

Adopted Report

Johnson Creek Floodplain Zoning Code Maintenance

Revising the Johnson Creek Basin Plan District
to Incorporate the Most Current FEMA Flood Maps

Exhibit A: Planning Commission Report and Recommendations to the City Council

Adopted by the Portland City Council
July 9, 2003, Ordinance No. 177689

Effective July 19, 2003



City of Portland, Oregon
Bureau of Planning
July 2003

Acknowledgements

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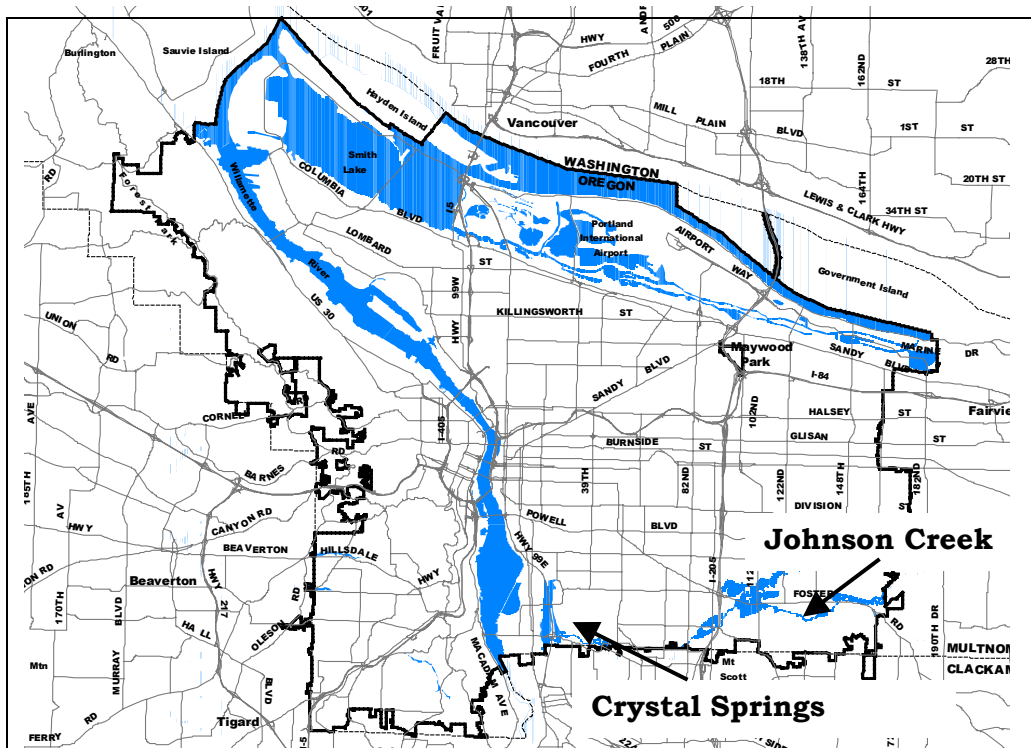
Planning Commission Recommendations

On July 9, 2003, the City Council unanimously adopted the Planning Commission recommendations to:

1. Adopt the ordinance that:
 - Approves this report and its appendices; and
 - Amends Title 33, Planning and Zoning, as shown in this report to allow the City to use the most current Federal Emergency Management Agency (FEMA) flood maps in the Johnson Creek Basin Plan District.
2. Declare that an emergency exists because 967 tax lots have been subject to incorrect floodplain standards in the Johnson Creek Basin Plan District since December of 2001 when FEMA adopted the updated Johnson Creek floodplain maps.

Project Summary

The City of Portland, with the Bureau of Environmental Services as the lead agency, began working with the Army Corps of Engineers and the Federal Emergency Management Agency (FEMA) in August 1998 to update the 100-year floodplain for Johnson Creek and Crystal Springs. The Johnson Creek portion was adopted by FEMA in December 2000 and was revised in December 2001. FEMA estimates that the Crystal Springs portion will be adopted in 2004.



Map 1: City of Portland's 100-Year Floodplain

The 100-year floodplain is used to regulate development in the City of Portland. The Bureau of Development Services and the Bureau of Planning use the 100-year floodplain to regulate such aspects of development as cut and fill, impervious surfaces, building placement, and tree removal. These regulations work together to provide safe development in, and adjacent to, the floodplain; protect against the loss of property; and improve the overall health of the watershed.

Many of the City's regulations, such as the building code, already directly use the most current FEMA maps to determine where floodplain regulations apply. However, the Johnson Creek Basin District Plan, Chapter 33.537 of the *Zoning Code*, uses separate maps prepared by the City, that are based on the old FEMA 100-year floodplain boundary. These plan district maps need to be updated for the City to use the most current FEMA 100-year floodplain boundaries when applying floodplain regulations in the Johnson Creek Basin Plan District. If the plan district used the most current FEMA maps today, 928 tax lots would no longer be subject to the plan district's floodplain regulations. There are also roughly 39 tax lots that have been included in the updated FEMA floodplain that are not subject to the floodplain regulations, and should be.

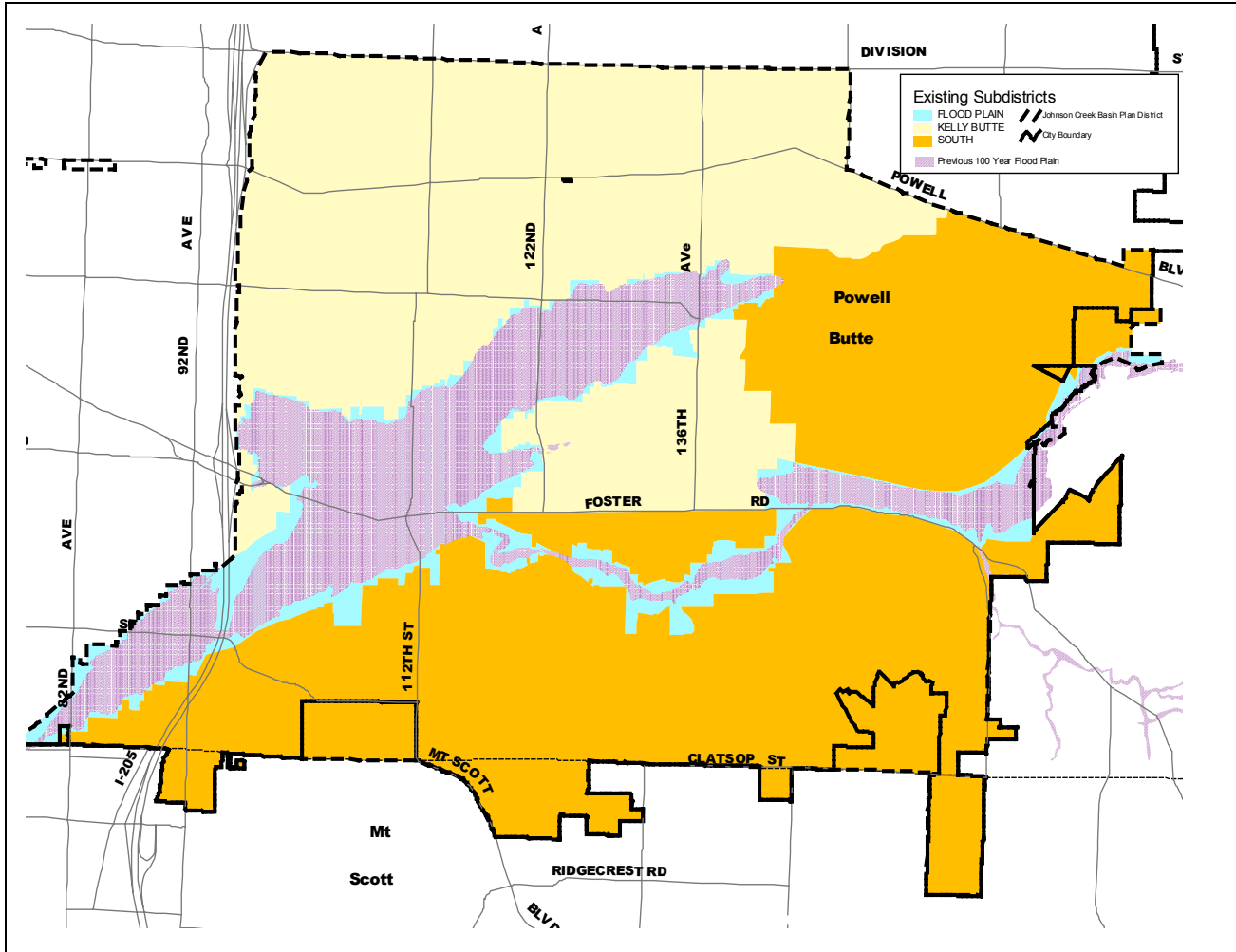
This is a code maintenance project. The *Johnson Creek Zoning Code Maintenance* project will not change the content of the floodplain regulations or how they are applied to sites in the Johnson Creek Basin Plan District. The scope of this project is limited to:

- Amending *Zoning Code*, Chapter 33.537, Johnson Creek Basin Plan District, to reflect FEMA's newly adopted maps for the Johnson Creek floodplain;
- Revising the code language and plan district maps of Chapter 33.537 so that in the future the most current FEMA maps can automatically be used to regulate the floodplain without a lengthy legislative process to change the plan district maps. This will include the Crystal Springs portion of the Johnson Creek floodplain scheduled to be approved in 2004; and
- Amending Map 631-1, Potential Flood Hazard Area Map, of *Zoning Code*, Chapter 33.631, Sites in Flood Hazard Areas, to reflect FEMA's updated maps for the Johnson Creek floodplain.

Summary of the Proposals in this Report

The proposals below ensure that the most current FEMA floodplain boundaries are used to apply the floodplain regulations in the Johnson Creek Basin Plan District. These proposals were developed by the Bureau of Planning, working with a City technical advisory group composed of staff from the Bureau of Environmental Services and the Bureau of Development Services.

- Remove the Johnson Creek Flood Plain subdistrict from Map 537-1. Sites with any portion of their site within the most current FEMA 100-year floodplain will continue to have to follow the development standards from the Johnson Creek Flood Plain subdistrict. Regulating the entire site is consistent with the way the floodplain standards are currently applied. The boundary of the existing Johnson Creek Floodplain subdistrict includes all sites where any portion of the site was located in the 100-year floodplain. The standards will be renamed 'Floodplain Standards,' and there will be no content change to the regulations.
- Drop the Kelly Butte subdistrict. This subdistrict is not needed because there are no special subdistrict standards. Properties in the Kelly Butte subdistrict will continue to be subject only to the general development standards of the plan district.
- Write purpose statements for the South subdistrict and the floodplain standards. Currently there are no purpose statements for the South subdistrict or the Johnson Creek Flood Plain subdistrict (to be renamed the 'floodplain standards'). Adding purpose statements will clarify the intent of these regulations.
- Amend the South subdistrict boundaries to reflect the inclusion of sites no longer in the 100-year floodplain that are adjacent to the South subdistrict.
- Amend Map 631-1, Potential Flood Hazard Area Map, to reflect FEMA's newly adopted 100-year floodplain for the Johnson Creek floodplain.



Map 3: Chapter 33.537, Johnson Creek Basin Plan District

The proposals in this report will remove the Johnson Creek Floodplain and the Kelly Butte subdistricts from the Johnson Creek Basin Plan District maps. The proposals will also amend the South subdistrict to include sites no longer in the 100-year floodplain that are adjacent to the South subdistrict. The official proposed *Zoning Code* maps begin on page 34.

Project Timeline

<input checked="" type="checkbox"/> Public review draft published	April 7, 2003
<input checked="" type="checkbox"/> Community open houses	April 16, 2003 April 23, 2003
<input checked="" type="checkbox"/> Bureau of Planning Report and Recommendation to the Planning Commission published	May 19, 2003
<input checked="" type="checkbox"/> Planning Commission public hearing	June 10, 2003
<input checked="" type="checkbox"/> Planning Commission Report and Recommendations to the City Council published	June 24, 2003
<input checked="" type="checkbox"/> City Council public hearing	July 9, 2003

Effective Date (with emergency ordinance) July 19, 2003

Frequently Asked Questions During Public Review

- **Will this project result in new floodplain regulations?**

No. Your property may be subject to different regulations based on its inclusion or removal from FEMA's updated 100-year floodplain. However, this project does not change the content of those regulations.

- **Does this project change any other floodplain regulations that my property is subject to?**

No. This project only changes the Johnson Creek Basin Plan District. All other floodplain regulations, including those in Title 24, Building Regulations, and the Land Division section of the Zoning Code will remain unchanged. However, the Johnson Creek Floodplain portion of the Potential Flood Hazard Area Map of the Land Division section has been revised to reflect FEMA's updated 100-year floodplain.

- **Can an individual property owner challenge the accuracy of FEMA's 100-year floodplain?**

Yes. FEMA delineates the boundary of the 100-year floodplain based on hydrologic modeling that uses data from past flood events, topography maps, aerial photographs, and site visits. Property owners may revise the floodplain boundary through a separate FEMA process. If a survey indicates that the property is above the 100-year base flood elevation, then FEMA will issue a Letter of Map Amendment (LOMA) that officially removes the property from the floodplain.

- **Why do the proposals in this report regulate the floodplain by including the entire site even if only a portion of the site is located in the 100-year floodplain?**

Requiring the entire site to meet the floodplain regulations is consistent with the way that the floodplain regulations are currently applied in the Johnson Creek Basin Plan District. The current boundary of the Johnson Creek Floodplain subdistrict includes sites where any portion of the site was located in the 100-year floodplain. The standards that apply to the floodplain are appropriate for land that is near, as well as in, the floodplain. These standards include:

- *A limitation on impervious surfaces;*
- *Restrictions on tree removal;*
- *Standards for stormwater collection; and*
- *Prohibition of detached houses in multidwelling zones.*

Together, these regulations help reduce stormwater runoff, provide groundwater recharge, reduce erosion, retain and enhance native vegetation, and enhance water quality. With the exception of the restriction of detached houses in the multi-dwelling zones, all of these standards are adjustable.

- **Making the entire site subject to the floodplain regulations, even if only a small portion is in the 100-year floodplain is not an equitable way to regulate the floodplain. Can this project change it to regulate only the land in the floodplain?**

Any changes to the way the floodplain regulations are applied to sites in the plan district would be a policy issue and is beyond the scope of this code maintenance project. However, The Bureau of Planning recognizes that the way the floodplain regulations are applied in the Johnson Creek Basin Plan District is an issue of concern. But, rather than try to resolve this issue through the Johnson Creek Floodplain Zoning Code Maintenance project—which has a narrow scope—it is more appropriate to address this issue in a project that looks more comprehensively at floodplain regulations, such as the Bureau of Planning Healthy Portland Streams project. The Healthy Portland Streams project will be able to take advantage of the information of the watershed characterizations studies currently being developed by the Bureau of Environmental Services. These watershed characterizations are expected to address existing conditions, including how development impacts such as increased impervious surfaces affect flooding, water quality and overall stream health. With the benefit of this information, the Healthy Portland Streams project will be evaluating a range of strategies for protecting and conserving significant natural resources including active floodplains. Options for how the Johnson Creek floodplain regulations should be applied could be evaluated as part of the Healthy Portland Streams project.

- **Should commercial and industrial properties be subject to the 50 percent impervious surface limitation in light of the current Stormwater Manual requirements?**

For all categories of new and redevelopment, the Stormwater Manual specifies minimum requirements for on-site stormwater management. The manual offers a variety of technical approaches to meet these requirements such as eco-roofs, landscape planters, infiltration basins, and swales. Although many of these approaches try to mimic natural hydrologic conditions, none of them are equal in function to nature. The manual provides sizing requirements for these approaches to control runoff from the site. However, it focuses on managing only stormwater runoff, with minimal requirements for stormwater soakage and evapotranspiration.

In addition, developers are allowed to chose the approach that best suits their needs, and meets the minimum Stormwater Manual requirement, which isn't necessarily the most desired condition for the resource area. Many approaches allowed in the manual do not facilitate infiltration or evapotranspiration. The Stormwater Manual also allows developers a means to pay a fee in-lieu of applying any technical approach.

Pervious surfaces play an important role in areas where promotion of natural hydrologic functions is desired, such as floodplains and areas adjacent to creeks and other waterways. Bureau of Environmental Services staff believe that both Stormwater Manual and impervious surface limitations are needed to ensure proper watershed management.

- **Some sites are now outside of the 100-year floodplain but still in the flood risk area. Can the Johnson Creek Zoning Code Maintenance project address this issue?**

No. This project will not amend the flood risk area. The flood risk area covers a large area along Johnson Creek that is frequently flooded. In an effort to reduce potential flood damage, additional land division and planned developments are not allowed in the Johnson Creek flood risk area. See page 30 for more information about the flood risk area.

Because the Bureau of Environmental Services delineated the boundaries of the flood risk area using criteria other than simply the 100-year floodplain, (past flooding events, topography, access, etc.) revising the boundary is a technical exercise that requires more time than the Johnson Creek Zoning Code Maintenance timeline can accommodate. However, the Bureau of Environmental Services acknowledges that the boundary should be revisited and expects to complete this work in the near future.

What are the regulations of the Johnson Creek Basin Plan District? How will these proposals affect my property?

It is important to note that most of the property in the Johnson Creek Basin Plan District has not been affected by the updated FEMA flood maps and will not be affected by the changes proposed in this project. See the matrixes below to determine if there will be any changes to the regulations on your property as a result of this project.

Matrix 1: Site Categories and Regulation Changes		
	Johnson Creek Basin Plan District South Subdistrict and Floodplain Standards <i>See Matrix 2, next page, for summary of complete plan district regulations.</i>	Change of Regulation with this Project
A. Sites currently in the Johnson Creek Flood Plain subdistrict are divided into three subcategories:		
1. Sites that remain in the floodplain. <i>(2,750 tax lots)</i>	Continue to meet the Johnson Creek Flood Plain subdistrict regulations. <u>(537.150, renamed 'floodplain standards')</u>	No change
2. Sites that no longer are in the floodplain and are not in the South subdistrict. <i>(838 tax lots)</i>	No longer meet the floodplain regulations. Must meet only the general standards of the plan district. (537.100, 537.110, and 537.120)	Less regulation
3. Sites that no longer are in the floodplain and are in the South subdistrict. <i>(90 tax lots)</i>	No longer meet the floodplain regulations, but must now meet the South subdistrict standards. <u>(537.140)</u>	About the same
B. New sites included in the updated FEMA floodplain boundary. <i>(37 tax lots)</i>	Meet the Johnson Creek Flood Plain subdistrict regulations. <u>(537.150, renamed 'floodplain standards')</u>	More regulation, except sites currently in the South subdistrict will have about the same

Matrix 2: Summary of Johnson Creek Basin Plan District Regulations

All sites in the Johnson Creek Basin Plan District are subject to the following three regulations.

General Development Standards 537.100	<ul style="list-style-type: none"> • No building in the floodway. • Follow Bureau of Development Services and Bureau of Environmental Services design and construction standards. • Prohibit water to be released from Powell Butte reservoirs. • Vegetation removal activities must be protected to prevent erosion and sediment leaving the altered site.
Transfer of Development Rights 537.110	This project does not affect these regulations.
Bonus Density 537.120	This project does not affect these regulations.
<p>In addition to above, the following regulations apply to certain sites described below. (proposed new code; existing code to be removed)</p>	
Springwater Corridor Standards 537.130	This project does not affect the regulations for sites that abut the Springwater Corridor.
South Subdistrict Standards 537.200 thru 537.240 <u>537.140</u>	<ul style="list-style-type: none"> • Tree removal standards for trees over 6" in diameter. • Impervious surface no more than 50%. • Stormwater collection (remove, already covered in stormwater manual) • Maximum density for land divisions and planned developments based on the three land classes in table 537-1.
Johnson Creek Flood Plain Subdistrict Development Standards <u>Floodplain Standards</u> 537.300 thru 537.320 <u>537.150</u>	<ul style="list-style-type: none"> • Tree removal standards for trees over 6" in diameter. • Impervious surface no more than 50%. • Stormwater collection (remove, already covered in stormwater manual) • In most situations, detached houses are not allowed in the R3, R2, or R1 zone.
Johnson Creek Flood Risk Area Standard 537.320 <u>537.160</u>	Land divisions and planned developments within Johnson Creek Flood Risk Area are prohibited.

How this Report is Organized

Section 1: Proposed Amendments to the Code Language of the Johnson Creek Basin Plan District. In order to use the most current maps available by FEMA several amendments to the code language of the Johnson Creek Basin Plan District are necessary. There are also a number of general clean-up revisions that bring the code language up to date and make the chapter easier to read. None of these proposed amendments will result in any content changes to the regulations.

Section 2: Proposed Amendments to the Maps of the Johnson Creek Basin Plan District. This section includes two sets of the eight maps of the Johnson Creek Basin Plan District.

- The first set is the plan district maps as if all the proposals in this report were adopted. These maps are the proposed *Zoning Code* maps.
- The second set of maps includes additional information to help readers understand the proposals in this Report. This information will not be included on the official *Zoning Code* maps. These maps show all the sites that have been removed from, or added to, the floodplain as a result of FEMA's update. The maps also show the Kelly Butte and Johnson Creek Floodplain subdistricts with a note in the legend that explains that the Johnson Creek Flood Plain subdistrict will no longer be identified on the zoning maps and the Kelly Butte subdistrict will be eliminated.

Section 3: Proposed Amendments to Map 631-1, Potential Flood Hazard Area Map. This map has been revised to reflect the updated FEMA 100-year floodplain boundary in the Johnson Creek watershed. In the Johnson Creek watershed, the 100-year floodplain boundary was the criteria for determining the boundaries of the potential flood hazard area. The amendments to Map 631-1 only affect the Johnson Creek watershed.

Section 1:

**Proposed Amendments to the
Code Language of the
Johnson Creek Basin Plan District**

Commentary

How to Read this Section

Odd-numbered pages show zoning code language with proposed changes. Language added to the zoning code is underlined (example). Language deleted is shown in strikethrough (~~example~~).

Even-numbered pages contain staff commentary on the proposed changes.

CHAPTER 33.537

JOHNSON CREEK BASIN PLAN DISTRICT

Table of Contents

Parts of this chapter will be restructured in order to use the most current Federal Emergency Management Agency (FEMA) floodplain maps for the Johnson Creek Basin Plan District.

CHAPTER 33.537
JOHNSON CREEK BASIN PLAN DISTRICT

(Added by Ord. No. 164472, effective 8/16/91. Amended by: Ord. No. 168698, effective 4/17/95; Ord. No. 169763, effective 3/25/96; Ord. No. 170495, effective 8/21/96; Ord. No. 170806, effective 1/17/97; Ord. No. 172208, effective 5/13/98; Ord. No. 174263, effective 4/15/00; Ord. No. 175837, effective 9/7/01; Ord. Nos. 175965 and 176333, effective 7/1/02; Ord. No. 176469, effective 7/1/02; Ord. No. 177028, effective 12/14/02.)

Sections:

General

- 33.537.010 Purpose
- 33.537.020 Where These Regulations Apply
- 33.537.030 Items Subject to These Regulations
- 33.537.040 Items Exempt from Environmental Regulations

Development Standards

- 33.537.100 General Development Standards
- 33.537.110 Transfer of Development Rights
- 33.537.120 Bonus Density
- 33.537.130 Springwater Corridor Standards
- 33.537.140 South Subdistrict Standards
- 33.537.150 Floodplain Standards
- 33.537.160 Johnson Creek Flood Risk Area
- ~~33.537.205 Site Development Standards~~
- ~~33.537.210 Maximum Density for Land Divisions and Planned Developments~~

~~Johnson Creek Flood Plain Subdistrict Development Standards~~

- ~~33.537.300 Housing Types~~
- ~~33.537.310 Site Development Standards~~
- ~~33.537.320 Land Divisions and PDs~~

Map 537-1 Johnson Creek Basin Plan District

General

33.537.010 Purpose

The Johnson Creek Basin plan district provides for the safe, orderly, and efficient development of lands which are subject to a number of physical constraints, including significant natural resources, steep and hazardous slopes, flood plains, wetlands, and the lack of streets, sewers, and water services. At certain locations, the density of development is limited by applying special regulations to new land division proposals. In addition, restrictions are placed on all new land uses and activities to reduce stormwater runoff, provide groundwater recharge, reduce erosion, enhance water quality, and retain and enhance native vegetation throughout the plan district. At other locations, development is encouraged and mechanisms are included that provide relief from environmental restrictions.

This plan district is intended to be used in conjunction with environmental zoning placed on significant resources and functional values in the Johnson Creek basin, to protect resources and functional values in conformance with Goal 8 of the Comprehensive Plan and Statewide Planning Goal 5.

Commentary

33.537.020 Where These Regulations Apply

The proposed amendments would eliminate the Johnson Creek Flood Plain and Kelly Butte subdistricts from the Johnson Creek Basin Plan District.

- The Johnson Creek Flood Plain subdistrict will be removed from the plan district map. To determine if a site must meet the floodplain regulations, a reference will be made to the 100-year floodplain as currently defined by FEMA rather than the plan district map. Properties issued a Letter of Map Amendment (LOMA) by FEMA are officially no longer in the floodplain and do not have to meet the floodplain standards of the plan district.

Sites with any portion of their site within the most current FEMA 100-year floodplain map will continue to follow the development standards from the Johnson Creek Flood Plain subdistrict. Requiring the entire site to meet the floodplain regulations is consistent with the way that the floodplain regulations are currently applied in the Johnson Creek Basin Plan District. The current boundary of the Johnson Creek Floodplain subdistrict includes sites where any portion of the site was located in the 100-year floodplain. The standards of the Johnson Creek Flood Plain subdistrict have been renamed 'floodplain standards.' There are no content changes proposed for these standards.

- The Kelly Butte subdistrict will be dropped because there are no special Kelly Butte subdistrict standards. Sites within the Kelly Butte subdistrict will continue to be subject to the general regulations of the Johnson Creek Basin Plan District.

The second paragraph has also been reworded to clarify which regulations of the plan district must be met.

33.537.020 Where These Regulations Apply

The regulations of this Chapter apply to ~~the~~ in the Johnson Creek Basin ~~Plan~~ District. The boundaries of the plan district are shown on Map 537-1 at the end of this Chapter, and on the Official Zoning Maps. ~~The plan district is divided into three subdistricts. These subdistricts allow some of the plan district's provisions to be applied in only part of the district. The three subdistricts, shown on Map 537-1, are:~~

- ~~• South subdistrict,~~
- ~~• Kelly Butte subdistrict, and~~
- ~~• Johnson Creek Flood Plain subdistrict.~~

~~The regulations of Section 33.537.010 through 33.537.120 apply to the entire plan district. The regulations of Section 33.537.130, Springwater Corridor Standards, apply to all lots that abut the Springwater Corridor. The regulations of Sections 33.537.200 through 33.537.240 apply to the South subdistrict. Sections 33.537.300 and 33.537.310 apply to the Johnson Creek Flood Plain subdistrict. The regulations of Sections 33.537.010 through 33.537.120 apply to all sites in the plan district. The regulations of Section 33.537.130 apply to sites that abut the Springwater Corridor. Where any portion of a site is in the 100-year floodplain as currently defined by the Federal Emergency Management Agency (FEMA), the entire site is also subject to the regulations of Section 33.537.150. In the South subdistrict, most sites are subject to the regulations of Section 33.537.140. However, where any portion of a site is in the 100-year floodplain as currently defined by the Federal Emergency Management Agency (FEMA), the entire site is exempt from the regulations of Section 33.537.140 and is instead subject to the regulations of Section 33.537.150. The regulations of Section 33.537.160 apply to sites in the Johnson Creek Flood Risk Area. The South subdistrict, Springwater Corridor, and Flood Risk Area are shown on Map 537-1.~~

33.537.030 Items Subject to These Regulations

The following are subject to the development standards and required reviews of this chapter:

- A.** New development and exterior alterations;
- B.** New above or below ground utilities that are not in public rights-of-way; and
- C.** Removal of trees greater than six inches in diameter.

33.537.040 Items Exempt from Environmental Regulations

The following items are exempt from environmental regulations within the plan district, as they are compatible with the purposes of the plan district and will not adversely impact significant resources and functional values.

- A.** Removing trees within Johnson Creek below the ordinary high water level;
- B.** Items and conditions listed in the Johnson Creek Basin Protection Plan document as “Site-Specific Compatible Uses and Activities” in Chapter 8, Inventory Site Summaries;
- C.** Construction and maintenance of a public recreation trail and support facilities within the Springwater Corridor; and
- D.** Maintenance within existing rights-of-way, including road widening, rebuilding of bridges, resurfacing, and installation of curbs and sidewalks.

Commentary

33.537.100.A.

The Johnson Creek floodway is identified on the Federal Emergency Management Agency (FEMA) floodplain maps. The floodway is the active flowing channel during a flood and is much smaller than the 100-year floodplain. The proposed amendments allow the city to use the most current FEMA floodway boundary. The amendments will not result in any content changes to the floodway regulations.

~~33.537.100.B~~

This standard is addressed in the *Stormwater Manual*. The Bureau of Environmental Services and the Bureau of Development Services recommend dropping this standard from the plan district regulations to eliminate redundancy.

33.537.110.A.

All references to the Johnson Creek Flood Plain subdistrict must be dropped and replaced with language that refers to the most current FEMA flood maps. This change does not result in any content change to the regulation.

Development Standards

33.537.100 General Development Standards

The standards of this Section apply to the entire Johnson Creek Basin plan district.

- A.** The following are prohibited within the Johnson Creek floodway as ~~delineated~~ currently defined by the Federal Emergency Management Agency (FEMA). ~~on July 1, 1991.~~ Exceptions to this are fences, public bridges, outfall structures, and fire hydrants, which are allowed subject to standards set by the Bureau of Environmental Services.
 - 1. New above ground structures;
 - 2. Alterations to existing commercial and industrial structures that exceed 50% of the assessed value; or
 - 3. Increase of building coverage.
- ~~**B.** Water discharge to Johnson Creek or its tributaries must not increase the existing level of Priority Pollutants as defined by the United States Environmental Protection Agency, sediment, temperature, or fecal enterococcus in the receiving water body. Systems must meet adopted Bureau of Environmental Services and BDS design and construction standards.~~
- CB.** Release of water from Powell Butte reservoirs into Johnson Creek is prohibited unless there is a system malfunction or when the release would result in no more than a 10 percent increase in water volume at any point in the creek during the release period. Water discharged during scheduled release periods must be dechlorinated.
- DC.** All vegetation removal activities must be surrounded or protected in a manner to prevent erosion and sediment from leaving the altered site.

33.537.110 Transfer of Development Rights

- A. Purpose.** These transfer of development rights regulations preserve development opportunities for new housing and reduce development pressure on environmentally sensitive sites. The regulations allow development rights to be transferred from sites with the Environmental Protection Overlay Zones or sites ~~within the Johnson Creek Flood Plain subdistrict~~ where any portion of the site is in the 100-year floodplain as currently defined by the Federal Emergency Management Agency (FEMA) to areas that can accommodate the additional density without environmental conflict.
- B. Regulations.** Transfer of development rights between sites in the plan district is allowed as follows. "Development rights" are the number of potential dwelling units that would be allowed on the site. Bonus density is not transferable.
 - 1. Sending sites. Sites in single-dwelling zones where at least 50 percent of the site is within the Environmental Protection overlay zone may transfer development rights.
 - 2. Receiving sites. All sites within the Johnson Creek plan district may receive development rights from sending sites except:

Commentary

33.537.110.B.2.b.

All references to the Johnson Creek Flood Plain subdistrict must be dropped and replaced with language that refers to the most current FEMA flood maps. This change does not result in any content change to the regulation.

- a. Portions of a receiving site that are in either a "c" or "p" Environmental overlay zone;
 - b. ~~Portions of a receiving site within the Johnson Creek Flood Plain subdistrict~~ Sites where any portion of the site is in the 100-year floodplain as currently defined by the Federal Emergency Management Agency (FEMA); and
 - c. Portions of a receiving site in Land Class I or II within the South subdistrict. Land Class I and II are defined in Section 33.537.210 ~~140.E~~, Maximum Density for Land Divisions and Planned Developments.
3. Maximum density. The density of the receiving site may not exceed 200 percent of the allowable density.
 4. Transfer procedure. Transfer of development rights is allowed as follows:
 - a. Planned Development (PD) required. The receiving site must be approved for development as a PD. The purpose of the PD review is to ensure that the extra density is developed appropriately on the receiving site according to the requirements and approval criteria of this subsection and the approval criteria in Chapter 33.665, Planned Development Review.
 - b. Sending site included. The sending site must be a part of the application for PD review on the receiving site. The purpose of this requirement is to allow the City to track the reduced development potential on sending sites.
 - c. Covenant required. The owner of the sending site must execute a covenant with the City that reflects the reduced development potential on the sending site. The covenant must meet the requirements of 33.700.060. The covenant must be recorded before approval of the final plan, or if the PD includes a land division, before the Director of BDS's approval of the final plat.
 5. Approval Criteria. In addition to the PD approval criteria in Chapter 33.665, Planned Development Review, the transfer will be approved when the review body finds that all the following approval criteria have been met:
 - a. A PD proposed for the site that includes the transferred density has been approved; and
 - b. The owner of the sending site has executed a covenant with the City that reflects the reduction in potential density for the sending site.
 6. Adjustments prohibited. Adjustments to the provisions of this Section are prohibited.

Commentary

33.537.120.B.2.

All references to the Johnson Creek Flood Plain subdistrict must be dropped and replaced with language that refers to the most current FEMA flood maps. This change does not result in any content change to the regulation.

33.537.120 Bonus Density

- A. Purpose.** Density bonuses promote denser development and encourage development in areas that have full and efficient urban services. They also encourage development patterns that reduce impact on environmentally sensitive sites.
- B. Qualifying situations.** Density bonuses are allowed except where prohibited. Density bonuses are prohibited on: ~~portions of a site:~~
1. Portions of a site that are in Environmental Protection or Conservation overlay zones;
 2. ~~Within the Johnson Creek Flood Plain subdistrict subdistrict~~ Sites where any portion of the site is in the 100-year floodplain as currently defined by the Federal Emergency Management Agency (FEMA); or
 3. Portions of a site in Land Class I or II within the South subdistrict. Land Class I and II are defined in Subsection 33.537.2101 140.E, Maximum Density for Land Divisions and Planned Developments.
- C. Maximum density.** Proposals that meet the requirements of Subsection D, below, may increase their maximum density by 50 percent. Bonus density may be combined with transfer of development rights. The maximum increase in density that will be allowed when bonus and transfer development rights are combined is 100 percent.
- D. Requirements.** Proposals to use density bonuses must meet the following:
1. Development. Development must be attached residential and must meet the development standards for attached residential development in R2 zones. Adjustments to this paragraph are prohibited.
 2. Planned Development (PD) required. The proposal must be approved for development as a Planned Development. In addition to the PD approval criteria in Chapter 33.665, Planned Development Review, the following standards must be met:
 - a. Access to transit. Access from each dwelling unit within the proposal to a transit street or transitway, as identified in the Transportation Element of the City's Comprehensive Plan, must be provided. The access must be by a direct route that is not more than one-quarter mile long. A direct route is one that follows public or private streets. A direct route may also include a pedestrian path developed as part of the proposal if the City receives an access easement for public use of the pedestrian path.
 - b. Sewer and water. Development sites within the project must be served by City sanitary sewer and water lines located in dedicated rights-of-way.
 - c. Storm water retention and detention. All storm water originating on the site must be managed to ensure that development on the site does not contribute to flooding. Stormwater collection systems must be designed so that the post development stormwater flow rate off the site is no greater than the pre-development flow rate off the site.

Commentary

No content changes to 33.537.130, Springwater Corridor Standards.

33.537.130 Springwater Corridor Standards

- A. Purpose.** This Section ensures protection of the Springwater Corridor as a transportation, recreation and scenic amenity.
- B. Applicability Where these regulations apply.** The standards of this Section apply to ~~lots~~ sites that abut the Springwater Corridor. These regulations do not apply within a public right-of-way. The Springwater Corridor is shown on the Official Zoning Maps and on Map 537-1 at the end of this Chapter.
- C. Standards.**
1. General standards.
 - a. Motor vehicle areas. Motor vehicle parking, loading, and maneuvering areas are not allowed within 20 feet of a lot line abutting the Springwater Corridor;
 - b. Waste collection and waste storage areas. In R3, R2, R1, RH, RX, IR, C, E, and I zones, exterior waste collection and waste storage areas must be screened from the corridor, the screen must be at least five feet deep and meet the L2 standard of Chapter 33.248, Landscaping and Screening;
 - c. Retain existing trees. Trees within 20 feet of a lot line abutting the Springwater Corridor that are more than 6 inches in diameter must be retained unless:
 - (1) The tree is determined by a certified arborist to be dead or diseased and needs to be removed, or it constitutes an immediate hazard to life or property; or
 - (2) The tree is within a water, sewer, or other utility easement; or
 - (3) The tree is within a proposed roadway or City-required construction easement, including areas devoted to curbs, parking strips or sidewalks, or vehicle areas.
 2. Special setback standards.
 - a. Landscaped buffer required. New development and expansion of existing development, including buildings, other structures, fences, parking and loading areas, paved and graveled areas, and exterior display and storage areas, must be set back and provided with a landscape buffer along lot lines abutting the Springwater Corridor.
 - (1) R zones. In R zones, a 20 foot landscaped buffer is required along a lot line that abuts the Springwater Corridor. The buffer must meet the L1 standard of Chapter 33.248, Landscaping and Screening.
 - (2) C, E, and I zones. In C, E, and I zones, a 10 foot landscaped buffer is required along a property line that abuts the Springwater Corridor. The buffer must meet the L1 standard of Chapter 33.248, Landscaping and Screening.
 - b. Bicycle and pedestrian paths. Connections for bicycles and pedestrians are allowed through the setback area.

Commentary

33.537.140 South Subdistrict Standards

This project does not propose any content changes to the South subdistrict development standards.

A. Purpose.

Currently there is no purpose statement for the South subdistrict in the Johnson Creek Basin Plan District. The purpose statement explains the intent of the regulations. It is important that the intended outcome of the regulation is clearly described for two reasons. First, in order for a project to receive an adjustment to a standard, the applicant must demonstrate that the project will equally or better meet the purpose of the standard to be modified. Also, the purpose statement provides the basis for future evaluation of the regulation.

B. Where these regulations apply.

This new language explains what properties are subject to the South subdistrict standards. If any portion of a site is located within the 100-year floodplain, now or in the future, the site will be exempted from the standards of the South subdistrict and will be subject to the 33.537.150, Floodplain Standards. Requiring the entire site to meet the floodplain regulations is consistent with the way that the floodplain regulations are currently applied in the Johnson Creek Basin Plan District. The current boundary of the Johnson Creek Floodplain subdistrict includes sites where any portion of the site was located in the 100-year floodplain.

~~C. Stormwater collection.~~

This standard is addressed in the *Stormwater Manual*. The Bureau of Environmental Services and the Bureau of Development Services recommend dropping this stormwater collection standard from the plan district regulations to eliminate redundancy.

South Subdistrict Development Standards

33.537.205 140 South Subdistrict Site Development Standards

A. Purpose. These regulations mitigate the negative impacts that may result from the development of areas where flooding and landslides are common. The impermeable clay soils of the steep-sided Boring Lava hills to the south of the creek contribute to rapid stormwater runoff in the winter, and contribute to flooding. Unlike the flatter areas north of the creek, in the South subdistrict there are numerous small streams that can quickly carry stormwater runoff to Johnson Creek. The extensive tree canopy on these hillsides helps to slow stormwater runoff. Limitations on development density, tree removal, and impervious surface area reduce stormwater runoff, provide groundwater recharge, reduce erosion, protect water quality, and retain native vegetation. These regulations work together to protect watershed health while allowing the safe and efficient development of unconstrained lands.

B. Where these regulations apply. The regulations of this section apply in the South subdistrict as shown on Map 537-1. Where any portion of a site is in the 100-year floodplain as currently defined by the Federal Emergency Management Agency (FEMA), the entire site is exempt from the standards of this section and is instead subject to the regulations of Section 33.537.150, Floodplain Development Standards.

AC. Tree removal. Trees greater than six inches in diameter may be removed only in the following situations:

1. When they are within 10 feet of an existing or proposed building or 5 feet of a paved surface;
2. When they are diseased or pose an immediate danger, as determined by the City Forester or a certified arborist; or
3. When they are below the ordinary high water level of Johnson Creek.

BD. Impervious surface. No more than 50 percent of any site may be developed in impervious surface. Building eaves are included in the calculation of impervious surface.

~~**C. Stormwater collection.** All storm water originating on the site must be managed to ensure that development on the site does not contribute to flooding. Stormwater collection systems must be designed so that the post-development stormwater flow rate off the site is no greater than the pre-development flow rate off the site.~~

Commentary

~~33.537.210~~ E. Maximum Density for Land Divisions and Planned Developments

No content changes to 33.537.210, Maximum Density for Land Divisions and Planned Developments.

Table 537-1 Land Class Characteristics and Density Restrictions

The references to the FEMA floodway have been removed. Properties that are in the 100-year floodplain are exempt from the South subdistrict regulations and must meet the floodplain standards. Any property in the floodway—the active flowing channel during a flood—would also be in the 100-year floodplain.

33.537.210 E. Maximum Density for Land Divisions and Planned Developments.

The maximum allowed density of development for Land Divisions and Planned Developments is determined by calculating the number of acres in each land classification and multiplying those figures by the following fractions in Table 537-1, below.

All land in the South subdistrict is divided into three land classifications, Classes I through III. Class I lands are generally the steepest sites having the greatest amount of natural hazards while Class III lands are generally flat without natural hazards. This land classification system is the basis for many of the regulations of this chapter.

Table 537-1 Land Class Characteristics and Density Restrictions		
Land Class	Characteristics of the Land Class	Maximum Density
Class I lands	Located within the FEMA floodway or on slopes with a grade of 30 percent or greater.	One-fourth the maximum density allowed in the base zone.
Class II lands	Not in Located within the FEMA floodway but on slopes with grade of 20 percent or greater, but less than 30 percent.	One-half the maximum density allowed in the base zone.
Class III lands	Not in Located within the FEMA floodway and on slopes with grade of less than 20 percent.	Maximum density allowed in base zone.

Commentary

~~Johnson Creek Flood Plain Subdistrict Development Standards~~

33.357.150 Floodplain Standards

The standards of this section are the same standards that currently apply to the Johnson Creek Flood Plain subdistrict. This project does not propose any content changes to the regulations.

A. Purpose.

The Johnson Creek Flood Plain subdistrict currently does not contain a purpose statement. The proposed purpose statement describes the intent of the subdistrict regulations. It is important that the intended outcome of the regulation is clearly described for two reasons. First, in order for a project to receive an adjustment to a standard, the applicant must demonstrate that the project will equally or better meet the purpose of the standard to be modified. Also, the purpose statement provides the basis for future evaluation of the regulation.

B. Where these regulations apply.

This project proposes to tie the floodplain development standards to the 100-year floodplain as currently defined by FEMA, rather than the plan district map that can only be updated through a legislative process. This allows the city to use the most current FEMA flood maps to regulate the floodplain. This new language explains sites with any portion of their site in the floodplain are subject to the floodplain development standards. Requiring the entire site to meet the floodplain regulations is consistent with the way that the floodplain regulations are currently applied in the Johnson Creek Basin Plan District. The current boundary of the Johnson Creek Floodplain subdistrict includes sites where any portion of the site was located in the 100-year floodplain.

Johnson Creek Flood Plain Subdistrict Development Standards

33.537.150 Floodplain Standards

- A. Purpose.** The regulations of this Section manage development in the floodplain in order to protect the quality and natural functions of the floodplain and reduce the loss of property in areas where flooding is common. Together, these regulations help reduce stormwater runoff, provide groundwater recharge, reduce erosion, retain and enhance native vegetation, and enhance water quality.
- B. Where these regulations apply.** These regulations apply to sites where any portion of the site is in the 100-year floodplain as currently defined by the Federal Emergency Management Agency (FEMA).

33.537.300

- C. Housing Types.** In R3, R2, and R1 zones, allowed housing types are limited to multi-dwelling structures, duplexes, and attached housing. A house is allowed on lots of record that cannot accommodate more than one dwelling unit under the provisions of Section 33.120.205, Density. Adjustments to this Section are prohibited.

33.537.310 Site Development Standards

- A D. Tree removal.** Trees greater than six inches in diameter may be removed only in the following situations:
1. When they are within 10 feet of an existing or proposed building or 5 feet of a paved surface;
 2. When they are diseased or pose an immediate danger, as determined by the City Forester or a certified arborist; or
 3. When they are below the ordinary high water level of Johnson Creek.
- B E. Impervious surface.** No more than 50 percent of any site may be developed in impervious surface. Building eaves are included in the calculation of impervious surface.

Commentary

~~C. Stormwater collection.~~

This standard is addressed in the *Stormwater Manual*. The Bureau of Environmental Services and the Bureau of Development Services recommend dropping the stormwater collection standard from the plan district regulations to eliminate redundancy.

33.537.160 Johnson Creek Flood Risk Area.

There is no content change to the regulations of the flood risk area. The flood risk area covers a large area along Johnson Creek that is frequently flooded. This area has very flat topography and is near Johnson Creek, making it susceptible to flooding from peak flows ranging from a two-year to ten-year flood event. Johnson Creek has overflowed its banks and caused property damage nearly thirty times in the past sixty years. Twenty-two of these thirty events have occurred within this more frequently flooded area. Because it is so flat, minor changes in grade or a new building can cause localized flooding. This flooding results in property damage, health and safety hazards, and an increased cost to the city for emergency services. In an effort to reduce potential flood damage, additional land division and planned developments are not allowed in the Johnson Creek flood risk area.

- ~~C. Stormwater collection. All stormwater originating on the site must be managed to ensure that development on the site does not contribute to flooding. Stormwater collection systems must be designed so that the post-development stormwater flow rate off the site is no greater than the pre-development flow rate off the site.~~

~~33.537.320160 Land Divisions and PDs Johnson Creek Flood Risk Area~~

~~Land divisions and PDs within the Johnson Creek Flood Risk Area, as indicated shown on Map 537-1, are prohibited.~~

Section 2:

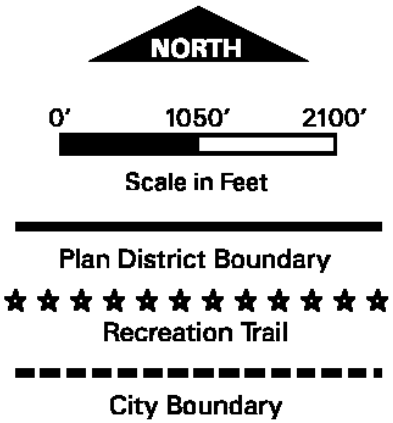
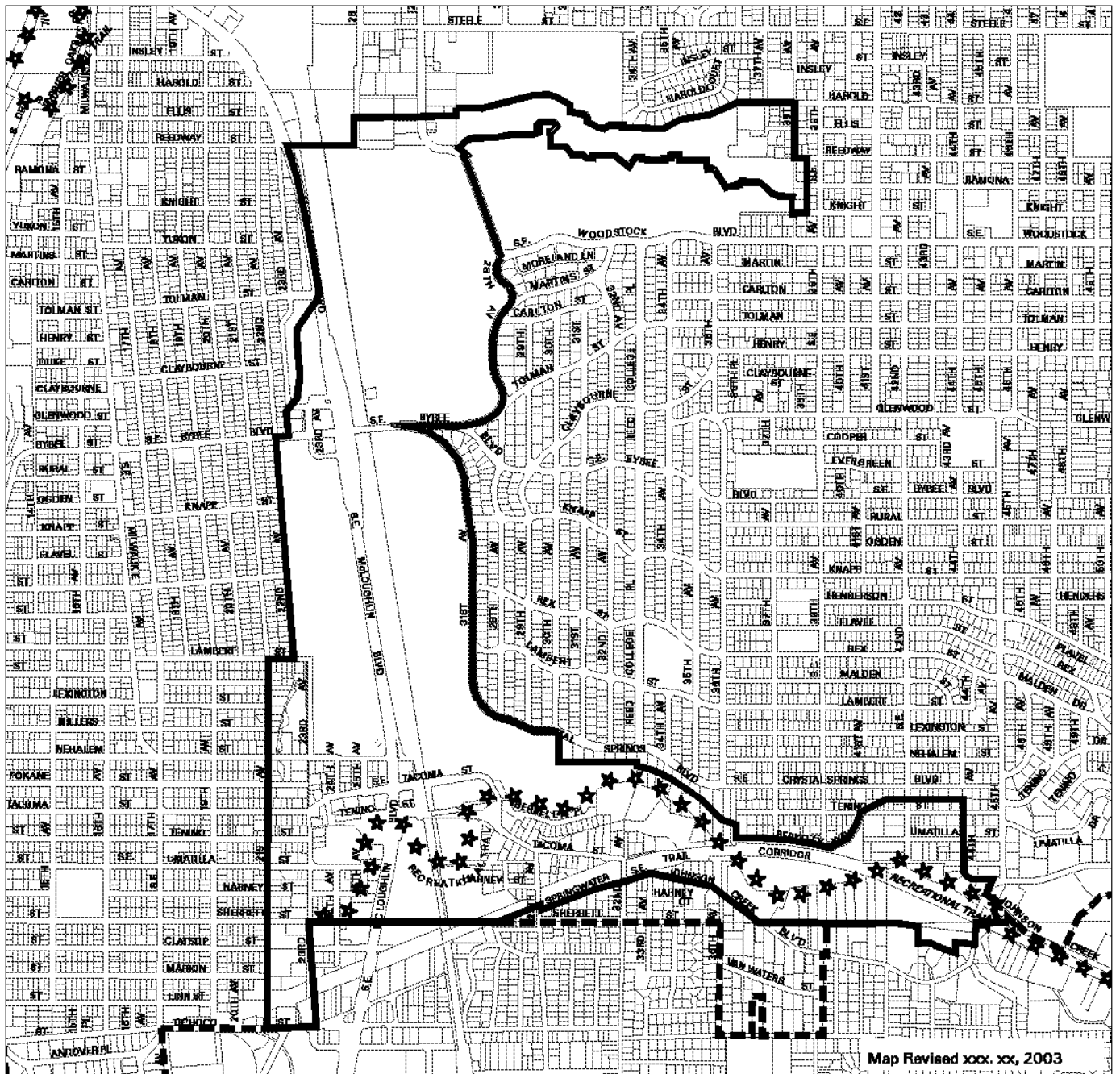
Proposed Amendments to the Maps of the Johnson Creek Basin Plan District

This section includes two sets of the eight maps of the Johnson Creek Basin Plan District.

- **Proposed Zoning Code Maps.** The first set is the plan district maps as if all the proposals in this report were adopted. These maps will be the official *Zoning Code* maps. They show the Kelly Butte and South subdistricts removed and the proposed amended boundary of the South subdistrict.
- **Existing Zoning Code Maps with Proposed Changes.** The second set of maps includes additional information to help readers understand the proposals in this report. This information will not be included on the official *Zoning Code* maps. These maps show all the sites that have been removed from, or added to, the floodplain as a result of FEMA's update. The maps also show the Kelly Butte and Johnson Creek Flood Plain subdistricts with a note in the legends that explains that the Johnson Creek Flood Plain subdistrict will no longer be identified on the zoning maps and the Kelly Butte subdistrict will be eliminated.

Proposed Zoning Code Maps

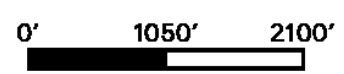
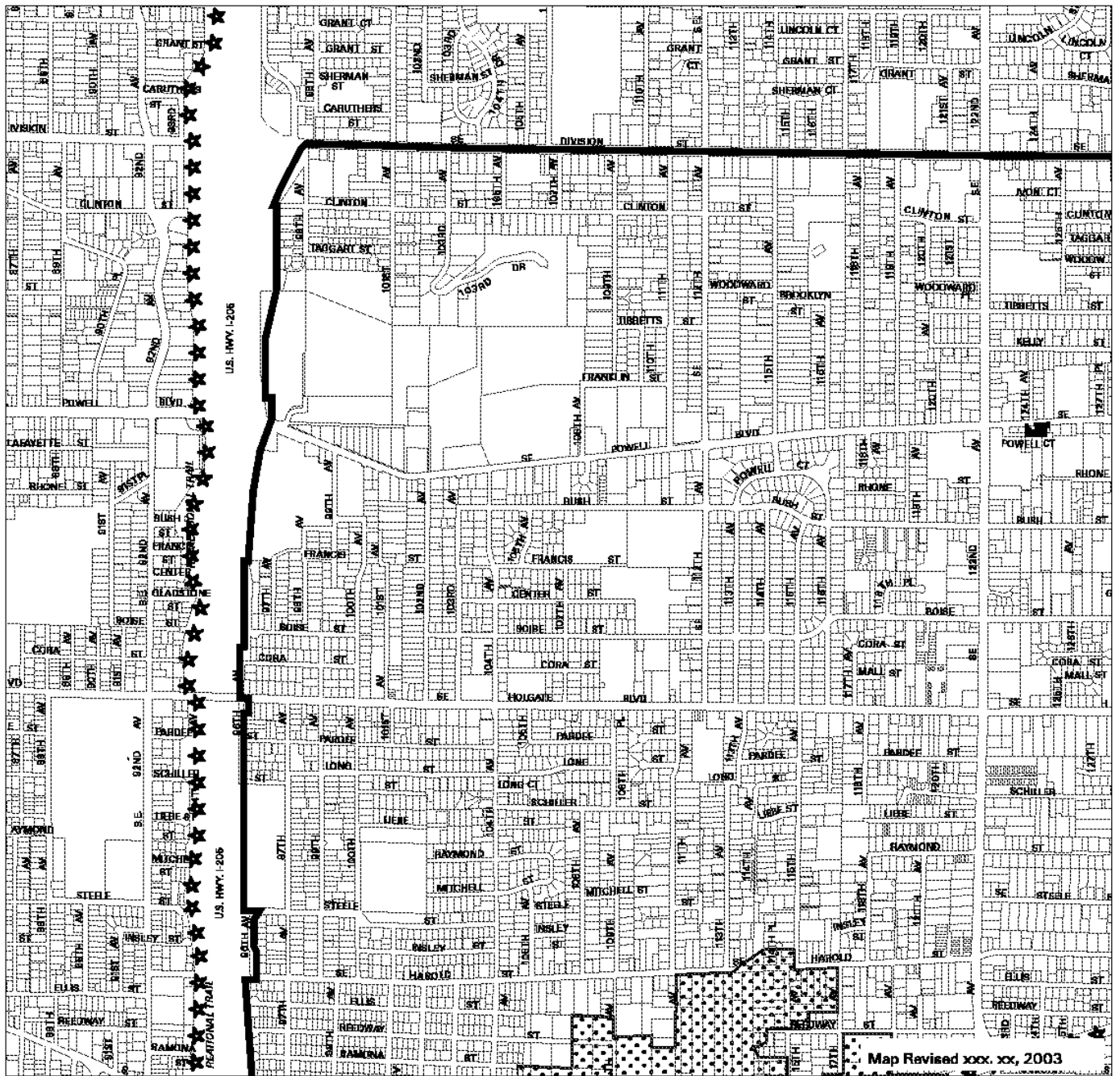
The eight maps on the following pages (pages 32 to 39) are the proposed *Zoning Code* maps that illustrate what the official Johnson Creek Basin Plan District maps would look like if all the proposals in this report are adopted.



- LEGEND**
-  South Subdistrict
 -  Flood Risk Area

Proposed Map 537-1 Johnson Creek Basin Plan District

Map 1 of 8



Scale in Feet

Plan District Boundary

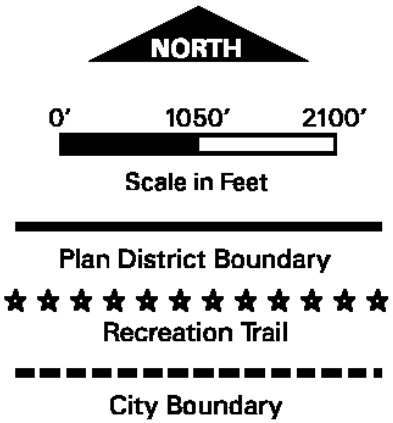
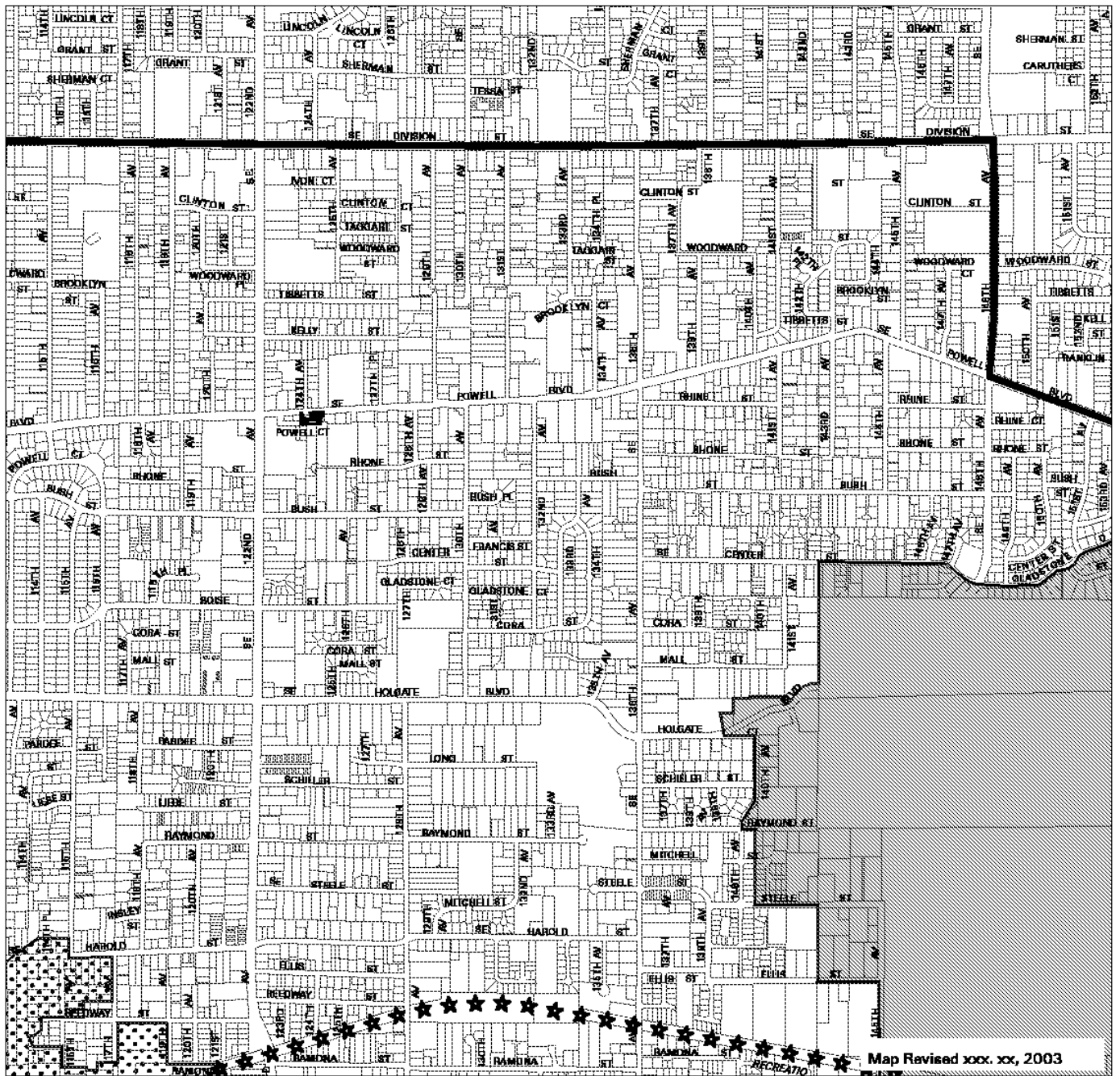
★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
Recreation Trail



City Boundary

- LEGEND
-  South Subdistrict
 -  Flood Risk Area

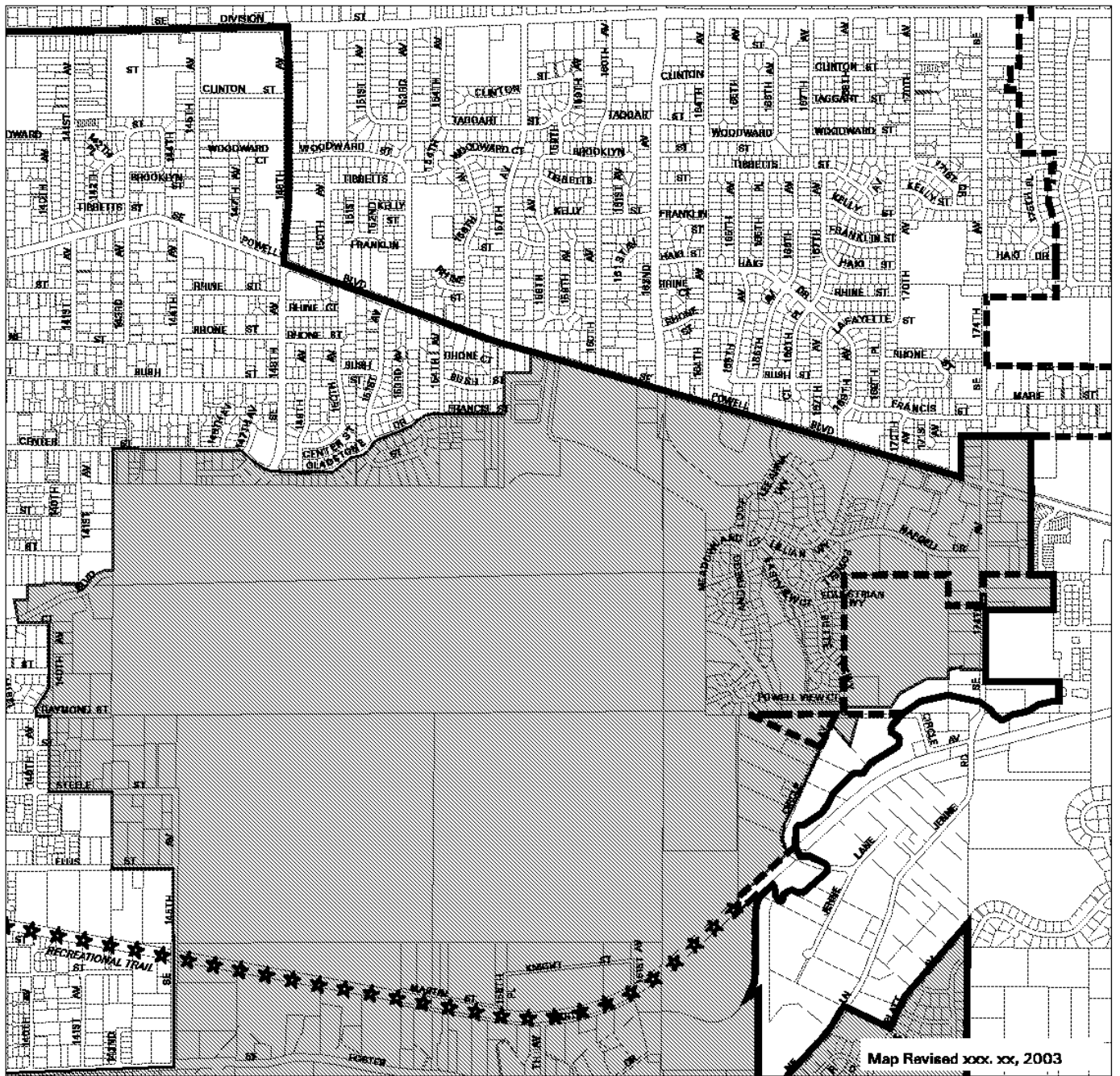
Proposed Map 537-1 Johnson Creek Basin Plan District

Map 2 of 8



- LEGEND**
-  South Subdistrict
 -  Flood Risk Area

Proposed Map 537-1
Johnson Creek Basin
Plan District
 Map 3 of 8



0' 1050' 2100'

Scale in Feet

Plan District Boundary

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
Recreation Trail

City Boundary

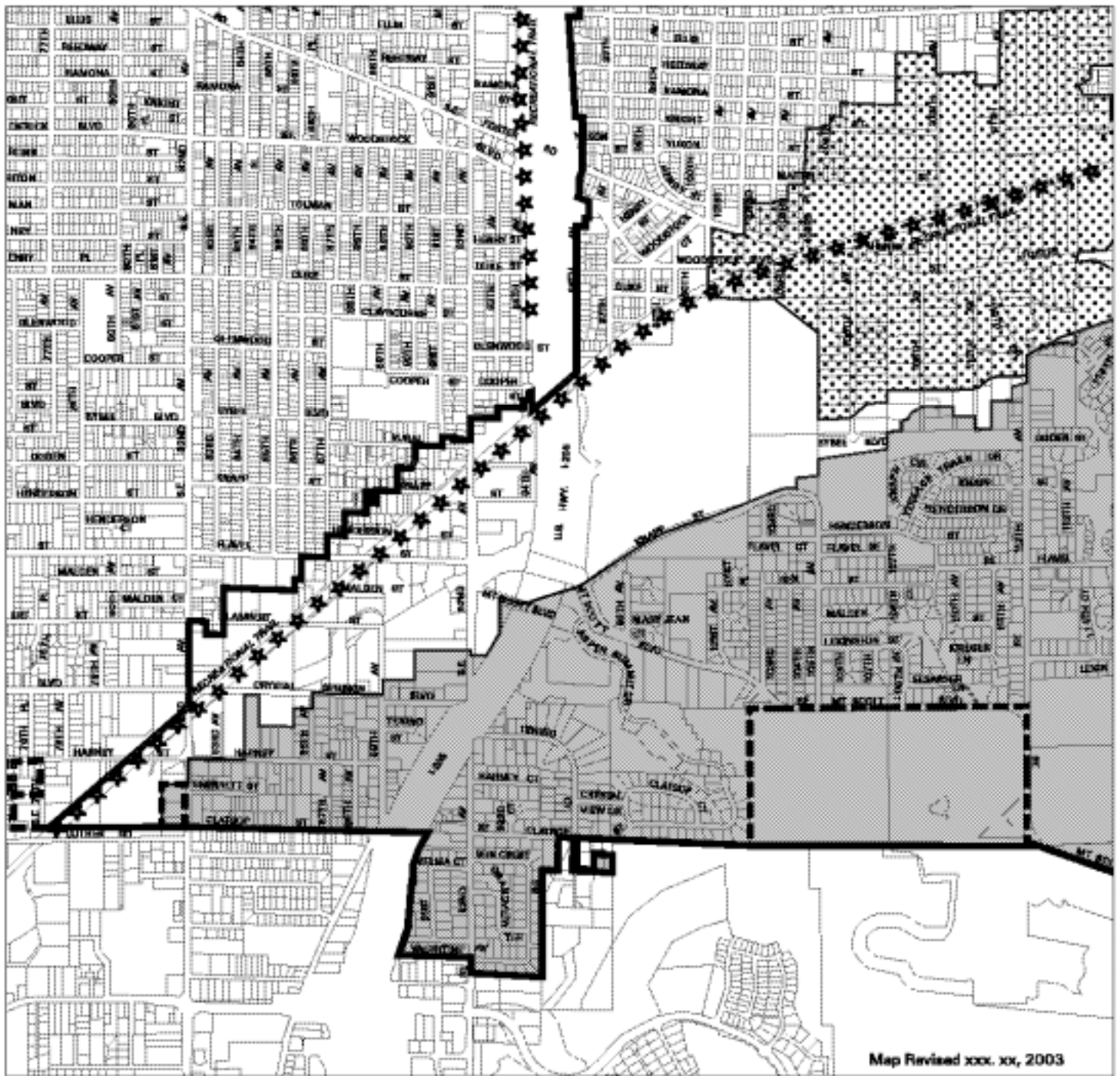
LEGEND

 South Subdistrict

 Flood Risk Area

Proposed Map 537-1 Johnson Creek Basin Plan District

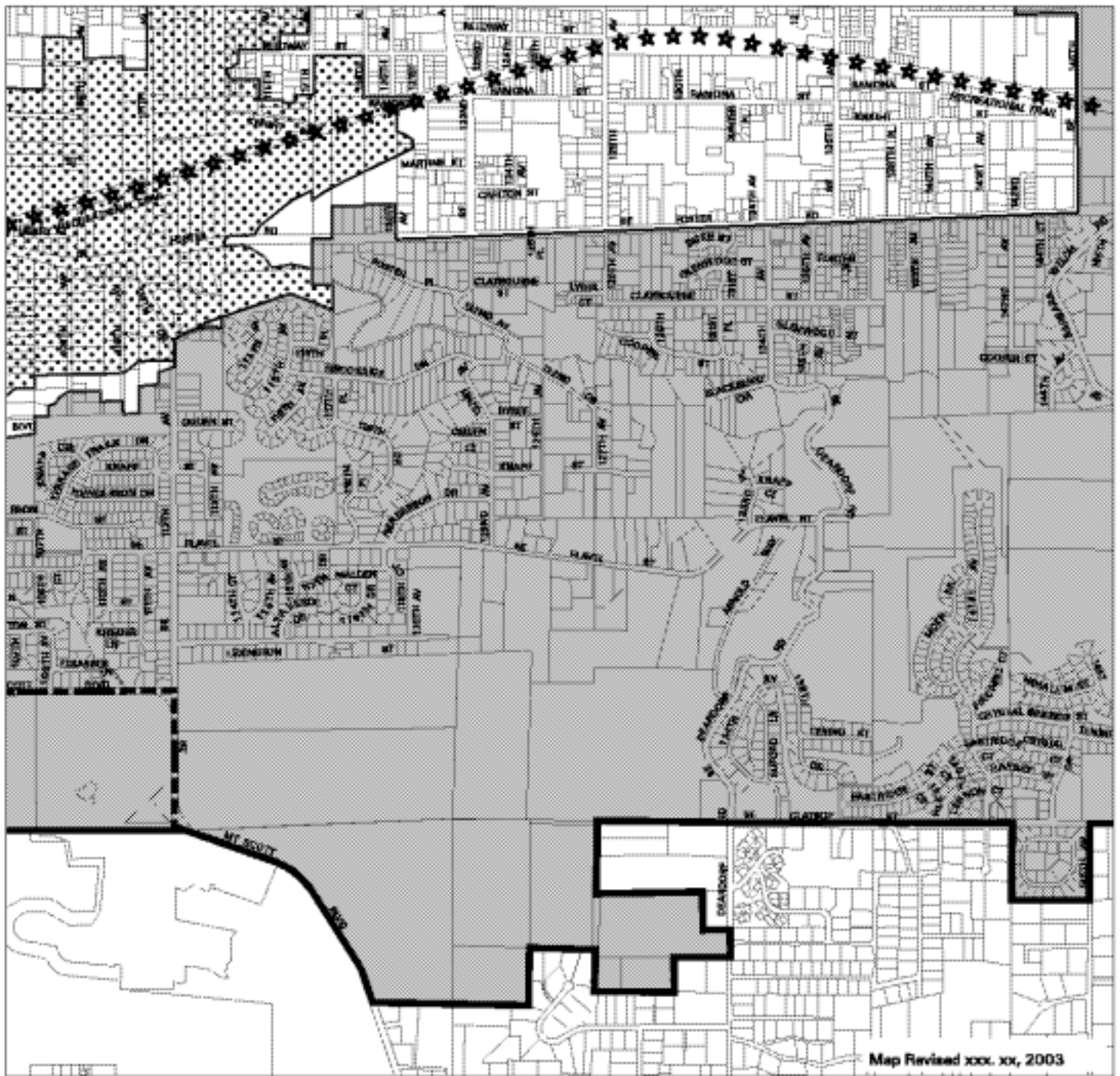
Map 4 of 8




- LEGEND**
- South Subdistrict
 - Flood Risk Area

Proposed Map 537-1 Johnson Creek Basin Plan District

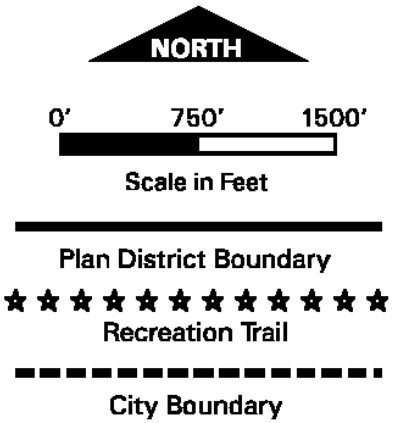
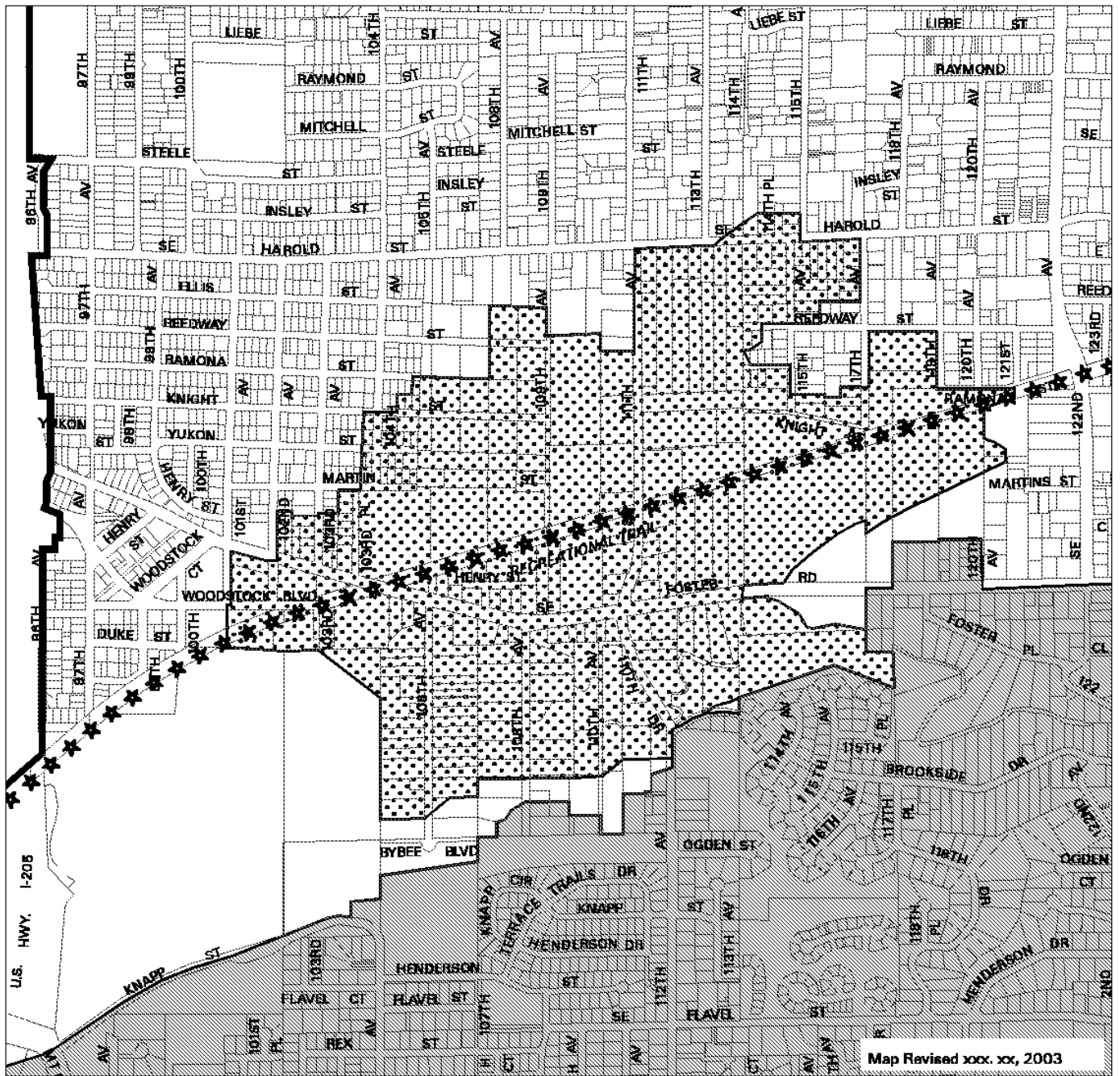
Map 5 of 8





- LEGEND**
-  South Subdistrict
 -  Flood Risk Area

Proposed Map 537-1 Johnson Creek Basin Plan District

Map 6 of 8



- LEGEND
-  South Subdistrict
 -  Flood Risk Area

Proposed Map 537-1

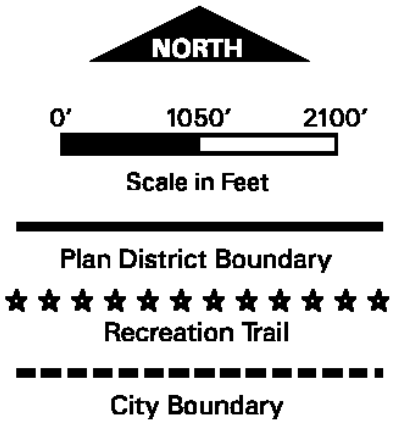
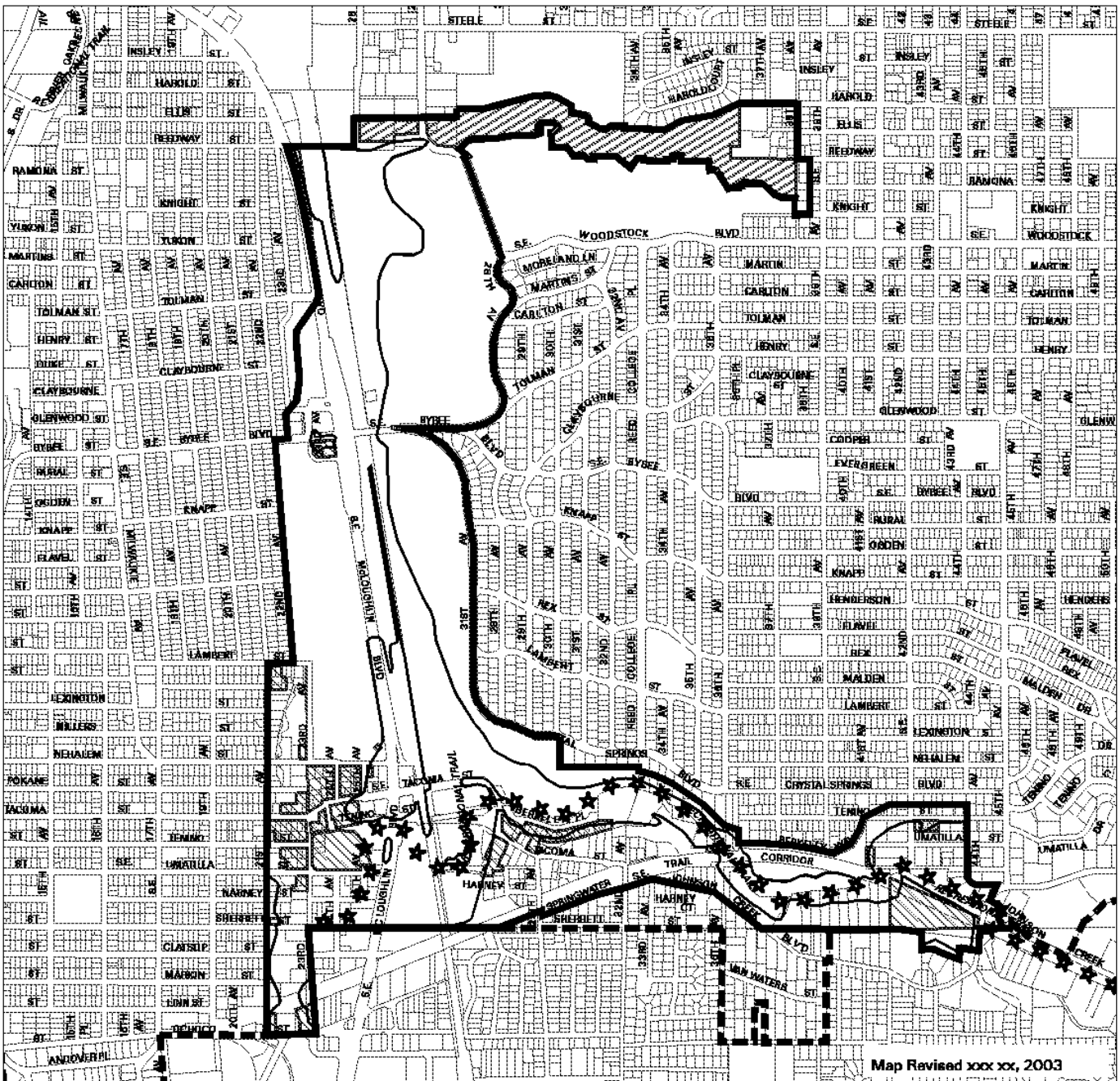
Johnson Creek Basin

Plan District

Map 8 of 8

Existing *Zoning Code* Maps with Proposed Changes

This second set of maps includes additional information to help readers understand the proposals in this report. This information will not be included on the official *Zoning Code* maps. These maps show all the sites that have been removed from, or added to, the floodplain as a result of FEMA's update. The maps also show the Kelly Butte and Johnson Creek Flood Plain subdistricts with a note in the legends that explains that the Johnson Creek Flood Plain subdistrict will no longer be identified on the zoning maps and the Kelly Butte subdistrict will be eliminated.

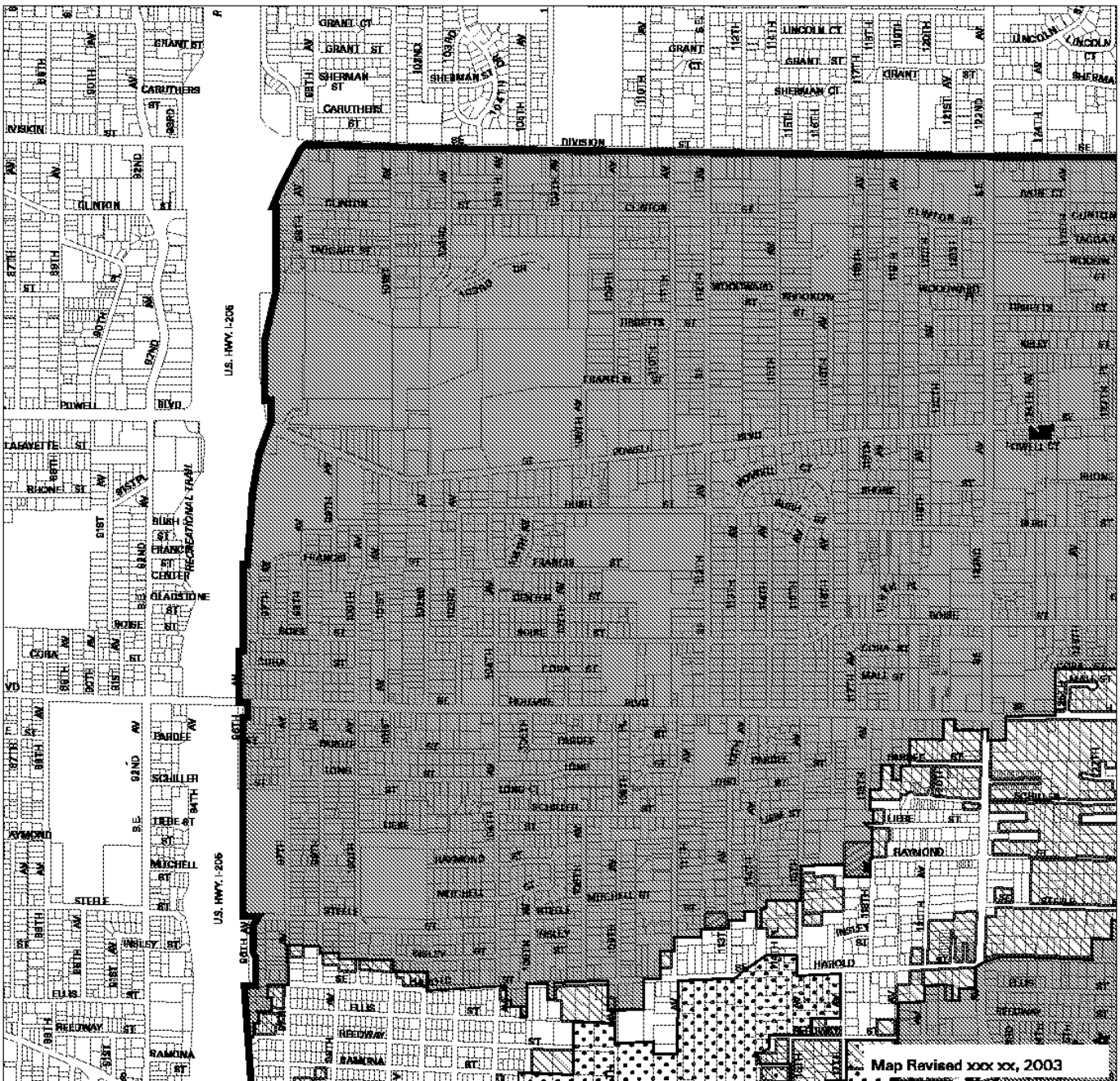


- LEGEND**
- Kelly Butte Subdistrict
(Subdistrict to be Eliminated)
 - Johnson Creek Flood
Plain Subdistrict
(No longer to be mapped)
 - South Subdistrict
 - Flood Risk Area
 - Areas no longer regulated by
Floodplain Subdistrict
 - Additional areas to be regulated by
Floodplain Subdistrict
 - Amended South Subdistrict
Boundary

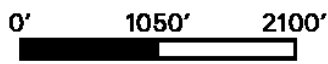
Johnson Creek Floodplain Zoning Code Maintenance

Proposed Changes

Map 1 of 8



Map Revised xxx xx, 2003










Scale in Feet

Plan District Boundary

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
Recreation Trail

City Boundary

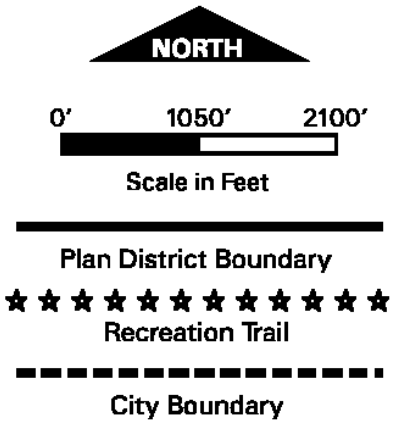
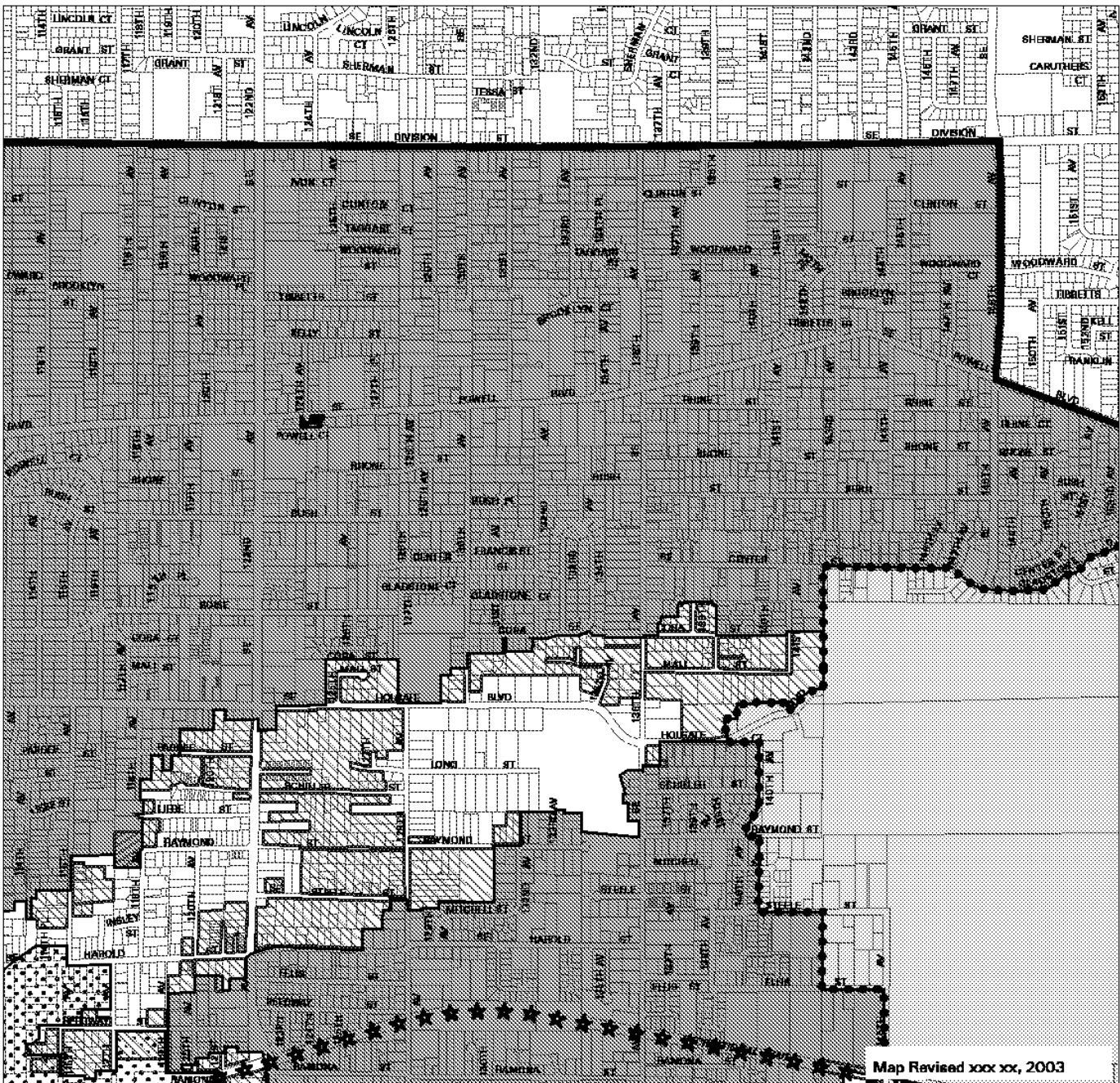
LEGEND








-  Kelly Butte Subdistrict
(Subdistrict to be Eliminated)
-  Johnson Creek Flood
Plain Subdistrict
(No longer to be mapped)
-  South Subdistrict
-  Flood Risk Area
-  Areas no longer regulated by
Floodplain Subdistrict
-  Additional areas to be regulated by
Floodplain Subdistrict
-  Amended South Subdistrict
Boundary

Johnson Creek Floodplain Zoning Code Maintenance

Proposed Changes

Map 2 of 8

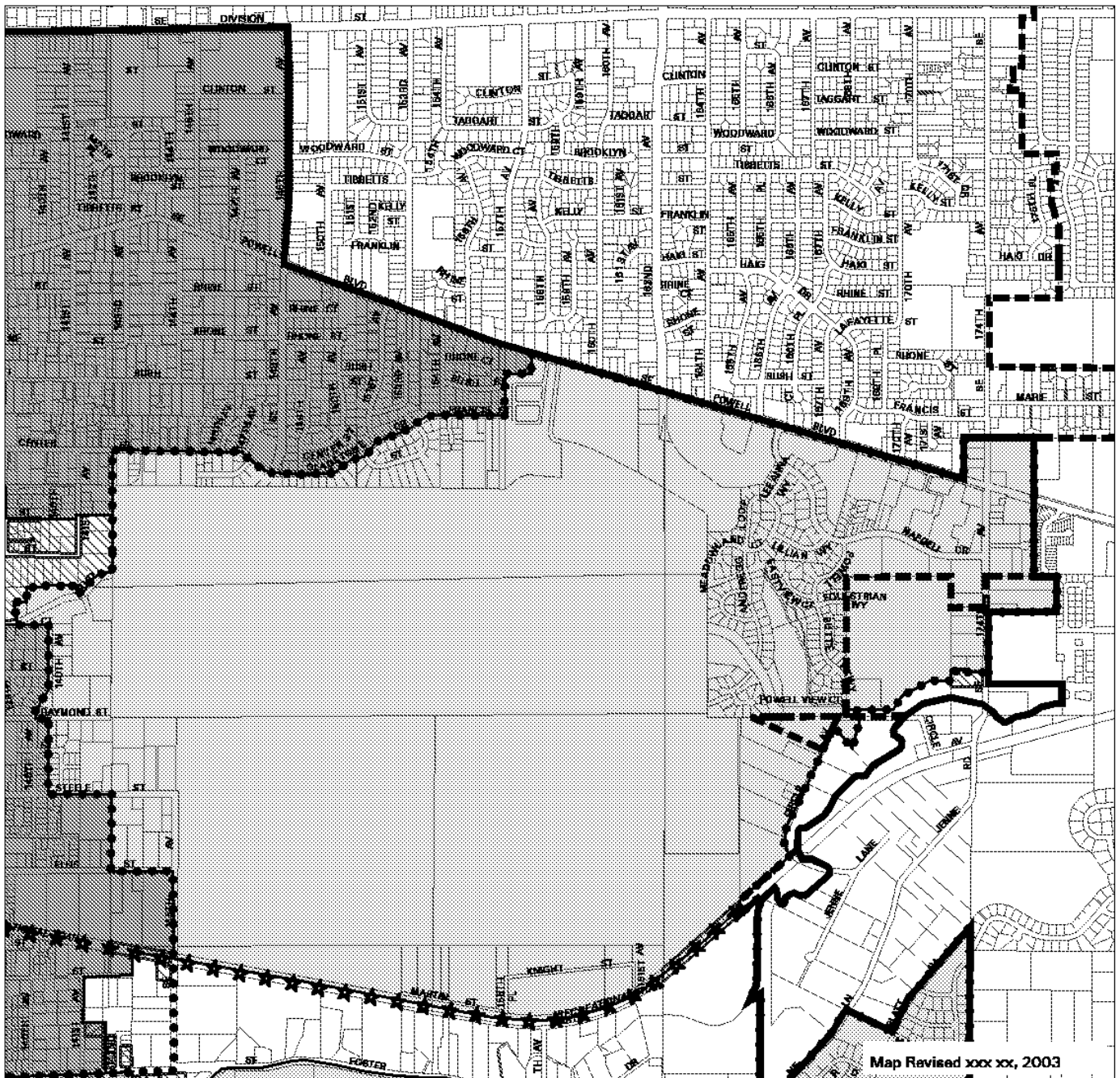


- LEGEND**
-  Kelly Butte Subdistrict
(Subdistrict to be Eliminated)
 -  Johnson Creek Flood
Plain Subdistrict
(No longer to be mapped)
 -  South Subdistrict
 -  Flood Risk Area
 -  Areas no longer regulated by
Floodplain Subdistrict
 -  Additional areas to be regulated by
Floodplain Subdistrict
 -  Amended South Subdistrict
Boundary

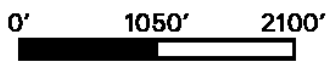
Johnson Creek Floodplain Zoning Code Maintenance

Proposed Changes

Map 3 of 8



Map Revised xxx xx, 2003










Scale in Feet

Plan District Boundary

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★
Recreation Trail

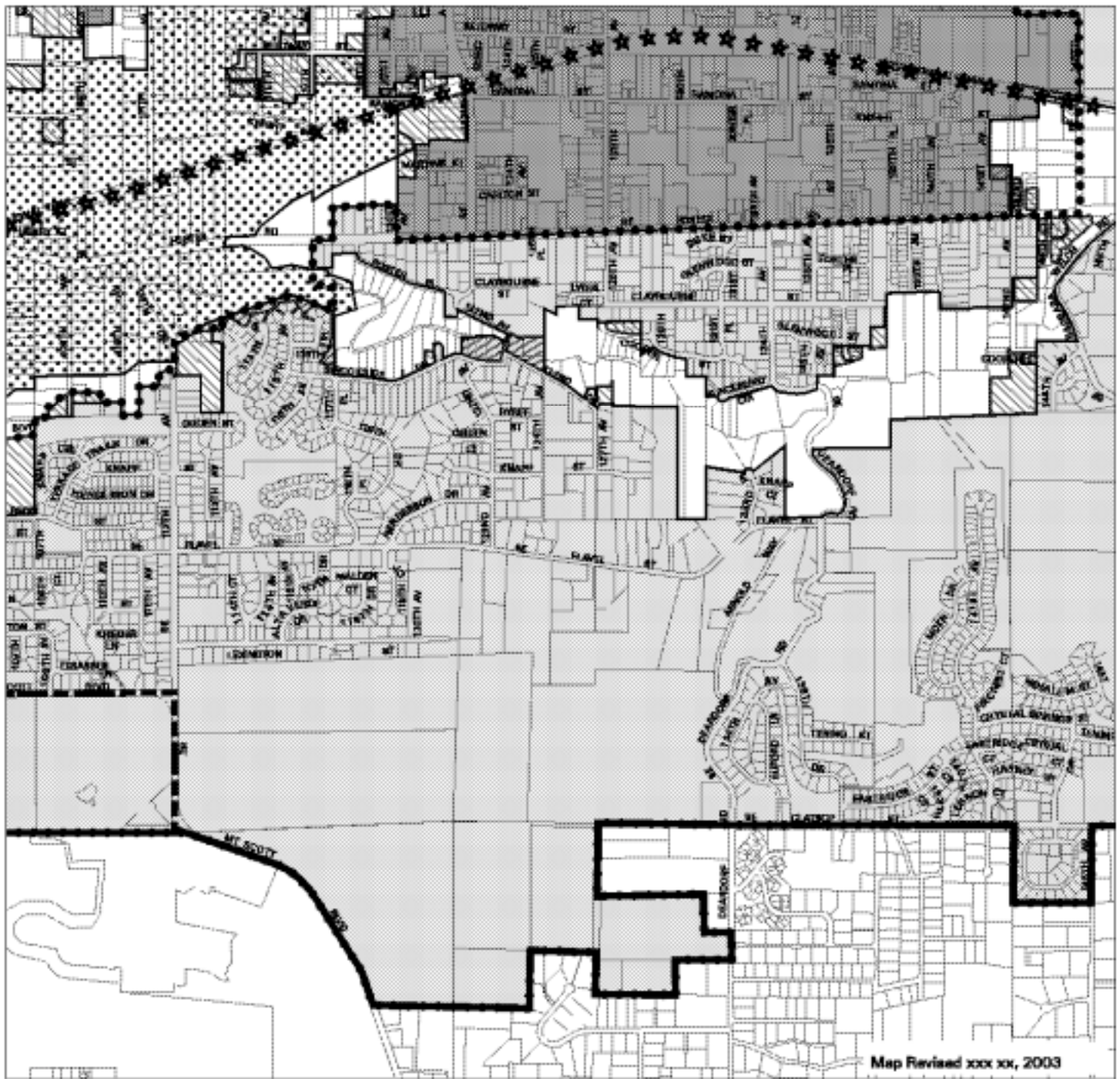
City Boundary

- LEGEND**
-  Kelly Butte Subdistrict (Subdistrict to be Eliminated)
 -  Johnson Creek Flood Plain Subdistrict (No longer to be mapped)
 -  South Subdistrict
 -  Flood Risk Area
 -  Areas no longer regulated by Floodplain Subdistrict
 -  Additional areas to be regulated by Floodplain Subdistrict
 -  Amended South Subdistrict Boundary

Johnson Creek Floodplain Zoning Code Maintenance

Proposed Changes

Map 4 of 8



0' 1050' 2100'





Scale in Feet

Plan District Boundary

Recreation Trail

City Boundary

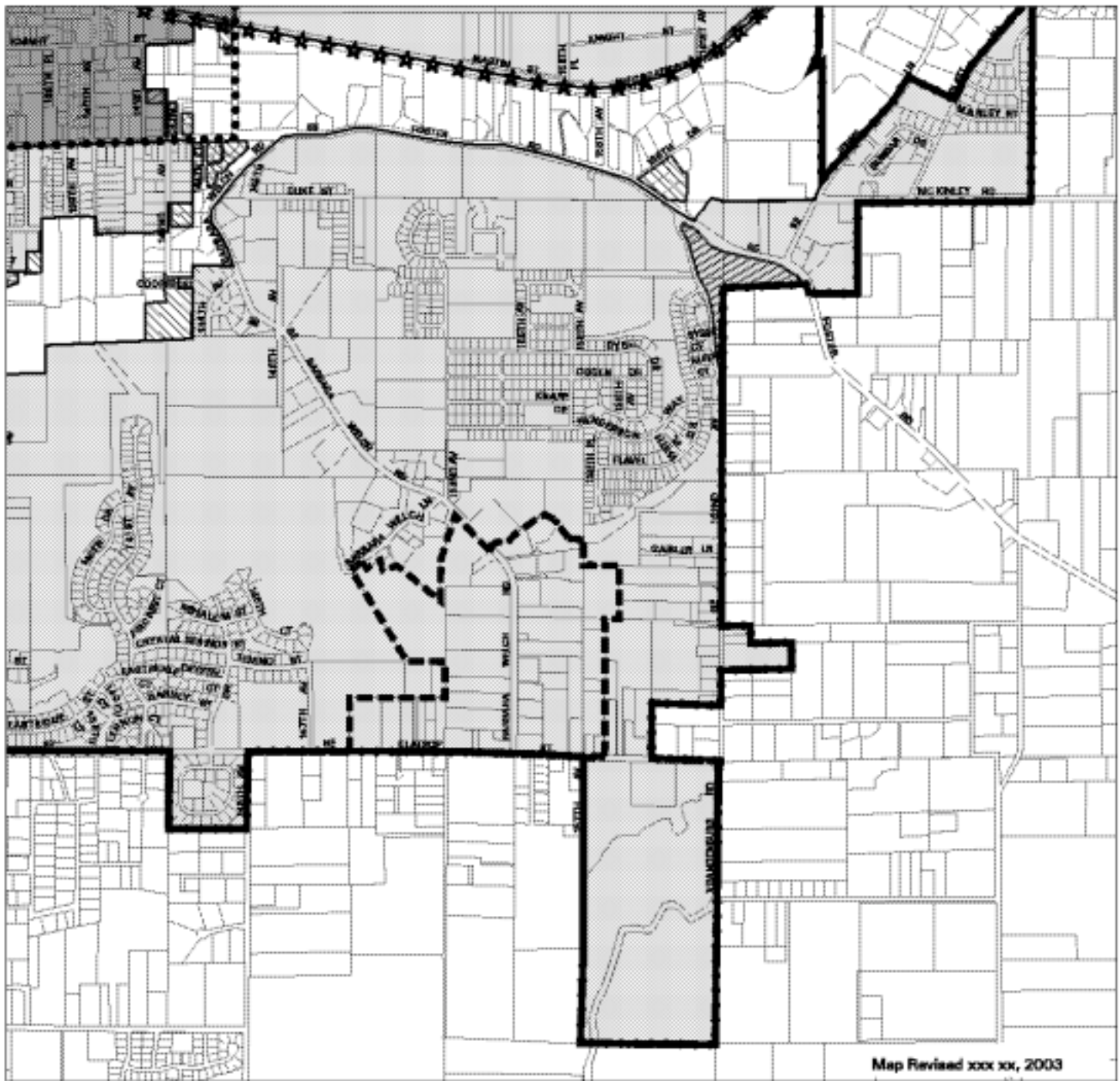
LEGEND

-  Kelly Butte Subdistrict
(Subdistrict to be eliminated)
-  Johnson Creek Flood
Plain Subdistrict
(No longer to be mapped)
-  South Subdistrict
-  Flood Risk Area
-  Area no longer regulated by
Floodplain Subdistrict
-  Additional areas to be regulated
by Floodplain Subdistrict
-  Amended South Subdistrict
Boundary

Johnson Creek Floodplain Zoning Code Maintenance

Proposed Changes

Map 6 of 8



0' 1050' 2100'








Scale in Feet

Plan District Boundary

***** Recreation Trail

----- City Boundary

LEGEND

-  Kelly Butte Subdistrict (Subdistrict to be eliminated)
-  Johnson Creek Flood Plain Subdistrict (No longer to be mapped)
-  South Subdistrict
-  Flood Risk Area
-  Area no longer regulated by Floodplain Subdistrict
-  Additional areas to be regulated by Floodplain Subdistrict
-  Amended South Subdistrict Boundary

Johnson Creek Floodplain Zoning Code Maintenance

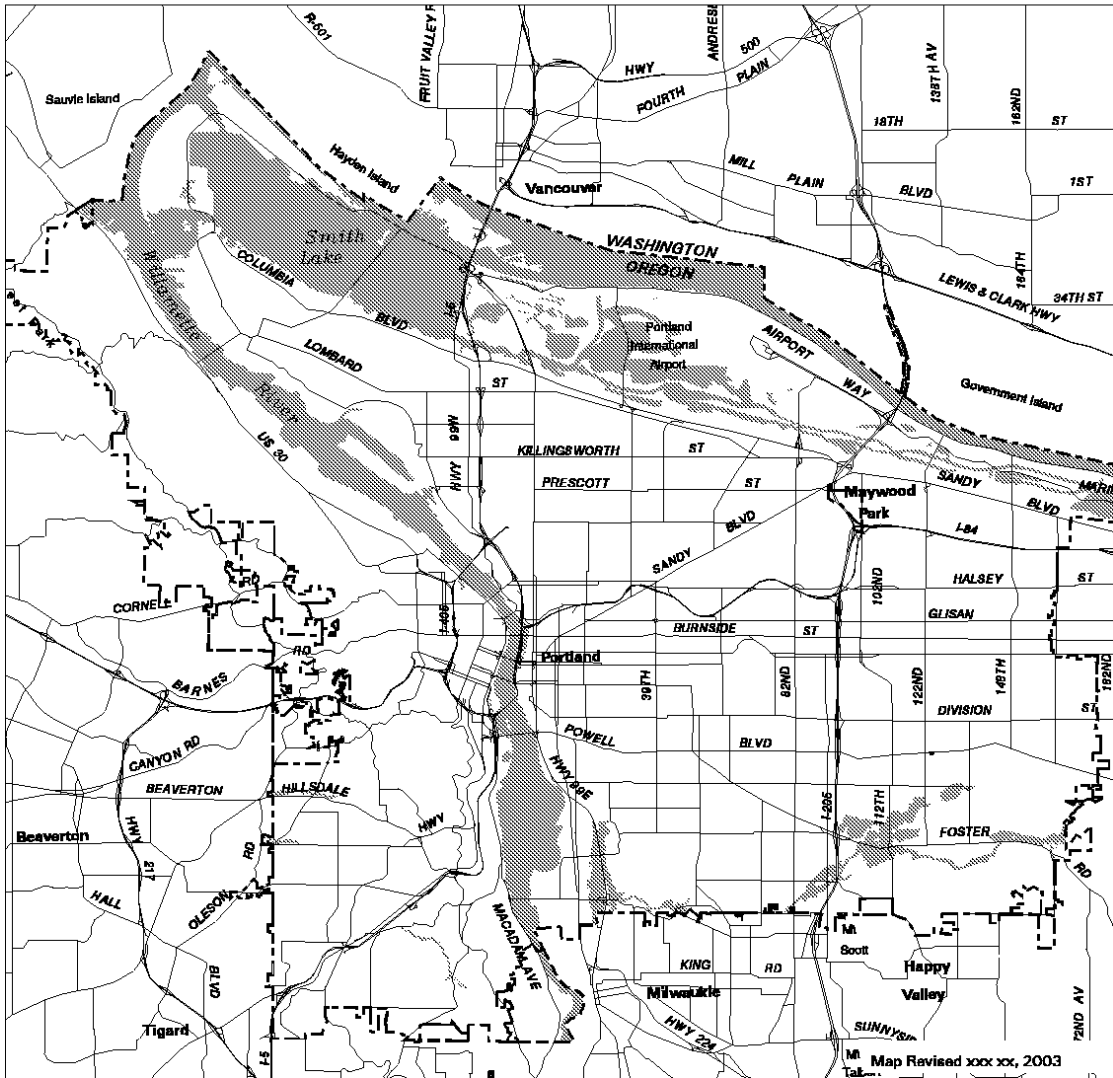
Proposed Changes

Map 7 of 8

Section 3:

Proposed Amendments Map 631-1 Potential Flood Hazard Area Map

Map 631-1, Potential Flood Hazard Area Map has been revised to reflect the updated FEMA 100-year floodplain boundary in the Johnson Creek watershed. In the Johnson Creek watershed, the 100-year floodplain boundary was the criteria for determining the boundaries of the potential flood hazard area. The amendments to Map 631-1 only affect the Johnson Creek watershed.



Map 631-1

Potential Flood Hazard Area Map

Proposed Changes

Bureau of Planning • City of Portland, Oregon

Appendices

Appendix A: Impact Analysis Report

The following questions from the *Impact Analysis Workgroup Report to Council*, March 20, 2003 guide staff when developing and assessing land use and development-related policies, regulations, and administrative requirements. This Impact Analysis Report was included in staff's cover letter to the Planning Commission for the *Johnson Creek Floodplain Zoning Code Maintenance* project.

The *Johnson Creek Floodplain Zoning Code Maintenance* project focuses on one administrative change. It allows the City to use the most current FEMA maps instead of referring to the plan district map to administer the floodplain regulations in the Johnson Creek Plan District. All the other changes proposed are code maintenance. The floodplain regulations—or how they are applied—will not change.

First Stage Assessment

What is the issue or problem the Johnson Creek Floodplain Zoning Code Maintenance project is trying to address?

The plan district maps of the Johnson Creek Basin Plan District need to be updated to reflect the current FEMA floodplain boundaries. The current FEMA maps were adopted in December 2001. Since December 2001, 928 tax lots are outside of the 100-year floodplain but still subject to the floodplain regulations of the Johnson Creek Basin Plan District. There are also roughly 39 tax lots that have been included in the revised FEMA floodplain that are not subject to the floodplain regulations, and should be.

A remapping of the entire watershed—such as was adopted for Johnson Creek in 2001—doesn't happen very often. In the past this type of remapping has been done every 10 to 20 years. However, FEMA has a process that allows property owners to challenge the accuracy of the floodplain boundary. If a survey indicates that a property is above the 100-year base flood elevation, then FEMA will issue a Letter of Map Amendment (LOMA) that officially removes the property from the floodplain. Currently, the Johnson Creek Basin Plan District does not allow properties with LOMAs to be exempt from the floodplain regulations.

The Crystal Springs portion of the Johnson Creek watershed re-mapping has not been completed yet. BES estimates that the Crystal Springs portion will be adopted in 2004, but there is still a question regarding FEMA's ability to fund the completion of the project. As the Johnson Creek Basin Plan District is currently written when the final adoption of Crystal Springs occurs, the City will have to go through another legislative process to amend the plan district maps.

What are the intended or desired outcomes?

The *Johnson Creek Floodplain Zoning Code Maintenance* project will allow the City now, and in the future, to use the most current Federal Emergency Management Agency (FEMA) floodplain boundaries when applying the floodplain regulations of the Johnson Creek Basin Plan District. This will avoid the need to process FEMA map changes—such as the upcoming Crystal Springs re-mapping—through a legislative process. If adopted, the *Johnson Creek Floodplain Zoning Code Maintenance* project would also allow properties with LOMAs to be automatically exempt from the floodplain regulations of the Johnson Creek Basin Plan District.

How will the outcomes advance and support the City's Comprehensive Plan?

The Johnson Creek Basin Plan District was adopted by City Council in compliance with the City's *Comprehensive Plan*. The *Johnson Creek Floodplain Zoning Code Maintenance* project is not changing any of the policy or regulations of the Johnson Creek Basin Plan District. The project most significantly supports Goal 6, Air, Water and Land Resource Quality.

Goal 6, Air, Water and Land Resource Quality, requires the maintenance and improvement of the quality of air, water and land resources. The amendments are consistent with this goal because they do not change policy or intent of any of the existing regulations pertaining to air, water and land resource quality. The amendments are limited to word and structural changes that improve the clarity and implementation of existing floodplain regulations. The amendments of the *Johnson Creek Floodplain Zoning Code Maintenance* project ensures that the proper floodplain regulations will be applied to the 967 tax lots whose floodplain status has changed as a result of the updated FEMA flood maps. Portland *Comprehensive Plan* findings on Goal 8, Environment, and its related policies and objectives also support this goal.

The project also makes formatting and clean-up revisions that improve the administration of the land use regulations, thus supporting *Comprehensive Plan*, Policy and Objectives 10.10, Amendments to the Zoning and Subdivision Regulations, that call for amendments to be clear and concise.

Who will be affected by the proposed policies, requirements, and/or regulations?

A property may be subject to different regulations based on its inclusion or removal from FEMA's updated 100-year floodplain. However, this project does not change the content of those regulations or how they are applied to sites.

Instead of looking at the Johnson Creek Basin Plan District map to see if a property is subject to the plan district floodplain regulations, if this project is approved, Bureau of Development Services staff in the permit center will use GARTH to see if any portion of a site is located within the 100-year floodplain.

Why should this be a priority for action?

It is important to adopt the proposals of the *Johnson Creek Floodplain Zoning Code Maintenance* project so that the maps in Chapter 33.537, Johnson Creek Basin Plan District, are up-to-date. Since December 2001, 928 tax lots are outside of the 100-year floodplain but still subject to the floodplain regulations of the Johnson Creek Basin Plan District. There are also roughly 39 tax lots that have been included in the revised FEMA floodplain that are not subject to the floodplain regulations, and should be. Some of the properties that have been removed from the floodplain have development projects pending completion of the Johnson Creek Basin Plan District updated.

How will the City staff and fund the project?

The *Johnson Creek Floodplain Zoning Code Maintenance* project has been staffed by the Bureau of Planning with general revenue funds.

Second Stage Assessment

What regulatory and non-regulatory alternatives were considered?

The primary focus of this project was to update the Johnson Creek Basin Plan District maps to reflect current FEMA maps. Because of the complexity of the environmental and floodplain regulations it was determined that this project will not look at alternative regulations, or ways to apply the regulations. Staff recommends that any changes to the regulations, or how they are applied, will be better addressed in the Bureau of Planning's Healthy Portland Streams (HPS) project. HPS will look holistically at the Johnson Creek watershed and its regulations.

Initially, at the urging of some community members, staff looked at regulating the floodplain by the actual 100-year floodplain boundary rather than the entire site if any portion of a site is in the 100-year floodplain. Staff did not pursue this approach for the following reasons.

- The floodplain standards are written for the entire site. If staff changed the way the regulations are applied, then the standards would have to be re-written. This was outside of the scope of the project and more appropriately addressed in the Healthy Portland Streams project.

- Bureau of Development Services staff asked BOP staff to not make this change. It adds another step for applicants and permit center to figure out where the floodplain boundary is located on a site.
- Bureau of Environmental Services (BES) and Bureau of Planning's Healthy Portland Streams staff requested no changes be made to the way the regulations are applied as part of this project. Other environmental projects underway, such as HPS, are looking at floodplain management more holistically and will be able to take advantage of the BES watershed characteristics studies, currently underway.

How were stakeholders and the community consulted throughout the process?

These proposals were developed with the consultation and review of a technical advisory group composed of staff from the Bureau of Environmental Services, Bureau of Development Services, and Portland Development Commission. Multnomah County was also notified because of the county pockets within the Johnson Creek Basin Plan District.

The Bureau of Planning, with the help of the Bureau of Environmental Services, hosted two community open houses for this project. Notices for these meetings were sent to all properties in the 100-year floodplain in the Johnson Creek Basin Plan District. There was also a legislative notice sent announcing the Planning Commission hearing.

What resources are required to implement the proposal and how will any proposed regulations be enforced?

The regulations of the Johnson Creek Basin Plan District will continue to be implemented and enforced by the Bureau of Development Services.

What are the general benefits of the proposals and how do these benefits compare to and balance against the public, private, and community costs?

The changes proposed in the *Johnson Creek Floodplain Zoning Code Maintenance* project will have no costs associated with them after adoption. By allowing the City to use the most current FEMA maps, the *Johnson Creek Floodplain Zoning Code Maintenance* project eliminates the cost and staff time of the City to complete a legislative process every time the FEMA maps are updated.

Appendix B: Letter from Bureau of Environmental Services



CITY OF PORTLAND

ENVIRONMENTAL SERVICES



1120 SW Fifth Avenue., Room 1000, Portland, Oregon 97204-1912 Dean Marriott, Director Dan Saltzman, Commissioner

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PLANNING BUREAU
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May 30, 2003

Dear Portland Planning Commission:

Thank you for the opportunity to comment on the Johnson Creek Floodplain Zoning Code Maintenance project. We appreciate the Bureau of Planning's effort to update the zoning code maps and we support this project. Our staff have been involved as members of the Technical Advisory Group and have attended two open houses.

Apparently during the public comment period, questions were raised about the current code provision requiring an entire site to meet the 50% impervious surface limitation if any portion of the site is located in the 100-year floodplain. This is currently how the Johnson Creek Basin Plan District regulates sites in the 100-year floodplain. Environmental Services supports retaining this provision. In the future it may be appropriate to review how the impervious surface limitations are applied, but this work should be handled through a larger project such as the Bureau of Planning Healthy Portland Streams. In the meantime, since impervious surfaces affect our waterways no matter where they are in the watershed, Environmental Services does not support reduction of the minimal regulations that now exist.

There were also concerns raised about redundancies with the impervious surface limitations and the Stormwater Manual. We do not consider the impervious surface limitations redundant with Stormwater Manual requirements. The Stormwater Manual focuses on detention and treatment of stormwater from impervious surfaces. The impervious surface guidelines in the Johnson Creek Floodplain Zoning Code regulate the allowable size of these surfaces and ensure that pervious area on any given site can not be reduced by more than 50%. Pervious surfaces create storage capacity for floodwaters and are critical in floodplains and areas adjacent to creeks and other waterways. The limitation on impervious surfaces preserves capacity for water to be detained on site and facilitates infiltration and evapotranspiration. Both the Stormwater Manual and impervious surface limitations are needed to ensure proper watershed management.

With regard to section 33.537.100B of the Zoning Code, Environmental Services supports the recommendation to remove this portion of the code. We recognize that as written, it is impractical for the Bureau of Development Service to enforce. The intent of this section was to protect Johnson Creek from additional inputs of sediment, temperature, and fecal coliform bacteria. The Stormwater Manual requirements provide some standards that protect the City's waterways by regulating inputs of Total Suspended Solids (TSS). We do recognize however that these standards may not be sufficient. The State Department of Environmental Quality is currently setting Total Maximum Daily Load allocations (TMDLs) for Johnson Creek. This process will provide more specific direction to the City regarding priority pollutants specific to

Ph: 503-823-7740 Fax: 503-823-6995 TDD: 503-823-3520 [www.ci.portland.or.us/pds.org](http://www.ci.portland.or.us/pds) An Equal Opportunity Employer Printed on recycled paper

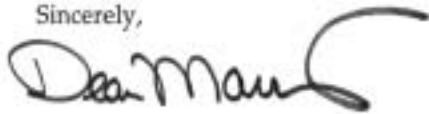
Johnson Creek and will result in Environmental Services updating the Stormwater Manual to make it more watershed specific.

Environmental Services also supports the removal of section 33.537.205C from the South subdistrict and 33.537.310.C Johnson Creek Floodplain subdistrict development standards. This standard is covered in the Stormwater Manual and specifies that new and re-development in all parts of the city must be planned in a manner that assures that post-development flow rate off the site is not greater than the pre-development flow rate.

An important task is not being addressed as part of the current code revisions. Environmental Services is currently updating the Johnson Creek Flood Risk Area. Ideally, the Flood Risk Area revisions would be done as part of this project. Unfortunately, modeling and analysis could not be completed in time to be included with the current revisions. Environmental Services staff will complete the analysis within the next month. This item should be prioritized and taken care of as soon as possible, perhaps under your process for code maintenance.


I am pleased that zoning code maps are being updated to make them consistent with the adopted FEMA Flood Insurance Rate Maps. The Planning Bureau's prompt attention to this matter will better serve the citizens of outer Southeast and avoid confusion at the permit center.

Sincerely,

A handwritten signature in black ink that reads "Dean Marriott". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Dean Marriott

Appendix C: Letter from Bureau of Development Services

	CITY OF	1900 S.W. 4th Avenue, Suite 5000 Portland, Oregon 97201 (503) 823-7300 FAX: (503) 823-6983 TDD: (503) 823-6868 http://www.bds.ci.portland.or.us
	PORTLAND, OREGON BUREAU OF DEVELOPMENT SERVICES	

June 5, 2003

TO: Ethan Seltzer, President,
Members, Planning Commission

From: Ray Kerridge, Director *RK*
Kermit Robinson, Code Development Manager *KR*
Bureau of Development Services

Re: Johnson Creek Floodplain Zoning Code Maintenance

The Bureau of Development Services supports the Recommendation of the Planning Bureau for revising the Johnson Creek Basin Plan District. Our support for the recommendation is based on the following:

1. The recommendation will bring the Zoning Code up to date with the most current FEMA flood plain mapping for the area and will allow us to apply floodplain related regulations from Building and Zoning codes to the same set of properties;
2. The proposed revisions will allow future FEMA mapping updates to be incorporated in our administration of the code without future legislative action; and
3. The recommendation provides a good example of simplification of the code that sets a good example for the continued efforts of regulatory improvement.

In addition, this bureau supports the following aspects of the proposal:

1. Emergency Clause. The emergency clause is administratively workable in this case. The changes improve consistency between the codes and reduce a set of regulations.
2. Building Eaves. We support the exclusion of eaves from the calculation of impervious surface. Such exclusion will be consistent with application of the Zoning Code regarding building coverage and with the Building Code. Functionally eaves certainly catch rain, but because they are open underneath, because rain is rarely vertical, and because something that is 10 to 30 feet above the ground has little direct relation to whether the ground beneath it can absorb water or not; they should be excluded from the impervious surface calculation. If this issue is not considered as part of this project, BDS would like to see it considered addressed in a future project.
3. Partial or full lots. Under the Building Codes, the flood plain standards are addressed for development on the lot even when a portion is in the FEMA mapped area. It will be more consistent administratively if the Zoning code regulations for the Johnson Creek floodplain standards apply to a lot even when only a portion is in the FEMA flood area. The Johnson Creek floodplain proposals are consistent with this approach.
4. Flood Risk Area. We support future review and update of the Flood Risk area. This mapping was done over 5 years ago. With current information, a review is appropriate.