Challenge

One of the biggest challenges we are facing is our nation’s aging water and wastewater infrastructure, which needs to be repaired or replaced. Recently, The American Society of Civil Engineers’ (ASCE) latest Report Card for America’s Infrastructure, issued every four years since 2001, gave the nation’s water systems a D grade and wastewater systems a D+ grade.

American Water works with local communities to identify problem areas, which helps us plan where and when to proactively replace and upgrade our infrastructure. Many factors contribute to engineer and operator decisions on when to upgrade pipes and facilities. Our engineers use a sophisticated computer model that “ranks” mains based on more than a dozen variables, in order to help them efficiently make informed decisions. For customers, it means improved water quality, service reliability and fire protection.

We learned that, beyond an understanding of what they pay for each month, customers also want us to provide tips and information they can use, and they want to know more about what we do for their communities. It’s not enough to say we care; they want to see the ways we care.

Solution

American Water began brainstorming ideas on how to utilize geographic information system (GIS) tools to improve interdepartmental and customer communication of utility data. The collaboration between External Affairs and Engineering to utilize ESRI StoryMaps to share the investment American Water is making toward pipeline replacement was one tool the team was very excited to implement for both the customer’s and utility’s benefit.

Now, American Water customers can view details about these infrastructure projects and other capital investments thanks to a new interactive map recently launched by American Water subsidiaries in New Jersey, Pennsylvania and West Virginia. The maps are located on the subsidiaries’ websites.

CASE STUDY: HELPING CUSTOMERS SEE THEIR “WATER BILLS AT WORK”

With this user-friendly map, customers can view details about the company’s water and wastewater pipe renewal or replacement projects across its service areas in the state.
Often our customers do not necessarily see their water bills at work because we may not be upgrading infrastructure in front of their home, or we may not make it obvious that nearby construction work is a water system improvement rather than a sewer, natural gas or even road improvement. While we try to communicate major infrastructure investments to our customers through mailings and press releases, we developed this map to go the next step and provide details about all of our current projects statewide through a map that is accessible from any computer or smartphone.

**Benefits**

With this user-friendly map, customers can view details about the company’s water and wastewater pipe renewal or replacement projects across its service areas in the state. The map features summaries of pipe upgrades across the state, total dollars invested and length of pipe being installed. By clicking on individual projects, users can see specific project details and “zoom in” to view the street level details of projects in their town or county.

American Water is looking forward to utilizing additional GIS tools for conveying and evaluating utility data, as this is only scratching the service of what GIS is able to do for the business. We want our customers to know we are working for them, helping to improve the systems and striving to earn and keep their trust as their water services provider.