EXECUTIVE SUMMARY

ES1. Introduction

The City of Grants Pass owns and operates a large and complex stormwater system that accommodates rainfall runoff from nearly 27,000 acres of land in and around the city. This contributing area and various political boundaries are illustrated in Figure ES1.

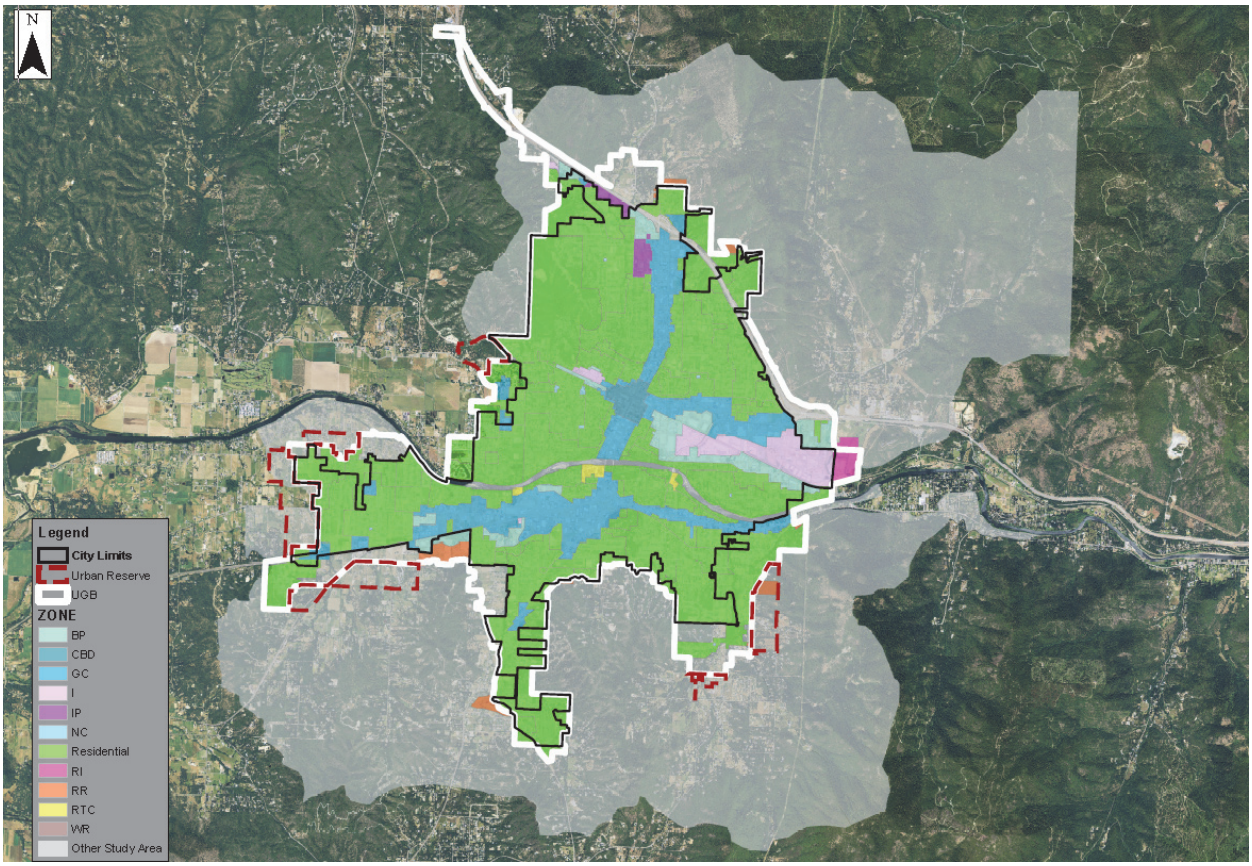

Figure ES1. Grants Pass Stormwater Study Area.

The fundamental purpose of the stormwater system is to keep Grants Pass a vibrant and livable community. Stormwater problems are more than just a periodic and temporary nuisance. If not for the stormwater system, destructive flooding and erosion would quickly turn unmanageable. Unchecked stormwater runoff can leave critical roadways impassible for emergency services. What's more, harmful urban pollution would be picked up by runoff and carried directly to the Rogue River and other natural water ways.

This Stormwater Master Plan provides a clear path for maintaining and improving the function of the Grants Pass stormwater system.

ES2. Things As They Are Today

The existing stormwater system consists of about 138 miles of underground piping. This is enough pipe to lay a route along I-5 from Grants Pass to Eugene. In addition to the piping,

there is an expansive network of open channel waterways, ponds, diversion structures, manholes, and interconnections with the Grants Pass Irrigation District facilities.

The stormwater system is divided into four major stormwater basins. These basins are illustrated in Figure ES2.1.

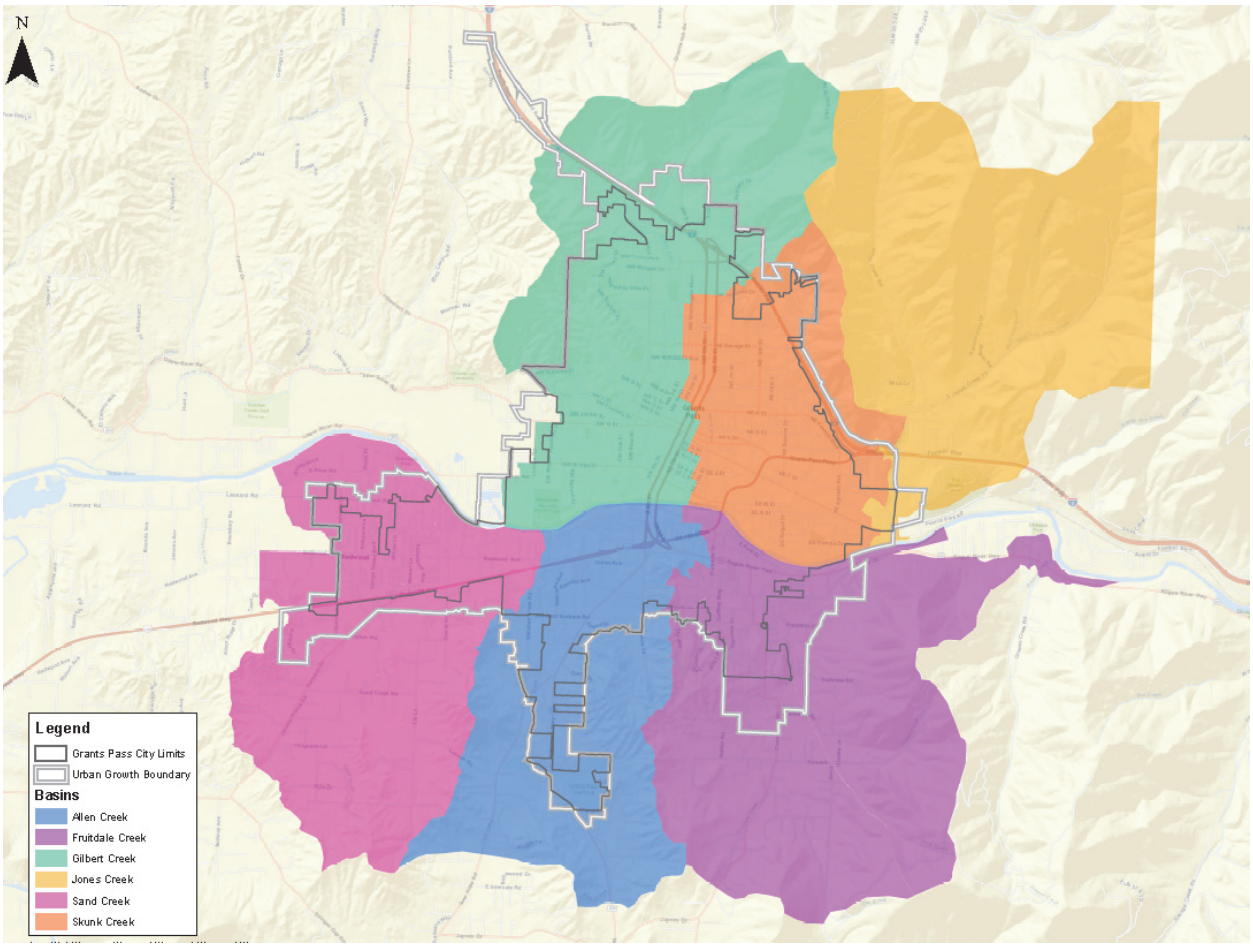

Figure ES2.1 Major Stormwater Basins in Grants Pass, Oregon.

An enormous amount of effort was put forth by City crews, GPID crews and consulting staff to investigate, understand, and map out the stormwater and irrigation systems. The data gathered by their efforts enabled the creation of a detailed computer model of the stormwater system. The computer model was calibrated to match observed system conditions, and then used to evaluate the stormwater system under a variety of scenarios. The scenarios used in the existing system evaluation are based on performance standards consistent with state and federal requirements, but are also customized specifically for Grants Pass.

The model is able to predict when and where flooding from runoff is most likely to occur. It can also be used to provide clues about the likely causes of flooding and how the system might be improved to eliminate or mitigate failures in the stormwater system.

Through this evaluation process, several problem areas and their corresponding solutions were identified. For example, Figure ES2.2 illustrates flooding locations and their statistical

probability of occurrence for one of the four major basins, Allen-Fruitdale, which is located south of the Rogue River.

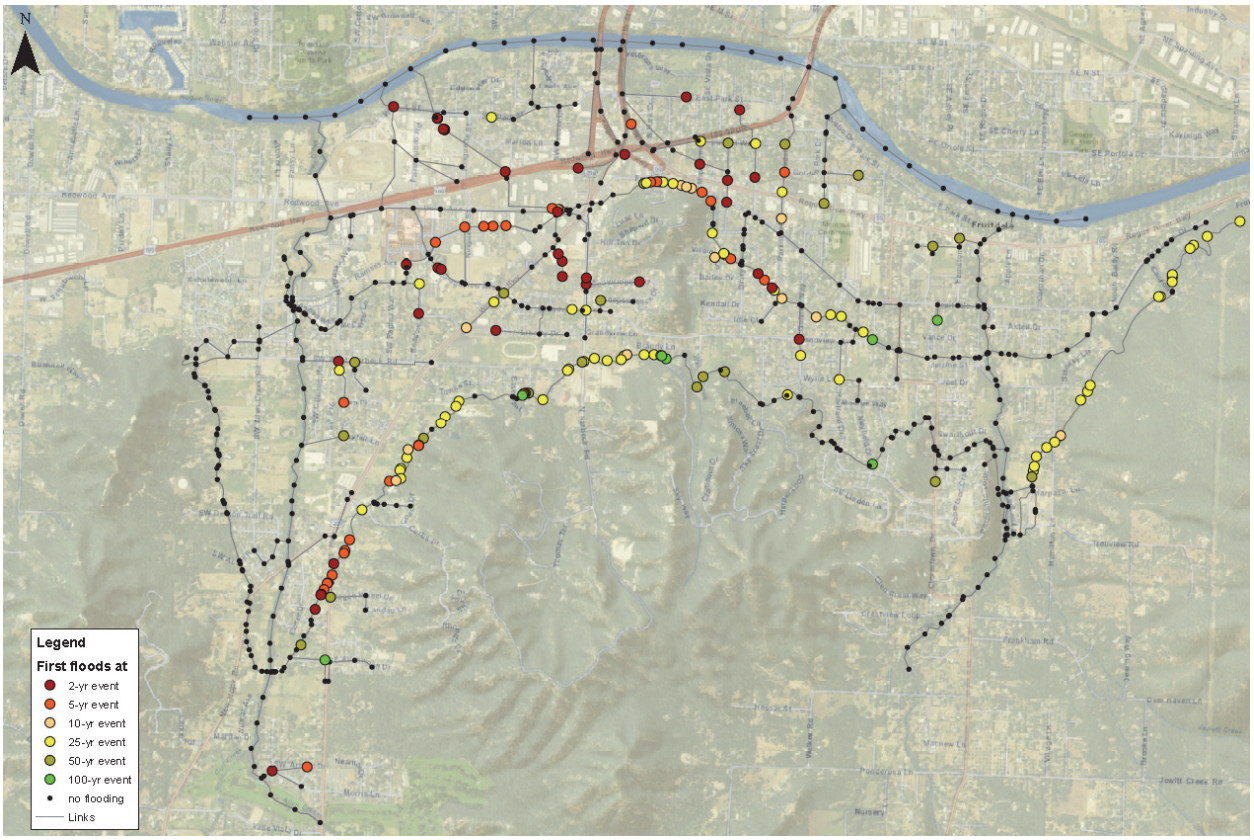

Figure ES2.2 Flooding Locations and Probabilities in the Allen-Fruitdale Basin.

Note: A 2-year storm event has a 1 in 2 chance of occurring every year (i.e. 100%÷2 = 50%) and a 25-year event has a 1 in 25 chance of occurring every year (i.e. 100%÷25 = 4%). The 2-year event brings much less rainfall than a 25-year storm event.

ES3. A Clear Path Forward

With such a large stormwater system, and natural limitations on resources, it can be a challenge to know where to begin. In coordination with City staff, priorities have been established to guide the improvement process. The highest priority (1A) has been given to residential areas flooded most severely and frequently (e.g. 2-year events), closely followed by priority (1B) for commercial areas flooded most severely and frequently (e.g. 2 to 5-year events). As the severity and frequency decreases, so does the priority level (e.g. 2A, 2B, 3A, 3B, and 3C) for the recommended improvement.

Where practical, projects in close proximity were grouped together for saving on construction costs and minimizing disturbance. Potential downstream effects of upstream improvements were also taken into consideration.

In summary, the recommended improvements include:

- 20 improvement projects in the Allen-Fruitdale basin, including 16 priority 1A, one priority 1B, two priority 3A, and one Priority 4 project.
- 10 improvement projects in the Gilbert basin, including nine priority 1A, and one priority 1B.
- 16 improvement projects in the Sand Creek basin, including 12 priority 1A, one priority 1B, and three priority 3A.
- 13 improvement projects in the Skunk-Jones basin, including one priority 1A, five priority 1B, one priority 2A, one priority 2B, two priority 3A, two priority 3B, and one priority 3C.

Each improvement recommendation has been described in Chapter 6 of this report and mapped out in Appendix A (Figures 11A through 12D). An example of these figures is included here for illustration only (see Figure ES3).

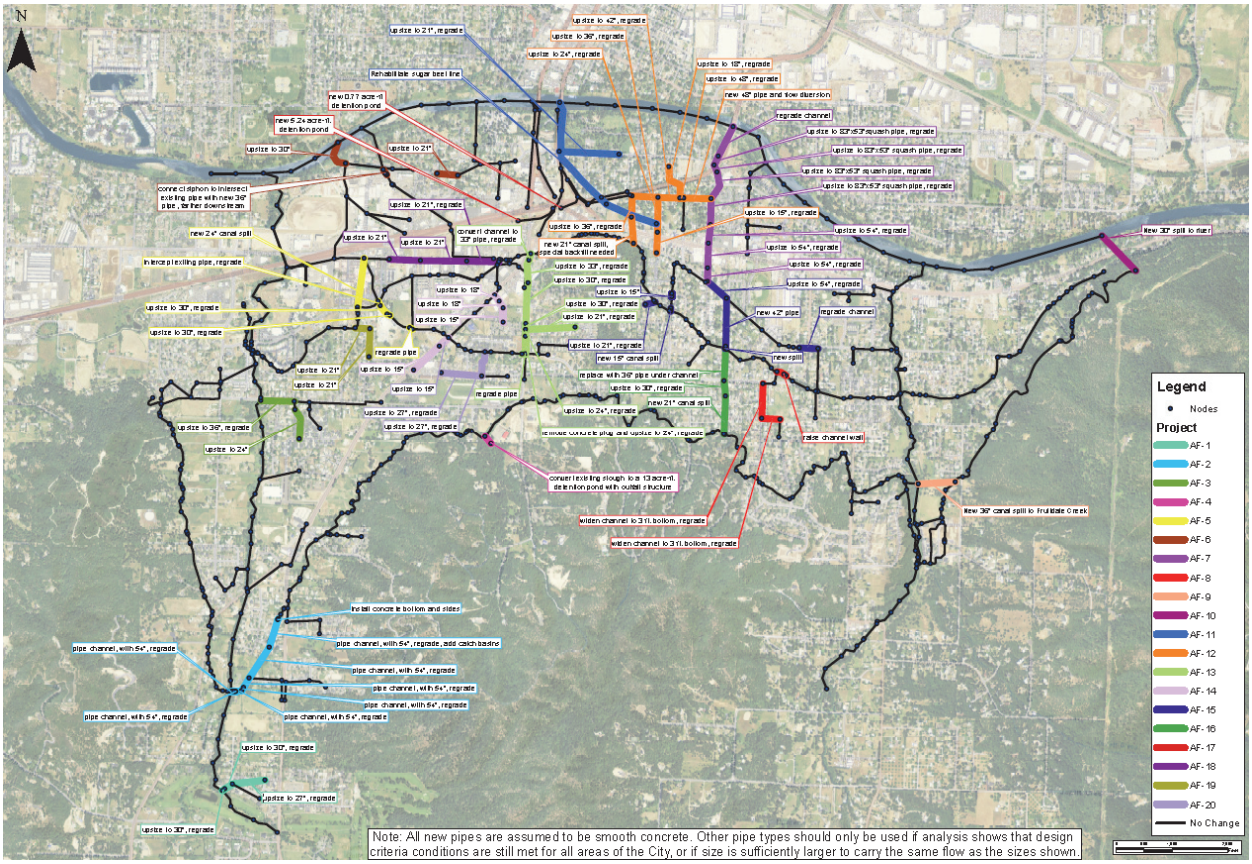

Figure ES3. Recommended Priority Improvements in the Allen-Fruitdale basin.

In addition to capital improvements, operational and maintenance recommendations have also been provided in Chapter 7. Some of these recommendations include:

- Pipeline cleaning every three years at a minimum
- CCTV inspection every 5-10 years
- Clean catch basins every three years
- Clean detention outlets every 6 months
- Apply weed control to detention facilities annually

- Sweep the streets weekly to every-other month depending on area
- Initiate a system replacement program to keep up with aging infrastructure. This is independent of the recommended capital improvements.

It should also be noted that the City has received communication from the DEQ that NPDES MS4 Phase II permitting compliance will soon be required. Additional detail on the permitting requirements have been provided in Chapter 7.

ES4. How much will all of this Cost?

A planning level opinion of probable cost for the recommended improvements can be found in Chapter 6, Tables 6-1 through 6-3 with supporting details in Appendix F. The highest priority improvements (1A) are estimated at roughly $32 million, and another $15 million is estimated for all other stormwater system improvements.

Of the estimated $32 million for priority 1A improvements, projects in the Allen-Fruitdale basin, Sand Basin, and Gilbert basin account for $13.7 million, $12.1 million, and $6.1 million respectively.

The current operations and maintenance budget is estimated to be $198,500 annually ($158,000 for current street sweeping contract). The recommended increase to this existing budget is an additional $480,000 annually. As an extension of regular operations and maintenance, a system replacement budget is recommended to keep up with the aging infrastructure. The replacement budget is recommended at $2.5 million annually.

There is a wide variety of funding and cost sharing options for these improvements. A financial analysis and utility rate study will be completed at a later time in order to determine which option will best meet the City's need.

ES5. Conclusion

The stormwater system is a vital part of Grants Pass infrastructure and is a significant resource to the community. As with all other utilities, the stormwater system requires continuous investment and prudent management to keep it functioning at its best.

This master plan provides the information needed by City managers and elected officials to make informed decisions for the benefit of Grants Pass both now and for years to come.