# **Overcoming Financial Obstacles** Fargo, North Dakota



# **QUICK FACTS**

Population <sup>1</sup>
Flood-Related Disaster <sup>2</sup>
% of City Properties at Risk <sup>3</sup>
Avg. Cost of Flood Insurance Per Household <sup>4</sup> \$598
FEMA Community Rating System Score (2019)⁵ 5





# CHALLENGES

The Fargo-Moorhead Diversion project is a large, complex, and very expensive flood control project that includes a 30-mile diversion channel, levees, and upstream staging areas. The project team had to coordinate with stakeholders across multiple state and regional jurisdictional boundaries. At times, the project has been politically contentious.

# YEARS WITH DAMAGING FLOODS, 1976-2019

Size proportional to National Flood Insurance payments.



# **LESSONS LEARNED**

# Larger projects require more flexibility and creativity.

Fargo's flood mitigation project is estimated to cost \$2.75 billion.<sup>6</sup> A project of that scale inevitably has unexpected challenges. The organizing team had to be flexible and responsive to keep the project moving. For instance, the project team chose a route that was less efficient from an engineering perspective but more politically acceptable given stakeholder objections. Negotiating skills were key.

# Funders have specific requirements and preferences.

Fargo's project had a low benefit-cost ratio, which made it less competitive for funding from the U.S. Army Corps of Engineers. Fargo officials, however, understood that the Corps was interested in exploring creative financing mechanisms with private funding. The city proposed a public-private partnership and pitched it as an opportunity to experiment with this model. The Corps agreed and prioritized the project. Funding applications should be specific to the funder and demonstrate an understanding of its priorities.

# Public relations campaigns work.

Fargo's emergency response programs are heavily dependent on volunteers. Program team members created a public relations campaign to secure votes for a local sales tax by reminding community members of the harsh conditions of volunteering to fight floods in North Dakota's sub-zero weather.

# Projects have long-term fiscal impacts.

Fargo understood that property buyouts may diminish their municipal revenues if residents leave the city. They provided financial incentives for buyout participants who chose to stay in the community, thereby protecting an important part of the tax base.

## **OVERVIEW**

The Red River divides Fargo, North Dakota and Moorhead, Minnesota as it flows north to Lake Winnipeg. The geography is exceptionally flat, heightening the risk for annual spring flooding. Between 1965 and 2019, the Federal Emergency Management Agency (FEMA) issued 26 disaster declarations for Cass County. Major flood events in 2009, 2010, 2011, 2013, and 2019 have reinforced the importance of flood protection.

In 2009 Fargo experienced a nearly 41-foot flood event that inundated parts of the city. This event motivated the community to initiate a large-scale flood diversion project spanning the Minnesota and North Dakota state line. It includes a 30-mile diversion channel, a 20-mile southern embankment to regulate flood water flows through the metro area, and in-town levees in Fargo and Moorhead. The project was designed to protect the city from a 100-year flood event and reduce the flood risk for 230,000 people in Fargo, Moorhead, West Fargo, Horace, and Harwood. Construction of the diversion channel is expected to be completed in 2027.

Funding Highlights: Fargo-Moorhead Diversion Project				
Local	State	Federal	Private	
Two ½-cent local sales taxes and one ½-cent countywide sales tax (\$1.1 billion)	Funding from both MN (\$86 million) and ND (\$870 million)	\$750 million from U.S. Army Corps of Engineers	Public-private partnership	

# LARGER PROJECTS REQUIRE CREATIVE FUNDING AND FLEXIBILITY

The diversion project is one of the most expensive flood mitigation projects currently being undertaken in the United States. The estimated costs range from 2.2 - 2.7 billion, and piecing together its funding has taken years.<sup>6</sup>

Fargo faced many challenges in the design and implementation of the project. It involves six rivers, protects more than five jurisdictions, and crosses not only state lines but also FEMA regions. Working across jurisdictions required the diversion's advocates to negotiate priorities, requirements, and even different interpretations of the same policies in multiple cities and states.

According to city officials and U.S. Army Corps of Engineers' assessments, given the geography and hydrology of the region, protecting the Fargo-Moorhead region from flooding would have been nearly impossible without such an expensive and ambitious design. Some of the costs still have not been funded. However, the tactics Fargo has used to secure the funding to date have been innovative and noteworthy.

### 1. Overcoming a Low Benefit-Cost Ratio

One of the first challenges Fargo encountered when seeking funding for the diversion project was its low benefit-cost ratio. To qualify for federal funding, projects must be shown to be cost-effective, which is proven through a benefit-cost ratio. While property buyouts in the floodplain are typically cost-effective, the diversion project's expensive price tag skewed the benefit-cost ratio downward. Further, the properties being bought were predominantly residential, which often have lower property values than commercial properties and served to further lower the benefit-cost ratio. As a result, the diversion project was not competitive for funding from the U.S. Army Corps of Engineers.

Instead of giving up on Corps funding, Fargo leadership presented an innovative strategy for implementation: a public-private partnership that would help cover costs and create new funding and organizational opportunities. The proposed partnership



Fargo community volunteers saved the city from devastating flooding in 2009.

#### Flood fighting in Fargo: The 2009 flood

Fargo's long history of "flood fighting" prompted the city to develop an extensive volunteer-based approach to emergency management in which hundreds of community members help sandbag and build temporary levees.

In 2009, Fargo experienced a massive flood in early spring. The city and volunteers rallied to fill millions of sandbags, ultimately placing them over 19 miles and building another 69 miles of temporary flood measures in freezing winter conditions. Thanks to the volunteers' heroic efforts, the city was largely spared from flood damages. Late Mayor Dennis Walaker joked that, if the flood fight successfully spared the city, he would buy everyone in Fargo a beer.<sup>7</sup> He later handed out 9,000 "Denny Dollars" coupons that could be used for \$1 off beers at a local bar.

When city officials proposed the Fargo-Moorhead Diversion channel, they reminded community members of the risk the flood posed and the effort it took to save the city. To build support for the project, they created a successful public relations campaign with pictures of volunteers placing frozen sandbags in neighborhoods during a frigid North Dakota March. The campaign worked and voters approved a local sales tax to kickstart the flood control project. was designed to supplement public funding with capital from private investors. In Fargo's project, the investors' upfront capital gets paid back with interest over time drawing from voter-approved sales tax revenues. In this public-private partnership, the investors also design, construct, and maintain the project for 30 years, but the infrastructure remains publicly owned.

The creative funding won over the U.S. Army Corps of Engineers. They pledged \$750 million in funding and prioritized the project. Under the agreement, the public-private partnership will pay for the diversion channel itself (when construction begins in 2021), whereas the Corps provided funding for the southern embankment construction (that began in 2017).

## 2. Leveraging Local Revenues to Jumpstart the Project

Another challenge for accessing funding was the relative absence of flood losses in Fargo. Although the city is prone to flooding, its exceptional record of "flood fighting" and emergency response measures—conducted, in large part, by volunteers—have often prevented major flood losses. As a result, Fargo was ineligible for some forms of federal funding. However, emergency measures such as constructing temporary levees and producing and placing sandbags were expensive and exhausting for volunteers. Fargo's city government and flood-fighting residents were motivated to find a better solution.

City officials used their history of sandbagging and successful flood fighting to the city's advantage, despite the consequences for funding eligibility. To generate local funding, Fargo and Cass County proposed a ½-cent sales tax increase in 2010 with revenues earmarked for flood control projects. Fargo officials developed a public relations campaign that focused on how the diversion project would relieve frustrations that many residents felt when forced to sandbag in freezing conditions to prevent their community from flooding.

The public relations campaign worked, and the sales tax passed with over 90% of the vote.<sup>8</sup> In 2013, another ½-cent increase in the city's sales tax was approved by voters for flood protection.<sup>9</sup> Both 1/2-cent sales taxes will be in place until 2084. Long-term local sales taxes like these provide a stable source of funding that is not subject to changing state or federal funding priorities. Local funding is projected to cover a greater percentage of the project than is required by federal partners, making Fargo a more attractive funding partner.

# 3. Making Buyouts Work for the City

The diversion required properties in the floodplain to be purchased by the city. Since 1997, more than 200 homes have been acquired by the city of Fargo.<sup>10</sup> In many communities, these buyouts can result in residents leaving the jurisdiction entirely, reducing the tax base and resulting in decreasing municipal revenues. To encourage residents to stay and reduce negative revenue impacts, Fargo provided \$15,000 in cash incentives for those who remained in the community following buyouts. The city also paid residents 110% of the assessed values of their homes to generate goodwill.

Although Fargo's flood project is unusual in terms of scale and cost, many flood mitigation projects include substantial infrastructure changes or updates. These types of projects are expensive and often take decades to complete. A community may be motivated to reduce its flood risk even without large investments from federal or state partners. These challenges force communities and local leaders to think creatively about how to develop local funding or how to convince stakeholders



#### What's a benefit-cost analysis?

The Federal Emergency Management Agency (FEMA) relies on benefit-cost analyses to assess the net advantages of flood mitigation projects. The analysis estimates costs and benefits over a defined time period and results in a benefit-cost ratio that is used to compare cost-effectiveness of projects.

FEMA has defined methods for how to calculate the benefit-cost ratio. For flood mitigation projects, the analysis will include the costs to develop and maintain the project, including the costs of acquiring properties and rights-of-way, planning and engineering costs, construction and materials costs, and administrative costs. Benefits will include the value of risk reduction (i.e., costs of damages and service losses avoided), as well as cobenefits like improved access to recreation.

If the ratio of benefits to costs is greater than one, it means a community will benefit more from the project than the project will cost. FEMA's Hazard Mitigation Grant Program requires projects to be cost-effective to be eligible for funding. In other words, the benefit-cost ratio must be higher than 1.0. to participate. Fargo's use of a public-private partnership, its local sales tax, and its approach to buyouts suggest how innovative thinking can generate community support for projects while also attracting unexpected funders.

## LEARN MORE ABOUT FARGO'S FLOOD MITIGATION EFFORTS

Fargo-Moorhead Area Diversion Project <u>https://fmdiversion.gov/</u>

City of Fargo Flood Control Projects and Protection https://fargond.gov/city-government/departments/engineering/flooding-flood-control

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# THIS REPORT IS PART OF A SERIES

This case study is part of a series entitled *Building for the Future: Five Midwestern Communities Reduce Flood Risk.* 

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#### Federal Emergency Management Agency regions

The Federal Emergency Management Agency (FEMA) is tasked with coordinating disasters that overwhelm the capacity of local and state governments. FEMA is headquartered in Washington, DC, and organized into 10 multi-state and territory regions. These FEMA Regions serve as a liaison between the federal government and local and state offices.

FEMA Regions are also responsible for administering specific delegated programs and for setting certain regional priorities. Because the regions may interpret federal guidance differently from each other, projects such as Fargo's that span regions may run into challenges negotiating these different interpretations.