

**Mitigation Measures (Actions)**  
(Initiated and/or Accomplished from 2007 to Present)

Mitigation Measure/Project Synopsis	Mitigation Measure/Action	Hazard(s) Addressed	Funding Source	Estimated Cost	Lead Agency	Status
316 communities have FEMA approved Local Mitigation Plans	Complete Local Hazard Mitigation Plans	All	HMGP, PDM, FMA, Local		Iowa Homeland Security & Emergency Management	Completed
647 communities are in the process of completing Local Mitigation Plans	Develop and/or update Local Hazard Mitigation Plans (in progress)	All	HMGP, PDM, Local		Iowa Homeland Security & Emergency Management	Ongoing Open grants under performance period
Build 6 multi-purpose Tornado Safe Rooms	Construct Safe Rooms	Tornado, Windstorm	HMGP, PDM, Local		Iowa Homeland Security & Emergency Management	Completed
Install 9 Emergency Power Backup Generators under the 5% initiative	Purchase/install back-up generators	Electrical Power Failure	Hazard Mitigation Grant Program (HMGP)		Iowa Homeland Security & Emergency Management	Completed
Acquire 82 repetitive loss properties in 17 communities.	Acquire property through purchase for demolition	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)		Iowa Homeland Security & Emergency Management	Completed
Relocate storm water lift stations	Flood protection for critical facilities	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)		Iowa Homeland Security & Emergency Management	Completed
4 infrastructure projects including the construction of a protective flood berm to protect a critical facility	Flood protection for critical facilities	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)		Iowa Homeland Security & Emergency Management	Completed
Build 10 multi-purpose Tornado Safe Rooms in School Facilities (7 Safe Rooms are pending FEMA approval) funded under DR-1763	Construct Safe Rooms	Tornado, Windstorm	Hazard Mitigation Grant Program (HMGP)	\$12,661,863.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period
Build 12 Multi-purpose Tornado Safe Rooms in Community Facilities funded under DR-1763	Construct Safe Rooms	Tornado, Windstorm	Hazard Mitigation Grant Program (HMGP)	\$12,661,863.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period
Acquire and demolish 977 substantially damaged or destroyed properties in 46 communities.	Acquire property through purchase for demolition	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$88,702,334.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; (As of 8-17-10, 691 properties acquired, 334 properties demolished )

Mitigation Measure/Project Synopsis	Mitigation Measure/Action	Hazard(s) Addressed	Funding Source	Estimated Cost	Lead Agency	Status
25 Electrical Retrofit projects are currently pending FEMA approval under DR-1763. These projects will retrofit and harden a total of more than 1,700 miles of electrical conductors, distribution lines, transmission lines, and poles	Electrical Retrofit - Replace damaged power lines with lines more resistant to ice and snow buildup and other hazards	Windstorm, Severe Winter Storm, Tornado, Thunder and Lightning, Electrical Power Failure,	Hazard Mitigation Grant Program (HMGP)	\$187,367,528.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period
Burial of .34 miles of electric lines to city's waste water treatment plant pending FEMA approval under DR-1763	Electrical Retrofit – lower or bury electric lines in non-flood, high-wind areas	Winter Storms, Ice Storms, Windstorm	Hazard Mitigation Grant Program (HMGP)	\$26,411.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period
Re-routing of .8 miles of electrical distribution lines away from river pending FEMA approval under DR-1763	Electrical Retrofit – remove from high flood risk area	River Flooding	Hazard Mitigation Grant Program (HMGP)	\$353,510.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period
Installation of 7 backflow valves and addition of 4 storm water lift stations pending FEMA approval under DR-1763	Drainage – flood protection for critical facilities	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$1,535,000.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period
Installation of 5 storm water detention basins pending FEMA approval under DR-1763	Drainage – construct storm sewer drainage	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$12,770,000.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period
Construction of an invisible floodwall and flood control system pending FEMA approval under DR-1763	Construct flood wall	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$4,448,820.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period
Increase capacity of storm sewer drainage system pending FEMA approval under DR-1763	Construct storm sewer drainage	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$2,476,218.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period
Construction of floodwall around water treatment plant under DR-1763	Construct flood wall	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$736,100.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period

Mitigation Measure/Project Synopsis	Mitigation Measure/Action	Hazard(s) Addressed	Funding Source	Estimated Cost	Lead Agency	Status
						period
Upgrade to effluent structure and addition of automatic pumping station	Flood control – flood protection for critical facilities	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$801,200.00	Iowa Homeland Security & Emergency Management	Ongoing Application period closes 11-1-10; Open grants under performance period
Communities joining NFIP- 44 communities joined since January 1, 2007	Encourage communities to participate in the NFIP	River Flooding, Flash Flooding	Technical Assistance (DNR)		Iowa Dept of Natural Resources (DNR)	Completed
Buyout of 14 repetitive loss flood damaged residential properties and provide relocation benefits to occupants in 7 communities	Acquire property through purchase for demolition	River Flooding, Flash Flooding	Community Development Block Grant State Disaster Fund (CDBG)	\$1,924,574.00	Iowa Department of Economic Development	Ongoing Open grants under performance period
5% Emergency Power Backup Generators for 4 communities under DR-1737	Purchase/install back-up generators	Electrical Power Failure	Hazard Mitigation Grant Program (HMGP)	\$299,500.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Build a Tornado Safe Room in Outdoor Bathing House Facility funded under DR-1737	Construct Safe Rooms	Tornado, Windstorm	Hazard Mitigation Grant Program (HMGP)	\$633,000.00	Iowa Homeland Security & Emergency Management	Ongoing Open grants under performance period
2 Electrical Retrofit projects are currently pending FEMA approval under DR-1737. These projects will retrofit a total of 152.4 miles of electrical conductors, distribution lines, transmission lines, and poles	Electrical Retrofit - replace damaged power lines with lines more resistant to ice and snow buildup and other hazards	Severe Winter Storms, Windstorm, Electrical Power Failure	Hazard Mitigation Grant Program (HMGP)	\$5,365,550.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Elevation of electrical motor controls for 2 water supply wells funded under DR-1737	Construct/elevate lift station controls	River Flooding, Flash flooding	Hazard Mitigation Grant Program (HMGP)	\$23,975.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Installation of an emergency wastewater pump to add additional pumping capacity funded under DR-1737	Wastewater Pump – flood protection for critical facilities	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$7,665.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Upgrade Emergency Storm Warning Sirens under DR-1727	Install siren warning system	Tornado	Hazard Mitigation Grant Program (HMGP)	\$16,000.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
5% Emergency Power Backup Generators for 4 communities under DR-	Purchase/install back-up generators	Electrical Power Failure	Hazard Mitigation Grant Program	\$64,580.00	Iowa Homeland Security and Emergency	Ongoing Open grants under

Mitigation Measure/Project Synopsis	Mitigation Measure/Action	Hazard(s) Addressed	Funding Source	Estimated Cost	Lead Agency	Status
1727			(HMGP)		Management	performance period
Strengthen 20.5 miles of electric lines increase conductor size, span widths, install underground cable pending FEMA approval under DR-1727	Electrical Retrofit - replace damaged power lines with lines more resistant to ice and snow buildup and other hazards	Sever Winter Storm, Windstorm	Hazard Mitigation Grant Program (HMGP)	\$1,336,700.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
5% Initiative – Emergency Backup Power Generators for 4 communities under DR-1705	Purchase/install back-up generators	Electrical Power Failure	Hazard Mitigation Grant Program (HMGP)	\$235,365.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Build a Tornado Safe Room in Outdoor Park and Recreation area funded under DR-1705	Construct Safe Rooms	Tornado	Hazard Mitigation Grant Program (HMGP)	\$200,700.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Acquisition and demolition of 8 substantially damaged residential properties and 12 contiguous lots located within a 100 year special flood hazard are (FMV Value= \$148,313.00) under DR-1705	Acquire property through purchase for demolition	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$301,260.00	Iowa Homeland Security and Emergency Management	Completed
Prevent sewer backups by improving storm sewer drainage under DR-1705	Drainage – construct storm sewer drainage	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$1,914,250.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Electrical Retrofit projects for 2 electric cooperatives covering 12.4 miles of electrical lines pending FEMA approval under DR-1705	Electrical Retrofit - replace damaged power lines with lines more resistant to ice and snow buildup and other hazards	Severe Winter Storm, Tornado, Windstorm, Thunder and Lightening	Hazard Mitigation Grant Program (HMGP)	\$747,500.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Electrical Retrofit project for a municipal utilities converting 1.4 miles of overhead electric distribution lines to underground power lines under DR-1705	Electrical Retrofit – lower or bury electric lines in non-flood, high-wind areas	Severe Winter Storm, Tornado, Wind Storm, Power Failure, Thunder and Lightening	Hazard Mitigation Grant Program (HMGP)	\$233,603.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
5% Initiative – Emergency Backup Power Generators for 4 communities under DR-1688	Purchase/install back-up generators	Electrical Power Failure	Hazard Mitigation Grant Program (HMGP)	\$1,295,499.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Electrical Retrofit project for Farmers Electric Cooperative converting 2 miles of distribution lines to underground cable	Electrical Retrofit – lower or bury electric lines in non-flood, high-wind areas	Electrical Power Failure	Hazard Mitigation Grant Program (HMGP)	\$87,070.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period

Mitigation Measure/Project Synopsis	Mitigation Measure/Action	Hazard(s) Addressed	Funding Source	Estimated Cost	Lead Agency	Status
Protect community utilities facility during flood events; remove seepage and ground water intrusion	Stormwater Pump – flood protection for critical facilities	River Flooding, Flash Flooding	Hazard Mitigation Grant Program (HMGP)	\$115,000.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Electric Retrofit projects for 4 electrical cooperatives strengthening 117.25 miles of distribution lines, increasing conductor size and pole span pending FEMA approval under DR-1688	Electrical Retrofit - replace damaged power lines with lines more resistant to ice and snow buildup and other hazards	Windstorm, Electrical Power Failure, Severe Winter Storms, Tornado	Hazard Mitigation Grant Program (HMGP)	\$12,928,628.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Electric Retrofit projects for 42 electrical cooperatives strengthening distribution lines through 225 total projects under DR-1688	Electrical Retrofit - replace damaged power lines with lines more resistant to ice and snow buildup and hazards	Windstorm, Electrical Power Failure, Severe Winter Storms, Tornado	Public Assistance Grant Program	\$65,749,318.19	Iowa Homeland Security and Emergency Management	Completed
Electrical Retrofit projects for 4 electrical cooperatives strengthening distribution lines through 15 total projects under DR-1705	Electrical Retrofit - replace damaged power lines with lines more resistant to ice and snow buildup and other hazards	Windstorm, Electrical Power Failure, Severe Winter Storms, Tornado	Public Assistance Grant Program	\$129,686.37	Iowa Homeland Security and Emergency Management	Completed
Electrical Retrofit projects for 4 electrical cooperatives strengthening distribution lines through 9 total projects under DR-1727	Electrical Retrofit - replace damaged power lines with lines more resistant to ice and snow buildup and other hazards	Windstorm, Electrical Power Failure, Severe Winter Storms, Tornado	Public Assistance Grant Program	\$113,720.51	Iowa Homeland Security and Emergency Management	Completed
Electrical Retrofit projects for 16 electrical cooperatives strengthening distribution lines through 54 total projects under DR-1737	Electrical Retrofit - replace damaged power lines with lines more resistant to ice and snow buildup and other hazards	Windstorm, Electrical Power Failure, Severe Winter Storms, Tornado	Public Assistance Grant Program	\$20,669,165.65	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Electrical Retrofit projects for 29 electrical cooperatives strengthening distribution lines through 262 total projects under DR-1763	Electrical Retrofit - replace damaged power lines with lines more resistant to ice and snow buildup and other hazards	Windstorm, Electrical Power Failure, Severe Winter Storms, Tornado	Public Assistance Grant Program	\$31,354,259.99	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Electrical Retrofit projects for 1 electrical cooperative strengthening distribution lines through 14 total projects	Electrical Retrofit - replace damaged power lines with lines more resistant to ice and snow buildup and other hazards	Windstorm, Electrical Power Failure, Severe Winter Storms, Tornado	Public Assistance Grant Program	\$6,962,404.96	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Acquire and demolish 831 substantially damaged or destroyed properties in the 100 year floodplain	Acquire property through purchase for demolition	River Flooding, Flash Flooding	Community Development Block Grant (CDBG)	\$112,252,484	Iowa Department of Economic Development	Ongoing Open grants under performance period
An estimated 960 projects to provide erosion protection and soil	Develop soil erosion stabilization projects	River Flooding, Flash Flooding	Public Assistance Grant Program -		Iowa Homeland Security and Emergency	Ongoing Open grants under

Mitigation Measure/Project Synopsis	Mitigation Measure/Action	Hazard(s) Addressed	Funding Source	Estimated Cost	Lead Agency	Status
stabilization are in progress under DR-1763			406 Mitigation Categories (C-G)		Management	performance period
An estimated 300 projects to provide drainage improvements are in progress under DR-1763	All drainage mitigation measures	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 65 projects to provide flood proofing are in progress under DR-1763	Flood protection for critical facilities and other properties	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 170 projects to provide elevation and relocation of critical components are in progress under DR-1763	Elevate or relocate critical components above base flood elevation	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 50 projects to encase or enclose critical utilities are in progress under DR-1763	Ensure no leaks exist in water supply and sewer lines. Flood protection for critical facilities.	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 65 projects to install backflow devices are in progress under DR-1763	Flood protection for critical facilities	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 15 projects to do building elevations are in progress under DR-1763	Elevate properties above base flood elevation	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 22 projects for miscellaneous mitigation measures are in progress under DR-1763	Various mitigation measures	River Flooding, Flash Flooding, Windstorm	Public Assistance Grant Program - 406 Mitigation Categories (C-G)	Total 406 Mitigation funding under DR-1763: \$79,062,871	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 110 projects for Erosion Protection and Soil Stabilization are in progress under DR-1727	Develop soil erosion stabilization projects	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 10 projects for Drainage Improvement are in progress under DR-1727	All drainage mitigation measures	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Two elevation/relocation of critical utilities projects are in progress under DR-1727	Elevate or relocate critical components above base flood elevation	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)	Total 406 Mitigation funding under DR-1727: \$6,740,914.30	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 180 projects for Erosion Protection and Soil Stabilization are in progress under DR-1705	Develop soil erosion stabilization projects	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance

Mitigation Measure/Project Synopsis	Mitigation Measure/Action	Hazard(s) Addressed	Funding Source	Estimated Cost	Lead Agency	Status
			Categories (C-G)			period
An estimated 16 projects for drainage improvement are in progress under DR-1705	All drainage mitigation measures	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
Two elevation/relocation of critical utilities projects are in progress under DR-1705	Elevate or relocate critical components above base flood elevation	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)	Total 406 Mitigation funding under DR-1705: \$9,166,507.69	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 22 projects for elevation/relocation of critical utilities projects are in progress under DR-1688	Elevate or relocate critical components above base flood elevation	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)		Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
An estimated 6 projects to encase and/or enclose utilities are in progress under DR-1688	Ensure no leaks exist in water supply and sewer lines. Flood protection for critical facilities.	River Flooding, Flash Flooding	Public Assistance Grant Program - 406 Mitigation Categories (C-G)	Total 406 Mitigation funding under DR-1688: \$4,078,129.97	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
A total of 18 projects to relocate buildings that have been or will be subject to repetitive heavy damage outside of the floodplain	Acquire property through purchase for relocation	River Flooding, Flash Flooding	Public Assistance Grant Program – Codes and Standards/ Building Replacement	\$104,208,574.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period
One elevation project to remove a critical facility out of the floodplain	Acquire property through purchase for elevation to or above base flood elevation – Flood protection for critical facilities	River Flooding, Flash Flooding	Public Assistance Grant Program – Codes and Standards/ Building Replacement	\$6,483,880.00	Iowa Homeland Security and Emergency Management	Ongoing Open grants under performance period