



TOM WARD, P.E.  
PUBLIC UTILITIES DIRECTOR

KURT BRADBURN  
MAYOR

MATTHEW HUISH  
CHIEF ADMINISTRATIVE OFFICER

## MEMORANDUM

**To:** City Council  
**From:** Tom Ward, P.E., Director *TW*  
Tyler Shelley, P.E., Chief Engineer *TS*  
**Date:** March 3, 2021  
**Re:** Storm Water and Floodplain Updates Overview

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### **INTRODUCTION AND RECOMMENDATION**

We are seeking approval from City Council of proposed revisions to ordinances and development standard specifications for storm water and floodplain updates. These updates have been prepared in collaboration with staff from Public Utilities Department (PU), Public Works Department, Parks & Recreation Department, Community Development Department, Legal Department, and consulting engineering firms contracted by PU. Included in the package for your review, are the proposed updates to ordinances and development standard specifications for storm water and floodplain updates and the presentation slides that will be presented.

On February 18, 2021, we presented an overview of the new storm water permit and floodplain requirements and proposed ordinance revisions to Public Utilities Advisory Board (PUAB) and to Planning Commission. PUAB made the recommendation to City Council that the ordinances be updated, with the understanding that most of the board members did not review the specific details of the proposed ordinance updates. Pat Casaday (appointed alternate to PUAB and former Sandy City attorney) did review the proposed updates in detail. Planning Commission reviewed the proposed detailed updates to Chapter 21 – Land Development Code and recommended that City Council approve the updates.

In the City Council meeting on March 9<sup>th</sup>, we will present the new storm water permit and floodplain requirements and proposed ordinance revisions/development standard specifications. We will also provide examples of some of the changes and how the proposed changes affect new development. Following is a summary of information that will be discussed in the meeting.

### **STORM WATER UPDATES**

The storm water updates are being proposed in order to:

- Meet new State storm water requirements for new development and redevelopment.
- Update, streamline, and clarify the storm water design standards for Sandy City.

The Utah Division of Water Quality (DWQ) administers the storm water program for the State of Utah and requires that Sandy City have a storm water permit to discharge storm water from

Sandy City into local streams, canals, and rivers. Sandy City is a joint-permittee under the Jordan Valley Municipalities (JVM) Permit. The new JVM Permit, effective on February 26, 2020, requires that:

- All new development projects greater than or equal to 1 acre (including those that are part of a larger common plan of development or sale) have to retain storm water on site for a volume equal to the 80<sup>th</sup> percentile rainfall event. **This means that theoretically, storm water runoff from developments would not leave the site for 80 percent of all storm events.** If not feasible, a rationale must be provided for the use of alternative design criteria.
- Redevelopment projects meeting the same threshold described above, that increase the impervious surface by greater than 10%, have to meet the same requirement as described above.
- The retention of storm water noted previously, must be accomplished by using Low Impact Development (LID) practices and the City must allow for use of a minimum of five LID practices.

The traditional method for managing storm water in the past has been to convey storm water runoff away from urban areas as quickly as possible to streams, rivers, and canals using storm drains. Along with the storm water, contaminants have been carried directly to the waterbodies causing significant water quality issues. LID is the new method, and is now required, for managing storm water. LID methods are designed to mimic natural storm water runoff by increasing pervious areas, slowing down urban runoff, infiltrating storm water into the ground where possible, and reducing potential for contaminants from getting introduced into the storm water. Updates to ordinance and development standard specifications are being proposed to accommodate these new requirements. Examples of LID will be presented in the meeting.

In addition to the updates to meet the new storm water requirements, several revisions to ordinances and storm water design standards are being proposed for updating and clarification purposes including the following:

- Storm water quality treatment requirements.
- Design rainfall depth and distribution for design/sizing of storm drains, detention ponds, streets, gutters, etc.
- Allowable methods for modeling storm drain systems.
- Storm water control options (retention/detention).
- Allowable methods for determining storm water infiltration rates.
- Submittal requirements.

## **FLOODPLAIN UPDATES**

The floodplain updates are being proposed in order to:

- Update the City floodplain ordinances to meet Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) regulations.
- Implement a Floodplain Development Permit as required in the NFIP.

FEMA regulates development in the floodplain using the NFIP. Cities are responsible for administering a floodplain management program in compliance with the NFIP. The NFIP provides floodplain maps and regulations for local program management. NFIP regulations have been updated over time and Sandy City ordinances need to be updated to reflect current regulations. The updates being proposed will bring city code into compliance with NFIP regulations.

In order to ensure compliance with all NFIP requirements, a development permit is required to be implemented for development in floodplains within Sandy City, including the following:

- Construction of new structures.
- Modifications or improvements to existing structures.
- Excavation.
- Filling.
- Paving.
- Grading.
- Land clearing.
- Permanent storage of materials and/or equipment.

Implementation of the proposed Floodplain Development Permit will help Sandy City better manage development in the floodplains and bring the City into compliance with the NFIP regulations. The location of floodplains where a permit would be required for development will be presented in the meeting.

### **DEVELOPMENT OF UPDATES**

We contracted with engineering experts to assist the City in developing the required updates to ordinances and development standard specifications. Hansen, Allen & Luce Inc. (in partnership with AECOM) was selected to assist in developing new LID and storm water design criteria standards. CRS Engineers reviewed and prepared updates to the Floodplain Overlay Zone ordinance and developed the Floodplain Development Permit. The assistance of these experts has been critical in assuring compliance with requirements and administration of the storm water and floodplain management programs. In the meeting on March 9<sup>th</sup>, we will present an overview of the proposed updates that were developed with the help of these consultants.

### **CONCLUSION**

We have been working on these updates over the last several months and are excited to be able to provide them to you and discuss them with you on March 9<sup>th</sup>. We ask that City Council approve the proposed revisions to ordinances and development standard specifications for storm water and floodplain updates.