

# ENVIRONMENT COMMITTEE AGENDA

May 21, 2015 – North Conference Room

21630 11<sup>th</sup> Avenue South – Des Moines 98198

6:00P – 6:50P

1. Approve minutes of 4-9-2015 meeting
  
2. Department of Ecology: Guidance on Wetland & Frequently Flooded Areas  
(Informational Item – 15 min)  
*Staff will discuss the Growth Management Act requirements for periodic review and update of Critical Areas Ordinances and specific requirements related to the new wetland classification system released by Ecology in 2014 and FEMA's new Flood Insurance Rate Maps and designations.*
  
3. FEMA Flood Plain Management Update  
(Discussion Item – 15 min)  
*Staff will brief the Committee on the scope and status of the work by Parametrix.*
  
4. Follow-up on Lakehaven and Southwest Suburban Comprehensive Plan Comments  
(Discussion Item – 20 min)  
*Staff will review with the Committee the response letters from both Lakehaven Utility and Southwest Suburban Sewer District in response to City comments to their respective water and sewer comprehensive plans.*

## DRAFT MINUTES - ENVIRONMENTAL COUNCIL COMMITTEE MEETING 4.9.2015

The meeting was called to order @ 6:01 PM, Thursday, April 9, 2015, in the North Conference room @ 21630 11<sup>th</sup> Avenue South, Des Moines with the following in attendance:

### Council Members

Dave Kaplan, Chair  
Melissa Musser  
Vic Pennington

### City Staff

Tony Piasecki, City Manager  
Loren Reinhold, SWM Utility Manager  
Peggy Volin, Admin Asst II

### **AGENDA:**

1. Approve minutes of 2.19.2015 meeting
2. WRIA 9 Interlocal Agreement
3. Public Works Yard Remediation Update

### **MEETING:**

1. Approve minutes of the February 19, 2015 meeting: Unanimously passed.
2. WRIA 9 Interlocal Agreement: SWM Utility Manager Loren Reinhold presented to the Committee the draft Interlocal Agreement with the other Water Resource Inventory Area 9 agencies for continuing the implementation of the Salmon Habitat Plan for another 10 years.
3. Public Works Yard Remediation Update: SWM Utility Manager Loren Reinhold updated the Committee on the progress of the fuel cleanup effort being made at the Public Works Yard located behind the Engineering Building by AMEC Environmental. He explained that two of the four groundwater extraction wells are still exceeding the concentration limit for gasoline hydrocarbons and benzene. Steady but slow progress has been made but likely it will take several more years of pumping and treating to reach the cleanup limits. Cleanup has also been hampered by a couple of system failures with several months of downtime. Of the 14 wells on site, only the two extraction wells currently exceed the cleanup limits. Once all of the wells reach the cleanup limit, the system is will be shutdown and monitored for 1-year. If after this monitoring period, the tests show levels below the cleanup limits, the site is considered clean.

Staff recommends extending the contract with AMEC Environmental for another two years for monitoring and maintenance.

Meeting Adjourned @ 6:19 pm  
Submitted by: Peggy Volin, Admin Asst II

# Memo



**Date:** May 21, 2015

**To:** Council Finance Environment Committee

**From:** Denise Lathrop, AICP – Community Development Mgr.

**RE:** *Regulations for Wetlands and Frequently Flooded Areas*

## Purpose

The purpose of this agenda item is to provide the Council Environment Committee with an overview of recent updates to the Washington Department of Ecology (Ecology)) wetland classification and rating system and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) and designations, and to discuss how these changes affect the application of Des Moines Critical Area regulation that are codified in Chapter 16.10 DMMC.

## Overview

The Washington State Growth Management Act (GMA) mandates that cities and counties adopt policies and regulations to protect the functions and values of critical areas. The GMA requires that cities and counties include best available science (BAS) in the development of such policies and regulations, as well as those measures taken to protect or enhance anadromous fisheries. Inclusion of BAS in the development of locally appropriate policies and regulations must be balanced with the many other substantive goals and mandates of the GMA.

As part of the 2015 Comprehensive Plan Update process, the GMA requires cities to conduct a review of our development regulations and specifically our Critical Areas Ordinance (CAO) by June 30, 2015 to ensure they comply with State and Federal regulations. Two key regulatory changes that need to be considered in conjunction with the 2015 update process are the recent changes to Ecology's wetlands rating system and changes to FEMA's FIRM maps and designations. Ecology's recommended changes are provided as Attachment 1 and the FEMA requirements are described further in Attachment 2.

## Wetland Delineation Manual

During the last few years the US Army Corps of Engineers has updated and expanded their delineation manual with regional supplements. To maintain consistency between the state and federal delineations of wetlands, Ecology has repealed [WAC 173-22-080](#) (the state delineation manual) and replaced it with a revision of [WAC 173-22-035](#) that states delineations should be done according to the currently approved federal manual and supplements. The following language is recommended:

Identification of wetlands and delineation of their boundaries pursuant to this Chapter shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements. All areas within the [City or County] meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions of this Chapter.

## Washington State Rating Systems

Ecology has updated the Washington State Wetland Rating Systems for eastern and western Washington. The 2014 updates provide a more accurate characterization of wetland functions based on the most recent science. **The effective date of the 2014 rating systems is January 1, 2015.**

CAO's contains the language "2004 rating system or as revised," will need to use the 2014 updates, as of January 1, 2015, to address your requirements. Also, if a jurisdiction's CAO requires the use of the 2004 rating systems, Ecology recommends revising to use of the 2014 version.

#### Determining Wetland Buffers Using Function Scores

For the 2015-2019 GMA update cycle, Ecology is not proposing any changes to the recommended wetland buffer widths. However, any buffer strategy that uses wetland function scores to determine buffer widths will need to be adjusted to use the new scores. The update of the rating systems keeps the same four wetland categories, but the scale of scores has been adjusted. Therefore, any buffer guidance in CAOs or Shoreline Master Programs based on scores for functions needs to be adjusted to reflect the new range of scores (for example, in the 2004 version the medium score range for habitat was 20-28, and in the updated rating systems it is now 5-7). Staff has not had a chance to review Des Moines' SMP to see how this would affect its application.

#### New Mitigation Tools

Ecology has developed new mitigation tools since the publication of *Wetland Mitigation in Washington State Parts 1 and 2* (Ecology Publication Nos. 06-06-011a and b, March 2006).

- Ecology has developed a credit-debit tool for calculating when a proposed wetland mitigation project adequately replaces the functions and values lost when wetlands are impacted. This optional tool is designed to provide guidance for both regulators and applicants during the mitigation process. You might want to include language that allows the use of the credit-debit method in your CAO.
- The federal rule on compensatory mitigation requires that some type of watershed approach be used in siting mitigation. Ecology, the US Army Corps of Engineers, and the Environmental Protection Agency have developed guidance to help applicants select potential off-site mitigation sites. To download a copy of *Selecting Wetland Mitigation Sites Using a Watershed Approach (Western Washington)*, (Ecology Publication #09-06-032, December 2009), please see <https://fortress.wa.gov/ecy/publications/summarypages/0906032.html>. Referring to this guidance in your CAO would assist applicants proposing mitigation for development projects.
- Jurisdictions are encouraged to consider including language in the CAO that allows the use of wetland banks and in-lieu fee (ILF) programs as compensation for unavoidable wetland impacts. To learn more about these approaches to mitigation, see Ecology's website at <http://www.ecy.wa.gov/programs/sea/wetlands/index.html>
- Ecology, WDFW, and the US Army Corps of Engineers have developed guidance to help applicants develop advance mitigation proposals. Advance mitigation is used only by a single applicant to compensate for a specific project (or projects) with pre-identified impacts to wetlands. To download a copy of *Interagency Regulatory Guide: Advance Permittee-Responsible Mitigation* (Ecology Publication #12-06-015, December 2012), please see <https://fortress.wa.gov/ecy/publications/SummaryPages/1206015.html>. Your CAO could reference this guidance to assist applicants who are considering this option.

#### Frequently Flooded Areas

Ecology's floodplain specialists have developed guidance to help you address both GMA and Federal Emergency Management Agency (FEMA) requirements for floodplain management. This guidance is attached in a separate document (Attachment 2).

## Attachment 1: Ecology's Recommended Changes to Des Moines CAO

### 16.01.050 Definitions

The reference to the rating system under "wetlands" should be updated to Ecology Publication No. 14-06-029, and the category descriptions need to be updated. I can send you that text.

**16.05.310.(4)(xxix)** refers to the state delineation manual. This should be replaced with "the approved federal wetland delineation manual and applicable regional supplements." While I think most consultants know that they need to delineate the wetland edge and use the established procedure, you should probably mention it in the wetland definition above and in 16.10.100(a): "The edge of the wetland and the outside edge of its buffer shall be determined and field marked by a professional wetland biologist or similarly qualified professional *in accordance with the federal wetland delineation manual and applicable regional supplements.*"

### 16.10.120(2)

I added the habitat scores in red to be consistent with the updated 2014 rating system.

	Width of Buffer (feet)
Category I Wetlands	
High habitat function (habitat score 8-9)	300
Moderate habitat function (habitat score 5-7)	150
High water quality function and low habitat function or none of the above characteristics (habitat score less than 5)	100
Category II Wetlands	
High habitat function (habitat score 8-9 points)	300
Moderate habitat function (habitat score 5-7)	150
High water quality function and low habitat function or none of the above characteristics (habitat score less than 5)	100
Category III Wetlands	
Moderate habitat function (habitat score 5-7)	150
Low habitat or not meeting above criteria (habitat score less than 5)	80
Category IV Wetlands	
Low functions	50

**(6)(a)(i) and (ii)** should refer to 5 points (rather than 20).

**16.10.140(2)(1)(iii)** should refer to 5 points (rather than 20).

**16.10.150(7):** The ratios in this table are not consistent with the ratios recommended in the joint state/federal guidance (see Table 1a on page 73 of [Wetland Mitigation Guidance Part 1](#). By requiring

mitigation based on this guidance, you will be providing consistency for applicants who must also apply for state and federal permits.

#### Frequently Flooded Areas

The Growth Management Act is silent on specific requirements for Frequently Flooded Areas. However, as a critical area, Best Available Science must be applied to the identification of Frequently Flooded Areas.

WAC 365-190-110(1) provides that "classifications of frequently flooded areas should include, at a minimum, the 100-year flood plain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.

While the WAC language is not mandatory, it is good advice. The local government may well determine that the FEMA Flood Insurance Rate Maps are Best Available Science with respect to Frequently Flooded Areas.

The NFIP Biological Opinion language does not necessarily need to be in the CAO. FEMA has recommended the provisions be placed in the local Flood Damage Prevention Ordinance. However local governments approach this, the adoption of clear procedures for how to meet the requirements of the Biological Opinion should be beneficial.



**Washington State Department of Ecology  
Shorelands and Environmental Assistance Program**

**Guidance to Local Governments on Frequently Flooded Area Updates in CAO's**

**Acronym Table:**

Word/Phrase	Acronym
Base Flood Elevation	BFE
Biological Opinion	BiOp
Channel Migration Zone	CMZ
Community Assistance Visit	CAV
Critical Areas Ordinance	CAO
Federal Emergency Management Agency	FEMA
Flood Insurance Rate Maps	FIRM or FIRMs
Frequently Flooded Area(s)	FFA(s)
Growth Management Act	GMA
National Flood Insurance Program	NFIP
National Marine Fisheries Service	NMFS

The Growth Management Act (GMA) calls for periodic review and update of Critical Areas Ordinances (CAO). Due dates for review and necessary updates of CAO in the Puget Sound region and Clark County are:

- June 30, 2015 = Pierce, King, and Snohomish Counties and all cities within those counties
- June 30, 2016 = Whatcom, Skagit, San Juan, Island, Clallam, Jefferson, Mason, Thurston and Clark counties and all cities within those counties.

One of the Critical Areas specified in the GMA is “Frequently Flooded Areas (FFAs).” The following guidance is offered by the Department of Ecology regarding update of FFA provisions.

Each local government must consider the adequacy of the *designation* and the *protection* of FFAs within their CAO. In these reviews, new information such as maps or relevant science findings needs to be integrated. Local governments will consider whether there have been updates to state statutes, other local codes or best available science that should be incorporated into the CAO. An important facet of these periodic updates is maintaining consistency with other statutes and programs. CAO reviews are also an opportunity for local governments to make enhancements of policy and regulation, particularly policies related to [flood hazard management planning](#).<sup>1</sup>

This guidance addresses the key elements of a CAO update for FFAs. We also address situations where a single local ordinance is used to meet both GMA and Federal Emergency Management Agency (FEMA) requirements for floodplain management. Links to additional information are provided at the bottom of this document.

### Updating the designation and mapping of FFAs

- **Final updated Flood Insurance Rate Maps (FIRM) from FEMA:** The [Department of Commerce](#)<sup>2</sup> recommends that classifications of FFAs should include, at a minimum, the 100-year floodplain designations of the FEMA National Flood Insurance Program (NFIP). Many Washington communities have received updated [Flood Insurance Rate Maps](#)<sup>3</sup> (often called “100 year floodplain maps.”) Final updated FEMA maps must be adopted into the local floodplain management ordinance in order for properties in a jurisdiction to retain flood insurance coverage. If your CAO references FEMA maps, you should update references to final updated maps.
- **Preliminary updated FIRM maps from FEMA:** In some jurisdictions, FEMA has issued preliminary updated FIRM maps, but the process to make these maps final has been delayed. Ecology and FEMA encourage use of these preliminary updated maps in regulating floodplains to reduce flood risk and protect floodplain resources (so long as the information is at least as restrictive as the current effective maps). Local governments can adopt the preliminary updated floodplain maps as the areas protected under their CAO. Ecology supports the use of the preliminary updated maps (until they are superseded by final maps) as best available science in meeting CAO update requirements. In no case may Preliminary FIRMs be used to reduce the area covered or applicable standards required by a currently effective FIRM. If utilizing Preliminary FIRMs, local governments should have an appeal or review process allowing for engineering review of preliminary FIRM information that is more restrictive than the current effective FIRM.
- **Identification of other flooding areas:** [Department of Commerce rules](#) recommend local governments consider designating flood areas outside the FEMA mapped 100-year floodplain, which may be threatened by flooding under future conditions. Other examples include the area identified as inundated during the “flood of record,” identification of areas subject to groundwater flooding, or stream systems where the path of flood waters can be unpredictable.
- **Mapping of Channel Migration Zones:** [Channel Migration Zones](#)<sup>4</sup> (CMZs) are the areas where the river channel is likely to shift or “migrate” over time. Structures and other improvements in these areas are particularly vulnerable to long-term damage. Shifts in channel location are a vital natural process, creating “off-channel habitat” for salmon and other species. These quiet-water areas can be especially important during high river flows as refuge for juvenile salmon and other species. In many jurisdictions, maps identifying CMZs were produced as part of recent Shoreline Master Program updates. If Channel Migration Zone areas have been mapped or identified in policy statements, they should be considered for inclusion in the description of FFAs included in the CAO.



[New guidance<sup>5</sup> is available](#) from the Department of Ecology on using mapping tools to identify CMZs.

### Update to Frequently Flooded Area standards

New information may warrant changes to CAO policy objectives that focus on protecting property and improving habitat in floodplains. In the Puget Sound region, local governments can take steps to change how they manage their floodplains to simplify permitting for floodplain development and other activities.

- **Habitat protection:** Increasingly, there is recognition of the importance of floodplains as [vital habitat to support salmon<sup>6</sup>](#) and other species. Relevant information may be found in updates to salmon recovery plans, channel migration zone mapping or other sources. These sources should be considered in development of revised CAO provisions which better protect riparian habitat. These protections may be addressed under the FFA provisions or within the Fish and Wildlife Habitat Conservation Area provisions of a CAO.
- **Endangered Species protection:** Local governments have responsibility, under the Endangered Species Act, for preventing harm to listed fish and other species that commonly inhabit floodplains. No adverse effects to habitat function are allowed in specified areas that are vital to these species.
- **Address Unique Circumstances and Climate Change:** A jurisdiction may have unique risks due to the potential for [tsunamis<sup>7</sup>](#), high tides with strong winds, [sea level rise<sup>8</sup>](#) or extreme weather events that it may want to address in its FFA provisions.
- **Flood risk reduction beyond FEMA minimums:** Ecology and FEMA encourage local governments to go beyond the FEMA minimum requirements for floodplain management. Greater protection from floods may be a policy objective that should be incorporated into the CAO. For example, some jurisdictions use the “flood of record” elevations to regulate the minimum elevation of structures, where the record flood is higher than the 100-year flood elevation used by FEMA (called the Base Flood Elevation [BFE]).

Additionally, some jurisdictions require that structures be built two (or three) feet above the BFE, rather than the minimum FEMA standards. These higher standards may be incorporated into FFA provisions. A CAO update may be important to ensure internal consistency where a jurisdiction has a separate Floodplain Management Ordinance that incorporates these higher standards. A CAO update may also be used to establish these higher standards.

### Update to Dual-Purpose Critical Area and Floodplain Management Ordinances

Local governments must address flood-prone areas under two separate statutes: The GMA ([RCW 36.70A<sup>9</sup>](#)) and the Floodplain Management statute ([RCW 86.16<sup>10</sup>](#)). A Floodplain Management ordinance under RCW 86.16 is necessary for a city or county to qualify for FEMA’s NFIP. Some local governments



adopt a single document to satisfy the floodplain management requirements of both the GMA and the NFIP. Such a dual-purpose ordinance needs to satisfy both the requirements of the GMA and the Floodplain Management statute and can be housed in the CAO. If all of a local government's floodplain management issues are adequately addressed in its Floodplain Management Regulations, then it may be possible for the FFA chapter to incorporate the Floodplain Management Regulations by reference.

- **Efficiency of concurrent flood ordinance and CAO update:** Where a local government has adopted a dual-purpose floodplain protection ordinance, **we encourage that you consider a concurrent update** that will satisfy the requirements of both RCW 36.70A and RCW 86.16.
- **Benefits of updating the local flood ordinance:** Local floodplain management ordinances are periodically reviewed by Ecology and/or FEMA to ensure that they meet Federal and State requirements through a review called a Community Assistance Visit (CAV). Concurrent floodplain management ordinance update during the CAO update will simplify the next required CAV review since Ecology will have already reviewed your local ordinance.
- **FEMA Puget Sound Biological Opinion response:** Jurisdictions in the Puget Sound basin must meet the procedural and substantive requirements of the National Marine Fisheries Service (NMFS) Biological Opinion on the NFIP. FEMA has the ultimate authority for determining the adequacy of BiOp compliance. In December 2014, FEMA provided new floodplain [ordinance guidance for Door 3 communities](#). Implementing the FEMA guidance will assist local governments in addressing compliance with the Endangered Species Act [Biological Opinion](#)<sup>11</sup> (BiOp). The CAO update provides an opportunity for local governments to include or reference procedures for BiOp implementation in their Floodplain Management Regulations or combined Floodplain Management Regulations/CAO. This will help ensure that all staff and other parties are aware of these procedures required to comply with the BiOp.
- **Programmatic Response to FEMA Puget Sound BiOp:** Within floodplains subject to the BiOp, some jurisdictions desire reducing review procedures that are often required for individual development proposals. An incentive for a reduced procedure approach is achieving programmatic compliance with the BiOp, known as "Door 2" communities. Updates to CAO provisions may be one tool to meet the requirements for this programmatic approval (Door 2 community) from FEMA. Additional guidance for preparing a Door 2 submittal to FEMA can be found at the [FEMA website](#).<sup>12</sup> As noted above, FEMA has authority for determining the adequacy of BiOp compliance.
- **Flood ordinance update requirements:** Please contact your [Ecology Floodplain Specialist](#)<sup>13</sup> if your jurisdiction wants their CAO update to satisfy both GMA and NFIP requirements. Our staff will work with you to accomplish this dual update. RCW 86.16 includes specific requirements for these floodplain management ordinances. Floodplain management ordinances must be submitted to the Department of Ecology for review after local adoption.

**Flood Control Districts operated by counties – Achieving internal consistency**



An important consideration in CAO updates is maintaining *internal consistency* among various policies and programs of the local jurisdiction. Increasingly, counties are using specially designated districts such as [Flood Control Districts](#)<sup>14</sup> to secure funding to address specific issues. If your county has created a Flood Control District to help define and fund floodplain improvements and other activities, you should consider whether the FFA provisions in your CAO should be updated to reflect the Flood Control District objectives. There may be other sections under the Comprehensive Plan (such as the capital facilities plan) that could benefit from an update to incorporate Flood Control District activities conducted by a county.

**Ecology Floodplain Management staff contacts:**

Central Washington, [Michelle Gilbert](#), (509) 457-7139  
(Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties)

Eastern Washington, [Rusty Post](#), (509) 329-3579  
(Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties)

Northwest Washington, [David Radabaugh](#), (425) 649-4260  
(Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom counties)

Southwest Washington, [Jeff Stewart](#), (360) 407-6521  
(Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties)

**For Statewide Policy Issues:**

[Tom Clingman](#), Policy and Legislative Lead, (360) 407-7448

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**References:**

<sup>1</sup> Municipal Research and Services Center (MRSC) information on flood hazard areas, including examples of local ordinances and links to other information:

<http://www.mrsc.org/subjects/pubsafe/emergency/ps-flood.aspx>

<sup>2</sup> WA Department of Commerce guidance on Frequently Flooded Areas:

<http://www.commerce.wa.gov/Services/localgovernment/GrowthManagement/Growth-Management-Planning-Topics/Critical-Areas-and-Best-Available-Science/Pages/Frequently-Flooded-Areas.aspx>

<sup>3</sup> Final (effective) and many preliminary Flood Insurance Rate Maps can be found at the FEMA Map Service Center: <https://msc.fema.gov/portal>

<sup>4</sup> Channel Migration Assessment web pages at Ecology:

<http://www.ecy.wa.gov/programs/sea/sma/cma/index.html>

<sup>5</sup> Guidance on identifying channel migration zones -- Mapping tools technical guidance:

<https://fortress.wa.gov/ecy/publications/SummaryPages/1406032.html>

<sup>6</sup> Land use planning for salmon, steelhead and trout (WA Department of Fish and Wildlife):

<http://wdfw.wa.gov/publications/00033/wdfw00033.pdf>

<sup>7</sup> Tsunami hazard area and evacuation route mapping (select "Tsunami Evacuation Map" from Map Theme menu at top left): <https://fortress.wa.gov/dnr/geology/>

<sup>8</sup> Sea level rise in Washington State: <http://www.ecy.wa.gov/climatechange/risingsealevel.htm>

<sup>9</sup> Growth Management Act statute: <http://apps.leg.wa.gov/rcw/default.aspx?cite=36.70A>

<sup>10</sup> Floodplain Management statute: <http://apps.leg.wa.gov/rcw/default.aspx?cite=86.16>

<sup>11</sup> National Marine Fisheries Service NFIP Biological Opinion: [http://www.fema.gov/media-library-data/20130726-1900-25045-9907/nfip\\_biological\\_opinion\\_puget\\_sound.pdf](http://www.fema.gov/media-library-data/20130726-1900-25045-9907/nfip_biological_opinion_puget_sound.pdf)

<sup>12</sup> NFIP ESA BiOp Biological Opinion Checklist: <http://www.fema.gov/media-library/assets/85336>

<sup>13</sup> Department of Ecology information on technical assistance to local floodplain management programs:

[http://www.ecy.wa.gov/programs/sea/floods/technical\\_assistance.html](http://www.ecy.wa.gov/programs/sea/floods/technical_assistance.html)

<sup>14</sup> Information on Flood Control Districts in Washington State:

<http://www.mrsc.org/subjects/governance/spd/spd-floodlist.aspx>

## ATTACHMENT A – SCOPE OF WORK

### Des Moines Surface Water Management FEMA Program Support

#### INTRODUCTION

The City of Des Moines participates in the National Flood Insurance Program (NFIP) which is administered by the Federal Emergency Management Agency (FEMA). The program includes studies, standards, policies, maps, guidance ordinances, and other program elements that a community is expected to adopt and execute in order to remain eligible for the NFIP. As part of the City's on-going participation in the program, they must also consider provisions of a recent Biological Opinion (BiOp) from the National Marine Fisheries Service (NMFS) to apply Reasonable and Prudent alternatives to protect listed species and their critical habitat. Generally, the BiOp requires each community to apply what are referred to as Door 1, Door 2, or Door 3 strategies that demonstrate "basic mechanisms" to achieve compliance. Most communities have apparently been working within the framework of Door 3. However, FEMA is encouraging communities to consider 'moving up' to Door 1 or 2, which are considered more programmatic options. Each choice requires a set of initial actions, modifications, processes, or programs, with attendant follow-up reporting. FEMA has sent a letter to Des Moines with an overview of expectations and other related information.

The purpose of this scope of work is to provide the City with an understanding and checklist of requirements to comply with Door 3 while also providing an explanation of why Door 1 and 2 are available along with a brief list of potential impacts should the City decide to pursue Door 1 or 2 in the future. In addition, we will review the letter received by the City from the Department of Ecology (Ecology) dated January 20, 2015, which provided guidance to local governments on frequently flooded areas.

#### Task 01 – Project Management and QA/QC

Parametrix will be responsible for continuous tracking and contract administration of this project including preparing monthly invoices and coordinating work efforts with the City's project manager. Parametrix's project manager will have routine telephone and email contact with the City's project manager on an as-needed basis with regard to scope, schedule, and budget.

This task also includes Quality Assurance/Quality Control (QA/QC). There will be an independent review of all project deliverables by a qualified and licensed professional to ensure that each project deliverable meets the standard of care for our industry.

#### Work Elements

- Prepare monthly invoices and progress reports (2 months).
- Review project deliverables listed in this scope of services prior to submittal to the City.

#### Assumptions

- Project duration is 2 months.

## Deliverables

- Monthly invoices and progress reports.

## Task 02 – Floodplain Program Compliance Review

The purpose of this task is to review the current FEMA program, NMFS BiOp and Ecology letter; prepare a checklist for the City to use to ensure compliance with Door 3 and the Ecology letter; and to prepare a summary of what is involved with FEMA program Doors 1 and 2 including likely steps the City would need to take to choose one of these alternatives in the future.

## Work Elements

- Complete a review of the FEMA letter and summary materials (notably a review in the *Water Report*) to prepare a brief summary of what is involved in each Door.
- Complete a review of the Ecology letter dated January 20, 2015 “Guidance to Local Governments on Frequently Flooded Area Updates in CAO’s.
- Prepare a checklist based on our research for Door 3 from the FEMA letter and supporting materials that is also consistent with the Ecology letter dated January 20, 2015.
- Prepare a summary explaining the benefits of Doors 1 and 2 (why are they offered and even preferred by FEMA) and a summary of the costs including likely changes to City’ ordinances and additional environmental studies.

## Assumptions

- Parametrix will not perform an exhaustive review of City ordinances with regard to the brief summary of Doors 1 and 2.
- The budget estimate includes one (1) meeting with City staff to review draft deliverables prior to completion of final work product.
- The budget estimate includes preparation of a DRAFT and Final Checklist and Memorandum, additional “interim” deliverables, if requested by the City, may require additional funds.
- All deliverables will be provided in electronic format (PDF, MS Office).

## Deliverables

- Draft Memorandum including Checklist for Door 3 (MS Word format)
- Final Memorandum including Checklist for Door 3 (PDF format)

Client: City of Des Moines  
 Project: FEMA Program Support  
 Project No: 216-1792-012

<b>Budget Summary</b>	<b>Direct Salary Cost</b>	<b>Overhead DSC * 194.70</b>	<b>DSC + OH</b>	<b>Fee Amount DSC * 30.00</b>	<b>Total Including Fee</b>	<b>Expenses</b>	<b>Total</b>
PHASE: 01 FEMA PROGRAM SUPPORT							
Task: 01 Project Management & QA/QC	477.22	929.15	1,406.37	143.16	1,549.53	0.00	1,549.53
Task: 02 Floodplain Program Comp. Review	2,452.79	4,775.58	7,228.37	735.84	7,964.21	0.00	7,964.21
Task: EXP Expenses	0.00	0.00	0.00	0.00	0.00	113.25	113.25
<b>Project Totals:</b>	<b>\$2,930.01</b>	<b>\$5,704.73</b>	<b>\$8,634.74</b>	<b>\$879.00</b>	<b>\$9,513.74</b>	<b>\$113.25</b>	<b>\$9,626.99</b>

Client: City of Des Moines  
 Project: FEMA Program Support  
 Project No: 216-1792-012

**Budget Detail**

				Sr Consultant	Sr Consultant	Sr Scientist/Biologist	Project Controls Specialist	Corp Finance Project Accountant
				Austin Fisher	Paul S. Fendt	Jeffrey C Meyer	Christy Pope	Corp Finance Project Accountant
Cost Rates:				\$71.04	\$72.12	\$55.08	\$33.35	\$32.00
Burdened Rates:				\$230.67	\$234.17	\$178.84	\$108.29	\$103.90
Phase	Task	Description	Labor Dollars	Labor Hours				
01		FEMA Program Support						
	01	Project Management & QA/QC	\$1,549.53	11	3		6	2
	02	Floodplain Program Comp. Review	\$7,964.21	37	6	20	10	1
	EXP	Expenses	(see below)					
<b>Labor Totals:</b>			<b>\$9,513.74</b>	<b>48</b>	<b>9</b>	<b>20</b>	<b>10</b>	<b>7</b>
				<b>\$2,076.03</b>	<b>\$4,683.40</b>	<b>\$1,788.40</b>	<b>\$758.03</b>	<b>\$207.80</b>

**DIRECT EXPENSES:**

Description	Amount
B & W 8.5 x 11	\$50.00
Mileage	\$63.25
<b>Expense Total:</b>	<b>\$113.25</b>
<b>Project Total:</b>	<b>\$9,626.99</b>



# LAKEHAVEN UTILITY DISTRICT

31627 1<sup>st</sup> Ave South • P.O. Box 4249 • Federal Way, Washington 98063-4249  
 Federal Way: 253-941-1516 • Tacoma: 253-927-2922  
 www.lakehaven.org

RECEIVED  
 FEB 26 2015

February 23, 2015

BY: L. Volin

Loren Reinhold, P.E.  
 Surface Water Management (SWM) Utility Manager  
 City of Des Moines  
 21650 11<sup>th</sup> Avenue South  
 Des Moines, WA 98198

Re: 2014 Water System Plan Update

Dear Loren:

Thank you for providing the opportunity for Stan French to provide information on Lakehaven Utility District's draft 2014 Water System Plan Update (WSP) at the City of Des Moines October 23, 2014 Council Meeting. I understand that the presentation went quite well.

A week after the Council meeting, you e-mailed a message to me asking several questions related to our draft WSP and I have included each of those questions and provided my response below:

- 1) *Does your plan include documentation of all Critical Aquifer Recharge Areas? I believe the answer was yes, that the plan includes a Wellhead Protection Program that defines the source water protection areas. Please confirm.*

The WSP contains information about the District's adopted "Wellhead Protection Program" located in Section 7 (Water Resources). Delineated wellhead capture zones (1 year, 5 year and 10 year time of travel) are designated as Critical Aquifer Recharge Areas (CARAs) under the provisions of the Growth Management Act (Chapter 36.70A RCW). While the plan does not include maps of the CARAs, maps are available and we will send them to you. Our delineated wellhead capture zones maps do not show any of the District's capture zones extending into the City of Des Moines. Since our CARAs extend predominately within the City of Federal Way, the District worked with Federal Way to adopt land use codes in 2004 to protect the CARAs.

- 2) *The City is concerned that the District's water rates as shown on slide 15 are too low given the impending pipe replacement program. Your plan shows an average of 31,000 feet of pipe being replaced annually after 2030 and only 1,100 feet being replaced before that. The City would like the District to consider gradually raising the rates in order to get ahead of the pipe replacements rather than a dramatic increase to its customers. Much of the pipe replacement is asbestos concrete pipe with an assumption of a 70-year life span, which assumes ideal soil conditions that are not saturated with groundwater.*

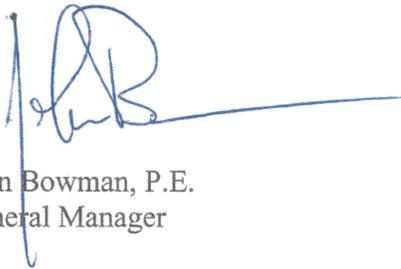
Leonard D. Englund	Charles I. Gibson	Timothy A. McClain	Donald L.P. Miller	Ronald E. Nowicki
Commissioner	Commissioner	Commissioner	Commissioner	Commissioner

*The City agrees with the Plan's recommendation to conduct an asset management study that includes an assessment of the condition of the pipes.*

Lakehaven Utility District has an annual budget for pipeline replacements that has been accounted for in our existing water rates and projected rates. The District is reviewing its rates every two years, with the next review scheduled for 2015. Your comments and concerns related to our pipe replacement program's impact on the water rates are appropriately noted and increases will be considered in relation with our asset management studies moving forward.

Please feel free to contact me if you have any additional questions or concerns.

Sincerely,

A handwritten signature in blue ink, appearing to read 'J. Bowman', with a long horizontal flourish extending to the right.

John Bowman, P.E.  
General Manager



RECEIVED  
MAR 23 2015

BY: *P. Volin*

## Southwest Suburban Sewer District

431 SOUTHWEST AMBAUM BOULEVARD  
BURIEN, WASHINGTON 98166-2497  
206-244-9575 • FAX 206-433-8546  
[www.swssd.com](http://www.swssd.com)

COMMISSIONERS:  
Susan Genzale  
Scott Hilsen  
William A. Tracy

March 19<sup>th</sup>, 2015

Dan Brewer, Planning, Building & Public Works Director  
City of Des Moines  
21650 11<sup>th</sup> Ave. South  
Des Moines, WA 98198

Mr. Brewer,

The District is in receipt of your City of Des Moines (City) letter dated March 9<sup>th</sup>, 2015 in reference to the Southwest Suburban Sewer District (SWSSD) 2014 Comprehensive Sewer Plan. Within your letter, you address 4 separate items. The bullet points below address each of your comments:

- Your first comment states that you feel that SWSSD may not be adequately re-investing in its infrastructure resulting in long term significant capital issues, and significant rate increases to its customers. As previously shared with the City, SWSSD has been very proactive in replacing and rehabilitating its aging sewer system. Over the past 6 years, SWSSD has spent \$11,500,000.00 on sewer line rehab, \$5,100,000.00 on pump station rehab and \$4,800,000.00 on treatment plant improvements. SWSSD has prioritized its infrastructure by condition and age and will continue to be proactive in rehabilitating and replacing its aging system as identified in the SWSSD Annual Budget and 2014 Sewer Comprehensive Plan. You will also notice in the SWSSD Comprehensive Plan that SWSSD will be spending approximately \$14,000,000.00 over the next 2 years on capital improvements.

In addition, of the \$29.50/month/REU sewer service bill, \$13.54/month/REU is spent on capital improvements. Capital improvements account for 46% of our annual budget.

I'm not sure how familiar the City is with the condition of SWSSD's infrastructure and wastewater treatment plants. Does the City have any particular concerns about the sewer facilities located within the City? If so, SWSSD would be happy to discuss the City's concerns in more detail.

Further, with respect to SWSSD's capital improvement plans, does the City have a particular benchmark in mind as to how much the City believes SWSSD should be investing in capital improvements? SWSSD would be interested to know how much the City believes SWSSD should be spending on capital improvement projects within the City, as well as the facts or other information that supports the City's position in this regard.

- Your second comment states that SWSSD needs to revise its policy and take a more proactive role by promoting sewer to unsewered areas. As previously explained to the City, SWSSD has no authority to force unsewered homes to hook up to sewer. You also state that the City is dealing with streams impaired with fecal coliform, likely as a result of failed septic systems and associated drain fields. I would encourage you to contact the King County Health Department (KCHD). KCHD has the authority to force unsewered homes to connect to sewer service, not SWSSD. If the City has analytical data indicating fecal coliform coming from failed septic systems and drain fields, KCHD will be able to assist the City. In addition, in reviewing area maps, it does not appear that any of the unsewered homes that are within SWSSD's boundaries are close to any streams within the City. The nearest stream appears to be a minimum of 5 to 6 city blocks east of Des Moines Memorial Drive, from the nearest property within SWSSD boundaries.

I should also mention that SWSSD has the authority to form a ULID for sewer improvements provided there is significant support of the property owners for such improvements. The ULID process is usually initiated by the property owners. To my knowledge, SWSSD has not been approached recently by any property owners proposing a ULID. SWSSD did process a ULID within the City back in the 2007-08 timeframe which turned out to be a very contentious process.

- Your third comment requests that SWSSD provide the City with the percentage of properties that are unsewered. SWSSD does not keep a count of unsewered properties within the six different cities it serves. In reviewing the 2 mini-basins that lie within the City that SWSSD serves, (see attached map) the majority of the area does have sewer service. SWSSD also does not keep track if the unsewered properties are vacant properties, commercial, single family residents, or multi-family.
- Your fourth comment states that the franchise agreement between SWSSD and the City is expired. This is true. SWSSD is in the process of updating all of its franchise agreements with the six cities it serves within. SWSSD's obligation is to its rate payers and it wants to make sure that there is a uniformity and fairness to all of the franchise agreements. SWSSD is also in communication with all of the water and sewer districts in the area to assure that there is uniformity and fairness within all of the franchise agreements amongst the districts. SWSSD is uncomfortable with the City's proposed franchise agreement. SWSSD will contact the City in the near future regarding the form of a new franchise agreement.

You also request that the expired franchise agreement be removed from SWSSD's Comprehensive Sewer Plan. The expired Comp Plan will be removed and the language will be modified to state that the franchise agreement between SWSSD and the City is expired and a new franchise agreement will be proposed to the City in the near future.

Thank you for your comments and if you have any other questions, please don't hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ron Hall".

Ron Hall, General Manager

Cc: Board of Commissioners