

RESOLUTION NO. 1416

A RESOLUTION OF THE CITY OF DES MOINES, WASHINGTON, adopting a Hazard Mitigation Plan for the City of Des Moines for the years 2020-2025.

WHEREAS, the City Council of the City of Des Moines recognizes that Des Moines has exposure to natural and man-made hazards that increase the risk to life, health, property, and the environment, and

WHEREAS, proactive mitigation of known hazards before disaster events occur can reduce or eliminate long-term risk to life, health, safety, and the environment, and

WHEREAS, Congress enacted the Disaster Mitigation Act of 2000, codified at 42 U.S.C. § 5121, et seq., requiring that local governments establish a mitigation plan for identifying natural hazards, risks, and vulnerabilities of that local government as a condition of receiving federal hazard mitigation funds, and

WHEREAS, King County and certain cities, towns, and special purpose districts within King County have engaged in a process to create consistent mitigation strategies that will allow for efficient resource management and consistency across the planning area, and

WHEREAS, the City of Des Moines has chosen to participate in the regional hazard mitigation planning process, and

WHEREAS, through the regional hazard mitigation planning process, City staff have developed a City of Des Moines Hazard Mitigation Plan for the years 2020-2025 that complies with the Disaster Mitigation Act of 2000; works in coordination with the King County plan and activities; and builds a network of local organizations that can play an active role in plan implementation, and

WHEREAS, the City Council of the City of Des Moines finds that adoption of the City of Des Moines Hazard Mitigation Plan for the years 2020-2025 is appropriate and necessary to protect the public health and welfare; now therefore,

THE CITY COUNCIL OF THE CITY OF DES MOINES RESOLVES AS FOLLOWS:

Sec. 1. The City Council adopts the Hazard Mitigation Plan for the City of Des Moines for the years 2020 through 2025,

which is attached to this Resolution as Attachment "A" and by this reference incorporated herein.

Sec. 2. The City Clerk is directed to file one certified copy of this Resolution and Exhibit with King County Emergency Management within thirty (30) days of the date of adoption of this Resolution.

PASSED BY the City Council of the City of Des Moines, Washington this 16th day of July, 2020 and signed in authentication thereof this 16th day of July, 2020.



M A Y O R

APPROVED AS TO FORM:

/s/ Timothy George
City Attorney

ATTEST:



City Clerk



City of Des Moines Plan Annex

Introduction

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—06/15/1959
- **Current Population**—31,580 as of 04/01/2019
- **Population Growth**— Based on existing data, the City of Des Moines has experienced moderate population growth over the past few years. At just over 5% growth between 2015 and 2019, it is notably higher than the population growth of the United States but comparable to the State of Washington's 1.6% annual growth rate.
- **Location and Description**—Des Moines is long and narrow and is situated along the shores of Puget Sound. Covering 6.4 square miles, Des Moines is the 12th largest city in King County and ranked 39th in the State of Washington. The cities of Normandy Park and SeaTac form Des Moines northwest and northeast borders, while the cities of Kent and Federal Way form the east and south borders. Very few major thoroughfares/arterials dissect the City, and the topography includes bluffs, steep slopes, several creeks, wetlands and beaches.
- **Brief History**—Early explorers to the area that would eventually become Des Moines included Coastal Indian Tribes, British Naval Captain George Vancouver and individuals associated with the Hudson Bay Company. The first homestead claim certificate was granted in 1872 and the plat of the Town of Des Moines was recorded in 1889. Des Moines became a destination for commerce dependent on the moving of goods and people via Puget Sound as well as a destination for visitors wanting to enjoy the water due to its direct access to the Puget Sound. After World War II the population of the area continued to grow and businesses were established. The talk of annexation from neighboring cities prompted the incorporation as a City in 1959. The proximity to both Seattle and Tacoma draws a population of residents whom want to live in an area with a small town feel and still have access to the amenities of the nearby larger cities.
- **Type of Government** – Des Moines operates under a council-manager form of government. The City Council is comprised of seven non-partisan members elected every two years to serve four-year terms. Council members elect the Mayor and Deputy Mayor. The City consists of eight departments: Administration; Legal; Finance; Police; Marina; Planning, Building and Public Works; Court; and Parks, Recreation and Senior Services. The Director of Emergency Management assumes responsibility for the adoption of this plan as well as the coordination with other city departments for the implementation
- **Climate**—Des Moines' weather is typical to western Washington. Wet, rainy winters and mild summers result in mostly mild temperatures. Des Moines like most of the Seattle-Tacoma area, is shielded from extreme temperatures by the Cascade Mountain Range, with an average daily temperatures in the 70's during the summer and in the 40's during the winter. The winter months result in significant amounts of rain with occasional snowfall. Des Moines receives on average 38 inches of precipitation annually.

Jurisdiction Profile

The city of Des Moines





Development Trends

Growth and development in the City of Des Moines is influenced by activities outside the city, including: state regulations; regional economic trends, development plans, transportation systems and commuting patterns; development within bordering jurisdictions; and local influences such as Seattle-Tacoma International Airport (Sea-Tac Airport) and Highline College.

Recent growth in the City has been attributed to the build out of the Des Moines Creek Business Park, new mixed use projects and residential development. Creation of new family wage jobs and quality housing have contributed to our thriving community.

By year 2040, the Puget Sound Region is expected to add 5 million people and 3 million new jobs. Des Moines is required to accommodate a portion of this growth and has planned for an additional 3,480 Housing Units and 5,800 new jobs by 2040. The City has established the vision, public policy and the regulatory framework to ensure that growth occurs in a manner that supports economic development and job growth; creates strong neighborhoods with a range of housing, commercial, and transportation options; and champion healthy neighborhoods that provide families with a clean environment.

Jurisdiction Point of Contact:

Name: Mark Couey
Title: Assistant Chief of Police
Entity: City of Des Moines Police
Phone: 206-870-6564
Email: mcouey@desmoineswa.gov

Plan Prepared By:

Name: Shannon Kirchberg
Title: Emergency Preparedness
Manager
Entity: City of Des Moines
Phone: 206-870-6562
Email: skirchberg@desmoineswa.gov



Des Moines Risk Summary

The City of Des Moines is vulnerable to numerous technological, natural and human-initiated hazards. While our overall hazards are similar to those identified in the King County Regional Hazards Mitigation Plan and Washington State Enhanced Hazard Mitigation Plan, based on the analysis performed, the City of Des Moines has determined it is vulnerable to:

Hazard Risk and Vulnerability Summary

HAZARD	RISK SUMMARY	VULNERABILITY SUMMARY	IMPACT SUMMARY
Avalanche	The City of Des Moines is not directly impacted by avalanche threat, although a secondary impact could be the economic impact from closure of mountain passes.	None	None
Earthquake	The City of Des Moines as a whole is at risk for earthquakes. The largest fault lines capable of earthquakes are Cascadia Fault Seattle Fault and Tacoma Fault	Being a coastal City, the City of Des Moines Marina Floor, Des Moines Beach Park, Redondo Beach and Downtown Marina Business district are at the highest risk due to liquefaction and Tsunami. An earthquake would have a significant impact on transportation systems, water and other utilities required for sustaining life and required for recovery.	Life support for survivors will not be available for several days due to extensive damage to roadways and bridges. The City of Des Moines has done a good job in retrofitting existing bridges and culverts. Continue the practice of ensuring future projects protect roads, bridges, utilities and needed infrastructure to ensure continuity of Government as quickly as possible.
Flood	While much of the City of Des Moines waterfront area is at risk for coastal flooding (along the Puget sound), the vast majority of the City is on higher ground. Due to the elevation of the area, flooding would be localized. The City of Des Moines does not have any repetitive loss properties to address.	As the largest asset of Des Moines, the Des Moines Marina is at risk from flooding due to King Tides, rising sea levels, Tsunami and storm surge.	Throughout the management of the Capital Improvement Plan the City of Des Moines will focus all upgrades at the Marina to ensure it can withstand flooding. The north sea wall replacement will increase the sustainability of the north and center lots of the Marina and ensure the Des Moines Marina can withstand Puget Sound surges.



Landslide	Landslides are at most times unpredictable and not forecasted. These acts are the movement of land including trees and manmade materials. When landslides occur, they can cause massive loss of public and private property.	The City of Des Moines has very little landslide area. Areas that are at risk are also on the west coast located on the edge of Puget Sound.	Minimal risk. Manage building and development high-risk areas through current and future building codes.
Severe Weather	The City of Des Moines as a whole is susceptible to severe weather seasonally. Highest impact to the area is mild to large snow and ice events. Due to the proximity to Puget Sound, winds can also have an impact on areas near the west of the City.	The effects of severe weather in the City of Des Moines can include flooding, power outages, land/mudslides, and road closures. There is minimal snow removal equipment or budget associated for such service in the City of Des Moines. Local community member vehicles and drivers are often poorly equipped to travel roadways under such conditions. For this reason, impacts from unusually heavy snowfalls and severe winters tend to be dramatic though short-lived.	When severe weather hits, the impacts are normally very short lived in our area. Road equipment improvements as well as sand and deicer that the City keeps on hand need will be evaluated to determine new acceptable levels. . Inventory levels of both have been increased to ensure a quick response to dangerous road conditions as experience in the 2019 Winter Storm event.
Tsunami	Models for Tsunami risk and the City of Des Moines are ever changing. The impact of such hazards are determined by the fault area.	The Seattle fault line currently shows the largest threat due to the direction and proximity to Des Moines. Current models indicate that tide surges could exceed 18 feet above sea level but would take up to 2 hours to crest allowing time for evacuation.	Ensure future renovations and upgrades to City infrastructure at the Des Moines Waterfront Redondo and Marina District include review and mitigation against Tsunami modeling.
Volcano	Eruptions of Mt. Rainier would result in lahar flows through the Auburn, Kent, Renton and valley floor. Given the altitude of the majority of the City of Des Moines, volcanic threats such as lahars, debris flow and lava flows are unlikely.	Most significant impact for Des Moines would be in access to the south and the evacuation of survivors from the Valley of Kent, Renton and Auburn.	Strengthen relationships with at risk cities within the Tri-County area. Familiarize ourselves with the evacuation plans that could influence the City of Des Moines to be as prepared as possible.

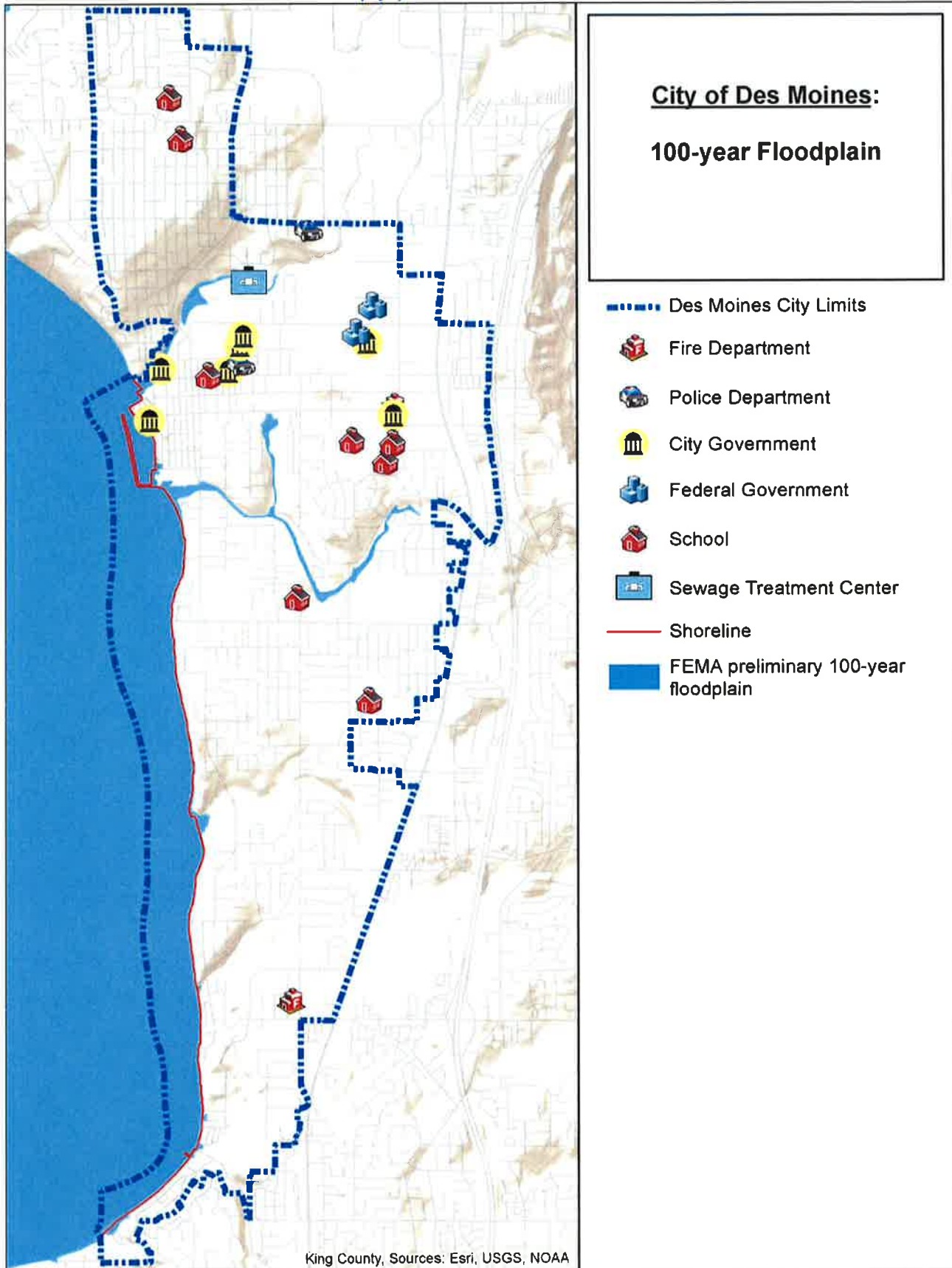


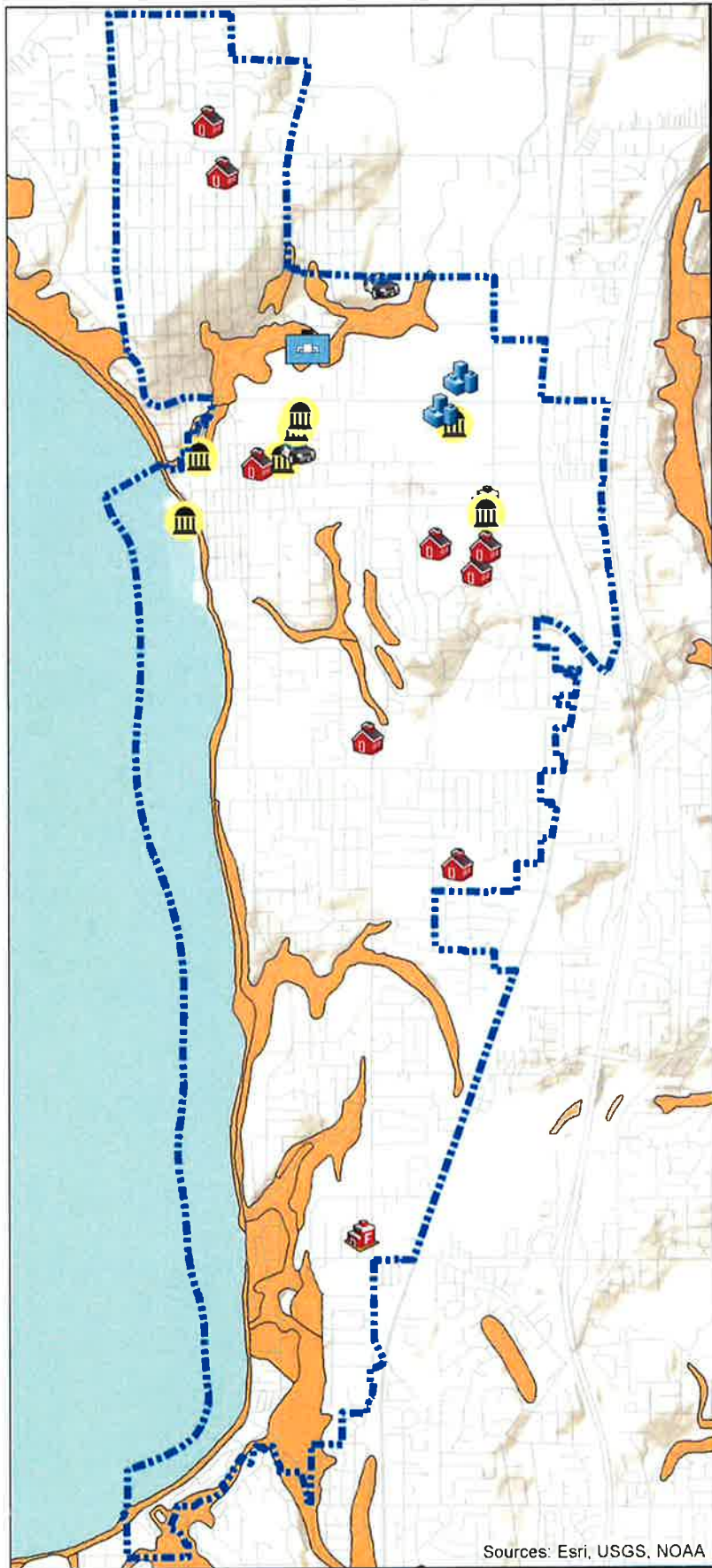
Wildfire	The City of Des Moines has limited wildland urban-interface areas, as the majority of the western edge of the City is the coastal Puget Sound. The City is at the same risk for wildfires as the rest of the county and general region .	None	None
Civil Disturbance	Civil Disturbance is an activity arising from a mass act of civil disobedience in which the participants become hostile toward authorities incur difficulties in maintaining public safety and order, over a disorderly crowd. It is in any form prejudicial to public law and order .	There can be a significant impact to cities during and after civil disturbances. These can be profound and have a direct impact on the community. These kinds of disturbances can include looting and the destructions of private and public property.	Des Moines has no history of civil disorder.
Cyber Attack	Just like all other governments and businesses across the nation, the City of Des Moines relies on computers/networks to conduct its normal business and is susceptible to cyberattack.	The City has implemented numerous systems, services and devices (internal and external networks) to conduct operations. These digital networks are vulnerable to intentional incidents (cyber-attacks) and unintentional incidents (accidental release of information or access to sensitive information). Cyber-attacks impact radio, telephone, and computer networks used to manage City services, potentially resulting in loss of those services or the inability to dispatch police, fire or medical as required for a given incident.	Although the City of Des Moines has not had any reports of cyber-attacks, our internal IT department is very active in ensuring all servers are protected/patched and have the latest and best in protection for all networks, servers and e-mail.
Dam Failure	Des Moines is not at risk of dam failures due to being located on the West Hill of Kent Valley.	The City of Des Moines is not at risk of flooding from a breach or release of water from local dams. Our vulnerability is that several of the westbound evacuation routes from low-lying areas in Kent and Auburn as these routes lead to the City of Des Moines.	Strengthen relationships with at risk Cities within the King County area. Familiarize ourselves with evacuation plans that could affect the City of Des Moines to



			be as prepared as possible.
Hazardous Materials Incident	Des Moines does not have any hazardous materials within its City Limits	There are no hazardous materials manufactured within the cite limits of Des Moines. The only hazards would be those of local utilities and/or businesses with fuel tanks on their property as the City has at their Public Works Service Center and Des Moines Marina	Coordinate response with local Fire, Police and State agencies as needed in any hazardous material spill.
Public Health Emergency	The National Disaster Medical System Federal Partners Memorandum of Agreement defines a public health emergency as "an emergency need for health care [medical] services to respond to a disaster, significant outbreak of an infectious disease, bioterrorist attack or other significant or catastrophic event.	Just as any other city within King County, Des Moines is at risk for any Public Health Emergency that may take place.	Des Moines has no history of Public Health Emergencies
Structure Fire	Structure fires are hazardous to all location both residential and business. The City of Des Moines handles structure fires through a partnership with South King Fire & Rescue.	There are 2 fire stations in the city limits of Des Moines. Station 67 located on 223 rd Street and Station 66 located on 15 th Ave South.	The City of Des Moines will continue to maintain its already strong relationship with South King Fire & Rescue.
Terrorism	Targets of terrorism are usually in large cities with high dense populations. Targets range from Government buildings, community facilities, airports and stadiums. Targets are large gathering places that would create attention across all media platforms including TV, radio and social media platforms.	The City of Des Moines would not be a direct target of terrorism. However, due to the City of Des Moines location to the south of Sea-Tac Airport, Des Moines could be indirectly involved in an attack on the Port.	The City of Des Moines will work closely with the Emergency Management Team at Sea-Tac Airport to ensure a strong working relationship. The City will share is Comprehensive Emergency Plan as appropriate with the Port to ensure we are working in support of any incident that may potentially take place.

Hazard and Asset Overview Map(s)

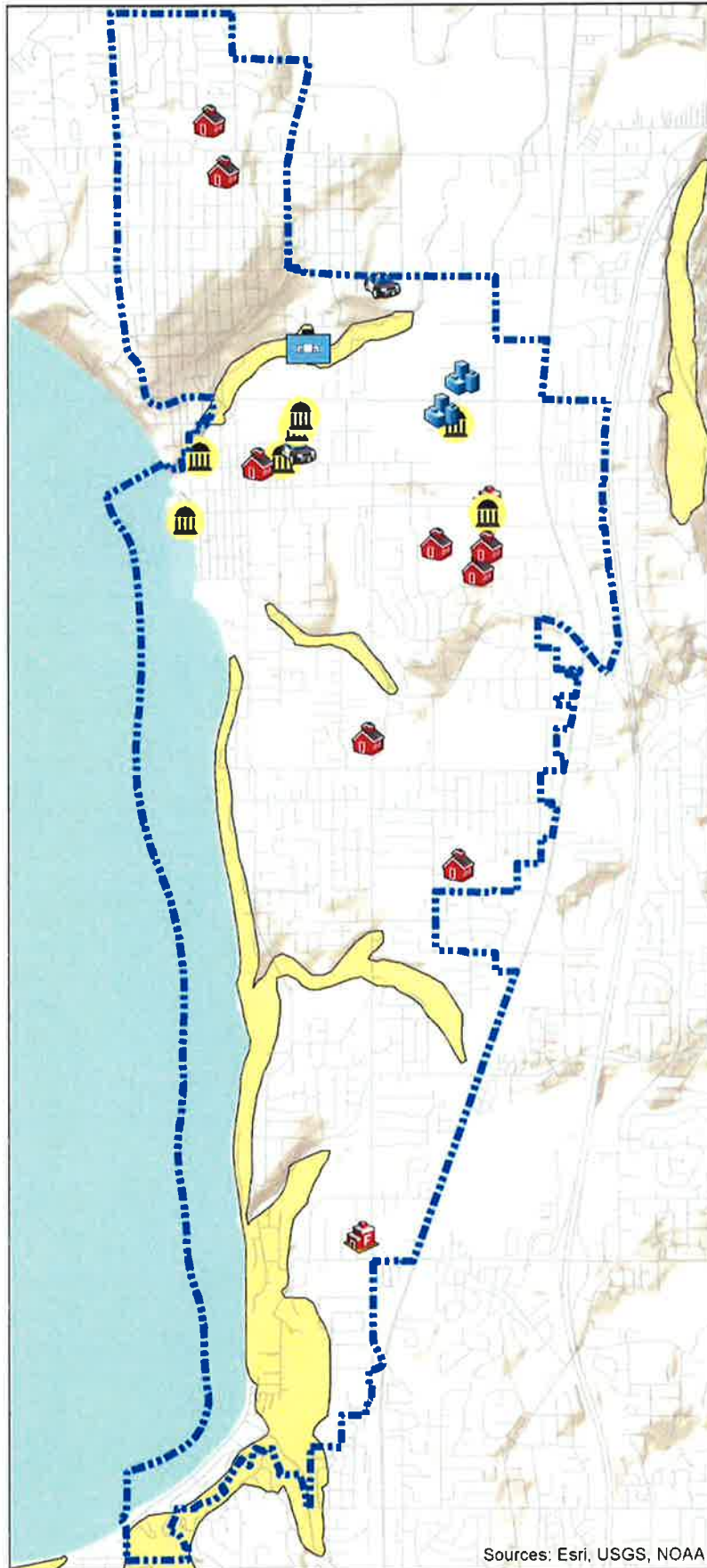




City of Des Moines:
Erosion Hazards

- Des Moines City Limits
- Fire Department
- Police Department
- City Government
- Federal Government
- School
- Sewage Treatment
- Erosion Hazards

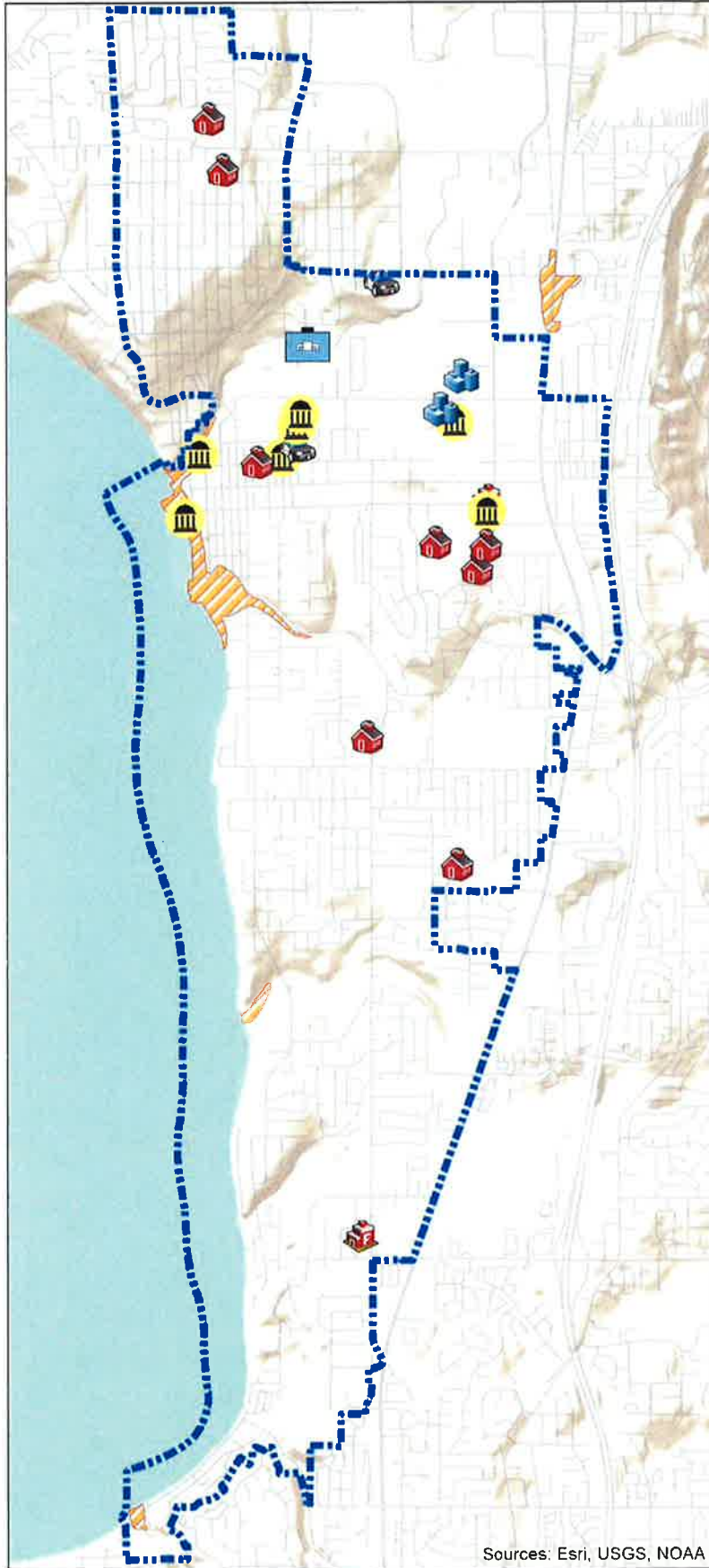
Sources: Esri, USGS, NOAA











City of Des Moines:
Landslide Hazards

- Des Moines City Limits
- Fire Department
- Police Department
- City Government
- Federal Government
- School
- Sewage Treatment
- Landslide Hazards

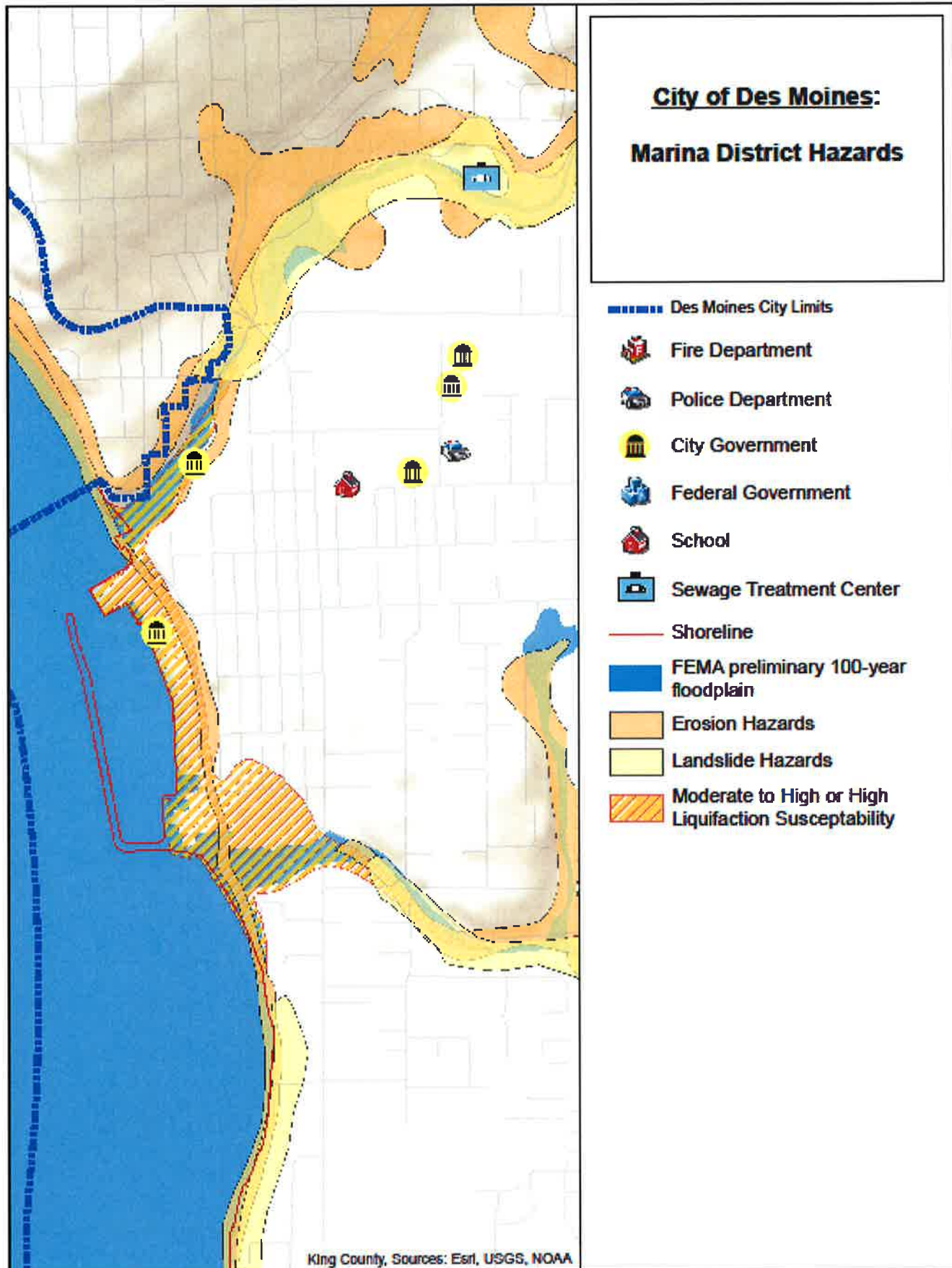
Sources: Esri, USGS, NOAA

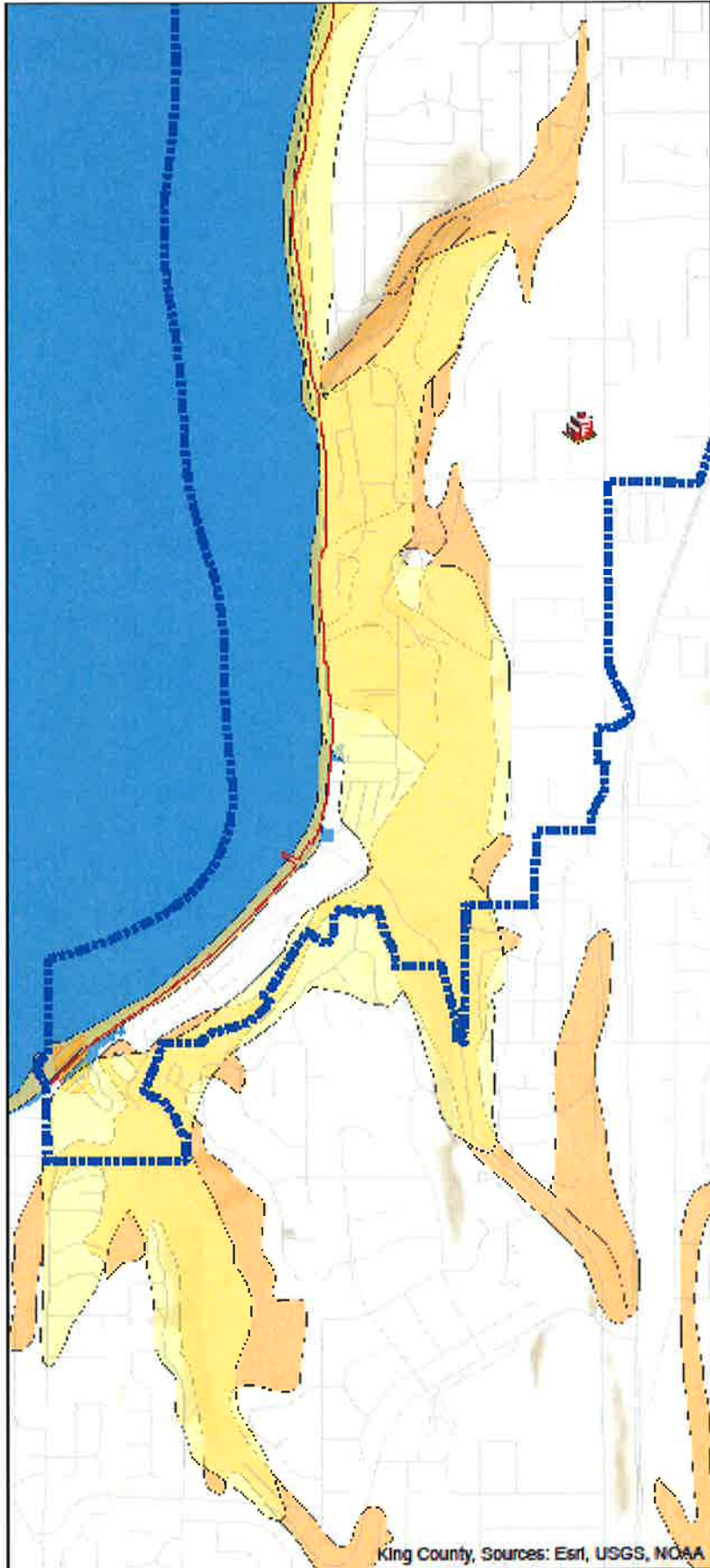


City of Des Moines:
Liquefaction Susceptibility

-  Des Moines City Limits
-  Fire Department
-  Police Department
-  City Government
-  Federal Government
-  School
-  Sewage Treatment Center
-  Moderate to High or High Liquefaction Susceptibility

Sources: Esri, USGS, NOAA





King County, Sources: Esri, USGS, NOAA

City of Des Moines: **Redondo Beach Hazards**

- Des Moines City Limits
- Fire Department
- Police Department
- City Government
- Federal Government
- School
- Sewage Treatment Center
- Shoreline
- FEMA preliminary 100-year floodplain
- Erosion Hazards
- Landslide Hazards
- Moderate to High or High Liquifaction Susceptibility



Plan Update Process

The Hazard Mitigation Plan began with the Des Moines City Manager and City Council recognizing that participating in the planning process with King County would be a benefit to the City of Des Moines. The City of Des Moines Emergency Management staff began participating in the 2020 King County Regional Hazard Mitigation Plan training programs and planning process. The plan began with an initial meeting with the Des Moines planning team to discuss known and potential threats for Des Moines and the surrounding area as well as mitigation efforts and planning already taking place and noted in the current CIP Plan.

Assistant Chief of Police; Mark Couey and Emergency Preparedness Manager; Shannon Kirchberg led the development of the City of Des Moines Hazard Mitigation Plan and will maintain the document in cooperation with the King County Office of Emergency Management and the State of Washington Military Department Emergency Management Division. The Des Moines Emergency Operations Committee, Planning, Building & Public Works (PBPW) staff, Emergency Management staff and South King Fire & Rescue (SKF&R) provided technical review for plan development.

The City focused on building pre-existing programs and identifying gaps that may lead to disaster vulnerabilities, in order to work on ways to address these risks through mitigation. These results were evaluated against the City of Des Moines current CIP. The City held two public meetings educating Des Moines residences about the Hazard Mitigation Plan and importance of whole community involvement. A mitigation survey has been placed on the City of Des Moines web site providing an opportunity for the public to comment. City staff attended the Des Moines Waterfront Farmers Market on September 21, 2019 with handouts and information about the Mitigation Plan and information on how to locate the questionnaire on line. Staff conducted an interactive tally to gain an understanding of what the community sees as the largest hazards that could affect the City of Des Moines.

City staff took part in several planning and training sessions about the Hazard Mitigation template provided by King County. Additionally, the planning team met one on one with King County Emergency Operations Center (LCEOC) staff about Des Moines specific questions.

The planning process will: (1) result in a Disaster Mitigation Act of 2020 compliance; (2) coordinate with the King County plan and activities; and (3) build a network of local organizations that can play an active role in plan implementation.

The City of Des Moines is committed to keeping the Hazard Mitigation Plan current and relevant to hazards that the City of Des Moines is vulnerable to. To achieve this, the City of Des Moines will review the Hazard Mitigation Plan, annually and/or after each disaster. Eighteen months before the plan comes due for the formal five-year update and adoption as required, the review process for the update will begin. The Des Moines Emergency Operations Committee, under direction of the City Manager, will facilitate the plan review and update. This planning team will stay intact during the five-year cycle. The City of Des Moines will also participate in regional planning efforts with the King County Office of Emergency Management and the Washington State Military Department - Emergency Management Division to ensure the City of Des Moines is in line with regional state goals and objectives.



Jurisdiction Planning Team

NAME	TITLE	ORGANIZATION	CONTRIBUTION
Michael Matthias	City Manager	Administration	Approval
Dan Brewer	Chief Operations Officer	Administration	Review/Approval
Susan Cezar	Chief Strategic Officer	Administration	Review/Approval
Mark Couey	Assistant Chief of Police	Police	Review/Research/Approval
Brandon Carver	Public Works Director	Public Works	Review/Approval
Andrew Merges	Transportation & Engineering Service Manager	Transportation	Review and Input
Loren Reinhold	Surface Water Management Utility Manager	Surface Water Management	Review and Input
Denise Lathrop	Planning and Development Services Manager	Planning and Community Development	Review and Input
Max Mousseau	GIS Analyst	IT	Maps/Analytics
Scott Wilkins	Harbormaster	Marina	Review and Input
Shannon Kirchberg	Emergency Preparedness Manager	Emergency Management	Research

Plan Update Timeline

PLANNING ACTIVITY	DATE	SUMMARY	ATTENDEES
Meeting at EOC	07/15/2019	Meeting with KCEOC staff for one on one training on Mitigation Plan	Shannon Kirchberg George Delgado Max Mousseau Thomas Sharp Derick Hiebert
Mitigation Action Plan Training	07/25/2019	Training on writing a Hazard Mitigation Strategy for the 2020 Annex	Shannon Kirchberg Max Mousseau Denise Lathrop
Grant Training	08/22/2019	Hazard Mitigation Funding Workshop	Shannon Kirchberg Nicole Nordholm
Mitigation Plan Training	09/05/2019	Meeting with new Assistant Chief of Police and KCEOC on Hazard Mitigation Strategist.	Shannon Kirchberg Mark Couey Derick Hiebert
2009 Mitigation Plan Update	09/10/2019	Meeting with Loren Reinhold, Surface Water Management Utility Manager, to update 2009	Shannon Kirchberg Loren Reinhold



		mitigation strategies for the 2020 mitigation plan.	
2020 Mitigation Map Review	09/12/2019	Meeting with GIS office. Review of current maps and editing for plan and Farmers Market Outreach event on 09-21-19. Maps to be printed 26 X 31 for display at the event.	Shannon Kirchberg Max Mousseau
2020 Mitigation meeting with IT Department	09/16/2019	Meeting to discuss assets at risk within the IT Department. What would be required to ensure continuity of Government, what is at risk, what is needed to ensure City Government could keep running or get back up and running quickly after a disaster.	Shannon Kirchberg Dale Southwick
2020 Mitigation Plan Review	09/16/2019	Meeting with Susan Cezar to review information collected for the Hazard Mitigation Plan. Get feedback and additional recommendation for information to be included in the plan for 2020.	Shannon Kirchberg Susan Cezar
2020 Mitigation Plan Review	09/18/2019	Meeting with Andrew Merges, Transportation and Engineering Manager, to review CIP and Hazard Mitigation Action Items.	Shannon Kirchberg Andrew Merges
2020 Mitigation Plan Review	09/18/2019	Meeting with John Blackburn, Public Works Superintendent, to review the CIP and Hazard Mitigation plan.	Shannon Kirchberg John Blackburn



Public Outreach

Public participation is vital to any planning initiative, and mitigation planning is no different. The Plan has remained posted on the City of Des Moines website (www.desmoineswa.gov/hmp) during the various stages of plan development. The public was asked to provide input via email, surveys, etc.

The City of Des Moines will continue to seek public input on the mitigation plan. The plan will be maintained on the City’s website, seeking public participation in the planning, updating and review meetings. During plan updates, we will again post the process on the City’s website and social media channels as well as announce it at public meetings, and continue to attempt to get community participation and input. Documentation from our public participation during the 2020 process is below.

EVENT	DATE	SUMMARY	ATTENDEES
Des Moines Area Emergency Management Group	04-23-19	Attendees- Des Moines Area Emergency Management partners. Held at the Dining Hall in the Beach Park. Discussed Hazard Mitigation. King County Office of Emergency Management discussing the King County Regional Hazard Mitigation Plan and how it impacts all of us. Attendees to consider what specific vulnerabilities they see as major threats to resources, properties and/or future development plans. From the discussion, a list of threats identified have been made available to the group to use in future planning.	Kyle Jacobson, CHI Franciscan; Tom Sharp, KCEM; John Bowmen, Lakehaven Water/Sewer; Eric Clarke, King County Water District 54; Lawrence Pickard, City of Des Moines; Corey Cummins, Recology; Brandon Carver, City of Des Moines; Scott Wilkins, City of Des Moines; Beth Anne Wroe, City of Des Moines; Susan Cezar, City of Des Moines; Randy Boyd, Highline Public Schools; George Delgado, City of Des Moines
Waterfront Farmers Market	09/21/2019	King County brought a relief map of King County to share with the public during the day. Public was asked what the City’s assets are and what they see as most at risk in our community.	Shannon Kirchberg Derrick Hiebert Sarah Yancey



		<p>The City handed out flyers directing attendants to go to the City of Des Moines web site to fill out the Hazard Mitigation Survey on line. In addition, there were printed surveys that were at the booth for individuals to fill in and leave behind.</p> <p>King County provided Emergency Readiness pamphlet's, Whistles, Car USB Chargers and Build an Emergency Preparedness Kit flyer.</p>	
Hazard Mitigation Survey	09/16/2019	<p>The Hazard Mitigation team created a questionnaire on Survey Monkey. The survey has been loaded on the City of Des Moines web site. The survey has been promoted through social media pages throughout the community including City of Des Moines and community pages.</p>	Shannon Kirchberg
Hazard Vote Talley	09/21/2019	<p>Des Moines and South King Fire & Rescue conducted a survey at the Des Moines Farmers Market. Market attendees vote for the 2 hazards they believe to be their highest concern and second highest concern. The highest was Earthquake with the second being Landslide.</p>	Shannon Kirchberg Sarah Yancey-Nuss



Jurisdiction Hazard Mitigation Program

The City of Des Moines hazard mitigation strategies were developed through the following process. A planning team was organized utilizing representatives from Planning, Engineering, Community Development, Police Department, Parks and Recreation, Public Works and Park Maintenance. Together this team created a list of mitigation strategies. These strategies were prioritized by a process identified at the county level and document into the base plan.

Each department that submitted a mitigation strategy will work through the strategy as outlined. The strategy will be reviewed and updated each year with all members of the mitigation team. The team will work together to advocate for the completion of all strategies in the plan, including securing funding to complete all projects.

Process to Integrate the Mitigation Plan

The success of this Mitigation plan requires coordination between all planning efforts. The City of Des Moines will attain proper integration of the plan by ensuring consistency across all planning, capitalize on multi-benefit initiatives that are supported across multiple planning processes and ensuring a common measuring process for results.

This Hazard Mitigation plan highlights information pertaining to vulnerabilities and risk for other plans to take into consideration. The Mitigation Plan will in turn rely on other plans and processes to implement strategies, since the mitigation plan is not itself a regulatory or budgetary document.

There are many plans and planning processes within the City of Des Moines that impact hazard risk. These include strategic plans, long-range plans, resource plans, and capital plans. To ensure the Hazard Mitigation plan is incorporated across all areas, the plan will be reviewed and updated annually during the Budget and CIP review each August.

Plan Monitoring, Implementation, and Future Updates

King County leads the mitigation plan monitoring and update process and schedules the annual plan check-ins and bi-annual mitigation strategy updates. Updates on mitigation projects are solicited by the county for inclusion in the countywide annual report. As part of participating in the 2020 update to the Regional Hazard Mitigation Plan, every jurisdiction agrees to convene their internal planning team at least annually to review their progress on hazard mitigation strategies and to update the plan based on new data or recent disasters.

As part of leading a countywide planning effort, King County Emergency Management will send to The City of Des Moines any federal notices of funding opportunities for the Hazard Mitigation Assistance Grant Program. Proposals from partners will be assessed according to the prioritization process identified in this plan and the county will, where possible, support those partners submitting grant proposals. This will be a key strategy to implement the plan.

Goals are broad policy statements of the community’s vision for the future. They help describe the contribution each strategy makes toward major objectives that reach beyond any individual department or discipline. In alignment of this and with the Plan’s purpose, King County’s Regional Hazard Mitigation Steering Committee adopted King County’s Determinants of Equity as Mitigation Plan Goals:

- 1) Access to Affordable, Healthy Food
- 2) Access to Health and Human Services
- 3) Access to Parks and Natural Resources
- 4) Access to Safe and Efficient Transportation
- 5) Affordable, Safe, Quality Housing
- 6) Community and Public Safety
- 7) Early Childhood Development
- 8) Economic Development
- 9) Equitable Law and Justice System
- 10) Equity in Government Practices
- 11) Family Wage Jobs and Job Training
- 12) Healthy Built and Natural Environments
- 13) Quality Education
- 14) Strong, Vibrant Neighborhoods



The next plan update is expected to be due in April 2025. All jurisdictions will submit letters of intent by 2023, at least two years prior to plan expiration. The county will lead the next regional planning effort, beginning at least 18 months before the expiration of the 2020 plan.

Continued Public Participation

The City of Des Moines and King County maintain substantial public outreach capabilities, focusing on personal preparedness and education. Information on ongoing progress in implementing the hazard mitigation plan will be integrated into public outreach efforts. This will provide Des Moines residents, already engaged in personal preparedness efforts, with context and the opportunity to provide feedback on the Cities progress and priorities in large-scale mitigation. In the vertical integration of risk-reduction activities from personal to local to state and federal, it is important that the public understand how its activities support, and are supported by, larger-scale efforts.

The outreach and mitigation teams with the City of Des Moines and King County will work with media and other agency partners to publicize mitigation success stories and help explain how vulnerabilities are being fixed. When possible, public tours of mitigation projects will be organized to allow community members to see successful mitigation in action.



Hazard Mitigation Authorities, Responsibilities, and Capabilities

Plans

PLAN TITLE	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
Comprehensive Plan	Police	Mark Couey	The City's development regulations including the comprehensive plan provide for identification, regulations, and protection of environmentally sensitive areas, geological hazard areas, and flood hazard areas. The comprehensive and mitigation plans are mutually supportive and provide direction for the City's planning efforts.
Comprehensive Emergency Management Plan	Police	Mark Couey	The CEMP has a direct relationship to the Hazard Mitigation plan. The CEMP is developed, taking the risks outlined in the Mitigation Plan into consideration. Our CEMP is in reaction to the hazards identified in the risk assessment in the plan.
Capital Improvement Plan	Chief Operation Officer	Dan Brewer	The Capital Facilities Plan and the Mitigation Plan address the mitigation efforts related to the City's infrastructure and will normally be included in the Capital Facilities Plan for consideration and funding by the city's leadership.
Storm Water Comprehensive Plan	Surface Water	Loren Reinhold	The Storm Water Comprehensive Plan and the Mitigation Plan are linked in that mitigation efforts related to the City's surface water management and will be included in the Storm Water Comprehensive Plan for consideration and funding by the city's leadership.



Programs, Policies, and Processes

PROGRAM/POLICY	RESPONSIBLE AGENCY	POINT OF CONTACT	RELATIONSHIP TO HAZARD MITIGATION PLAN
Building Codes	Planning and Community Development	Susan Cezar	The building codes of the city of Des Moines are in consideration of all-hazards. The City has the ability to modify building codes upon adoption reflecting risks and hazards for the City.
Emergency Management Program	Police	Mark Couey	The City's emergency management program is based from the risk assessment in the Mitigation Plan. Our educational programs use the risks identified to educate the public on what may happen in Des Moines and how to best prepare for the impact to their homes, business and family.
Critical Areas Ordinance	Planning and Community Development; Surface Water Management	Susan Cezar/Loren Reinhold	The relationship of the mitigation plan and the critical areas ordinance, both address some of the same natural features, especially flood, groundwater protection areas and geologic hazards. They both also share the common purpose of protecting public health, safety and general welfare.



Entities Responsible for Hazard Mitigation

AGENCY/ORGANIZATION	POINT OF CONTACT	RESPONSIBILITY(S)
Office of the City Manager	Michael Matthias	Responsible for the mitigation planning process, identifying City assets at risk, creating mitigation strategies and implementing strategies.
Chief Operations Officer	Dan Brewer	Responsible for the mitigation planning process, identifying City assets at risk, creating mitigation strategies and implementing strategies.
Community Development	Susan Cezar	Responsible for the mitigation planning process, identifying City assets at risk, creating mitigation strategies and implementing strategies.
Police/Emergency Management	Mark Couey	Responsible for the mitigation planning process, identifying City assets at risk, creating mitigation strategies and implementing strategies.
Emergency Management	Shannon Kirchberg	Responsible for the mitigation planning process, creating mitigation strategies and implementing strategies as assigned.
Public Works	John Blackburn	Responsible for identifying City assets at risk, creating mitigation strategies and implementing strategies.
GIS Analytics	Max Mousseau	Maps/Analysis
Parks	Susan Cezar	Responsible for identifying City assets at risk, creating mitigation strategies and implementing strategies.
Information Systems	Dale Southwick	Responsible for identifying City assets at risk, creating mitigation strategies and implementing strategies.
South King Fire	Vic Pennington	Responsible for identifying City assets at risk, creating mitigation strategies and implementing strategies.

National Flood Insurance Program

National Flood Insurance Program Compliance

What department is responsible for floodplain management in your community?	Community Development
Who is your community's floodplain administrator? (title/position)	Susan Cezar, LEG Chief Strategic Officer
What is the date of adoption of your flood damage prevention ordinance?	Chapter 16.15 Flood Hazard Areas 1583 - 2013
When was the most recent Community Assistance Visit or Community Assistance Contact?	The last Community Assistance Visit (CAV) or Community Assistance Contact (CAC) was in 2007. Addressed during that contact, was that the City of Des Moines Flood Hazard Areas Code did not meet or exceed the model FEMA ordinance, as required. A new ordinance was drafted and adopted shortly after (Ordinance 1407) that now mirrors the model FEMA ordinance.
Does your community have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are?	No. Des Moines is NFIP Community #060264 and is currently in compliance with NFIP regulations.



Do your flood hazard maps adequately address the flood risk within your community? If so, please state why.	Yes. The City is using the most up to date FEMA maps. The City of Des Moines participated in the latest FEMA review, and is aware new maps will be available in 2020.
Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of training/assistance is needed?	Yes. Currently staff in Community Development are trained in floodplain management. There was a recommendation that at least one person in engineering should be certified as well.
Does your community participate in the Community Rating System (CRS)? If so, what is your CRS Classification and are you seeing to improve your rating? If not, is your community interested in joining CRS?	No. Not at this time.
How many Severe Repetitive Loss (SRL) and Repetitive Loss (RL) properties are located in your jurisdiction?	SRL: 0 RL: 0
Has your community ever conducted an elevation or buy out of a flood-prone property? If so, what fund source did you use? If not, are you interested in pursuing buyouts of flood prone properties?	No. Not at this time.

Hazard Mitigation Strategies

2009 Hazard Mitigation Strategy Status

STRATEGY	DESCRIPTION	PRIORITY	STATUS
Hazard Mitigation and Damage Tracking	Create a data base and tracking mechanism for damages and other issues related to hazards in the City of Des Moines	Moderate	Not completed
North Twin Bridge Seismic Retrofit and Safety Improvements	Rehabilitate this City Bridge for preservation and maintaining the existing integrity for safe use. Rehab to include Seismic and safety improvements	High	Completed
Saltwater State Park Bridge Seismic Retrofit	Rehabilitate this 75 year old bridge for seismic safety, preservation and maintaining the existing integrity for safe use, Rehab will include seismic and safety improvements	Moderate	Completed
Barnes Creek/Kent Des Moines Road Culvert Replacement	Replacement of existing culvert with a new 42-inch diameter concrete culvert and instillation of	Low	Completed



	an energy dissipater structure at the downstream end of the culvert.		
Severe Weather, Landslide, Earthquake, Terrorism, Civil Unrest, Hazardous Material, Transportation	Replacement of the 350 feet existing storm drainage and ditches with 18-inch pipe	High	Not Completed
Barnes Creek Detention Facility/223rd Street	Construction of a 2.96 acre-foot storm water detention facility and replacement of the Barnes Creek culvert at 223rd Street	Moderate	Completed
North Hill Elementary/ 199th Street to 4th Ave Pipeline Replacement	Replacement of existing 12-inch storm drainage with 24-inch pipeline	High	Completed
24th Ave Pipeline Replacement/Upgrade	Replacement of existing 12-inch storm drain with 36-inch trunk line	Moderate	Completed
Des Moines Neighborhood Emergency Teams (NET)	Neighborhood based citizen emergency preparedness program that provides training and guidelines for personal and neighborhood preparedness.	High	Not Completed
Lower Massey Creek Channel Modifications	Provide stream bank modifications from 10th Ave South to Marine View Drive, add approximately 300 feet of berm on the north bank; install 10-12 anchored log weirs and bank logs for erosion control.	Low	Completed
Lower Des Moines Creek Channel Modification	Provide channel widening and deepening at various locations bank stabilization, construction of two in stream sediment traps and bank restoration and revegetation	Moderate	Not Completed



2020 Hazard Mitigation Strategies

STRATEGY	LEAD AGENCY/POC	TIMELINE	PRIORITY
Des Moines Marina North Bulkhead Replacement	Transportation/Engineering	Complete by 2023	High
Citywide Fiber Communication Plan	IT	Complete by 2022	Medium
Pavement Preservation Program	Transportation	Complete by 2025	Medium
Redondo Beach Drive – Seawall Pile Corrosion Protection	Transportation	Complete by 2025	Medium
Redondo Bulkhead Replacement	Public Works	Complete by 2025	Medium
Flood Prevention Projects	SWM	Complete by 2025	Medium
Cyber Security	IT	Complete by 2022	High
Community Resilience	Emergency Preparedness	Ongoing	High



Hazard Mitigation Strategy - Des Moines Marina North Bulkhead

Lead Points of Contact (Title) Andrew Merges; Transportation & Engineering Services Manager	Partner Points of Contact (Title) Scott Wilkins – Harbormaster	Hazards Mitigated / Goals Addressed 1, 2, 3, 4, 6, 12	Funding: Tax, General Fund, Grants, REET. 15 million
Strategy Vision/Objective Replace the north marina parking lot bulkhead and revetment to also include wider sidewalks and pedestrian amenities supporting multimodal emergency management operations, marina operations, and public land-water access.			
Mitigation Strategy Existing north marina bulkheads are experiencing structural deficiencies and have been damaged by storm activities, which require periodic spot rebuilding. Replacing the bulkheads will provide long-term protection with lower maintenance costs. Public access to waterfront activities will also be improved from the north parking lot to the marina facilities, Beach Park, and fishing pier.			
2-Year Objectives Obtain all required Permits Begin Phase 1 Construction	5-Year Objectives Phase 1 complete Phase 2 permitted Phase 2 construction	Long-Term Objectives Marina Floor able to withstand full scale regional incident and aid in response and recovery missions via land, air andwater	
Implementation Plan/Actions <i>This can provide a timeline, indicate partners, discuss implementation stages, etc. Use this to discuss how the strategy/program will be implemented over the long term.</i> Complete design and permitting for Phase 1 & 2 Solicit for construction Bids Phase 1 Construction Phase 1 Solicit for construction Bids Phase 2 Construction Phase 2			
Performance Measures Phase 1 and phase 2 completed full by 2025			



Hazard Mitigation Strategy – Citywide Fiber Communication System

Lead Points of Contact (Title) Dale Southwick; IT Manager	Partner Points of Contact (Title) Andrew Merges; Transportation & Engineering Services Manager; WSDOT; KC Transportation	Hazards Mitigated / Goals Addressed 6, 9	Funding: TBD 400 thousand
<p>Strategy Vision/Objective</p> <p>Eliminate the possibility of losing network connectivity between City facilities in the event that the city fiber optic cables are damaged. Ensure government communication resiliency and redundancy for emergency services. Coordinate and optimize traffic signal timing throughout City. Improve communications and coordination with the Washington State Department of Transportation and King County.</p>			
<p>Mitigation Strategy</p> <p>Currently the fiber connections between City facilities has a single non-redundant path for connectivity. Completing the fiber loop will add redundancy to the network so that if the fiber is damaged at any single point the entire network will not be down.</p>			
<p>2-Year Objectives</p> <p>Secure funding and install fiber.</p>	<p>5-Year Objectives</p> <p>Complete fiber communications system</p>	<p>Long-Term Objectives</p> <p>Provide Fiber Redundancy</p>	
<p>Implementation Plan/Actions</p> <ol style="list-style-type: none"> 1) Determine funding source. 2) Work with city engineering to identify fiber installation pathway. 3) Install and test fiber. 4) Simulate fiber failure to test redundancy. 			
<p>Performance Measures</p> <p>Network connectivity maintained if fiber is damaged. Loop completed by 2025</p>			



Hazard Mitigation Strategy – Pavement Prevention Program

Lead Points of Contact (Title) Andrew Merges; Transportation & Engineering Services Manager	Partner Points of Contact (Title) Franchise Utilities	Hazards Mitigated / Goals Addressed 2, 3, 4	Funding: Transportation Benefit District 1million/year
Strategy Vision/Objective Maintain and preserve the City's roadway surfaces through pavement rehabilitation measures such as overlays/patching, crack sealing and other preventative maintenance measures. Focus on Citywide arterial networks for redundancy and resiliency within the transportation network.			
Mitigation Strategy Maintain current pavement condition index (PCI) levels to ensure current level of service of roadway network.			
2-Year Objectives Annual Paving Contracts	5-Year Objectives Annual Paving Contracts	Long-Term Objectives	
Implementation Plan/Actions Complete annual paving program projects. Coordinate legislative efforts locally, regionally, and statewide for additional resources for paving infrastructure.			
Performance Measures Monitor pavement PCI.			



Hazard Mitigation Strategy – Redondo Beach Drive – Seawall Pile Corrosion Protection

Lead Points of Contact (Title) Andrew Merges; Transportation & Engineering Services Manager	Partner Points of Contact (Title) Scott Wilkins – Harbormaster	Hazards Mitigated / Goals Addressed 1, 2, 3, 4, 6, 12	Funding: Local 400 thousand
Strategy Vision/Objective Corrosion protection for Sea Wall H piles to ensure long-term serviceability of the principal arterial roadway, Redondo Beach Drive.			
Mitigation Strategy Complete design, permitting, and construction of H pile corrosion protection.			
2-Year Objectives Secure Funding	5-Year Objectives Complete design, permitting, construction	Long-Term Objectives Ensure 40+ year service life of seawall.	
Implementation Plan/Actions Complete design & permitting. Complete construction. Perform on-going inspection and maintenance of facility.			
Performance Measures Complete seawall H pile corrosion protection by 2025.			



Hazard Mitigation Strategy – Redondo Bulkhead Replacement

<p>Lead Points of Contact (Title) Andrew Merges; Transportation & Engineering Services Manager</p>	<p>Partner Points of Contact (Title) Scott Wilkins Harbormaster</p>	<p>Hazards Mitigated / Goals Addressed 3, 4, 6, 12, 14</p>	<p>Funding: REET and Grants 4 million</p>
<p>Strategy Vision/Objective Replace Redondo bulkhead from MaST facility to boat launch and remove existing timber piles. Replace pedestrian promenade, public restrooms, and fishing pier.</p>			
<p>Mitigation Strategy The bulkhead, restrooms, and fishing pier are now approximately 35 years old and have reached the end of their useful life. The facilities are currently exhibiting moderate degradation.</p>			
<p>2-Year Objectives Complete design and permitting Secure funding</p>	<p>5-Year Objectives Complete construction</p>	<p>Long-Term Objectives</p>	
<p>Implementation Plan/Actions Complete design & permitting Secure funding Complete construction</p>			
<p>Performance Measures Complete construction by 2025.</p>			



Hazard Mitigation Strategy – Flood Prevention

Lead Points of Contact (Title) Loren Reinhold; Surface Water Management	Partner Points of Contact (Title) Public Works Engineering	Hazards Mitigated / Goals Addressed 4, 6, 14	Funding: Surface Water Utility 2.7 million
Strategy Vision/Objective Replacement of dilapidated or undersized storm drainage systems throughout the City of Des Moines to reduce flooding risk to public and private property during flood events. Complete all projects listed in the 2020-2025 SWM Capital Improvement Plan.			
Mitigation Strategy During major storms, drainage systems may overflow the existing pipe systems due limited capacity or facility deficiencies. These overflows have the potential to flood public and private property. The 2015 Surface Water Comprehensive Plan has identified a number of projects for replacing or additional improvements to mitigate flooding.			
2-Year Objectives See Project Year	5-Year Objectives See Project Year	Long-Term Objectives See Project Year	
Implementation Plan/Actions The following projects are scheduled for implementation between 2020 and 2025: 2-Year Objectives <ol style="list-style-type: none"> 1. Barnes Creek/Kent-Des Moines Road Culvert Replacement: Replacement of 100 feet of 24-inch culvert with a 48-inch culvert. 2019/2020. 2. N. Fork McSorley Creek Diversion: Construct a creek diversion pipe on 20th Avenue to bypass several properties that are frequently flooded. 2019/2020 3. 6th Avenue/239th Pipe Replacement: Replace existing pipe outfall to Puget Sound with a larger 18-inch HDPE pipe. 2019/2020. 4. Soundview Drive/Redondo Beach Dr. Pipe Replacement: Replace system below Redondo Beach Drive that is restricted by pipe bends and install a new trash rack at the culvert inlet on Soundview Drive. 2019/2020. 5. 8th Avenue (264th to 265th) Pipe: Installation of new pipe along the west side of the road to prevent road runoff from impacting a landslide area. 2019/2020 6. 10th Avenue Pipe Replacement: Install 300 feet of new pipe. 2020 7. DMMD 208th to 212th Pipe: Replace 1,500 feet of roadside ditch and corrugated metal pipe with new 18-inch pipe. 2020/2021. 8. KDM/16th Avenue A Pipe Replacement: Replace existing undersized pipes with 24-inch and 26-inch pipe. 2020/2021. 5-Year Objectives <ol style="list-style-type: none"> 1. 24th Avenue Pipeline Replacement: Replacement of 1670 feet of undersized pipe with 24-inch and 36-inch pipe. 2020/2023. 2. 5th Ave/212th Street Pipe Upgrade: Replacement of 2,630 feet of corroded metal pipe with new 12-inch and 18-inch pipe. 2021/2022. 3. 216th/Marine View Drive Pipe Upgrade: Replace existing ditch along MVD with 300 feet of 18-inch pipe and replace the existing road crossing with 24-inch pipe. 2021/2022 4. KDM/16th Ave B Pipe Replacement: Replace 2,930 feet of undersized pipe with larger pipe. 2022/2023. 5. 232nd Street (10th-14th) Pipe Replacement: Install 2,300 feet of pipe on the north side of 232nd Street. 2022/2023. 6. 258th Street(13th Pl. to 16th Ave) Pipe: Replace 960 feet of ditch with 18-inch pipe. 2023/2024. 			



7. 6th Place/287th St Pipe Replacement: Replacement of 1,670 feet of corroded metal pipe and installation of flow diversion structures to direct flows away from flood prone areas. 2024/2025
8. 14th Ave (268th – 272nd) Pipe Upgrade: Replace 900 feet of undersized pipe with new 36-inch pipe. 2024/2025

Long Term Objectives

Projects beyond 2025 are prioritized and listed in the 2015 Surface Water Comprehensive Plan. This Plan is scheduled to be updated in 2020. Projects have been ranked from high/medium/low priority and scored by determined criteria, which includes public safety and flooding reduction.

Performance Measures

Elimination/reduction of flooding during major storm events following project construction.



Hazard Mitigation Strategy – Cyber Security

Lead Points of Contact (Title) Dale Southwick; IT Manager	Partner Points of Contact (Title) Darktrace - Vendor	Hazards Mitigated / Goals Addressed 6,9	Funding: TBD 20 thousand per year
<p>Strategy Vision/Objective</p> <p>Ransomware and viruses are the largest threat to the City’s network infrastructure. A network detection and response (NDR) system would significantly reduce that threat.</p>			
<p>Mitigation Strategy</p> <p>Implement a network detection and response system that would continuously monitor all network devices for unusual behavior, and isolate that device from the rest of the network if infected.</p>			
<p>2-Year Objectives</p> <p>Secure funding and install NDR appliance.</p>	<p>5-Year Objectives</p> <p>NDR Appliance installed and fully functional</p>	<p>Long-Term Objectives</p> <p>Secure Network</p>	
<p>Implementation Plan/Actions</p> <ol style="list-style-type: none"> 1) Receive estimate from Darktrace. 2) Determine funding source and purchase. 3) Work with Darktrace to install, configure, and train IT staff on NDR appliance. 			
<p>Performance Measures</p> <p>If NDR is functioning as intended an infection should be limited to the device initially infected and not spread to other network devices.</p>			



Hazard Mitigation Strategy – Community Resiliency

Lead Points of Contact (Title) Shannon Kirchberg, Emergency Preparedness Manager	Partner Points of Contact (Title) Sarah Yancey, South King Fire Emergency Manager; Mark Couey, Assistant Chief of Police	Hazards Mitigated / Goals Addressed 6, 10, 14	Funding: General Fun; Grants Costs: TBD
Strategy Vision/Objective The City of Des Moines is committed to preparing its community for the numerous hazards that can happen in our area of the Pacific Northwest. The City of Des Moines wants to ensure all of its community members are prepared for these hazards and are aware of the limitations of government response capabilities and how individuals can prepare, support and help in times of distress.			
Mitigation Strategy Provide emergency preparedness and emergency management training to the Des Moines residence, businesses, schools and employees directly and through local private and public partnerships.			
2-Year Objectives 1) CERT Train 200 community members 2) Distribute Emergency Preparedness and Management material via Social Media and City Facilities at least monthly.	5-Year Objectives 1) Host 2 CERT trainings per year 2) Conduct 1 joint HAM CERT exercise per year. 3) Successfully completed MAP Your Neighborhood in 8 Neighborhoods 4) Include local businesses, schools, City in at least 1 functional exercise	Long-Term Objectives 1) A prepared community	
Implementation Plan/Actions <ul style="list-style-type: none"> • Conduct at least 2 Community Emergency Response Team (CERT) trainings each year. • Work with South King Fire to develop a Teen CERT program for the Highline Schools District • Partner with Westley to ensure partnership for their staff and residency to participate in all CERT classes offered. • Conduct at least one of the 3 CERT classes at Highline College for staff and faculty • Promote MAP my Neighborhood through Social Media monthly and City Currents Publications monthly quarterly. • Work with Senior Center to reach seniors in our community and offer preparedness classes for seniors at least 6 per year. • Build and finalize mutual aid agreement with Highline HAM Radio Group. • Facilitate MAP Your Neighborhood meetings in the community to educate emergency preparedness 			
Performance Measures <ul style="list-style-type: none"> • Increase the number of trained community members by 5% annually and develop a database of individuals trained and prepared to volunteer during community events, drills, tabletops and Whole Community plan writing and exercise. 			