

**Guidance Document for Proposed Atlas 14 Code Amendments and
Drainage Criteria Rules**
December 6, 2018

When new Land Development Code regulations or technical criteria manual rules are being proposed by the City, it is important to understand when the new requirements will apply to development applications (i.e., the effective date) and how they will affect developments at various stages of the design and permitting process. While the effective date for a new ordinance is established by City Council, staff provide a recommendation as to when the new regulations should begin to apply to development applications. This document discusses the implementation timing of the proposed floodplain code amendments and rules and provides guidance for long-term development planning that may be impacted these changes. The current floodplain regulations and drainage rules are referred to as pre-Atlas 14, while the proposed floodplain regulations and drainage rules are referred to as post-Atlas 14.

The Atlas 14 rainfall study provides an update to the rainfall information that is used to determine floodplain delineations, storm drain design, and detention pond design, among other things. For the discussion of when the post-Atlas 14 *floodplain regulations* and *drainage rules* will apply to development applications, it is necessary to clearly define these two items.

The post-Atlas 14 floodplain regulations include the following amendments to the Land Development Code Chapter 25-7, Section 25-12-3, and Title 30: new definitions of 100-year floodplain and 25-year floodplain; a new redevelopment exception; modifications to the Colorado River exception; and a revised freeboard requirement. The redefined 100-year floodplain is used to determine the location of drainage easements as required in Section 25-7-152 and is used to determine whether there is an adverse flooding impact to other properties from an encroachment on the 100-year floodplain per Section 25-7-61.

The drainage rules located in the Drainage Criteria Manual include the design requirements for detention ponds, culverts, and storm drain systems such as curb inlets, drainage pipes, and channels.

Implementation timing of the post-Atlas 14 floodplain regulations

All development applications with an initial submittal date on or after the effective date of the adopted ordinance are subject to the new regulations. The initial submittal for an application for a preliminary plan, final plat, subdivision construction plan, or site plan is when the application is submitted for completeness check. The initial submittal for a residential building permit is when the applicant submits a formal application to the City. Fair notice applications, conceptual site plans, and development assessments cannot be used to establish the applicable floodplain regulations.

Tying the applicability of the post-Atlas 14 floodplain regulations to the submittal date for each type of development permit means that a project may become subject to the new regulations as it proceeds through the permitting process. For example, the following scenario may occur for residential development: The preliminary plan, final plat, and subdivision construction plans are all submitted prior to the effective date and are therefore reviewed and approved using the pre-

Atlas 14 floodplain regulations. If an applicant submits a residential building permit application after the effective date, then the post-Atlas 14 regulations would apply to the building permit application even though the previous applications were reviewed and approved using the pre-Atlas 14 regulations. This means that development on some platted lots within a subdivision may not be able to be approved administratively when the post-Atlas 14 regulations are applied at the time of building permit review. This situation may also occur with site plans that propose buildings that require separate residential building permits, such as condo regime developments. To minimize the potential impacts of the post-Atlas 14 floodplain regulations, developers should follow the long-term planning recommendations provided below.

Floodplain review for commercial development is reviewed at the time of site plan. Therefore, a commercial building permit submitted after the effective date would not be reviewed using the post-Atlas 14 floodplain regulations.

Development permit extensions and revisions that are requested after the effective date of the new floodplain regulations will be reviewed under the post-Atlas 14 floodplain regulations.

Implementation timing for drainage rules

The Atlas 14 rainfall updates will also impact drainage rules that establish design parameters for storm drain systems, detention ponds, and culverts. Watershed Protection Department staff are currently considering potential rules updates. That process will include a discussion with internal and external stakeholders about the new rules, their effective date, and how and when they might apply to development applications. Prior to the effective date of the new drainage rules, the pre-Atlas 14 Drainage Criteria Manual rules govern the design of storm drain systems, detention ponds, and culverts. However, we recommend using the long-term planning criteria shown below.

Long-term Planning Recommendations

For long-term land planning, we recommend using a larger design storm for floodplain delineation, storm drain, detention pond, and culvert design to minimize the impact that the post-Atlas 14 floodplain regulations and drainage rules will have on development design and ensure a more resilient development. The following table provides recommended criteria to use for design.

Long-term Planning Recommendations		
	<i>Current Criteria</i>	<i>Recommended Criteria</i>
100-year floodplain definition – LDC Section 25-7-2 (9) and Section 30-4-5	100-year frequency storm	500-year frequency storm
25-year floodplain definition – LDC Section 25-7-2 (10) and Section 30-4-6	25-year frequency storm	100-year frequency storm
Street, gutter, inlet, and storm drain capacity for storm drain design – DCM Section 1.2.2B	25-year frequency storm	50-year frequency storm
Public right-of-way capacity for storm drain design – DCM Section 1.2.2C	100-year frequency storm	250-year frequency storm
Peak flow rate control for detention pond design – DCM 1.2.2D	2-, 10-, 25-, and 100-year frequency storms	2-, 10-, 25-, 100, and 500- year frequency storms
Overtopping limits for bridge and culvert design – DCM 1.2.4 C and D	100-year frequency storm	500-year frequency storm

The following table provides guidance on certain development situations that may be encountered.

Development Situation Recommendations		
<i>Development situation</i>	<i>Recommended floodplain regulations</i>	<i>Recommended drainage rules</i>
<ul style="list-style-type: none"> Property is not impacted by a mapped 500-year floodplain. Property does not contain a drainage channel with a drainage area greater than 64 acres. 	N/A	Long-term planning recommendations noted above are recommended for storm drain, detention pond, and culvert design.
<ul style="list-style-type: none"> Property is not impacted by a mapped 500-year floodplain. Property contains a drainage channel with a drainage area greater than 64 acres. 	Use the current 500-year frequency storm data in the DCM to delineate the floodplain of the drainage channel and establish the drainage easement. If the development proposes to encroach within this 500-year floodplain, use the 500-year frequency storm to review for no adverse impact.	Long-term planning recommendations noted above are recommended for storm drain, detention pond, and culvert design.
<ul style="list-style-type: none"> Property is not impacted by a mapped 500-year floodplain. Development proposes an in-line pond on a drainage channel with a drainage area greater than 64 acres. 	Use the current 500-year frequency storm data in the DCM to delineate the floodplain of the drainage channel and establish the drainage easement. Use the current 500-year frequency storm to review for no adverse impact.	Long-term planning recommendations noted above are recommended for storm drain, in-line pond outlet structure design, and culvert design.

<i>Development situation</i>	<i>Recommended floodplain regulations</i>	<i>Recommended drainage rules</i>
<ul style="list-style-type: none"> Property is impacted by a mapped 500-year floodplain. 	<p>Use the current 500-year frequency storm data in the DCM to delineate the floodplain of the drainage channel and establish the drainage easement. If the development proposes to encroach within this 500-year floodplain, use the 500-year frequency storm to review for no adverse impact.</p>	<p>Long-term planning recommendations noted above are recommended for storm drain, detention pond, and culvert design.</p>
<ul style="list-style-type: none"> The initial submittal of a preliminary plan occurs prior to the effective date of the post-Atlas 14 floodplain regulations. However, any final plats out of that preliminary plan, site plans, or building permits are not expected to be submitted until after the effective date of the post-Atlas 14 floodplain regulations. 	<p>The preliminary plan will be reviewed under the pre-Atlas 14 floodplain regulations. However, subsequent development applications that have an initial submittal date after the effective date of the post-Atlas 14 floodplain regulations will be reviewed under the post-Atlas 14 floodplain regulations. We recommend that developments under this scenario use the current 500-year frequency storm in the design of their preliminary plan.</p>	<p>Long-term planning recommendations noted above are recommended for storm drain, detention pond, and culvert design.</p>