
1 **R2021-14: A RESOLUTION TO ADOPT THE FLOODPLAIN MANAGEMENT**
2 **AND HAZARD MITIGATION PLAN FOR THE CITY OF MYRTLE BEACH**

3 **Applicant/Purpose:** Staff/ to request Council approve & adopt 2020 revised Floodplain
4 Management/Hazard Mitigation plan

5
6 **Brief:**

- 7 • Federal Disaster Management Act of 2000 requires communities to create plan
8 to qualify for federal disaster funding.
- 9 • Last plan update was accepted by FEMA in 2015. Current plan has now
10 received FEMA’s preliminary approval & is ready for Council adoption.

11
12 **Issues:**

- 13 • Plan required for Community Rating System, which saves flood insurance
14 policyholders in Myrtle Beach over \$1,000,000 annually.
- 15 • Identifies 40 tasks that City could do or is already doing to help meet the
16 mitigation goals:
 - 17 ○ Protecting life & property from hazards.
 - 18 ○ Preserving beaches, wetlands, swashes, & waterways.
 - 19 ○ Continue to develop and implement storm water drainage plans.
 - 20 ○ Create and foster a comprehensive public awareness for all hazards in
21 the community.
 - 22 ○ Improving public safety & municipal services under emergency
23 conditions.
 - 24 ○ Preserving neighborhoods & land use plan.
 - 25 ○ Reducing economic impacts from hazard events.

26
27 **Public Notification:** Normal meeting notification.

28
29 **Alternatives:** None considered. Plan is required by CRS & to participate in Hazard
30 Mitigation Grant Program (HMGP) funds. Future federal disaster funding is contingent
31 on plan approval.

32
33 **Financial Impact:** City’s participation in CRS saved residents estimated \$1,000,000
34 annually in flood insurance premiums.

35
36 **Manager’s Recommendation:**

- 37 • I recommend approval.

38
39 **Attachment(s):** Proposed resolution.

RESOLUTION R2021-14

**CITY OF MYRTLE BEACH
COUNTY OF HORRY
STATE OF SOUTH CAROLINA**

**A RESOLUTION TO ADOPT THE
FLOODPLAIN MANAGEMENT AND
HAZARD MITIGATION PLAN FOR THE
CITY OF MYRTLE BEACH**

WHEREAS, the City of Myrtle Beach is a participant in the Community Rating System of the National Flood Insurance Program managed by the Federal Emergency Management Agency; and

WHEREAS, the City of Myrtle Beach implemented a Floodplain Management and Hazard Mitigation Plan in 1991 and incorporated it by reference in the Comprehensive Plan as part of the enrollment process in the CRS; and

WHEREAS, because of the city's participation in the CRS, owners in flood plains in the city have enjoyed a 25% reduction in flood insurance premiums; and

WHEREAS, because of the city's participation in the CRS, owners outside of flood plains in the city have enjoyed a 10% reduction in optional flood insurance premiums; and

WHEREAS, since the Disaster Management Act of 2000 the Federal Emergency Management Agency requires the plan be approved by the City Council in order to enable the City to apply for recovery funds after a presidentially-declared disaster;

WHEREAS, the Federal Emergency Management Agency requires a full evaluation of the plan to determine progress in implementation, and revision of the plan where deemed necessary, every five years, last achieved in 2015; and

WHEREAS, the Federal Emergency Management Agency has given preliminary approval to the attached plan, with full approval contingent upon the plan being approved and adopted by the local governing body;

NOW, THEREFORE, IT IS RESOLVED that the attached revised Floodplain Management and Hazard Mitigation Plan is hereby approved and adopted.

SIGNED AND SEALED this 13TH day of April 2021.

BRENDA BETHUNE, MAYOR

ATTEST:

JENNIFER ADKINS, CITY CLERK

U. S. Department of Homeland Security
Region IV
3005 Chamblee Tucker Road
Atlanta, GA 30341



FEMA

February 17, 2021

Candice Shealey, SC CEM
Hazard Mitigation Manager
South Carolina Emergency Management Division
2779 Fish Hatchery Road
West Columbia, SC 29172

Reference: Hazard Mitigation Plan: City of Myrtle Beach

Dear Mrs. Shealey:

This is to confirm that we have completed a Federal review of the draft City of Myrtle Beach Hazard Mitigation Plan for compliance with the Federal hazard mitigation planning requirements contained in 44 CFR 201.6(b)-(d). We have determined that the City of Myrtle Beach Hazard Mitigation Plan is now compliant with Federal requirements, subject to formal community adoption.

In order for our office to issue formal approval of the plan, the City of Myrtle Beach must submit adoption documentation. Upon submittal of a copy of documentation of the adoption resolution(s) to our office, we will issue formal approval of the City of Myrtle Beach Hazard Mitigation Plan. Please have the City of Myrtle Beach submit a final copy of their Plan, without draft notations and track changes.

For further information, please do not hesitate to contact, Kenya Grant, of the Hazard Mitigation Assistance Branch, at (202) 320-3338 or Jake Grabowsky, of my staff, at (202) 856-1901.

Sincerely,

A handwritten signature in blue ink that reads "Kristen M. Martinenza".

Kristen M. Martinenza, P.E., CFM
Branch Chief
Risk Analysis
FEMA Region IV

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA’s evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan’s strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction: City of Myrtle Beach	Title of Plan: City of Myrtle Beach Hazard Mitigation Plan Update	Date of Plan: November 2020
Local Point of Contact: Margaret Walton	Address: 1616 Millbrook Road, Suite 160 Raleigh, NC 27609	
Title: Senior Planner II, Land Planning		
Agency: Atkins Global Consulting		
Phone Number: (803) 622-4142		

State Reviewer: Lindsey McCoy	Title: HM Planning Coordinator	Date: 12/02/2020
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FEMA Reviewer: Jake Grabowsky Carl Mickalonis	Title: Hazard Mitigation Planner HM Planning Lead	Date: 02/08/2021
Date Received in FEMA Region <i>(insert #)</i>	12/09/2020	
Plan Not Approved		
Plan Approvable Pending Adoption	02/17/2021	
Plan Approved		

**SECTION 1:
REGULATION CHECKLIST**

INSTRUCTIONS: The Regulation Checklist must be completed by FEMA. The purpose of the Checklist is to identify the location of relevant or applicable content in the Plan by Element/sub-element and to determine if each requirement has been ‘Met’ or ‘Not Met.’ The ‘Required Revisions’ summary at the bottom of each Element must be completed by FEMA to provide a clear explanation of the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is ‘Not Met.’ Sub-elements should be referenced in each summary by using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each Element and sub-element are described in detail in this *Plan Review Guide* in Section 4, Regulation Checklist.

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
ELEMENT A. PLANNING PROCESS				
A1. Does the Plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1)) QC concurs: second meeting needs to occur.	a. 2:3 – 2:6 (11-14) b. 2:5 (13) c. 2:4 – 2:6 (12-14) d. 2:3 – 2:6 (11-14), Appendix D e. 2.3	X		
A2. Does the Plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))	a. 2:9– 2:10 (17-18), 2:5-2:6 Appendix D b. 2:5 – 2:6 (13-14) c. 2:3 – 2:6 (11-14), Appendix D	X		
A3. Does the Plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))	a. 2:6 – 2:9 (15-17) Appendix D b. 2:6 – 2:9 (15-17)Appendix D	X		
A4. Does the Plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3)) QC concurs	a. 6:3 – 6:4 (169-170) b. 6:5 – 6:9 (174-175)	X		

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
A5. Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))	a.	9:4 – 9:5 (205-206)	X	
A6. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a 5-year cycle)? (Requirement §201.6(c)(4)(i))	a.	9:1 – 9:5 (202-206)	X	
	b.	9:1 – 9:5 (202-206)		
	c.	9:1 – 9:5 (202-206)		
	d.	2:3 – 2:6 (11-14)		
<u>ELEMENT A: REQUIRED REVISIONS</u>				
ELEMENT B. HAZARD IDENTIFICATION AND RISK ASSESSMENT				
B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i))	a.	4:1 – 4:92 (25-116)	X	
	b.	N/A		
	c.	4:1 – 4:89 (25-113)		
	d.	4:1 – 4:89 (25-113)		
B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))	a.	4:1 – 4:89 (25-113)	X	
	b.	4:92 – 4:95 (116-119)		
	c.	4:1 – 4:89 (25-113)		
B3. Is there a description of each identified hazard’s impact on the community as well as an overall summary of the community’s vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii))	a.	4:1 – 4:89 (25-113)	X	
	b.	5:37 – 5:83 (120-166)		
QC concurs				
B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))	a.	4:65 – 4:66 (89-90)	X	
QC concurs				
<u>ELEMENT B: REQUIRED REVISIONS</u>				
ELEMENT C. MITIGATION STRATEGY				

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))	a.	6:3 – 6:15 (167 – 181)	X	
QC concurs				
C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))	a.	6:9 – 6:10 (175-176)	X	
QC concurs				
C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i))	a. b.	7:3 (184) 7:3 (184)	X	
C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))	a. b. c.	8:1 – 8:14 (190-201) 8:1 – 8:14 (190-201) 8:1 – 8:14 (190-201)	X	
C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))	a. b. c.	7:2 (183) 7:2 (183) 8:1 – 8:14 (190-201)	X	
C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii))	a. b. c. d. e.	6:3 – 6:15 (167 – 181) 6:3 – 6:4 (169-170) N/A 6:3 – 6:15 (167 – 181) 6:3 – 6:15 (167 – 181)	X	
ELEMENT C: REQUIRED REVISIONS				
ELEMENT D. PLAN REVIEW, EVALUATION, AND IMPLEMENTATION (applicable to plan updates only)				
D1. Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))	a.	3:5 – 3:6 (23-24); 5.3.4 (129)	X	
QC concurs				
D2. Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))	a.	8:1 – 8:14 (190-201)	X	
QC concurs				
D3. Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))	a.	4:92 – 4:95 (116-119)	X	

1. REGULATION CHECKLIST		Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)				
ELEMENT D: REQUIRED REVISIONS				
ELEMENT E. PLAN ADOPTION				
E1. Does the Plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))	a. Appendix A			X
E2. For multi-jurisdictional plans, has each jurisdiction requesting approval of the plan documented formal plan adoption? (Requirement §201.6(c)(5))	a. N/A			X
<p>ELEMENT E: REQUIRED REVISIONS To be inserted upon plan approval.</p> <p>Element E1 – City of Myrtle Beach has not provided documentation of adoption of the Updated Plan. This requirement will be scored as met following the submittal of documentation.</p> <p>Required Revisions:</p> <ul style="list-style-type: none"> The plan must include documentation of plan adoption, usually a resolution by the governing body or other authority. If adopted after FEMA review, adoption must take place within one calendar year of receipt of FEMA’s “Approvable Pending Adoption”. <p>Additional information can be found in the “Local Mitigation Plan Review Guide”, Element E: Plan Adoption, dated October 1, 2011, Pages 28-29. Also see the Local Mitigation Plan Handbook dated March 2013, Task 8. Links to these documents can be found in Section 3 of this Plan Review Tool.</p>				
OPTIONAL: HIGH HAZARD POTENTIAL DAM RISKS				
HHPD1. Did Element A4 (planning process) describe the incorporation of existing plans, studies, reports, and technical information for high hazard potential dams?				X
HHPD2. Did Element B3 (risk assessment) address HHPDs?				X
HHPD3. Did Element C3 (mitigation goals) include mitigation goals to reduce long-term vulnerabilities from high hazard potential dams that pose an unacceptable risk to the public?				X
HHPD4. Did Element C4-C5 (mitigation actions) address HHPDs prioritize mitigation actions to reduce vulnerabilities from high hazard potential dams that pose an unacceptable risk to the public?				X
REQUIRED REVISIONS				
ELEMENT F. ADDITIONAL STATE REQUIREMENTS (OPTIONAL FOR STATE REVIEWERS ONLY; NOT TO BE COMPLETED BY FEMA)				
F1.				
F2.				

1. REGULATION CHECKLIST	Location in Plan (section and/or page number)	Met	Not Met
Regulation (44 CFR 201.6 Local Mitigation Plans)			
<u>ELEMENT F: REQUIRED REVISIONS</u>			

SECTION 2:

PLAN ASSESSMENT

A. Plan Strengths and Opportunities for Improvement

Element A: Planning Process

Plan Strengths:

- The city continued to seek public involvement with a survey after no one showed up to the public meetings
- Plan development followed a thorough and thought out process

Element B: Hazard Identification and Risk Assessment

Plan Strengths:

- The plan has great hazard descriptions
- The plan does a good job discussing previous occurrences and impacts in the tables for each hazard

Opportunities for Improvement:

- Some of the maps are from several years ago, such as the drought map from 2011 more up to date maps would be helpful to the community

Element C: Mitigation Strategy

Plan Strengths:

- Plan is a good example of planning integration as it is also the city's flood management plan.
- Section 6 does a good job describing the city's capabilities

Element D: Plan Review

Plan Strengths:

- All Items from the previous plan were account for in the current plan

Opportunities for Improvement:

- Most of the action items from the previous plan were deferred. Hopefully in the next plan update many more will be complete.

B. Resources for Implementing Your Approved Plan

Local Mitigation Planning Handbook

This Handbook provides guidance to local governments on developing or updating hazard mitigation plans to meet the requirements under the Code of Federal Regulations (CFR) Title 44 – Emergency Management and Assistance §201.6.

Use the Local Plan Guide and Handbook in tandem to understand technical requirements

<http://www.fema.gov/library/viewRecord.do?fromSearch=fromsearch&id=7209>

Integrating Mitigation Strategies with Local Planning

This resource provides practical guidance on how to incorporate risk reduction strategies into existing local plans, policies, codes, and programs that guide community development or redevelopment patterns.

<http://www.fema.gov/library/viewRecord.do?id=7130>

Mitigation Ideas

Communities can use this resource to identify and evaluate a range of potential mitigation actions for reducing risk to natural hazards and disasters.

<http://www.fema.gov/media-library/assets/documents/30627>

Mitigation Assistance Programs

FEMA administers three programs that provide funding for eligible mitigation projects that reduces disaster losses and protect life and property from future disaster damages. The three programs are the Hazard Mitigation Grant Program (HMGP), the Flood Mitigation Assistance (FMA) Program, and the Pre-Disaster Mitigation (PDM) Program.

<http://www.fema.gov/hazard-mitigation-assistance>

Rehabilitation of High Hazard Potential Dam Grant Program

The President signed the “[Water Infrastructure Improvements for the Nation Act](#)” or the “WIIN Act,” on December 16, 2016, which adds a new grant program under FEMA’s National Dam Safety Program (33 U.S.C. 467f). Section 5006 of the Act, Rehabilitation of High Hazard Potential Dams, provides technical, planning, design, and construction assistance in the form of grants for rehabilitation of eligible high hazard potential dams.

<https://www.fema.gov/rehabilitation-high-hazard-potential-dam-grant-program>

**SECTION 3:
MULTI-JURISDICTION SUMMARY SHEET (OPTIONAL)**

INSTRUCTIONS: For multi-jurisdictional plans, a Multi-jurisdiction Summary Spreadsheet may be completed by listing each participating jurisdiction, which required Elements for each jurisdiction were 'Met' or 'Not Met,' and when the adoption resolutions were received. This Summary Sheet does not imply that a mini-plan be developed for each jurisdiction; it should be used as an optional worksheet to ensure that each jurisdiction participating in the Plan has been documented and has met the requirements for those Elements (A through E).

MULTI-JURISDICTION SUMMARY SHEET												
#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Requirements
1	City of Myrtle Beach						Y	Y	Y	Y	N	NA
2												
3												
4												
5												
6												
7												
8												

MULTI-JURISDICTION SUMMARY SHEET

#	Jurisdiction Name	Jurisdiction Type (city/borough/ township/ village, etc.)	Plan POC	Mailing Address	Email	Phone	Requirements Met (Y/N)					
							A. Planning Process	B. Hazard Identification & Risk Assessment	C. Mitigation Strategy	D. Plan Review, Evaluation & Implementation	E. Plan Adoption	F. State Require- ments