

Project Name: Development and Higher Regulatory Regulations as outlined in table below

Mitigation Action: Development Regulations

Mitigation Strategy: Flooding

Jurisdiction: City of Hattiesburg

Priority: High

Description: City of Hattiesburg seeks to adopt and implement multiple development and regulatory standards by way of adopting policy resolutions, revising the Land Development Code and the Flood Prevention Ordinance to mitigate hazards for future buildings and infrastructure. These regulatory standards will include:

CRS Element #	Activity Description	Goal Description	Timeline	STATUS 2020
422.a, 422.b and/or 422.c	Open Space Preservation, Deed Restrictions, and/or Natural Functions Open Space – will vary per property	When the city acquires properties, by whatever means, consider setting aside a percentage of the land as perpetual open space - Policy Resolution needed with guidelines outlining the process for review and/or approval on a case-by-case basis	Establish Resolution in 2019	
422.g	Low-density zoning	When the city acquires SFHA properties, by whatever means, consider utilizing low-density zoning if/when the lot size is appropriate or if we can assemble multiple adjoining properties - Policy Resolution needed with guidelines outlining the process for review and/or approval on a case-by- case basis	Establish Resolution in 2019	
432.b	Freeboard	FMP Committee to re-visit increasing our	2019-2020	Needs FMP Review

		Freeboard requirements		
432.g	Enclosure limits	Create, implement and enforce non-conversion agreements	Agreement - early 2019	Completed 2019
432.g	Enclosure limits	FMP Committee to re-visit a regulation prohibiting all enclosures on elevated structures	2019-2020	Needs FMP Review
432.i	Local drainage protection	Extensive training to all appropriate City staff and outreach to all landscapers and nurserymen for stricter enforcement of current ordinance that prohibits blowing yard debris into the streets and/or drains	Early 2019	
432.i	Local drainage protection	After training period and targeted outreach activities are completed actively enforce and levy fines for violators of this ordinance to help eliminate drain blockages	Early 2019	
432.i	Local drainage protection	Require milling on all street re-paving projects, so that drains are not partially covered by new street layer	2018 and ongoing	Milling is done dependent on the situation.

432.i	Local drainage protection	Extensive outreach to all citizens for stricter enforcement of current containerization ordinance and Sec. 9.1 of the LDC; after training period and targeted outreach activities are completed actively enforce and levy fines for violators of this ordinance to help eliminate drain blockages.	Early 2019	Staff has worked to inform businesses about LDC Section 9. Code Enforcement has worked to enforce Section 9, including 9.1.4, "Illicit Discharges"
452.b.1-8	Watershed Master Plan: Plan meets all the criteria listed in Sec 452.b	Creation of a Watershed Master Plan, including parts 1-8 of CRS requirements, phases done as funding is available and prioritized by most populated, starting with Gordon's Creek as Phase I.	2019 and ongoing over 3-5 years for completion of all Watersheds	Under Review
512.a.03	Floodplain Management Planning: Coordinate	Fully consider and utilize the Comprehensive Plan Action Items and the Metropolitan Transportation Plan for all future projects	2018 and ongoing	Ongoing
512.a.03	Floodplain Management Planning: Coordinate	Prepare a comprehensive inventory of housing in the floodplain by quality (dilapidated, elevated, good condition, etc.); and seek funding to obtain elevation certificates throughout the SFHA to assist with re-development of area	2019-2021	Incomplete

512.b	Repetitive loss area analysis	Inventory, data collection, outreach and preparation of a detailed mitigation plan for all Repetitive Loss areas with specific guidance on how to reduce damage	2018- early 2019	Incomplete
512.b	Repetitive loss area analysis	After RLAA inventory and data collection is completed, implement identified property protection and/or drainage improvements	2019-2020 as funding is available	Incomplete
512.c	Natural floodplain functions plan	Create and adopt a Natural Floodplain Functions Protection Plan, including the ecological attributes of all watersheds and protection measures for shorelines, floodplain, habitat and wetland areas	2018-early 2019	Not completed, Staff to review.
532.a.2b	Structural flood control technique used: Storage Facilities	Engineering to actively pursue the installation of retention basins across city on existing vacant City owned land, to help reduce flooding.	2019 and ongoing	Review is ongoing.
612.a	Flood Threat recognition system	Creation of Standard Operating Procedures for all department response plans for different event types, especially flooding and dam breach	2018-2019	Partially complete.
612.d	Critical facilities planning	Outreach and individual contact with all Critical Facilities to update all information in conjunction with the Hazard Mitigation 5-	Early 2019	Critical facilities were documented in the updated HMP

		year renewal		
422.h	Natural shoreline protection	Regulations need to be developed to protect the remaining natural shorelines	2019-2020	Engineering has mapped disturbed and natural shorelines. There are plans to import this data into our mapping system, which will allow for Staff to review this item. At current, the LDC does existing riparian protections.
422.h	Natural shoreline protection	Re-visit to consider the establishment of larger setbacks, especially along the Leaf River and urbanized drainage/creeks.	2019-2020	Incomplete
542.a	Channel Debris Removal (CDR 1 - 6)	Finish inspections of all Community Flood Hazard Areas, maintain those as needed, budget for improvements where necessary, and report on those "unsolvable"	2019	CFHAs have been mapped.
542.b	Problem Site Maintenance	Inventory, identification and mapping of Problem Sites (choke points, flow obstructions, erosion/sedimentation	2019	Ongoing

		problems or chronic dumping sites), including any identified resolution to problem (including channel modification) and increased inspection schedules for better maintenance included in the drainage maintenance resolution, if needed, including the who, what, when of inspections, for better maintenance of these areas		
542.d	Stream dumping regulations	Posting of "No Dumping Signs" at all identified locations,	2019	Staff has contacted Public Works for updates to this item.
542.d	Stream dumping regulations	Outreach prohibiting dumping anywhere in city	2019	Ongoing, mailers including this information were sent out most recently in March 2020
542.d	Stream dumping regulations	Frequent patrolling, and fines levied for violators	2019 and ongoing	Ongoing

Responsible Department(s): City of Hattiesburg CRS Coordinator.

Cost Estimate: unknown

Source of Funding: General fund and applicable federal monies

Schedule: Within the next two - five years.

Status is as noted in chart above.

Project Name: Vacuuming Trucks/Equipment for Street Cleaning

Mitigation Action: Equipment Purchase

Mitigation Strategy: Flooding

Jurisdiction: City of Hattiesburg

Priority: High

Description: To improve the capabilities of removing small debris and leaves caused by flooding and wind events, the City of Hattiesburg seeks to purchase additional vacuuming equipment to keep leaves off the streets and out of drains.

Responsible Department(s): City of Hattiesburg Public Works Director

Cost Estimate: unknown

Funding Source: General fund and applicable federal monies

Schedule: Within the next three years and is projected for the 2021 City of Hattiesburg general fund and applicable federal monies.

Status: A new sweeper truck has been purchased. The bid was accepted on March 3, 2020.

Project Name: I-Pads or other Portable Computer Equipment for any department that requires fieldwork to streamline current workflows

Mitigation Action: Equipment purchase

Mitigation Strategy: All Natural

hazards **Jurisdiction:** City of

Hattiesburg

Priority: High

Description: The City of Hattiesburg has software to prepare a tree inventory for the entire City to aid in identifying weak or damaged trees that need removal, healthy trees that assist with stormwater retention and those that help with bank stabilization, etc.; however, the work load of doing the work on paper in the field then entering again on computer is double the work load and would be more efficient with the purchase of portable equipment to accomplish the entire project in the field, thus saving man hours. Other departments, such as drainage inspections, bridge inspections, and the like may also need this type equipment.

Responsible Department(s): City of Hattiesburg (Arborist, Public Works, Engineering)

Cost Estimate: \$ 600.00 each unit

Funding Source: General fund

Schedule: Within the 2018-2019 budget for Tree Inventory

Status: Complete

Project Name: Survey Equipment for Verifying Building Elevations

Mitigation Action: Equipment Purchase

Mitigation Strategy: Flooding

Jurisdiction: City of Hattiesburg

Priority: High

Description: The City of Hattiesburg has regulations that require elevation of certain structures, both in and out of a SFHA, but no way to accurately verify compliance on residential construction. Non-Residential Construction is verified by the Engineer for the project, and a Drainage Release is required on those that cannot meet the requirement.

Responsible Department(s): City of Hattiesburg Building Official

Cost Estimate: under \$500.00

Funding Source: General fund

Schedule: Within the 2018-2019 budget

Status: Incomplete. Building Division has not purchased any survey equipment, though the city Engineering Department has survey equipment.

Project Name: Additional Module(s) of EnerGov Software

Mitigation Action: Equipment

Purchase Mitigation

Strategy: All Natural Hazards

Jurisdiction: City of Hattiesburg

Priority: High

Description: The City of Hattiesburg currently utilizes several modules of the EnerGov Software, but many need enhancing to better monitor hazards and elevation information, and interface with GIS. This will help us to ensure compliance and enforcement of CRS Activities specifically 310 and required mapping activities. Seamless connectivity between our GIS and the existing modules (Permitting, Privilege Licensing, Code Enforcement, and Planning) are essential for efficient data collection and mapping. Another important aspect of this software is the Land Management, Permitting and Licensing Customer Self Service Portal which would be a vital customer service tool.

Responsible Department(s): City of Hattiesburg IT Department

Cost Estimate: unknown

Funding Source: General fund and applicable federal monies

Schedule: Within the next three years

Status: Improvements to Energov are actively ongoing, including the CSS portal addition.

Project Name: Drone for use in field work in inaccessible locations

Mitigation Action: Equipment Purchase Mitigation Strategy: All Natural hazards

Jurisdiction: City of Hattiesburg

Priority: High

Description: The City of Hattiesburg is currently updating maps for all drainage, streams and rivers in the City. Many locations are inaccessible for accurately recording information and a drone would allow access to these areas.

Responsible Department(s): City of Hattiesburg GIS and/or Engineering

Cost Estimate: unknown

Funding Source: Applicable federal monies or other identified funding source

Schedule: Funding Source will have to be identified prior to scheduling

Status: Incomplete.

Project Name: KANA Enterprise: Knowledge Management Software (or comparable brand)

Mitigation Action: Equipment Purchase

Mitigation Strategy: All Natural Hazards and City functions

Jurisdiction: City of Hattiesburg

Priority: High

Description: City-wide centralized information system to improve inter departmental relations and actions as to policies, procedures, ordinances, projects, status tracking and needed shared information for all internal staff. This would also allow standardized information distribution to all citizens for better customer service, including a detailed logging system all internal/external communications via telephone or E-Mail, thus reducing cost by being a more paperless City.

Responsible Department(s): City of Hattiesburg GIS and/or Engineering

Cost Estimate: unknown

Funding Source: Applicable federal monies or other identified funding source

Schedule: Funding Source will have to be identified prior to scheduling

Status: Ongoing. The City has upgraded the phone system, Staff has seen improvements to Energov, and is working toward an online customer service portal. Additionally, City ordinances are in the process of being digitized for online access. GIS, Engineering, Public Works, and Water & Sewer have also reviewed potentially shifting to ArcGIS online.

Project Name: Establish a revolving loan fund program for elevating all structures within SFHA

Mitigation Action: Property Protection Measures

Mitigation Strategy: Flooding

Jurisdiction: City of Hattiesburg

Priority: High

Description: Revolving loan fund for elevating structures in the flood zone. Criteria could be

income, personal funds, need of the structure, limitations on reinvestment due to value of structure (“substantial improvement”, County tax assessment), must be in designated flood zone. Could be set up through local non-profit or foundation for management at a zero or low interest. Benefits of elevating through this fund include:

1. Improve safety of the structure by reducing the flood risk
2. Lower flood insurance costs by elevating structure
3. Keeps people in their communities, many of which are historic or established through multiple generations
4. Allows increased investment in a structure by property owners by eliminating the “substantial improvement” limitation.
5. Allows increased investment in a neighborhood overall
6. Requiring work to be done by a “local” contractor would keep the investment in the community. Could also require the work to be done by independently owned companies, minority owned companies, etc.

Responsible Department(s): City of Hattiesburg Administration and Planning

Cost Estimate: unknown

Funding Source: Applicable federal monies or other identified funding source

Schedule: Funding Source will have to be identified prior to scheduling

Status: To date, no funding source has been identified. There is research in the utilization of CBGP/HUD funding for this project on a case-by-case basis.

Project Name: Locate source of assistance to homeowner’s on flood insurance cost

Mitigation Action: Property Protection Measures

Mitigation Strategy: Flooding

Jurisdiction: City of Hattiesburg

Priority: High

Description: We submitted a request to the State Auditor’s office asking “if a municipality could credit the cost of flood insurance to a homeowner’s property taxes that live in a flood zone, and the flood zone has been recognized and adopted by the municipality’s board as a tax abatement district/zone?” The response from Thomas Chain, Director of Technical Assistance with the State Auditor’s office was “We find no authority for a municipality to offer a tax abatement for property taxes based on the cost of flood insurance”. The City of Hattiesburg will continue to look for other ways to assist citizens with this expense, to make insurance more affordable for our low-income citizens.

Responsible Department(s): City of Hattiesburg Administration

Cost Estimate: unknown

Funding Source: Applicable federal monies or other identified funding source

Schedule: Funding Source will have to be identified prior to scheduling

Status: To date, no funding source has been identified.

Project Name: Implement existing drainage maintenance and repairs identified in existing studies and create new studies for additional areas of need

Mitigation Action: Property Protection Measures

Mitigation Strategy: Flooding

Jurisdiction: City of Hattiesburg

Priority: High

Description: Drainage Studies have been completed on several areas – the 2 most recent are identified as “6th Avenue to Corinne Street” and “2017 Gordon’s Creek Drainage. Many other areas of the City need such studies, and the City wishes to pursue funding for the implementation of existing studies, obtain additional studies throughout the City and implement the new studies, performing drainage improvements identified in all studies to decrease the flood potential in the entire City.

Responsible Department(s): City of Hattiesburg Administration

Cost Estimate: unknown

Funding Source: Applicable federal monies or other identified funding source

Schedule: Funding Source will have to be identified prior to scheduling

Status: There is an ongoing FEMA project for erosion repair along Burkett’s, Mixon’s and Gordon’s Creeks. Additionally, NRCS has been working on a variety of watershed stabilization projects at various points in City creeks, though this is just preliminary work. Repair and replace on existing drainage structures is ongoing as needed. A study of existing drainage along Gordon’s Creek at Lincoln Rd. is also ongoing.

Project Name: Implement existing studies for streets, outdoor water spaces (recreation and river walks) and other issues

Mitigation Action: Implement existing recreation and river walk plans

Mitigation Strategy: Flooding

Jurisdiction: City of Hattiesburg

Priority: High

Description: The City has many studies on file that will enhance areas of our City while implementing storm water street islands or creating outdoor water areas for many items, such as recreational or river walks. An example of some of the pending studies are East Hardy Street,

Twin Forks and Phase II of a Blue Way Project.

Responsible Department(s): City of Hattiesburg Administration

Cost Estimate: unknown

Funding Source: Applicable federal monies or other identified funding source

Schedule: Funding Source will have to be identified prior to scheduling

Status: City has most recently proposed the Leaf and Bouie river redevelopment district (March 2020) and is pursuing tap funding for a multi-use path along Gordon's creek, which is in line with the Gordon's creek park plan.

Project Name: Develop partnerships with local universities

Mitigation Action: Partnerships with local universities

Mitigation Strategy: All Hazard Types

Jurisdiction: City of Hattiesburg

Priority: High

Description: City wishes to develop partnerships with the University of Southern Mississippi and William Carey University to utilize their areas of expertise for future studies such as master planning, economic development, architectural/site analysis, natural resource, environmental and health studies, etc.

Responsible Department(s): City of Hattiesburg Administration

Cost Estimate: unknown

Funding Source: Applicable federal monies or other identified funding source

Schedule: Within one year

STATUS: The City partners with the Physical Plant at USM for "Right Way to Throw Away Day" each year. There has been outreach by the previous CRS Coordinator to the USM Construction Engineering Department.

Project Name: Continued coordination with all area agencies

Mitigation Action: Coordination with adjoining agencies

Mitigation Strategy: All Hazard Types

Jurisdiction: All Jurisdictions

Priority: High

Description: All jurisdictions wish to continue coordination between agencies, including but not

limited to, Forrest County, Lamar County, City of Hattiesburg, City of Petal, Emergency Management, University of Southern Mississippi, William Carey University, major businesses, health care facilities and state agencies for joint projects whenever feasible to protect all citizens in Forrest County and adjoining communities.

Responsible Department(s): City of Hattiesburg Administration

Cost Estimate: unknown

Funding Source: Applicable federal monies or other identified funding source

Schedule: Within one year

Status: The City of Hattiesburg continues to work with the above-listed agencies and stakeholders to promote flood and other hazard awareness and resiliency. Examples include “Right Way to Throw Away” Day and response during hazard events.