Amy Johnson

From: Lora Meisner <lmgb@earthlink.net>
Sent: Monday, September 14, 2020 3:35 PM
To: CityRecorder
Subject: re: Agenda Item: 7.2A 20-33 Exhibit A Definitions

Expires: Sunday, December 13, 2020 12:00 AM

Please explain to homeowners here in Salem, how removing storm water detention requirements on new large projects is going to keep residents homes from being flooded? In Section 71.090 The removal of the paragraph "*Provide additional stormwater facilities or improve the stormwater system to adequately accommodate the stormwater flows from the site if insufficient capacity exists in the public stormwater system to carry existing and anticipated discharge flows including any flows from dewatering activities. The Director may [actually, it should say "shall] require the developer to conduct analyses to ensure sufficient capacity exists downstream from the location where the drainage water is discharged from the site."*

It is ludicrous to remove this paragraph and not have any replacement requiring new large developments to have any type of stormwater retention/detention. What's an even bigger joke is the fact that the city has NO IDEA what the capacity of our creeks is or isn't. With climate change and unexpected events that could potentially deliver MORE moisture during fall/winter in the form of rain……not snow-capped peaks—it's irresponsible for the city council to consider any such changes at this time. I think the city council should send this back to Public Works Department and ask them to first determine the capacity of the city's creeks—how much water is going in now and what are their capacities……then talk about making changes to definitions of ordinances regarding stormwater.

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Amy Johnson

From: John Shepard <emailjcs@comcast.net>
Sent: Monday, September 14, 2020 4:04 PM
To: CityRecorder
Subject: Public Testimony regarding Agenda Item 7.2a
Attachments: PublicHearing 2020BC Code Changes.pdf; Stormwater 2020BC Salem .pdf

Attached find 2 documents regarding the issues discussed on the 14th September at the City Council Meeting. The subject is Agenda Item 7.2a Amending Salem Revised Code Chapter 70 (Utilities), Chapter 71 (Stormwater), and Chapter 601 (Floodplain Overlay Zone).

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John
S/V Hadley
PacificNW Sailing

CHANGES TO STORMWATER CODE PUBLIC HEARING

Salem City Council,

Response to Agenda Item 7.2a Amending Salem Revised Code Chapter 70 (Utilities), Chapter 71 (Stormwater), and Chapter 601 (Floodplain Overlay Zone).

The recommended amendments regarding Chapter 71

Sec. 71.090. - Requirements for large projects.

SRC 71.095 *Flow control facilities* (c) Flow control facility performance standard. (3) (4)

Do not achieve the stated
Finding: The Code amendment is in the best interest of the public health, safety, and welfare of the City because it minimizes peak stormwater discharges from new and replaced impervious surfaces and reduces risks of flood damage for flood-prone properties.

Design storm event means the size of the storm event used to calculate runoff volumes and peak rates of discharge when designing stormwater facilities. The design storm event is the total inches of rainfall, distributed during a 24-hour period using a standard synthetic rainfall distribution identified as Type I-A by the Natural Resources Conservation Service.

A Design Storm is an engineering construct intended to provide a metric. The time period 24-Hours fits many of parts of the US where flash flooding occurs. The Design storm structure looks at rainfall in 24 hour increments. The rainfall pattern refreshes each period and assumes runoff starts at zero at the beginning of each period. It's application in the PacificNW is flawed. Our storm systems and our soil systems are different. We experience days sometimes weeks of rainfall. During the days of mist and drizzle the soils are being charged like a sponge. Then we get a series of days where rainfall fills the soil and runoff begins. That this happens during our winter months the saturated soils are sometimes frozen. Saturated or frozen soils act just like street surfaces impervious. Then all inches of rainfall flow off the hills into the creeks.

We need to use a different model to identify rainfall in our code. We need a metric that recognizes the rainfall conditions in Salem, not Arizona.

Changes to SRC 71.095(c) further restrict peak flows from development projects during larger storm events and require additional storage volume for flow control facilities. Staff has estimated the impact that changes to SRC 71.095(c) will have on development projects as follows:

This is a positive statement in the record to support the revisions but is deceptive in structure.

- What is a “Large Storm Event”?
- How much additional storage volume is required to be detained?
- What effect will this storage have on downstream flooding?

In Surgery if they sever the arm at the elbow instead of the shoulder, they reduced the risk, but you still lost your hand.

Until the code is modified to address the storm events experienced in Oregon, the present 24-hour Design Storm criteria still puts existing residents at increasing flood risk from development on the hills of Salem. To stop increasing the risk of flooding we need to stop incrementally increasing the volume of water in the Stormwater pipes (our Salem creeks and streams).

John Shepard
Ward 4
Salem, Oregon

STORMWATER BATTLECREEK BASIN

Salem City Council

I am more of a historian than an engineer or a writer of policy about the subject of flooding in the Battle Creek Basin.

I was participant in the work concerning the Future use of Battle Creek Golf course. The property owner one day in 2007 announced his intent to develop the property into a 55-plus housing project on the 85 acers. The property was zoned “Public Amusement”. The Comprehensive Plan would require a change. We argued that the property served a public purpose in detaining flood stormwater. During the process I learned from Public Works staff that the city had no knowledge of the stream capacities in the Battle Creek Basin. This seems to be a failure, in that the City uses the streams as a conveyance (think pipeline) to transport stormewater through the city to the Willamette River. Zoning and Development standards from the 70’s have required connection of all stormwater drainage to the streams. The 1996 Salem flood demonstrated that stream capacities were beyond the FEMA Flood Plain mapping (models developed in the late 50 early 60’s) for the Battle Creek Basin. Home Building and development is dependent on the FEMA maps to identify the requirements of approval. After the 1996 flood the city prepared an assessment plan with a budget to address the stream flow conflicts at culverts in the Battle Creek basin. It was the meat of the 2000 Salem Stormwater Master Plan. An extensive list and budget for remediation of issues causing flooding was developed. The culvert at 13th street as an example was changed from three round pipes to a large box culvert the width of the stream bed and the height of the roadway. This increased the capacity of water to flow under 13th street more than 10-fold. The city did very little more regarding the engineer recommendations for 13 million in improvements. The city did not change their Zoning and Development standards. Stormwater continued to be added to the streams and with each new development the volume of stormwater in the creeks increased.

In 2017/2018 I participated as a member of the Stormwater Master Plan committee to revise the long over due update. During our discussions the Public Works department presented the committee a new modeling method for stormwater in the Battle Creek Basin and other stream basins of the City. It was developed to identify the level of flood water inundation in parts of the city. We were told the modeling was state of the art. It showed that the stream capacities were indeed exceeded by the present level of stormwater being emptied into the creeks. New and greater damage would be occurring during 25 plus year storm events.

When the question was asked “Should we include this new data into our practice for accessing the risk to property from flood damage?” the development community was against the idea. It would devastate property values. Validation of the model was not clear. Residents would lose their life savings in their homes as flood at risk homes would kill the real estate market. Insurance costs would be enormous. The flood insurance rates, which the City had been championing would be lost.

I argued “you cannot keep this information from the public”. The city must be transparent on this issue. You know that some homes will be flooded now. The individuals who purchased these homes had reason to believe the city when they asked are these homes safe. To be told, FEMA

mapping shows these are outside of the flood zone, yet the city model shows that they are now in a flood risk zone was wrong. We need to consider zone and development standards that protect the residents. If you buy a home in the hills your home and development cannot flood out the older homes downstream.

When the committee voted the decision was to not do anything about this information. It would be up to the Public Works department to decide to use or not use the information.

In this day and age, you cannot keep secrets for long. August 26th, Realtor.com announced a new feature on their website. Flood Risk data now available for home shoppers.

This new feature is provided by the nonprofit First Street Foundation. The flood data includes an estimate of a home's FEMA flood zone location as well as a FLOOD FACTOR™, comprehensive flood risk data displayed on the property level in the form of a risk score, ranging from 1 (minimal risk) to 10 (extreme risk). The Realtor.com site displays the current risk of flooding for a home; weather the risk is increasing or decreasing, or constant; and the likely hood of that property experiencing a flood event over the next 30 years.

Research identified in the Wall Street Journal indicate, Homes outside the high-risk flood zone appreciated faster than homes inside those zones between 2012 and 2017.

Here is a link to the area around Battle Creek and 13th. This area was developed in the late 60's early 70's. At that time these homes were not in any flood zone. During the period from build out to about 1992 none of these homes had experienced flooding. Following development higher in the basin from 1992 on, flooding issues started to affect the homes along 13th street near the streams. The 1996 Salem flood saw many of these homes affected by flood waters. The cause was blamed on the weather conditions and the too small culverts. More likely the cause was the systematic increase of stormwater added to the streams. Many of these homes now show a FLOOD FACTOR™ risk assessments of 10 EXTREME RISK yet they are outside the FEMA flood plain. This can only happen if the volume of water in the creeks is greater than the FEMA models (standards for development decisions)

https://floodfactor.com/county/marion-county/41047_fsid#score_map

Perhaps the Stormwater Master plan should consider a modification to require onsite stormwater detention for all stormwater producing storms. It feels obvious, if the creeks (stormwater pipes) cannot contain the current volume of water then any project that may increase the volume of water should detain that water on sight and only release it when it is safe to do so. The flooding of Salem Residents who live downstream based on the current rules is wrong and bad policy.

John Shepard
Ward 4
Salem, Oregon

Information provided has been resourced and supporting documents are available upon request.

STORMWATERB

Amy Johnson

From: John Shepard <emailjcs@comcast.net>
Sent: Monday, September 14, 2020 4:36 PM
To: CityRecorder
Subject: Public Testimony regarding Agenda Item 7.2a
Attachments: Salem Code Chapter 71 Sec 71090 (b) .pdf

Attached find 1 document regarding the issues discussed on the 14th September at the City Council Meeting. The subject is Agenda Item 7.2a Amending Salem Revised Code Chapter 70 (Utilities), Chapter 71 (Stormwater), and Chapter 601 (Floodplain Overlay Zone).

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John Shepard
Ward 4
Salem OR

CHANGE TO SALEM STORMWATER CODE

The code change before the Council, specifically change to Chapter 71 Sec 71.090 (b), the removal of paragraph (b) is a reversal in the direction of protecting the citizens of Salem.

Much time and discussion of the language encapsulated in the paragraph was agonizingly discussed during the Storm Water Master Plan Committee meetings.

The intent of this paragraph is to "Improve the public stormwater system to adequately accommodate the stormwater flows.." The context of our discussions reviewed the current use of outdated FEMA data, the lack of knowledge on the part of Public Works regarding the capacities of the streams and creeks used for conveyance of stormwater, and the inability to know, on the part of Public Works, if adding more water to the stormwater system will cause flooding to residents downstream of a proposed development.

Without proper analysis of the stream capacities and knowledge of the proposed additional water to be added by new development, the citizens downstream are at risk of being flooded.

The clause serves to require new development to provide the needed information to the Director in order to gain approval. This is similar to the information being provided to the Director for traffic issues.

The proposed clause attempts to specify a metric. Now the development is not at fault for adding more water to the stream than it can handle.

If a storm, possibly a "Large Storm" occurs and the stormwater floods creating damage to residents downstream, the condition is blamed on "An act of God".

What happens, not only the property owners downstream suffer monetary damage, all of Salem suffers. The flood plan fails and the Insurance costs for all Salem go up for all residents.

This is a bad way to set policy.

I request the City Council keep paragraph (b) of Chapter 71 Sec 71.090. Stay the course and protect the citizens of Salem.