility be inspected by utility operators and EPA engineers to determine, through the use of the EPA’s four step flood resilience plan, if they were vulnerable to future floods, what aspects of the plant are most vulnerable, and how to implement a solution to be resilient to future flooding events. Using FEMA flood

mapping techniques, flood experts from Berwick and the EPA determined the areas of the utility that were most vulnerable to flooding. After the analysis, it was determined that the best solutions to minimizing flood risk was a gradual equipment replacement plan that would shift the positions of the equipment within the plant to make it more resilient to flooding. The town also allowed the plant to have a second access road in case of a flood blocking the road in the future.

“When you realize that a flood could come and bring [your workable plant] all to an end in a couple of hours, and you’d be down for potentially weeks, that makes you ...want to know, what can I do to avoid this? “
Chris Weismann, Berwick Water Department

What are the benefits

- Decrease risk of damaging vital assets to the community
- Reduce potentially costs of damage through upfront low-cost mitigation
- A gradual replacement plan does not force the plant to incur any extra costs

How much did it cost (TBD)

What did they learn or what would they recommend to others

Short-term mitigation options included:

- Placing sandbags at utility entryways
- Installing backflow preventers on low lying overflow pipes
- Securing or elevating tanks to prevent floating
- Ensuring adequate finished water storage prior to storm events

Think ahead. Make plans now to reduce risk.

Four basic steps to increase your utility’s resilience to flooding:

1. Understand the threat of flooding
2. Identify vulnerable assets and determine consequences
3. Identify and evaluate mitigation options
4. Develop plan to implement mitigation measures

Implement low cost solutions right away, then undergo larger changes later on

*100 year flood- A flood that has a 1-percent chance of occurring in any given year