



## **FINAL DRAFT REPORT**

# **All Natural Hazards Mitigation Plan**

**To be adopted by the Village of New Richmond Council after FEMA review.**

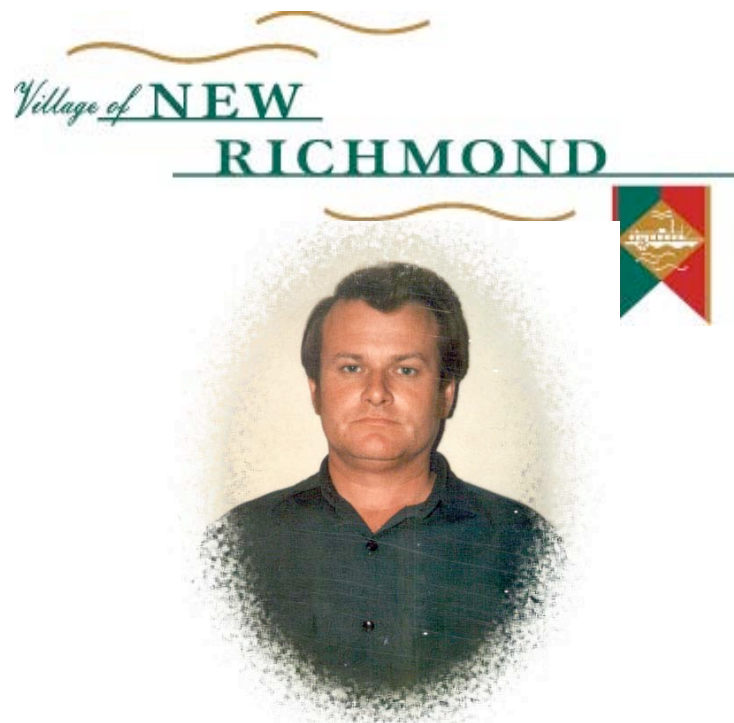
Prepared for

Village of New Richmond  
Clermont County, Ohio

August 2003

# ALL NATURAL HAZARDS MITIGATION PLAN

## Village of New Richmond, Ohio Clermont County



*This plan is dedicated in fond memory of Willard E. Davis P.S. (1939–1999). Willard, a lifelong New Richmond resident, unselfishly dedicated himself to the Village’s flood protection efforts. His work included the installation of flood elevation benchmarks, the preservation of historical Ohio River flood data and the creation of residential flood elevation information, by which the 1097 Hazard Mitigation Grant Program was based following the flooding of March 1997. Willard also provided important technical assistance involved in the construction of the Ohio River Flood Gauge located on Front Street. Willard Davis followed a history of public service set in place by his mother Hazel and father Willard “Jim” Davis, both having served as Village Council members.*

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## 1.0 Forward

In recent years, the Village of New Richmond has suffered extensive damage to both private and public infrastructure from floods. The most recent flood disaster to affect the Village occurred in March of 1997, when the Ohio River flooded a significant portion of low-lying areas of the Village. Since then, the Village has expended considerable effort toward mitigating the damage from these types of disasters. In fact, the Village of New Richmond has become a national example of what a river community can do to mitigate disaster potential while still being sensitive to the economic development and growth of their community.

One of the ways that the Village of New Richmond felt they could make an impact and to strive to become more disaster resistant was to create an **All Natural Hazards Mitigation Plan**. An **All Natural Hazards Mitigation Plan** addresses natural disasters that could affect a local community, whether it is flooding, tornados, subsidence, winter storms or some other disaster. By developing a mitigation plan, the Village is able to determine its areas of risk, assess the magnitude of the risk and develop strategies and priorities for reducing risk. Disaster mitigation planning is a comprehensive “future-oriented” process that determines how a community will deal with its problems while protecting the natural and beneficial aspects of the area.

In an effort to continue to meet the mission of protecting lives, property, economic viability and quality of life for the people of New Richmond, the Village Council has supported the effort to create an **All Natural Hazards Mitigation Plan** for their community and its residents.

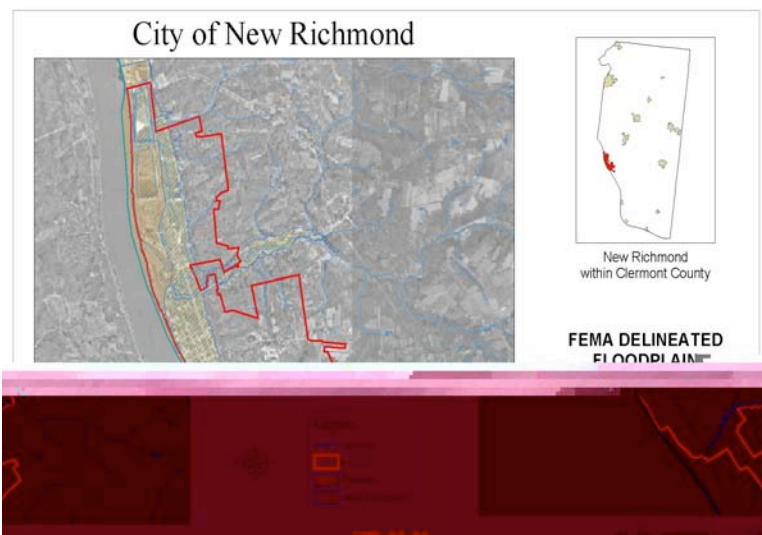
The **All Natural Hazards Mitigation Plan** will allow the Village of New Richmond to:

- Locate their areas of risk and assess the cost and magnitude of the risk;
- Develop strategies and priorities, and identify projects for reducing risk;
- Guide the community and lessen conflicts between agencies; and
- Provide eligibility for future mitigation program funds.

### 1.1 New Richmond Hazards

The Village of New Richmond is susceptible to several natural hazards. Flooding, severe storms, tornadoes and earthquakes have all left their mark on the Village. The primary natural hazard risk in the Village is flooding. The main source of flooding is the Ohio River. *Please note: Detailed descriptions of other hazards are addressed later in the text.*

Flood damage has been the result of unusual rainfall events



and constricted waterways. Due to this devastating combination, several residents have suffered repetitive losses in a short time frame. There was a Presidential Disaster Declaration for Clermont County in 1996, due to flooding. In 1997, the Village once again sustained severe flood damage both to private and public property. While the worst flooding on record occurred in the Village of New Richmond in January 1937, the recent floods have alarmed the residents and the New Richmond Village Council. All flooding within the Village occurs from the Ohio River and 12 Mile Creek, which enters the Village at the down river point of Front Street. It is estimated that the flood on March of 1997 caused approximately \$300,000 in infrastructure damages alone. The majorities of the floods occur during the spring, and are usually the result of heavy rainfall.

## **2.0 New Richmond, Ohio Community Information**

New Richmond is located in the southwest portion of Ohio Township in Clermont County. The original county seat was in Williamsburg (originally spelled Williamsburgh), where it remained until 1823, when it was moved to New Richmond, along the Ohio River, for one year.

New Richmond was laid out on two surveys. David Jackson's survey was entered on June 3, 1778, for 333 acres. In 1804, the Jackson survey became the property of Jacob Light, who laid out the 85 acres that would become the original village of New Richmond. A nephew of Mr. Light, who had lived in Richmond, Virginia, made the plat, which contained 219 lots of one-fourth acre, six 60-foot wide streets and one 33-foot wide street. Lots number 98 and 99, where the Market Street School now stands, were set aside for public use.

Robert Beal's survey of 1,000 acres was also entered on June 3, 1778. The Beal survey eventually became the property of General William Lytle, who conveyed 875 of those acres to Thomas Ashburn in 1813. In February of 1816, Ashburn laid out the section of New Richmond that begins at Union Street and extends ten blocks to the west. He named the village 'Susanna' in honor of his wife. Historical records show that Ashburn's plat of Susanna was elaborate. Had these plans been carried out, the New Richmond of today would be very different. The Village does retain one feature from these past plans, a 100-foot wide promenade on the banks of the Ohio River that provides a beautiful river view.

### **2.1 Municipal history**

By a special act of the Ohio General Assembly, passed January 11, 1828, the villages of New Richmond and Susanna were to be combined and known by the name "New Richmond." Susanna had lost its identity to its more successful neighbor. New Richmond is the only name that appears in the municipal history of the two villages. One of the first official acts of the new council was to borrow \$10 to defray current expenses. The salary of the Recorder, or Clerk, was set at 5¢ per 100 words. The Council ruled that the citizens of the Village be allowed to sit in as spectators in the council rooms during business sessions, except when council deemed it necessary to sit



***Model of the Old Village of New Richmond.***

with closed doors. One of the oldest ordinances of the Village, and one of the first to be enacted by the new council, prohibited the shooting of guns within the corporation limits.

### **Heroism**

In 1834, James G. Birney, a champion of human liberty and equal rights, began several years of publishing The Philanthropist. He came to New Richmond with the assurance of anti-slavery forces that he could pursue his mission, but it was not easy. Although New Richmond residents frowned on attempts to disturb Birney, pro-slavery forces were antagonistic.

When lawless men from Kentucky and elsewhere threatened to sack the office, abolitionists and close friends of the editor rallied to defend the paper, even sacrificing life and property. On one occasion, residents became alarmed when they learned pro-slavery forces were headed down from Cincinnati to attack the offices of The Philanthropist. Although the boatload of trouble never arrived, the people of New Richmond patrolled the streets in front of the newspaper during the night to protect it. When Birney moved his office to Cincinnati in 1836, a lawless mob destroyed it, scattering type in the streets and tearing down the presses.

In 1844, Birney was the Liberty Party's candidate for U.S. President, running with Thomas Morris of Bethel, Ohio for Vice President. In subsequent years, Birney often spoke in the highest terms of the good people of New Richmond and Clermont County, all of whom stood by him boldly in muscle and money during trying hours.

### **Market Street School**

In July of 1829, a petition was brought before the Village Council and a committee of three men was appointed to build on lots 98 and 99. The Market Street School Building, originally dedicated in 1915, now occupies this block. The last graduates from this building were the Class of 1965, when grades nine through twelve were moved to a new building on Bethel-New Richmond Road. The building was used until 1974 for grades seven and eight, with administrative offices occupying the building until 1980. The old school was sold in 1983, repurchased in 1990 and is now used as a community center that houses school administrative offices, pre-school and adult education classrooms, satellite county agencies, a branch of the public library and a youth club. It was rededicated on August 27, 1995.

### **Historic Train Disasters**

During the early 1880s, a small narrow gauge steam railroad operated between New Richmond and Newtown, Ohio. From a turntable just off Congress Street in New Richmond, the road eventually made its way along the Cincinnati Turnpike as far as Nine Mile Road. It turned and ran uphill to a place just below Nine Mile Schoolhouse, known as Three Forks. There it crossed the intersection of Three Creeks on a high, narrow trestle about 800 feet long that was built of solid oak timbers.

It was at this spot, on August 8, 1885, that the trestle gave way, causing the locomotive, three flat cars, a coal car and the combination coach to drop more than thirty feet into the valley and creek below. The accident killed three people and seriously injured nine others. The wrecked train had left the Cincinnati Northern station at 10:30 AM and was stopping at Locust Corner to take on and discharge passengers. The trestle collapsed when the train brakes were applied. The day before the accident, a train with six carloads of brick had passed safely over the same spot. This narrow gauge steam line

was the beginning of the present Norfolk & Western Railroad and was called the Cincinnati & Eastern.

### **Steamboats**

As river interests increased in the 1800s, New Richmond became an outstanding shipping point for packet boats on the Ohio River. Some of the first boats that docked in New Richmond were the Allegheny, a small stern-wheeler, the Zephyr, Lancaster #1, #2 and #4. The steamboat, William Tell, was built in New Richmond in 1826, with a capacity of about 90 tons. In 1845, the Clermont was launched, followed by two other boats also named Clermont. The Tacoma, a



sternwheeler packet boat with a wood hull, was built in New Richmond in 1883 by the Ohio River Packet Company. The intention was to operate it from Cincinnati to Chilo, but it eventually went as far as Pomeroy and Charleston. The Tac, as she was called, was destroyed by a fire at Cincinnati's Public Landing in 1922, along with the Island Queen, Morning Star and Chris Greene.

### **Early Businesses**

The Pioneer Business Directory of the Village of Susanna included storekeepers, wagon makers, a wood turner, cooper, brick maker and bricklayer, blacksmiths, a gunsmith, hatters, a cabinetmaker and a miller, shoemakers, a millwright, jewelers and watchmakers and justices of the peace. By the fall of 1816, the Village included representatives of all classes and trades, including Plummer Iams, the first storekeeper to sell medicine, and David Jones, the first to manufacture tobacco products. Others included a tavern keeper and potter; a tanner, a carpenter, a tailor, shoemaker and harness makers; a nail maker, wool-carder, blacksmith, brick maker, painter, cabinet makers, chair maker, wheelwrights, a mason, engineers, distillers, a cloth dresser, baker, teachers and physicians.

Robert Haines operated the first hotel for about 20 years, dating from the time the Village was first laid out. In 1835, Plummer Iams had a small hotel near the Springer House. Various hotels were located in the old Donaldson building on Front Street, at the ferry landings called the "St. Charles" and the "Franklin."

### **Newspapers**

For a number of years, printing was an active industry in New Richmond and contributed much to the history of the Village. The first newspaper, The Luminary, was issued in 1823, when New Richmond was Clermont's County Seat. It was published every Wednesday by the four Herron brothers, and cost \$2 for a one-year subscription if paid in advance, and \$3 if paid at the end of the year. The publisher's mottos included "Truth our guide and naught but the public good our aim" and "Enlightened minds and virtuous manners lead but to the gates of glory." When the County Seat moved from New Richmond to Batavia in early 1824, the paper soon died.

Other papers included the New Richmond Age, published in 1851 and 1852; the New Richmond Advertiser/Morning Welcome, in 1854; the New Richmond Weekly Dispatch, in 1856; the New Richmond Telegraph, in 1866; The Advertiser, in 1868; and the New Richmond Independent.

## 2.2 New Richmond Utilities

The Village of New Richmond is supplied by groundwater from three wells located in the Ohio River Sand and Gravel Aquifer at 701 Washington Street. The raw well water is pumped to the water treatment plant where it is aerated, clarified, filtered and disinfected before distribution. The Village of New Richmond maintains an emergency connection with the Clermont County Water District.

The Village of New Richmond has proudly maintained their own utilities for many years, offering water and sewage service to its residents. Supplying these services has always given the Village a certain amount of independence. The control of these utilities, although giving the Village independence, is also very expensive and requires continuous upgrades to stay in compliance with EPA requirements.

## 2.3 Census Information

New Richmond is located in Clermont County. According to the 2000 Clermont County census information, New Richmond currently has a population of 2,219 persons. As seen from the following table, the Village has seen a decline in the population over the past forty years. The Flood of 1997 caused a further loss of population, especially in the older areas of the Village, which is not represented by the table, as accurate statistics are not available. Approximately 53 mobile homes and 10 residential homes were lost due to damage from the flood. This trend is expected to reverse with the completion of the Waste Water Treatment Plant and the ability to construct affordable housing anchored with a solid school district and relatively easy access to the Cincinnati Area.

| New Richmond                      | 2000                | 1990  | 1980  | Area (sq. mi) | Density per sq. mile |
|-----------------------------------|---------------------|-------|-------|---------------|----------------------|
| <b>Population - Community</b>     | 2,219               | 2,408 | 2,769 | 3.42          |                      |
| <b>Population Clermont County</b> | 178,749             |       |       |               |                      |
| <b>Housing Units</b>              | 888<br>(100 vacant) |       |       |               |                      |
| <b>Owner Occupied</b>             | 468                 |       |       |               |                      |
| <b>Renter Occupied</b>            | 320                 |       |       |               |                      |

The Ohio Department of Development has made a PDF Document available on their website that provides more specific information for Clermont County.

<http://www.odod.state.oh.us/osr/profiles/pdf/clermont.pdf>

A large percentage of the residents of the Village utilize rental type occupancy, as shown above. Many residents within the original village area utilize rental housing through apartments, single-family homes and mobile homes. These residents were among the most severely impacted by the flood of 1997, and many rental units, especially mobile homes, are no longer available for occupancy.

### 2.3 Village of New Richmond Authority to Adopt Plan

The Village of New Richmond has zoning authority as well as subdivision regulations adopted for their community. (Please see Sections 2.4, 2.5 and 2.6 for a description all documents adopted and enforced in the Village of New Richmond.) In order for the Village of New Richmond’s All Natural Hazard Mitigation Plan to be enforceable and compliant with the Disaster Mitigation Act, the Village Council of New Richmond will adopt this plan upon approval from the Federal Emergency Management Agency and the Ohio Emergency Management Agency.

### 2.4 Land Use, Comprehensive Planning and Zoning

In an effort to plan for the future, the New Richmond Village Council asked the Village of New Richmond Planning Commission to prepare a Comprehensive Plan. The process of preparing the Village Comprehensive Plan involved the following:

1. Analyze the existing conditions by looking at the various departments and elements of the Village.
2. Analyze the Village makeup for demographics and socioeconomic characteristics.
3. Analyze the Village existing land use and potential future development.
4. Develop recommendations for goals and objectives for the Village.
5. Prepare a future land use/development map for the Village.

In preparation of the plan, the New Richmond Planning Commission decided to design a plan that offers the flexibility necessary for the community of New Richmond, with appropriate concern given to special needs presented by the prospect of future flooding. The proper use of this plan as a guide to the future is integral to assure that the Village is properly prepared for the inevitable growth on the horizon.

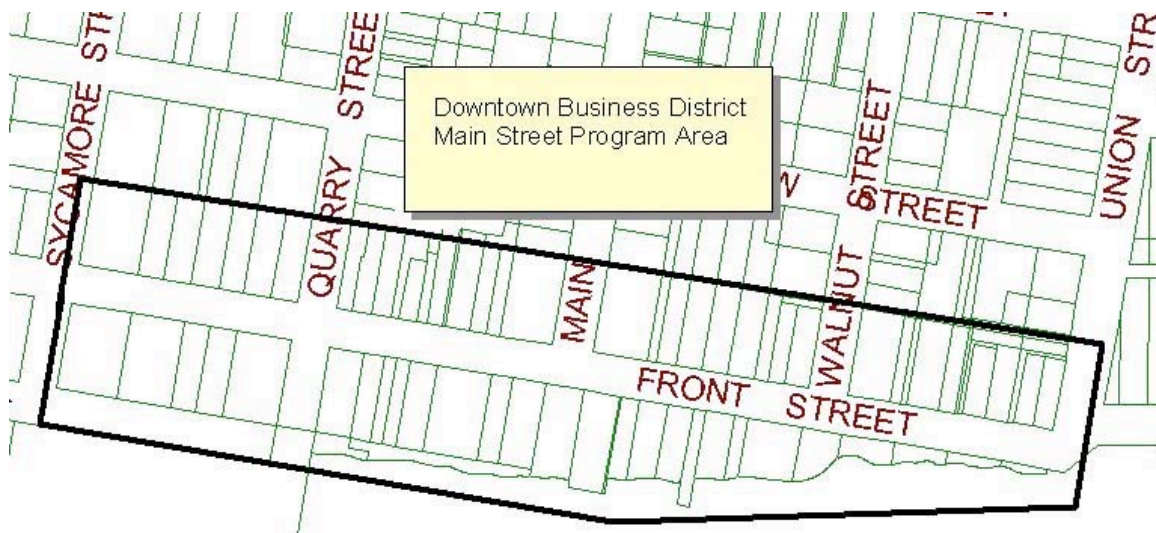


## 2.5 The Main Street Program

The Village of New Richmond was recently selected to become a Main Street Community in Ohio. The Main Street Program is a philosophy, program and proven comprehensive approach to historic commercial district revitalization, created by the National Trust for Historic Preservation. The revitalization process uses a four-point approach of promotion, economic restructuring, design and organization.

The Ohio Main Street Program, administered by Downtown Ohio, Inc., is modeled after the National Trust Main Street Center's comprehensive approach to downtown revitalization. Benefits of the program include the renewed vitality of the downtown area along with enhanced economic performance. Today, the Main Street Program has been instituted in 43 states and more than 1,600 communities. Nationwide, it has helped create 206,000 new jobs and opened 52,000 new businesses. The Main Street Program District in New Richmond is defined as Front Street, between Sycamore and Union Streets. This area is readily identifiable as the "historic commercial district." Any measures taken to improve this area of the community will benefit the other businesses through increased traffic and visibility, resulting in an improved local economy.

The Village of New Richmond hopes to revitalize their downtown while keeping in mind the opportunity to plan according to the mitigation efforts that have taken place in the past and will continue to take place until all structures in harms way are mitigated.



## 2.6 Other Existing Plans and Community Goals

### Zoning Ordinance – 11/24/75

Major amendments have occurred to the Village's zoning ordinance over the past 10 years. No zone exists for the mitigation areas, such as an environmental district, although this would be a consideration.

### Downtown Plan – 7/92

The downtown plan is part of New Richmond's effort in preparing for the submittal for downtown revitalization funds. The downtown area deals with only four (4) blocks and the plan has not been updated since its adoption.

**Subdivision Guidelines – 5/11/93**

The subdivision regulations are primarily in place for new subdivisions, which would be built on the hillside portions of the Village. The only relationship to the floodplain portions of the Village comes into play when lot splits occur.

**Fill Guidelines – 7/9/96**

Fill guidelines were created to deal with handling the multiple requests received concerning the placement of ash from the local power plant.

**Elevated Structures Ordinance – 2/11/97**

New Richmond’s elevated structures ordinance is an add-on to floodplain regulations. This ordinance requires that elevated structures comply at a level up and above the floodplain regulations, in terms of their foundation and walls. This has worked very well in stopping mobile homes from being elevated on cinder blocks.

**Floodplain Regulations – 6/24/98**

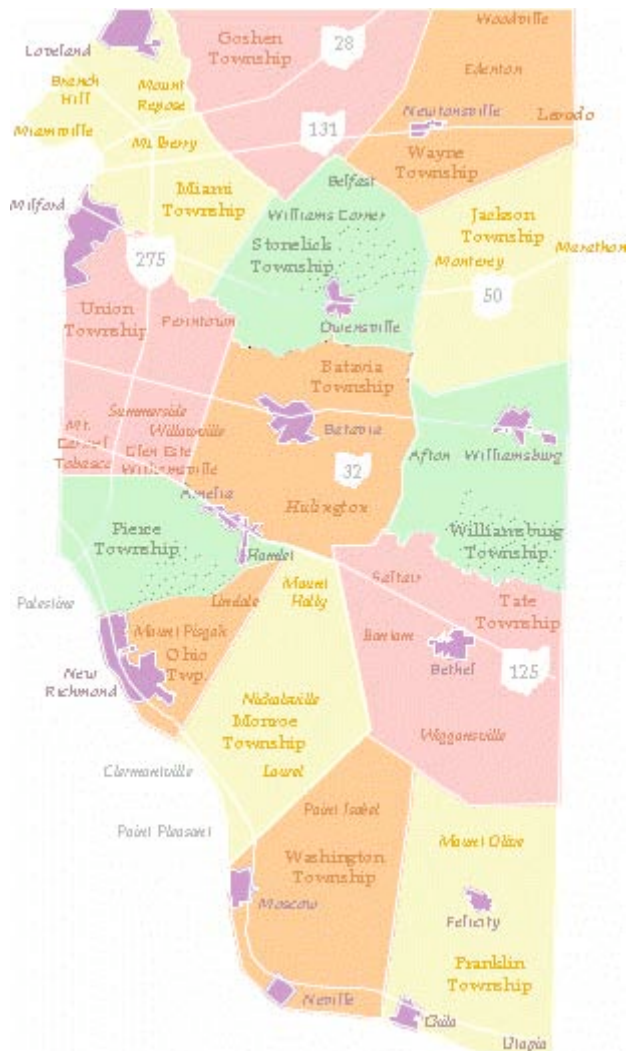
The Village's Floodplain Ordinance is a standard NFIP model regulation adopted by all communities who participate in the NFIP. The original ordinance was adopted in 1987 and an amended version was adopted in early 1998 following the '97 flood. Standard language requires flood proofing/elevation of new construction.

**Comprehensive Plan – 1999**

The Village Comprehensive Plan was written with funds received after the 1997 flooding. It references flooding and the floodplain in general, but is not of in-depth quality.

**Design Guidelines – 2002**

The Design Guidelines are part of New Richmond’s efforts to prepare for Downtown Revitalization Funding. They were only recently adopted, and are being reviewed by a professional consultant following a grant received from the Ohio Historic Preservation Office (OHPO). The Village is eligible for OHPO funding because it was recently accepted as a Certified Local Government (CLG).



### 3.0 All Natural Hazards Mitigation Planning Process

The Village of New Richmond has participated in the Community Rating System (CRS) Program since 1992. The Federal Emergency Management Agency (FEMA) created this program in an effort to improve floodplain management across the county. This program, which was first initiated in 1990, provides incentives to communities to initiate more proactive floodplain management activities and to incorporate mitigation techniques within their planning hierarchy. This is accomplished by providing a system of activities to be performed by the community that, if done in accordance with the program, will result in significant cost savings to those individuals who have flood insurance. These savings can be as much as a 45% discount off flood insurance premiums. Although flood insurance rate reduction is a major benefit of the program, the improvement in floodplain management also provides great benefits to the entire community.

This **All Natural Hazards Mitigation Plan** utilizes the planning process recommended in the CRS Program Manual. The CRS Program Manual suggests that the following outline be utilized in preparing an **All Natural Hazards Mitigation Plan**:

- A. Organize to prepare the plan;
- B. Involve the public;
- C. Coordinate with other agencies;
- D. Assess the hazard(s);
- E. Assess the problem(s);
- F. Set goals;
- G. Review possible activities;
- H. Draft an action plan;
- I. Adopt the plan; and
- J. Implement, evaluate and revise the plan.



*The Village of New Richmond, Ohio.  
A River Community with a Plan.*

The process to create an **All Natural Hazards Mitigation Plan** started with the creation of a “Core Group” of decision makers and implementers.

This group was created at the beginning of the process to lead the planning efforts. The Core Group was made up of a Village Council Members, the Village Administrator and Staff, the Main Street Program Manager along with input from the Clermont County Emergency Management Director, Clermont County Floodplain Administrator, and most importantly concerned citizens.

As stated above, the approach undertaken in the creation of the **All Natural Hazards Mitigation Plan** for New Richmond can be described as both comprehensive and collaborative. The comprehensive approach includes following the interim final rule guidelines enacted under the Disaster Mitigation Act of 2000 and the Federal Emergency Management Agency (FEMA) suggested guidelines for the creation of an **All Natural Hazards Mitigation Plan**. Any additional items that New Richmond chose to address as part of the comprehensive analysis of their community were addressed as well. The Ohio Emergency Management Agency and the Ohio Department of Natural Resources were consulted during the preparation of this plan. Since this guide was in development, all

attempts were made to coordinate efforts to meet the suggested guidelines of the Ohio Natural Hazard Mitigation Planning Guidebook.

The collaborative portion of creating the Plan included working with the different agencies within Clermont County and New Richmond. The Village could not have a comprehensive plan without the coordination of several other agencies within the County. Information was collected from agencies such as the Clermont County Emergency Management Agency, Clermont County Public Works and any other agencies that are involved in planning efforts for New Richmond. A letter went out inviting all County agencies to participate. Beth Nevel, Clermont County EMA Director participated in the first meeting. Since the County started their own PDM process, their participation in this effort was minimal. There were several agencies invited to participate. The Main Street Community Liason participated in the process.

### **3.1 Core Group**

Obtaining support from the whole community required a comprehensive approach to preparing the Mitigation Plan. Identifying those persons, community leaders and government agencies with the knowledge and authority to help a community organize a plan is key to the planning effort. A core group of leaders was necessary in order to give this task validity.

The group consisted of Ms. Minta Herrin, Administrative Assistant; Ms. Cheryl Dean, 1164 Mitigation Coordinator; Ms. Donna Hammons, Village Clerk and Treasurer; Ms. Becky Ploucha, Main Street Program Manager; Mr. Dave Kennedy, Village Administrator; Mr. Lee Vesper, Vice Mayor; and Mr. Gordon Dickerson, Citizen and Developer.

### **3.2 Public Notification Process and Involvement**

The formal public notification process as defined in the Federal Code took place prior to approval and/or adoption of the plan. The public was notified that the process to produce the All Natural Hazard Mitigation Plan was underway and that they would have an opportunity to review the draft for a thirty-day period prior to submittal to the Ohio Emergency Management Agency and the Federal Emergency Management Agency. There was a formal public hearing on November 26, 2002. (Please see Appendix 10 - Notification to Adjacent Communities.)

The Village of New Richmond is an active community when it comes to public participation and mitigation efforts. The local residents are very familiar with the efforts of local leaders. As an active participant in the Community Rating System Program, the Village of New Richmond is required to reach out to the community on an annual basis.

### **3.3 Meetings**

There were three Core Group meetings, and one community meeting for public comment on the Draft All Natural Hazards Mitigation Plan.

#### **Determination of Hazards – Meeting 1**

The kick-off meeting items of discussion included the process to be followed in the creation of an All Hazards Mitigation Plan. Overall goals of the Plan for New Richmond were discussed, and it was decided, as a group, which hazards to focus upon. By the

end of the first meeting, Core Group members had exchanged contact information, organized and scheduled several interviews to be conducted, established a priority list of hazards and discussed the general process and timeline of the project.

### **Determination of Problem Statements and Overall Goals – Meeting 2**

The second meeting focused on the development of problem statements and setting overall goals for the All Natural Hazards Mitigation Plan as it related to the hazards that were decided upon at the first meeting. Each Core Group member received several documents (via e-mail, USPS or fax) to prepare for discussion during the second meeting. The Core Group then developed problem statements for each community hazard that was identified at the first meeting. Since flooding is the most common and devastating naturally occurring disaster in the State of Ohio, it was assumed that the hazard of flooding would have the most problem statements associated with it.

Along with the development of problem statements, the core group determined overall goals to address the hazards. Goals are defined as general guidelines that explain what a community wants to achieve in the future, and set a community's priorities. Goals should be realistic and explain what a community wants to achieve concerning mitigation in the future.

### ***Problem Statements***

Below are some examples of problem statements that were created for the hazards associated with New Richmond. In order to establish the problem statements and get to the root of the issues associated with the hazards in New Richmond, the group first decided on an overall "state of the hazard" and how it has affected the community in the past.

#### ***1. Flooding***

Historically, this hazard has occurred most frequently and has caused the most damage in terms of dollar value of all natural disasters. It also affects a large portion of the Village. The current state of flooding is the continuing occurrence in numerous areas of New Richmond.

- Residents and businesses are continually displaced during flood events, affecting both short and long-term income that equates to a loss of tax base for the Village.
- Because it is utilized as the Emergency Operations Center (EOC), the school is commonly disrupted for weeks.
- Normal government duties are disrupted for days and sometimes weeks.
- Substandard repairs are common after the event, when people start to rebuild.
- Little maintenance is occurring in the streams in New Richmond, leading to constrictions from man-made activities and natural debris.
- The transient nature of some of the New Richmond residents makes it difficult for public awareness campaigns relating to flooding awareness to be affective.
- Post-disaster stress management services need to be provided to residents for the overall good health of New Richmond residents.
- Health issues, clean up and re-entry into the affected areas after an event are not being adequately addressed.
- Federal disaster dollars are not directly tied to work being conducted at the local level, which leads to angry residents and hard feelings between the local government and the residents they serve.

- “Existing” residential development in the floodplain – both repetitive loss structures and structures that are located in the 100-year floodplain.
- Limited coordination occurs with adjacent communities in regard to floodplain and storm water management and increasing standards.
- There are no tie down requirements for propane tanks, which means that during a flood event they are potentially floating bombs.

*Overall Goals:*

- Manage the Village floodplain to minimize the loss of life and damage to property during flood events, while “reinvesting” in the community.
- Focus on the areas within the Village that need mitigation and target them with specific types of mitigation techniques.

## **2. Severe Storms**

The current state of severe storms is the continuing occurrence in numerous areas of New Richmond. Severe storms are one of the lesser-known hazards in New Richmond.

- There is little to no public awareness occurring in the Village as it relates to the seriousness of severe storms, winter storms and snow emergencies.
- There are at least 6-10 electrical outages a year in New Richmond due to severe storms.
- There are terrain issues in several areas of the Village of New Richmond which directly relate to winter storms and difficulty of access
- There is increased runoff attributed to flooding, exacerbated by steep terrain and inadequately sized culverts.

*Overall Goals:*

- Increase awareness of severe storms and reduce property damage from this type of hazard.
- Specifically focus on key issues related to severe storms such as hypothermia, children playing near fast moving water, etc.
- Encourage Clermont County to address severe weather issues in their building standards and increase public awareness of the damage that can be done by these types of storms.

## **3. Tornadoes**

The current state of tornadoes is the fact that they will continue to occur. The Village has several options to prepare and mitigate for tornadoes.

- There is a lack of a warning system in New Richmond.
- There are limited wind resistant construction requirements Clermont County.
- There are no public safe zones established in New Richmond.
- There is limited education occurring in the schools as it relates to tornadoes and how to react to one.
- There is a lack of weather radios in the community.

*Overall Goals:*

- Establish a warning system and increase awareness by capitalizing on existing and future funding.
- Encourage Clermont County to address building standards as they relate to tornadoes.

#### **4. Earthquakes**

The current state of earthquakes is that they are one of the lesser-known hazards that New Richmond has to deal with.

- Currently, there is little to no public awareness occurring in the Village as it relates to the seriousness of earthquakes and how an earthquake could affect New Richmond.
- There are no Clermont County building standards that address earthquake resistant building construction

##### *Overall Goal:*

- Reduce potential damage and increase public awareness of this type of natural hazard.

#### **Determination of Alternatives and Evaluation Criteria – Meeting 3**

The next meeting was designed to address how each problem statement relates to each hazard, by creating possible alternatives. One of the alternatives considered for all of the hazards is the “No Action” option. The core group identified alternatives by utilizing all strategies and measures to implement that particular alternative. Below are some examples of the alternatives that were developed by the Core Group.

##### **1. Flooding**

- No Action.
- Seek funding for a new EOC/government function center.
- Reduce displacement of businesses and residents by not utilizing FEMA dollars in mitigation efforts, in order to re-develop correctly in the floodplain.
- Increase sewer and water users in New Richmond by properly developing in the 100-year floodplain.
- Develop innovative community-wide clean-up programs along streams.
- Work with Clermont County to create an ordinance for repair standards.
- Increase public awareness with innovative PSAs focusing on the transient population and children K-12.
- In regard to existing structures in the floodplain, create program for more buy-out's, retrofits, elevated structures and flood proofing both on homes and utilities.
- Increase coordination with Clermont County as it relates to floodplain and storm water management and improved standards.
- Evaluate need for stress management for families in conjunction with existing programs through Red Cross etc.
- Establish an ordinance or work with Clermont County to create an ordinance that requires propane tanks to be strapped down.
- Create a cumulative, substantial damage and improvement program for New Richmond.

##### **2. Severe Storms**

- No Action.
- Increase PSA campaigns to make them more creative/innovative. Possibly focus on K-12 grade campaign. Target senior audience as well.
- Research reason for power outages in Village and how they can be reduced and/or eliminated.
- Evaluate how other communities deal with steep terrain and snow emergencies.

### 3. Tornadoes

- No Action.
- Work with County EMA to establish warning system for New Richmond.
- Increase PSA campaigns to make them more creative/innovative. Possibly focus on K-12 grade campaign. Target senior audience as well.
- Village of New Richmond to attempt to acquire grant money to establish program to “purchase” weather radios and distribute in the community.
- Establish public safe zones. Research further.
- Encourage mobile home parks to “partner” to create public safe zones.

### 4. Earthquakes

- No Action.
- Increase PSA campaigns to make them more creative/innovative. Possibly focus on K-12 grade campaign. Target senior audience as well.
- Work with and encourage Clermont County to improve building standards.

### 3.4 Matrix Development

Once the alternatives were created for each hazard, the Core Group established evaluation criteria to rank each of the alternatives. The mitigation criteria selected: economically justifiable; technically feasible; socially equitable, environmentally sound and publicly acceptable.

The rating scale used for the matrix went from 1 to 5. A rating of 1 is considered low, while a rating of 5 is considered high. Each mitigation alternative under each hazard was rated by considering the evaluation criteria at the top of the matrix. Each mitigation alternative was to be judged as a separate concern.

The evaluation criteria and the alternatives developed by the Core Group were then placed in a matrix that organized all the alternatives and how they rated. Utilizing a matrix allowed the community to systematically review all alternatives, identifying which mitigation method(s) are appropriate based on the specified criteria. The combined results of all the Core Group members were tabulated and the matrix comparison was complete.

Each of the activities was given an averaged number based on all the Core Group scores. This will help New Richmond focus their mitigation strategies on the highest rating activities.

| New Richmond Hazard Mitigation Plan  | Evaluation Criteria      |                      |                    |                       |                     |             |        |            | Total | Rating Scale |
|--|--------------------------|----------------------|--------------------|-----------------------|---------------------|-------------|--------|------------|-------|--------------|
|  | Economically Justifiable | Technically Feasible | Socially Equitable | Environmentally Sound | Publicly Acceptable | Appropriate | Hazard | Prevalence |       |              |
| <b>Flooding</b>  |                          |                      |                    |                       |                     |             |        |            |       |              |
| No Action  | 1                        | 2                    | 1                  | 1                     | 1                   | 5           | 11     |            |       | 1-low        |
| Seek funding for a new EOC/government function center  | 3                        | 4                    | 4                  | 4                     | 4                   | 5           | 24     |            |       | 2            |
| Reduce displacement of businesses and residents by not utilizing FEMA dollars in mitigation efforts in order to re-develop correctly in the floodplain               | 3                        | 4                    | 2                  | 2                     | 2                   | 5           | 18     |            |       | 3            |
| Increase sewer and water users in New Richmond by properly developing in the 100-year floodplain   | 4                        | 4                    | 4                  | 3                     | 4                   | 5           | 24     |            |       | 4            |
| Develop innovative community-wide clean-up programs along streams  | 3                        | 3                    | 4                  | 5                     | 4                   | 5           | 24     |            |       | 5-high       |
| Work with Clermont County to create an ordinance for repair standards  | 3                        | 4                    | 3                  | 4                     | 3                   | 5           | 22     |            |       |              |
| Increase public awareness with innovative PSAs focusing on the transient population and children K-12  | 4                        | 4                    | 4                  | 4                     | 4                   | 5           | 25     |            |       |              |
| In regard to existing structures in the floodplain, create program for more buy-out's, retrofits, elevated structures and flood proofing both on homes and utilities | 4                        | 4                    | 4                  | 4                     | 3                   | 5           | 24     |            |       |              |
| Increase coordination with Clermont County as it relates to floodplain and storm water management and improved standards   | 4                        | 4                    | 4                  | 4                     | 3                   | 5           | 24     |            |       |              |
| Evaluate need for stress management for families in conjunction with existing programs through Red Cross etc.  | 3                        | 3                    | 3                  | 3                     | 3                   | 5           | 20     |            |       |              |
| Establish an ordinance or work with Clermont County to create an ordinance that requires propane tanks to be strapped down   | 4                        | 5                    | 4                  | 4                     | 3                   | 5           | 25     |            |       |              |
| Create cumulative and substantial damage and improvement program for New Richmond  | 4                        | 4                    | 3                  | 4                     | 2                   | 5           | 22     |            |       |              |
| <b>Severe Storms</b>   |                          |                      |                    |                       |                     |             |        |            |       |              |
| No Action  | 1                        | 2                    | 1                  | 2                     | 2                   | 4           | 12     |            |       |              |
| Increase PSA campaigns to make them more creative/innovative. Possibly focus on K-12 grade campaign. Target senior audience as well.                                 | 4                        | 4                    | 4                  | 4                     | 4                   | 4           | 24     |            |       |              |
| Research reason for power outages in Village and how they can be reduced and/or eliminated   | 4                        | 4                    | 4                  | 4                     | 5                   | 4           | 25     |            |       |              |
| Evaluate how other communities deal with steep terrain and snow emergencies  | 4                        | 4                    | 4                  | 4                     | 4                   | 4           | 24     |            |       |              |
| <b>Earthquakes</b>   |                          |                      |                    |                       |                     |             |        |            |       |              |
| No Action  | 3                        | 3                    | 3                  | 3                     | 2                   | 2           | 16     |            |       |              |
| Increase PSA campaigns to make them more creative/innovative. Possibly focus on K-12 grade campaign. Target senior audience as well                                  | 3                        | 4                    | 4                  | 3                     | 4                   | 2           | 20     |            |       |              |
| Work with and encourage Clermont County to improve building standards  | 3                        | 3                    | 3                  | 3                     | 2                   | 2           | 16     |            |       |              |
| <b>Tornadoes</b>   |                          |                      |                    |                       |                     |             |        |            |       |              |
| No Action  | 1                        | 2                    | 1                  | 1                     | 1                   | 3           | 9      |            |       |              |

**Sample of the matrix completed by each Core Group member.**

### 3.5 Public Review

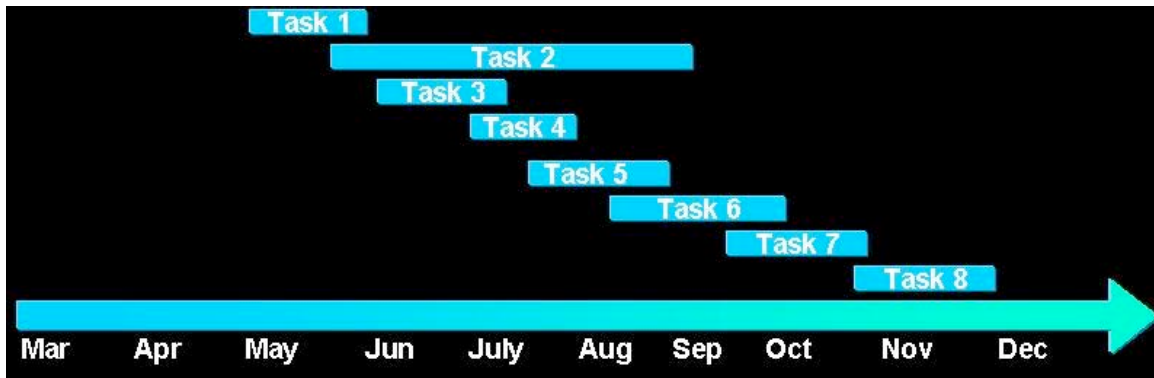
After the draft plan was completed, the Core Group provided for an official 30-day public review period before hosting a public meeting.

Public input is necessary in order to gage the opinion of the community and build support for the Plan. There were draft copies of the Plan available at the public meeting, along with a set agenda to keep the discussion on course. The Core Group reviewed the process of the draft All Natural Hazards Mitigation Plan and the overall goals to be implemented. There were several large-scale maps available for public review of the potential hazards in their community. Ample time for public comment was provided for and documented, for incorporation into an added section within the All Hazards Mitigation Plan.

### 3.6 Finalization

Once all comments have been reviewed and added to the draft Plan, the preparation of the final Plan will begin. FMSM will be present at the formal adoption of the All Natural Hazards Mitigation Plan by the Village of New Richmond, to provide any needed information regarding the development process.

Implementation of the plan is crucial. The Core Group must strategize effectively to put the plan into action. New Richmond must follow through to translate the goals and objectives developed during the planning process into action steps. It is recommended that a monitoring program be included in the Plan.



*Timeline that the Core Group followed to complete the plan.*

The Tasks in this timeline correspond to the following:

- |   |                                      |
|---|--------------------------------------|
| Task 1 - Kick-off Meeting                   | Task 6 - Evaluation of Alternatives  |
| Task 2 - Data Gathering                     | Task 7 - Prepare Draft Plan          |
| Task 3 - Hazard Assessment & Problem ID     | Task 8 - Public Meeting & Final Plan |
| Task 4 - Establish Goals & Objectives       |                                      |
| Task 5 - Alternatives & Evaluation Criteria |                                      |

## 4.0 State of Natural Disasters and Hazard Assessment for New Richmond

### 4.1 Initial Hazard Determination for the Village of New Richmond and Clermont County

In order to properly evaluate the natural hazards that affect the Village of New Richmond, a three-step process was utilized. This three step process was completed in order to “narrow-down” the hazards that the Village of New Richmond and Clermont County should prepare for, and potentially mitigate, in the future.

Step 1 - FMSM Engineers researched FEMA’s database to determine which hazards FEMA had documented as possible natural hazards, including future threats, for the State of Ohio. Several hazards that are listed on FEMA’s website include Flooding, Severe Storms, Tornadoes and Winter Storms.

#### Ohio Disaster History According to FEMA

1989 Severe Storms & Flooding  
1990 Severe Storms, Tornadoes & Flooding  
1992 Severe Storms, Tornadoes & Flooding  
1995 Severe Storms & Flooding  
1996 Severe Storms & Flooding  
1996 Severe Storms & Flooding  
1997 Severe Storms & Flooding  
1998 Severe Storms

Step 2 - FMSM Engineers contacted the National Climatic Data Center (NCDC), that allows reviews of historic hazard information all the way down to the County level. The NCDC website presents each type of hazard and the historic information associated with it for each County, offering several hazard search parameters. These parameters include: droughts, dust storm, flooding, fog, hail, hurricanes, lightning, tornadoes, wild/forest fires, ocean/lake surf, precipitation, snow and ice, temperature extremes, thunderstorms and high winds. Of those parameters, dust storms, severe fog, hurricanes, wild/forest fires, ocean/lake surf and severe precipitation have either never been documented in Clermont County, or have not occurred since 1950. This left droughts, flooding, hail, lightning, tornadoes, snow and ice, temperature extremes, thunderstorms and high winds to further assess. Note that earthquakes are not part of the NCDC database. The information pertaining to earthquake susceptibility was attained from USGS and the Ohio Earthquake Program Manager, Candace Sherry, at the Ohio Emergency Management Agency (OEMA).

Step 3 - In addition to the NCDC data, FMSM reviewed the Ohio Hazard Analysis and Risk Assessment, a document created in 1998 by OEMA for local and state emergency preparedness officials. The Ohio Hazard Analysis and Risk Assessment looks at both natural and non-natural (technological) hazards.

All of the above documents were provided to the Core Group for their review and initial assessment. The Core Group made the decision to explore five hazards, based on all the above information.

### 4.2 History of Flooding in New Richmond and Clermont County

The history of flooding in the Village of New Richmond and Clermont County is extensive. The National Climatic Data Center (NCDC) has comprehensive information available back to 1993. Flooding is the number one disaster in frequency of events and disaster dollars associated with each event.

There were 51 flood events documented between 1993 and 2002. (See Appendix 1 - Flooding History in Clermont County.) A detailed description of two significant recent events follows below.

**Significant River Flooding Events**

*January 1996* – The combination of significant prior snow cover, warm temperatures and rainfall produced widespread tributary flooding in the Ohio River basin. Most of the tributaries were back within their banks by the 21<sup>st</sup>, but points along the Ohio River were now in flood stage. Some of the tributaries that experienced significant flooding were the Scioto, Great Miami and Blanchard rivers, as well as Ohio Brush Creek.

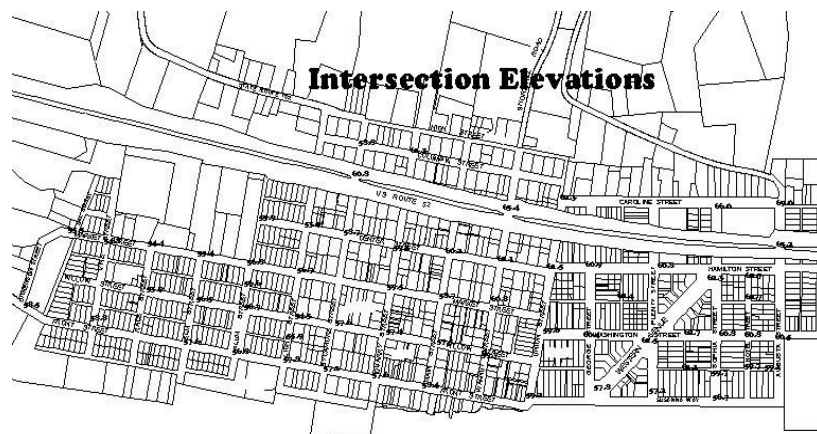
*March 1997* – Heavy rainfall occurred across Southern Ohio and Northern Kentucky on the 1<sup>st</sup> and 2<sup>nd</sup> of March, with areas along the Ohio River receiving up to 12 inches of rainfall. The river rose rapidly, reaching a crest of 59.8 feet in Portsmouth at 10:00 PM on the 4<sup>th</sup>, where the flood stage is 50.0 feet. About 30 miles east of Cincinnati at the Meldahl Dam, where the flood stage is 51.0 feet, the river crested at 61.3 feet at 7:00 PM on the 6<sup>th</sup>. In Cincinnati, the river crested at 64.7 feet at 11:00 PM on the 5<sup>th</sup>. Many towns were flooded from Portsmouth to Cincinnati and thousands of people were evacuated from their homes for several days.

*Chart Data Prepared by Willard Davis, Jr., Surveyor.*

| Years with Two Floods |        |        | Number of Floods by Month |           |
|-----------------------|--------|--------|---------------------------|-----------|
| Year                  | #1     | #2     | Month                     | Number    |
| 1887                  | 06-Feb | 28-Feb | January                   | 16        |
| 1890                  | 01-Mar | 25-Mar | February                  | 17        |
| 1898                  | 26-Jan | 29-Mar | March                     | 28        |
| 1907                  | 21-Jan | 19-Mar | April                     | 10        |
| 1908                  | 11-Mar | 04-Apr | May                       | 5         |
| 1913                  | 14-Jan | 01-Apr | June                      | 0         |
| 1916                  | 14-Jan | 02-Apr | July                      | 0         |
| 1918                  | 02-Feb | 12-Feb | August                    | 1         |
| 1920                  | 20-Mar | 23-Apr | September                 | 0         |
| 1933                  | 21-Mar | 15-May | October                   | 0         |
| 1939                  | 07-Feb | 19-Apr | November                  | 0         |
| 1943                  | 04-Jan | 23-Mar | December                  | 4         |
| 1961                  | 05-Mar | 10-May |                           |           |
| 1963                  | 10-Mar | 02-Mar |                           |           |
| 1979                  | 04-Jan | 02-Mar |                           |           |
|                       |        |        | <b>Total</b>              | <b>81</b> |

**Flash Flooding**

Flash floods occurring in New Richmond are only nuisances compared to the Ohio River flooding. The Core Group’s main focus related to flash flooding is the educational component of helping individuals realize that dumping in waterways causes potential harm to both themselves and their neighbors.



*Willard E. Davis completed the information above, which has proven to be of great use for the Village and residents of New Richmond.*

**Historic Flood Data**

In addition to the NCDC data, the Village of New Richmond was fortunate to have a very dedicated resident by the name of Willard Davis Jr. Mr. Davis was a retired surveyor with

a mission to give the Village of New Richmond the most accurate flood information data that he was able to provide. Mr. Davis documented several important items for the Village, recording past floods and the frequency of flooding occurring in the Village. He surveyed all the intersections in the Village for use in predicting flood elevations for the residents of the Old Village area. This information has proven to be very valuable in helping the residents prepare for evacuation during flood events.

These numbers are everything when it comes to living in the Village of New Richmond. The government uses the information Mr. Davis collected even today, and will cherish his enthusiasm and dedication. Please see the cover page for the dedication of this All Natural Hazard Mitigation Plan for the Village of New Richmond.

| Years Between 60' Floods                          |       |       | Frequency of Floods by Level *                               |             |
|---|-------|-------|--|-------------|
| Years   | Level | Years | Level  | Frequency   |
| 1832-1847   | 63.7  | 15    | 54' or higher  | 2.72 years  |
| 1847-1883   | 66.3  | 36    | 56' or higher  | 3.67 years  |
| 1883-1884   | 71.1  | 1     | 58' or higher  | 4.97 years  |
| 1884-1897   | 61.2  | 13    | 60' or higher  | 7.34 years  |
| 1897-1898   | 61.4  | 2     | 62' or higher  | 12.07 years |
| 1898-1907   | 62.5  | 9     | 64' or higher  | 16.9 years  |
| 1907-1913   | 69.9  | 6     | 66' or higher  | 28.16 years |
| 1913-1918   | 61.8  | 5     | 68' or higher  | 42.25 years |
| 1918-1933   | 63.6  | 15    | 70' or higher  | 84.5 years  |
| 1933-1936   | 60.6  | 3     |  |             |
| 1936-1937   | 79.9  | 1     |  |             |
| 1937-1940   | 60.0  | 3     |  |             |
| 1940-1943   | 60.8  | 3     |  |             |
| 1943-1945   | 69.2  | 2     |  |             |
| 1945-1948   | 64.8  | 3     |  |             |
| 1948-1962   | 61.3  | 14    |  |             |
| 1962-1964   | 66.3  | 2     |  |             |
| 1964-1997   | 64.4  | 33    |  |             |
| <b>Average time between 60' Flood - 9.2 years</b> |       |       | <b>* Based on total number of floods over 52' since 1832</b> |             |

*Chart Data Prepared by Willard Davis, Jr., Surveyor*

**Infrastructure and Critical Facilities**

There are currently several “grand fathered” critical facilities located within the 100-year floodplain. When a flood event demands that the Village mobilize their Emergency Operations Center (EOC), it is established outside of the floodplain. The current location of the EOC is the high school, however, the Village is looking for permanent location because of the disruption to the school during mobilization. The Village Council is currently looking for funding to create a secure site for the EOC. (Please see Page 21 for a Critical Facilities Map.)

**Repetitive Loss Properties**

The Village of New Richmond has 7 repetitive loss properties located within the Village of New Richmond’s boundaries. The structures on these properties are those that remain after the implementation of the two Hazard Mitigation Grant Projects in 1996 and 1997. (Please see the following section, New Richmond Flood Mitigation Efforts, for greater detail on these projects.)

The following is a table of each repetitive loss property and the damages associated with each:

| Property      | Year | Building            | Content            |
|---------------|------|---------------------|--------------------|
| 1             | 1997 | \$ 62,300.00        | \$10,600.00        |
|               | 1996 | \$ 6,926.81         | \$ 500.00          |
| 2             | 1979 | \$ 3,881.00         | \$ 865.25          |
|               | 1978 | \$ 1,197.00         | \$ 0.00            |
| 3             | 1997 | \$ 23,700.00        | \$28,100.00        |
|               | 1996 | \$ 0.00             | \$ 1,000.00        |
|               | 1979 | \$ 0.00             | \$ 1,398.10        |
| 4             | 1997 | \$ 15,133.97        | \$ 0.00            |
|               | 1996 | \$ 2,100.42         | \$ 0.00            |
| 5             | 1997 | \$ 16,100.00        | \$ 0.00            |
|               | 1996 | \$ 1,410.75         | \$ 0.00            |
| 6             | 1997 | \$ 0.00             | \$ 1,911.70        |
|               | 1997 | \$ 8,300.00         | \$ 8,000.00        |
| 7             | 1997 | \$ 25,575.91        | \$ 0.00            |
|               | 1996 | \$ 1,935.64         | \$ 0.00            |
| <b>Totals</b> |      | <b>\$168,561.64</b> | <b>\$52,375.05</b> |

Total damages for these 7 repetitive loss properties are \$220,936.55. This figure can be broken down into costs incurred for buildings and costs incurred for content. Building damages totaled \$168,561.50, and content damages totaled \$52,375.05.

A large portion of the Village of the New Richmond is within the 100-year floodplain boundary as denoted below outlined in red.

