

## **Flood Control**

Flooding has been a significant part of West Des Moines history. Although floods along the Raccoon River and Walnut Creek have historically caused the most damage, virtually any area could be subjected to flood damage. Before reporting flooding conditions it is important to understand the different types of flooding and the responsibilities associated with them.

### **Types of Flooding**

There are four general types of flooding that may cause property damage:

- *Riverine Flooding*

Riverine flooding is the overflow of rivers and streams due to excessive rainfall, snowmelt, or ice. Floods are a natural occurrence and can develop in anywhere from less than an hour to several days depending upon the size of the watershed. Every river and stream has an adjacent area, or floodplain, that conveys floodwater in excess of the stream capacity during these events.

Because of the significant potential for damage due to riverine flooding, the cities of Clive, Des Moines, and West Des Moines have cooperatively developed the Des Moines Metro ALERT system. This system includes a network of automated rainfall and stream gages that allow for real-time observation of conditions in the Des Moines Metropolitan area. This information is used to operate the Raccoon River and Walnut Creek levee system and plan emergency response operations.

The smaller streams within the City generally are not protected by levees or other structural means. The primary method of flood protection in these areas is limiting construction within the floodplain. Properties located within FEMA designated floodplains are subject to flood insurance requirements. All flood insurance questions can be directed to the Floodplain Administrator. To report riverine flooding, call the Department of Public Works hotline at 222-3480 or use the West Des Moines Online Service Desk.

- *Local Flooding*

Local flooding occurs primarily in streets, parking lots, and yards when precipitation exceeds the capacity of the local drainage system. In most cases, public streets are intended to convey stormwater runoff in excess of the capacity of the storm sewer system. This may result in temporary ponding at the lowest points of roadways and overflow into nearby streams.

If local flooding is a concern the first step is to determine the possible cause. Flooding caused by plugged intakes, failed pipes, or insufficient capacity of the public system may be the responsibility of the City. Excessive runoff from adjacent property or private drainage systems is a civil matter between the property owners. To report a local drainage problem call the Department of Public Works hotline at 222-3480 or use the West Des Moines Online Service Desk.

- **High Groundwater**  
Basements are often flooded by high groundwater. This is especially true in the spring when rain falls on ground saturated by snowmelt. However, some areas are affected by high groundwater at all times of the year. Because groundwater is highly variable and property specific it is almost always the property owner's responsibility to maintain individual groundwater removal systems such as sump pumps.
- **Sanitary Sewer Backup**  
Sanitary sewer backups occur when stormwater infiltrates into leaking sewer pipes. The smaller sewer pipes can be quickly overwhelmed causing water to backup through floor drains and fixtures. If you suspect you have a sanitary sewer backup immediately call the Department of Public Works Hotline at 222-3480.

### **Flood Safety**

Each year, more deaths occur due to flooding than from any other severe weather related hazard. The Centers for Disease Control report that over half of all flood-related drownings occur when a vehicle is driven into hazardous flood water. The next highest percentage of flood-related deaths is due to walking into or ear flood waters. Many of the deaths occur in automobiles as they are swept downstream. Of these drownings, many are preventable, but too many people continue to drive around the barriers that warn you the road is flooded.

The reason that so many people drown during flooding is because few of them realize the incredible power of water. A mere six inches of fast-moving flood water can knock over an adult. It takes only two feet of rushing water to carry away most vehicles. This includes pickups and SUVs.

If you come to an area that is covered with water, you will not know the depth of the water or the condition of the ground under the water. This is especially true at night, when your vision is more limited. If flooding is predicted or you encounter a flooded area follow these general safety rules:

- Monitor a weather radio, or your favorite news source for vital weather related information.
- If flooding occurs, get to higher ground. Get out of areas subject to flooding. This includes dips, low spots, canyons, washes etc.
- Avoid areas already flooded, especially if the water is flowing fast. Do not attempt to cross flowing streams.
- Road beds may be washed out under flood waters. NEVER drive through flooded roadways.
- Do not camp or park your vehicle along streams and washes, particularly during threatening conditions.

Be especially cautious at night when it is harder to recognize flood dangers.