

**Staff Report  
FLOOD MITIGATION UPDATE  
3/1/2011**

In January, 2011, the City Council established a new Flood Mitigation goal with the following objective and tasks:

**Objective A: Initiate two focus areas for flood mitigation – (1) River/Watershed flooding, and (2) Localized flooding. Undertake the following tasks for both areas:**

*Tasks:*

1. *Identify and take both short-term and long-term mitigation actions*
2. *Identify what can and should be fixed/mitigated, by which entity, and with what funding*
3. *Explore how local policies can improve these situations*
4. *Undertake these tasks in concert with ISU (administration and academics), Story County, and the Iowa Flood Center, with the City taking leadership*

Following is a status report on staff's efforts and plans to accomplish these tasks. The update is divided into river and localized flooding, and each of those areas is divided into short-term and long-term mitigation efforts. Following this update is an extensive list of flood recovery and repair projects already accomplished or currently underway.

**RIVER FLOODING**

**Short-term Mitigation Actions:**

- Carry out needed flood damage repairs to City infrastructure with FEMA assistance  
*Status: Progress on these projects for both river and localized flooding is summarized at the bottom of this report.*
- Identify needs, seek FEMA funding, and carry out City infrastructure mitigation projects  
*Status: Progress on these projects is summarized at the bottom of this report.*
- Flood buy-outs – Identify potential flood buy-out properties, solicit interest from property owners, apply for FEMA funding, identify sources of local match, and bring potential buy-out properties to Council for action  
*Status: Extensive contacts have been made with owners of potential buy-out properties, and two public information meetings have been held. Federal and state funding may be available both for buy-out of flooded properties with subsequent demolition of structures, and for demolition of condemned structures on properties that will remain under private ownership. A comprehensive report on this program will be presented to the City Council at its March 22 meeting.*

**Long-term Mitigation Actions:**

- Invite ISU, Story County and Iowa Flood Center to partner on coordinated mitigation efforts (with City leadership)

*Status: An initial planning meeting of representatives from the City, Story County, Iowa State University and the Iowa Department of Transportation was held in November. A follow-up meeting with the Iowa Flood Center will be held on March 2 to identify potential areas of collaboration.*

*This multi-jurisdictional planning group will next decide if there are other local resources to explore, including academic, research, citizen, and professional resources. It will then pull together a recommended joint plan to understand flooding causes and identify appropriate mitigation measures. We anticipate that this plan will include the following steps:*

- Form leadership group to plan and carry out coordinated mitigation efforts
- Identify needs, potential resources, and study steps, including public involvement
- Identify potential funding sources
- Bring plan to Council and other policy makers for approval
- Partner and/or contract with the Iowa Flood Center, academics, and/or private engineering firm(s) to carry out needed meteorological and floodplain studies
- Identify potential funding and partnerships for implementing improvements
- Carry out long-term, coordinated mitigation steps
- Identify and implement potential policy and regulatory changes for floodplain management (concurrent with above steps)
- Public Education regarding anticipated rainfalls, mitigation, etc.

**LOCALIZED FLOODING**

**Short-term Mitigation Actions:**

- Solicit citizen input regarding locations that suffered flash flooding damage

*Status: This step has been ongoing since the August storms. Locations continue to be identified through citizen input, including stormwater run-off*

*problems brought to staff's attention during the Cyclone Sports Complex public forums.*

- Engineering evaluation of each individual location, identifying contributors to flash-flooding, possible mitigation steps, and costs
- Seek outside funding assistance for mitigation actions

*Status: These steps are under contract with an outside engineering firm at an initial cost of \$48,980, and Notices of Interest have already been filed for several projects. Additional contract work will need to be authorized to complete the applications for federal and state funding to help finance these projects.*

- Prioritize and schedule mitigation projects in CIP

*Status: Adequate data for this step will be available before preparation of the Capital Improvements Plan update begins this fall. Actual timing of improvements will depend upon funding available from the state and federal governments and from our local stormwater utility fees.*

**Long-term Mitigation Actions:**

- Develop potential stormwater management policy changes for new development (with costs and benefits)
- Develop options for stormwater management system expansions or changes in existing neighborhoods (with costs and benefits)
- Educate citizens regarding advantages and availability of flood insurance for areas outside of floodplains
- Educate citizens regarding steps they can take to mitigate localized flooding damage to their individual homes and properties

**STATUS OF REPAIRS AND POTENTIAL CORRECTIONS TO CITY INFRASTRUCTURE (including both river and localized flooding)**

Public Works has submitted 10 projects for consideration under the **Hazard Mitigation Grant Program (HMGP)**. We received notice this week that Iowa Homeland Security and Emergency Management Division (HSEMD) has completed their preliminary eligibility review of the Notices of Interest (NOI) and that the proposed projects described on the NOIs have been determined to meet the preliminary eligibility requirements established through the State HMGP Administrative Plan and the State Hazard Mitigation Plan. The City of Ames is invited to complete and submit an HMGP project application for each proposed project. **Successfully completing and submitting an application does not guarantee that the proposed projects will be eligible or funded; rather, it is the next step in the HMGP funding process.**

The 10 projects and a short description of each are included below:

1. Stuart Smith Park Bank Armoring – This project has been identified to protect the 24” water main that crosses Squaw Creek (near Lincoln Way), which is vital to the city-wide water system.
2. Northridge Parkway – This neighborhood has several homes that have experienced damage due to flooding during the 1993 and 2010 events. This project will mitigate the flood potential through grading, storm pipe and intake improvements, and adjusting the grade of the shared use path in the area.
3. South Duff Siphon Access Structure – This siphon was submerged for a number of days during the 2010 floods, thereby hindering maintenance crews from having full access to the structure. This project will include raising the elevation of the access to allow maintenance crews to have access even during flood events.
4. Schubert Street and Todd Drive – Homes along Schubert Street and Todd Drive have experienced repeated flooding during larger storm events. This project is anticipated to include grading and possibly storm sewer pipe installation in order to mitigate the basement flooding.
5. Trail Ridge Landslide - During the flood events, areas of the Clear Creek bank eroded causing landslides to occur along the hillside on an outside curve of the creek. A house is bordered by the creek to the northwest. Grading and land stabilization needs to occur in order to prevent impacts to the home.
6. Oakwood Drive Area -The neighborhood on the north side of Oakwood Road has experienced basement flooding on several occasions due to storm water flowing overland and into garages and window wells. This project may include installation of additional storm sewer and possible creation of detention areas to mitigate future damage.
7. Castlewood Place - Three four-plex apartment units at the east end of Castlewood Place experienced flooding in the lower level units during August 2010. This project would include storm sewer improvements in the area.
8. Pi Kappa Alpha Union (PIKE) & Phi Kappa Theta (PKT) – These fraternity houses are located lower than the surrounding area and have experienced repeated flooding of the lower levels. This project would include obtaining an easement and installation of storm sewer to intercept storm sewer run-off that flows through their sites.
9. Waterbury Ct. - The homes along Waterbury Circle and Stonebrook Road experienced damage to the basements during the 2010 floods as a result of water backing up to the west from Ada Hayden. This project would include grading, storm sewer installation, and reconstruction of the impacted shared use path to prevent further damage.

10. North Park Villa - Some residents in this area experienced damage to their basements during the 2010 floods. This project would include obtaining an easement and then regrading areas to create positive drainage away from the units.

To address severe erosion and other damage to the City's system of urban streams, the 2011 **urban stream assessment project** has already been initiated at a contracted cost of \$30,120. Stream assessment data is being collected incorporating LIDAR topographic data and past stream condition data. Results will compare stream bank stability and soil loss with pre-2010 flood conditions and prioritize stabilization efforts. Contact is currently being made with land owners to obtain permission to collect data on privately owned stream segments within the incorporated limits. Field work is scheduled to be completed by April 30, 2011.

Parks and Recreation is completing the removal of damaged trees and limbs in the park system and protection of pump vaults at the Furman Family Aquatics Center.

The following FEMA and FHWA (Federal Highway) projects are also in process. The FHWA projects are on streets that have previously been designated as eligible to receive federal construction funding (arterials and major collectors).

Public Works projects:

- \* Repairs through Federal Highway to be let through the IDOT in June:
  - \* 6th Street - Erosion repairs at the Squaw Creek Bridge
  - \* Lincoln Way - Erosion repairs at the Squaw Creek Bridge
  - \* South Dayton - Shoulder erosion repairs north of Theisen's
- \* Squaw Creek Shared Use Path Bridge - Working with Iowa Homeland Security and FEMA to secure approval for replacement of the trail bridge connecting the IDOT area to Coldwater Golf Links.
- \* South 4th Street Water Main - Developing a project to repair or replace the water main under Squaw Creek and armor the crossing to protect from future damage.
- \* Squaw Creek Bank Erosion near Riverside Drive - Developing a project to repair and armor the eroded east bank of Squaw Creek near the 300 block of Riverside Drive.
- \* 20th Street Storm Manhole - Replacing a manhole that was destroyed near Homewood Golf Course.
- \* SE 16th St. Bridge - Removing accumulated silt and debris.

Joint Parks/Public Works projects:

- \* Bank erosion and bike path repair - repairing bank and replacing bike path in Brookside Park across from Riverside Dr.
- \* Stuart Smith and Carr Park bridges - fixing some scour and erosion with City forces
- \* Inis Grove sanitary sewer - repairing scour that exposed a section of sanitary sewer