

# Mitigation Success

## Trenton Island, Pierce County, Wisconsin

### Background:

Trenton Island is located in the unincorporated area of Trenton Township, Pierce County, in northwestern Wisconsin. Often called Pucketville, it is middle of the Mississippi River and in the floodway. Developed prior to Pierce County’s adoption of floodplain management regulations, which prohibit structures in the floodway, the homes and businesses of Trenton Island are on hazardous ground. (See Appendix A for floodway and floodplain definitions.)

For years the residents of Trenton Island have suffered severe and repetitive flood damage. Major floods in 1952, 1965, 1969, 1993 and 1997 devastated the community, damaging homes, businesses and island infrastructure. Wells used for drinking water were contaminated, overflowing sewage spread bacteria to flooded buildings and down the Mississippi River, businesses lost customers, temporary housing costs grew as residents forced from their homes spent weeks in costly lodging. Minor flooding in 1967, 1975 and 1986 also damaged the community. With each flood, cleanup and repair costs mounted along with the costs of emergency response and repairs sustained by county, state and federal governments.

### Flooding and Flood Threats on Trenton Island

Flood Damages Occur When Water Level is 14 Feet or More Above Flood Stage  
Crest and Height Figures are in Feet Above Flood Stage

<i>Year</i>	<i>Crest</i>	<i>Date</i>	<i>Type</i>	<i>Begin</i>	<i>Height</i>	<i>End</i>	<i>Height</i>	<i>Duration</i>
1952	16.80	N/A	Major	N/A	N/A	N/A	N/A	N/A
1965	20.85	04/19	Major	04/13	15.00	05/01	13.90	19 Days
1966	12.00	03/24	Threat	—	—	—	—	—
1967	14.20	04/06	Minor	04/05	14.10	04/07	13.90	3 Days
1969	18.80	04/17	Major	04/12	14.60	04/27	14.00	16 Days
1971	12.80	04/16	Threat	—	—	—	—	—
1973	12.69	03.20	Threat	—	—	—	—	—
1975	14.90	05/01	Minor	04/28	14.58	05/08	13.60	11 Days
1976	12.00	04/04	Threat	—	—	—	—	—
1979	13.68	04/25	Threat	—	—	—	—	—
1982	13.38	04/22	Threat	—	—	—	—	—
1983	13.15	03/11	Threat	—	—	—	—	—
1984	12.27	06/20	Threat	—	—	—	—	—
1986	14.88	01/07	Minor	04/05	14.60	04/11	13.92	7 Days
1986	12.90	09/27	Threat	—	—	—	—	—
1992	12.62	03/14	Threat	—	—	—	—	—
1993	15.25	06/28	Major	06/25	14.38	07/03	13.98	9 Days
1997	17.20	04/12	Major	04/07	14.40	04/20	14.00	14 Days
2001	17.80	04/28	Major	04/11	14.00	05/08	14.00	27 Days

## Zoning and Floodplain Regulations:

Trenton Island is in the Mississippi River floodway. Federal, state and Pierce County floodplain management and zoning standards for the floodway prohibit new construction and tightly regulate existing structures. All existing structures in a floodway are classified as nonconforming uses, and cannot be repaired or replaced if the cumulative damage from one or more floods exceeds fifty percent of the structure's present assessed value. In addition, any remodeling is limited to fifty percent of the structure's present assessed value, over the life of the structure.

Any repair or remodeling effort is considered to be a conditional use, which requires a public hearing. The public hearing fee is \$300.00. All actions or approvals granted by Pierce County are subject to review by the Wisconsin Department of Natural Resources (DNR). The DNR may file objections to plans and Pierce County approvals.

Many of Trenton Island's structures were damaged extensively by the 1993 floodwaters. For some, the losses exceeded fifty percent of the structure's value and thus subjected them to the floodway regulation prohibiting repair or replacement of the structure.



*Most of Trenton Island (area within red border) is visible in the photo shot during the 2001 flood. Channels of the Mississippi are at the bottom, top and right of the Island. All of Trenton Island is in the floodway.*

## Project:

The floods of 1993 hit Trenton Island hard and Pierce County officials and island residents faced some difficult choices. Local residents who wanted to rebuild could be in violation of floodplain ordinances, and; they would remain in the floodway. Also, given the island's flooding history and its location in the floodway, Trenton Island would surely flood again. Clearly here was a recurring problem in need of a permanent solution.

A Presidential Disaster Declaration for the 1993 Wisconsin flooding made federal disaster dollars available for mitigation projects through FEMA/State Hazard Mitigation Grant Program (HMGP). To prevent the suffering, damage and expense wrought by

repetitive flooding, Pierce County officials sought participation in a voluntary property acquisition project through the HMGP.

The purpose of the project was to:

1. Acquire flood prone properties from willing sellers. Those properties included homes, businesses and vacant parcels on Trenton Island and the surrounding communities of Bay City, Hagar City and Spring Valley.
2. Provide property owners with an opportunity to recoup investments and equity.
3. Enact perpetual deed restrictions on acquired properties to ensure land use would remain compatible with open space, recreational or wetlands management practices. These restrictions are in compliance with HMGP regulations and sound floodplain management practices.
4. Reduce the need for future county, state and federal disaster response and recovery expenditures.



*Shown above during the flood of 1993, many of these buildings were purchased and the lots returned to open space. The property owner of the two homes on the far left chose not to sell. The homes were flooded in 1997 and 2001.*

Pierce County officials prepared and submitted a project application to the Wisconsin Emergency Management (WEM), the state administrator of the HMGP. Following their review the project was submitted to FEMA for approval and federal funding. Under the regulations of the HMGP, FEMA would provide 75% of the six million dollar project costs. The remaining 25% would be split between WEM and the Wisconsin Department of Administration Division of Housing, which provided funding through a Community Development Block Grant for Disaster Relief.

To supplement funds provided by the HMGP, WEM and the Wisconsin Department of Administration Division of Housing, project administrators raised \$187,989.00 by selling salvage from purchased structures. Two additional homes were bought and removed from the floodway with salvage funds and \$52,239.00 of the salvage income was used to help fund another HMGP project in the City of Darlington.

With state and FEMA approval complete and funding in place, Pierce County project administrators began implementing the project in early 1995. Over the next three years, owners of fifty-nine Trenton Island properties accepted offers for buyout from the Pierce County HMGP project. Seven more owners sold their properties to the Red Wing Area Fund, a local conservation group. In all sixty-eight or sixty-five percent of island properties were purchased and returned to open space. (See Appendix C)

Some Trenton Island residents were initially reluctant to participate in the buyout. However, the specter of rebuilding again, or of not being able to rebuild and still be in compliance with floodplain regulations, convinced them to sell. Others like Cash Gardas, an island resident since 1931, welcomed an opportunity to leave. “I’ve been through, let’s see—one, two, three, four—four floods,” he says. “I am ready to leave the floodplain.” He adds with resignation, “There ain’t much you can do about it when it wants to rain and keep raining.”

*“I’ve been through, let’s see—one, two, three, four—four floods. I am ready to leave the floodplain.”*

**Cash Gardas  
Trenton Island resident and  
project participant**

In addition to providing all property owners with the fair market value of their properties as stipulated under the HMGP, owners of primary residences were compensated for moving expenses and replacement housing cost differential as required under Wisconsin state law. The housing cost differential payment made up the difference, if any, between the acquisition cost and the reasonable cost to purchase a comparable replacement, or the actual cost of the replacement dwelling, whichever is less.

During the implementation of the project, the Pierce County official in charge of administering the project kept Trenton Island residents, and others in the interested public, well informed of the particulars and progress of the buyout. Through newsletters, meetings and personal contacts, project participants and others were informed and assisted with all aspects of the acquisition and relocation processes. The administrator also served as a liaison between numerous government agencies and individual property owners. Open communication between all parties helped make the difficult process of leaving home and property easier to bear.

Today much of Trenton Island is now open space. Though some residents and businesses remain and likely will again suffer from flooding, project participants are now free from the anguish and loss of Trenton Island flooding.



*Photographed after the 2001 flood, this former home site shows the effects of high water. By participating in the buyout, the former property owner avoided thousands of dollars in flood damage.*



The majority of those who chose to sell and leave the island did not go far. Over eighty per cent of those participating in the buyout relocated within five miles of Trenton Island. (See Appendix D) Most attend the same schools, work at the same jobs, shop in the same stores and are within visiting distance of their former neighbors. Now unthreatened by flood losses, they remain a part of the economic and social fabric of the local community.

### **Benefits:**

The floods of April 1997 and 2001 clearly illustrated the benefits of the acquisition and removal of vulnerable properties in the Trenton Island floodway. The crest of the 1993 flood on Trenton Island was 1.25 feet above flood stage. In 1997, the crest was almost two feet higher than the 1993 flood at 3.2 feet above flood stage and, in 2001, the crest was higher yet at 3.8 feet above flood stage. The extensive losses of the 1993 flooding would of have been multiplied in the two succeeding floods, and in future floods, if the homes and businesses participating in the project had remained on Trenton Island.

Most of the twenty remaining homes and businesses, which chose not to participate in the buyout, again suffered flood damage in both 1997 and 2001. According to one business owner, the 2001 flood caused more damage to his structure than any previous flood. Though beyond the scope of this report, these damages can be quantified and the financial benefits of the buyout project be shown in dollars.



*Choosing not to participate in the acquisition project, these properties were flooded again in 2001 and suffered extensive and expensive losses.*

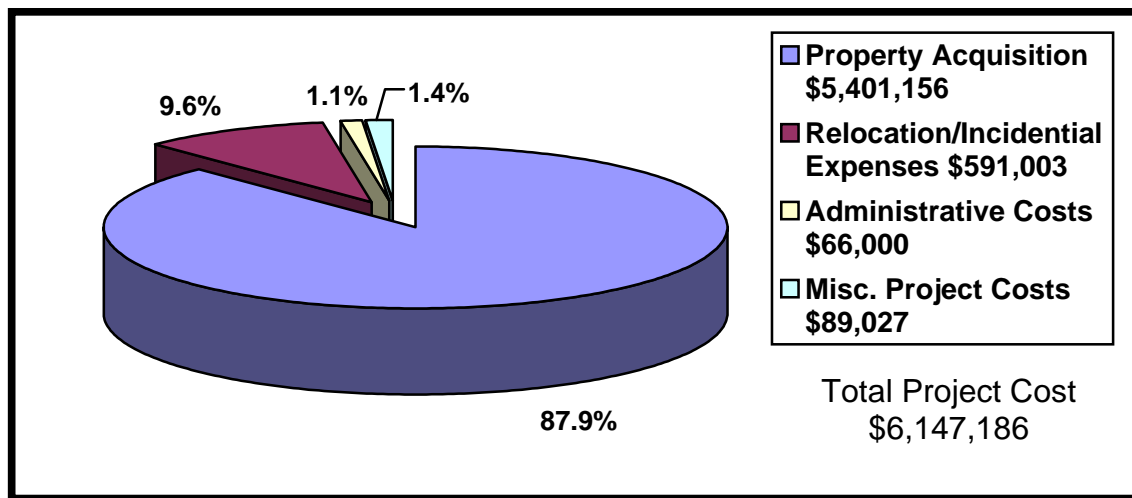
For the project participants the benefits were manifold. The pain, suffering, disruption, stress and mental and physical anguish brought with flood damage to former island residents are no more. Family photos, heirlooms and other family treasures are safe and dry. The cycle of damage, clean, rebuild, damage is broken. Property loss savings to homes and businesses is substantial. Though two businesses remain on Trenton Island, economic losses due to lost business, unemployment, increased insurance premiums and expenses for damage repair loans are reduced substantially.

With less sewage and other pollutants, there is less environmental damage. Flood insurance claim payments have decreased. Costs for evacuation and emergency response have diminished. Local, state and federal disaster aid costs for temporary housing, home repair grants and other forms of direct assistance, as well as cost for debris removal and clean up, are less.

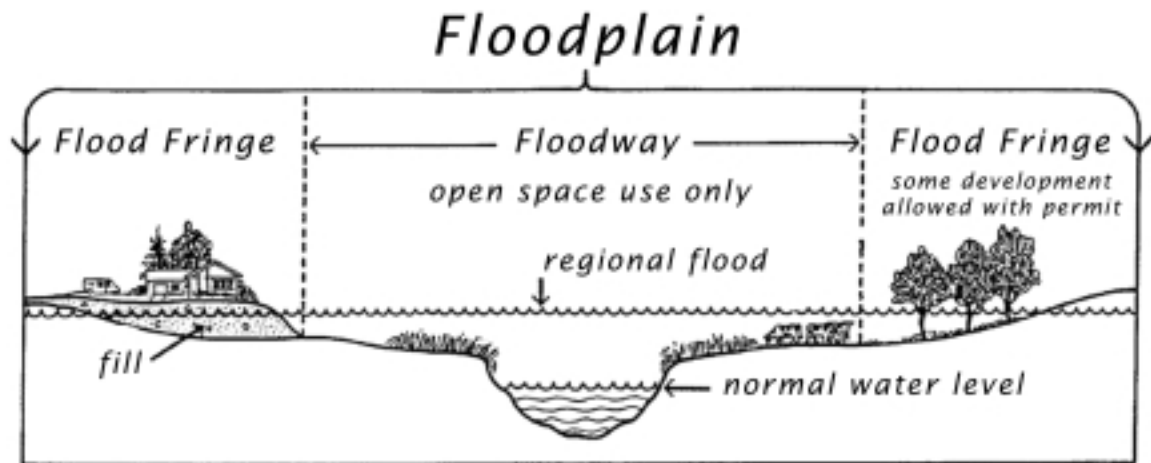
Compounding with each flood, the savings in human suffering and dollars continue to grow. Given the flooding history on Trenton Island and other areas involved in the project, it won't be long before the project benefits will greatly exceed its costs.

**Costs:**

Fourteen properties not located on Trenton Island were included in the acquisition project. Costs for those properties are included below with the costs of the fifty-nine Trenton Island properties purchased.



## What is a floodplain?



Trenton Island is in the floodway.

The **floodplain** is that land which has been or may be covered by floodwater during the regional flood. The floodplain includes the floodway and flood fringe areas.

The **floodway** is the channel of a river or stream, and those portions of the floodplain adjoining the channel required to carry the regional flood discharge. **The floodway is the most dangerous part of the floodplain—it is associated with moving water.**

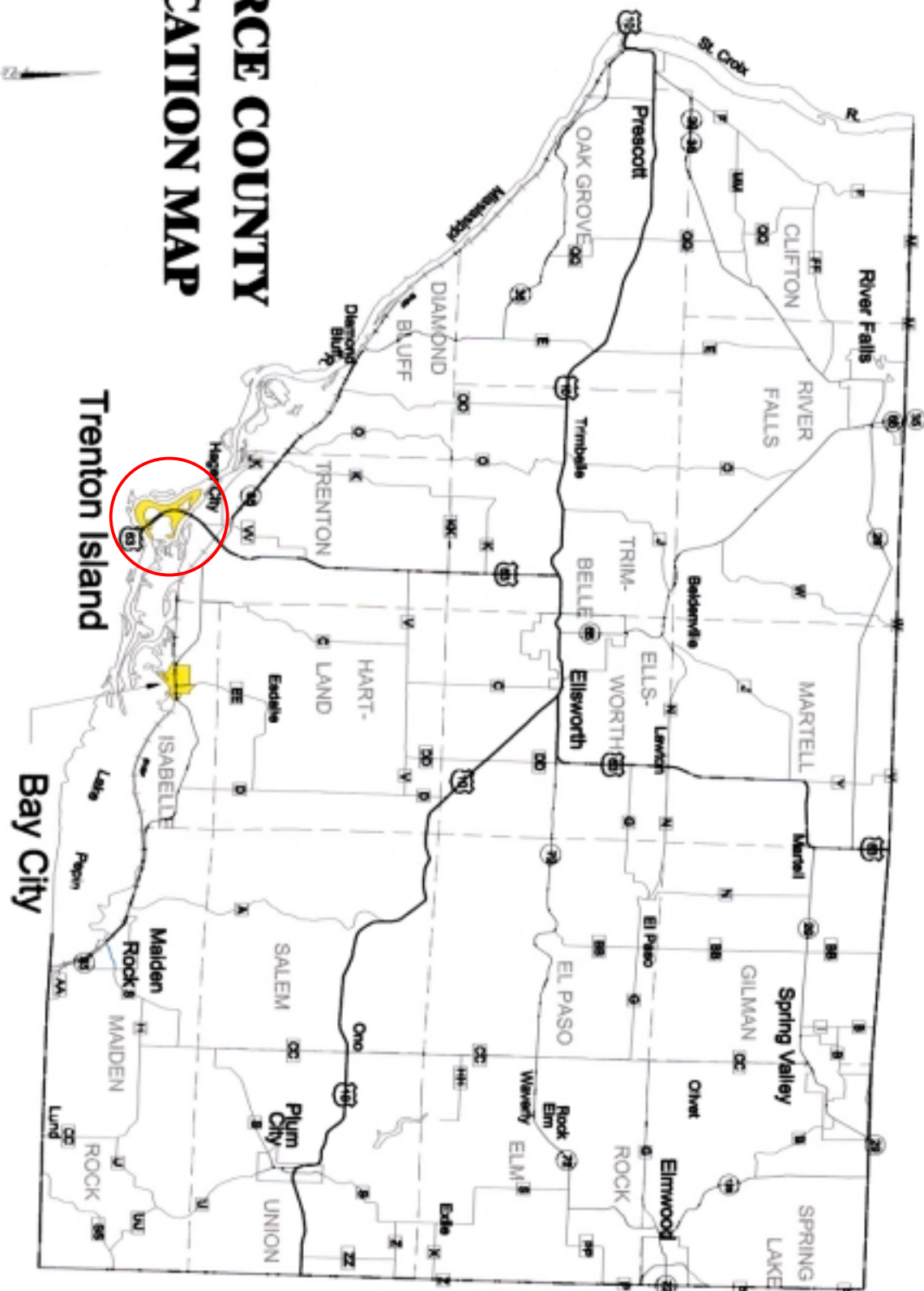
The **flood fringe** is the portion of the floodplain outside of the floodway, which is covered by floodwater during the regional flood. The term, "flood fringe" is generally associated with standing water rather than flowing water. It is also that part of the floodplain in which development is allowed subject to the floodplain development standards.

The **regional flood elevation** is the elevation determined to be representative of large floods known to have occurred in Wisconsin or which may be expected to occur on a particular lake, river, or stream at a frequency of 1% during any given year.

The **flood protection elevation** is an elevation, which is 2 feet above the regional flood elevation.



# PIERCE COUNTY LOCATION MAP





# TRENTON ISLAND

## PROPERTY ACQUISITION PROJECT

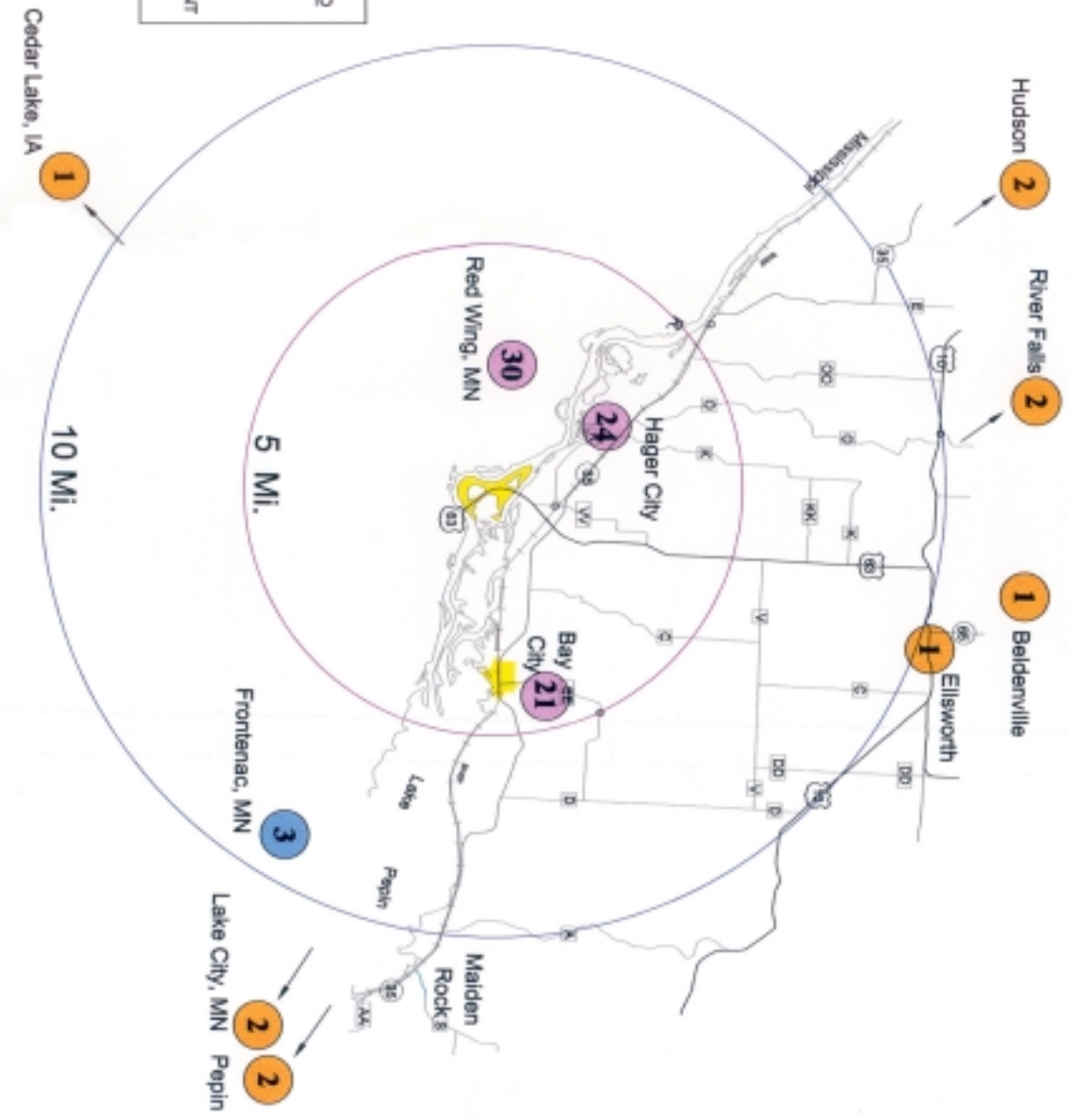




# TRENTON ISLAND RELOCATION OF BUYOUT PARTICIPANTS

- WITHIN 5 MILES
- WITHIN 10 MILES
- GREATER THAN 10 MILES

# OF PARTICIPANTS	DISTANCE FROM TRENTON ISLAND
75	WITHIN 5 MILES
3	WITHIN 10 MILES
11	GREATER THAN 10 MILES
2	DID NOT PURCHASE REPLACEMENT
91	



**Sources:**

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*Pierce County Hazard Mitigation Grant Program Application for Funding*, 1994, Pierce County, Wisconsin

*Pierce County Hazard Mitigation Plan*, 1996, Pierce County Office of Emergency Management

*What's Wrong with Living on Trenton Island? Residents vs. government in the Middle of the Mississippi*, Celeste Williams, May 29, 1994, Wisconsin Magazine, The Milwaukee Journal

*The Floods of 1993: The Wisconsin Experience*, 1993, Wisconsin Department of Natural Resources

*What is a Floodplain?*, Wisconsin Department of Natural Resources website

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