

# Appendix A

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## Figures

# Figure A1

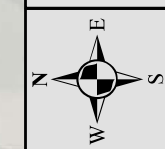
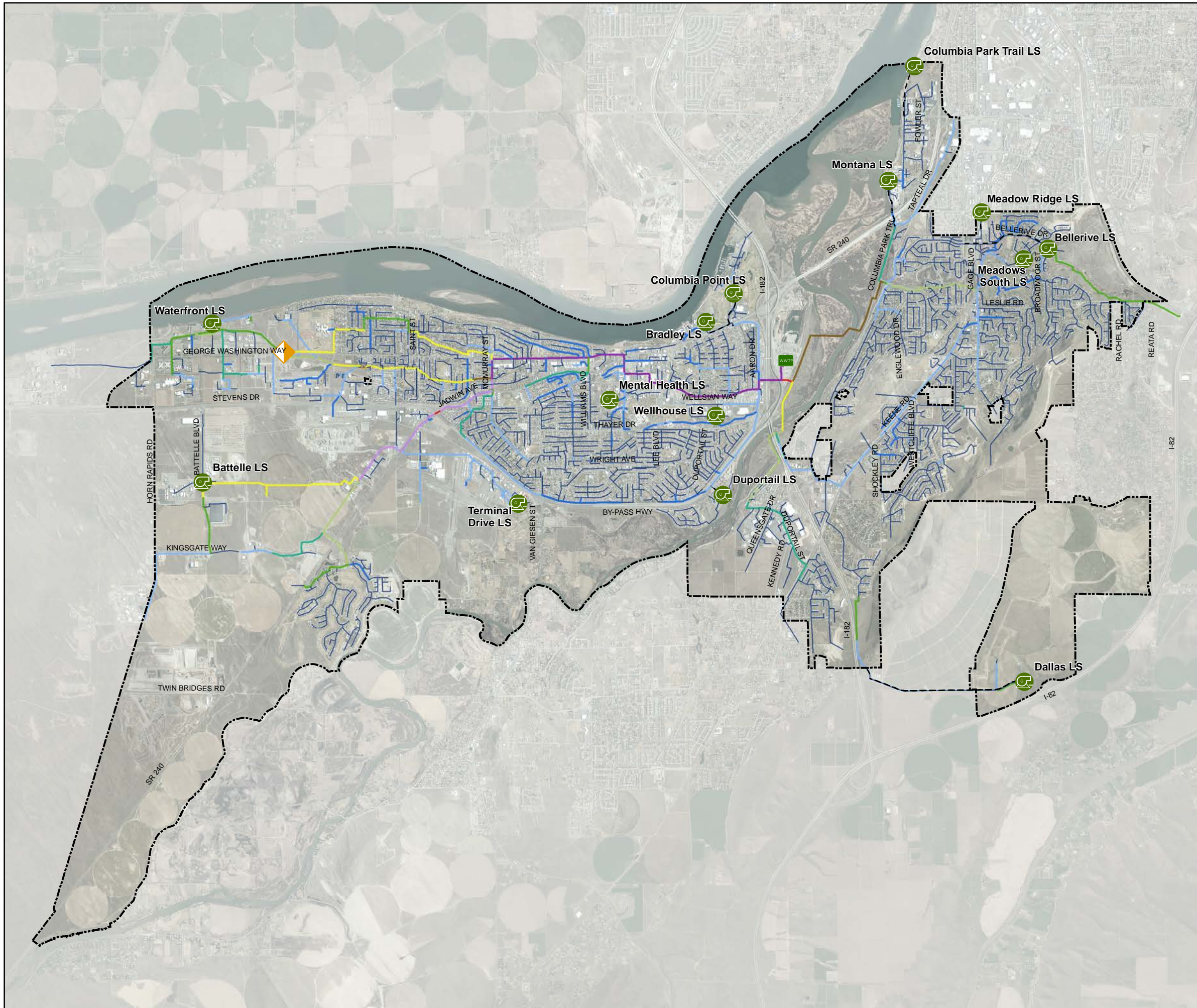
## Existing System

### Legend

- City Limits
- Waste Water Treatment Plant
- City Lift Stations
- George Washington Way Diversion Structure
- Forcemain

### Existing Pipe Size (in)

- Collector
- 10
- 12
- 15
- 18
- 21
- 24
- 27
- 30
- 36
- 42
- 54

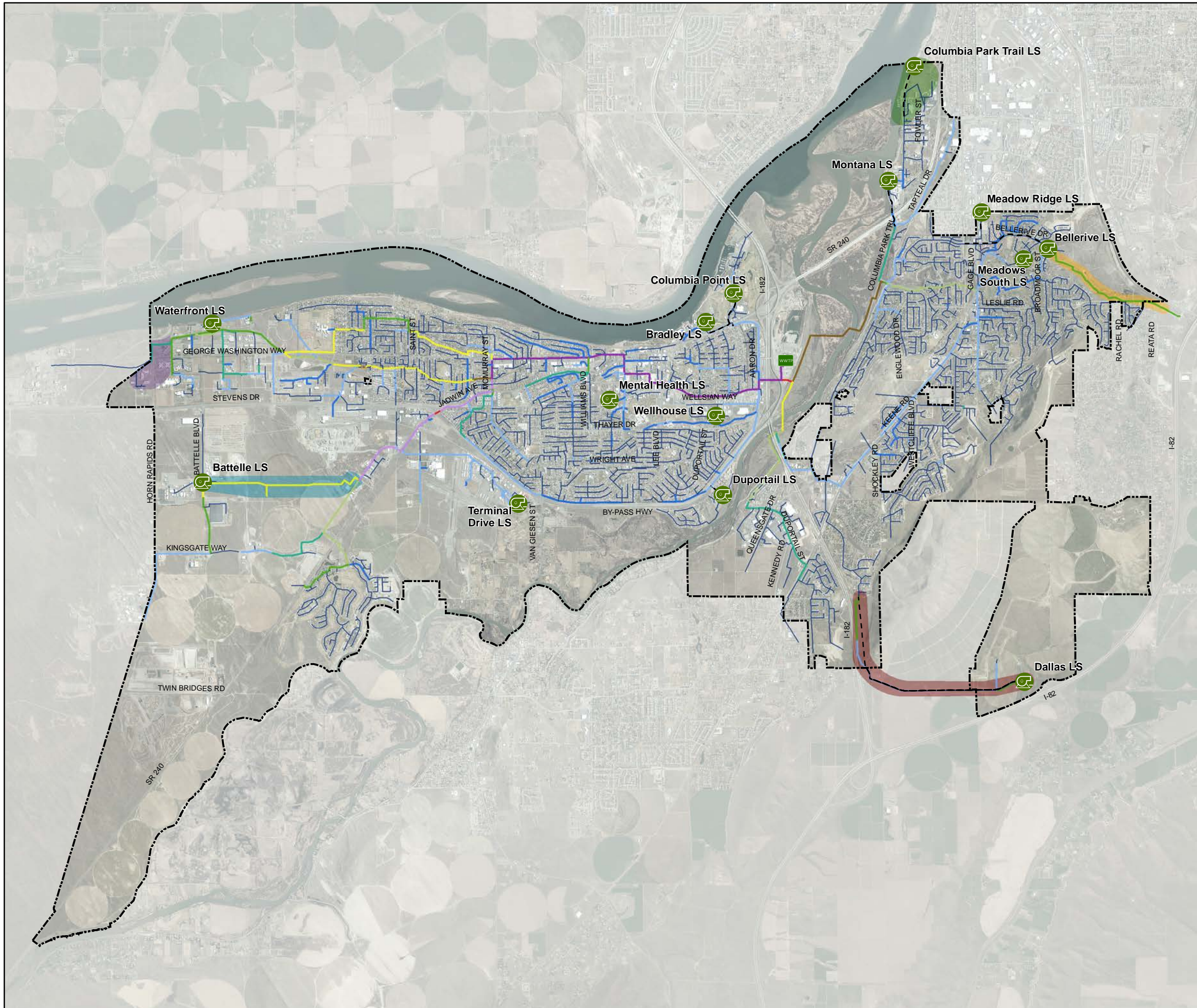


Date: Dec 4, 2015



# Figure A2

## Update to Existing Model



- Legend**
- City Limits
  - Waste Water Treatment Plant
  - City Lift Stations
  - Forcemain

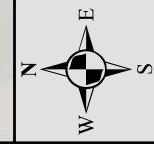
**Existing Pipe Size (in)**

- Collector
- 10
- 12
- 15
- 18
- 21
- 24
- 27
- 30
- 36
- 42
- 54

**Added Sewer Collection Piping Improvement Areas**

- Physical Sciences Facility
- Logston Sewer Interceptor
- RY Basin Improvements
- Leslie Sewer Trunk
- Badger South Development

0 1 2 Miles



Date: Dec 4, 2015



# Figure A3

## Flow Monitoring Sites

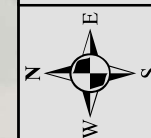
### Legend

- City Limits
- Waste Water Treatment Plant
- City Lift Stations
- (8) Selected Flow Monitor Locations for Comp. Plan Update
- Forcemain

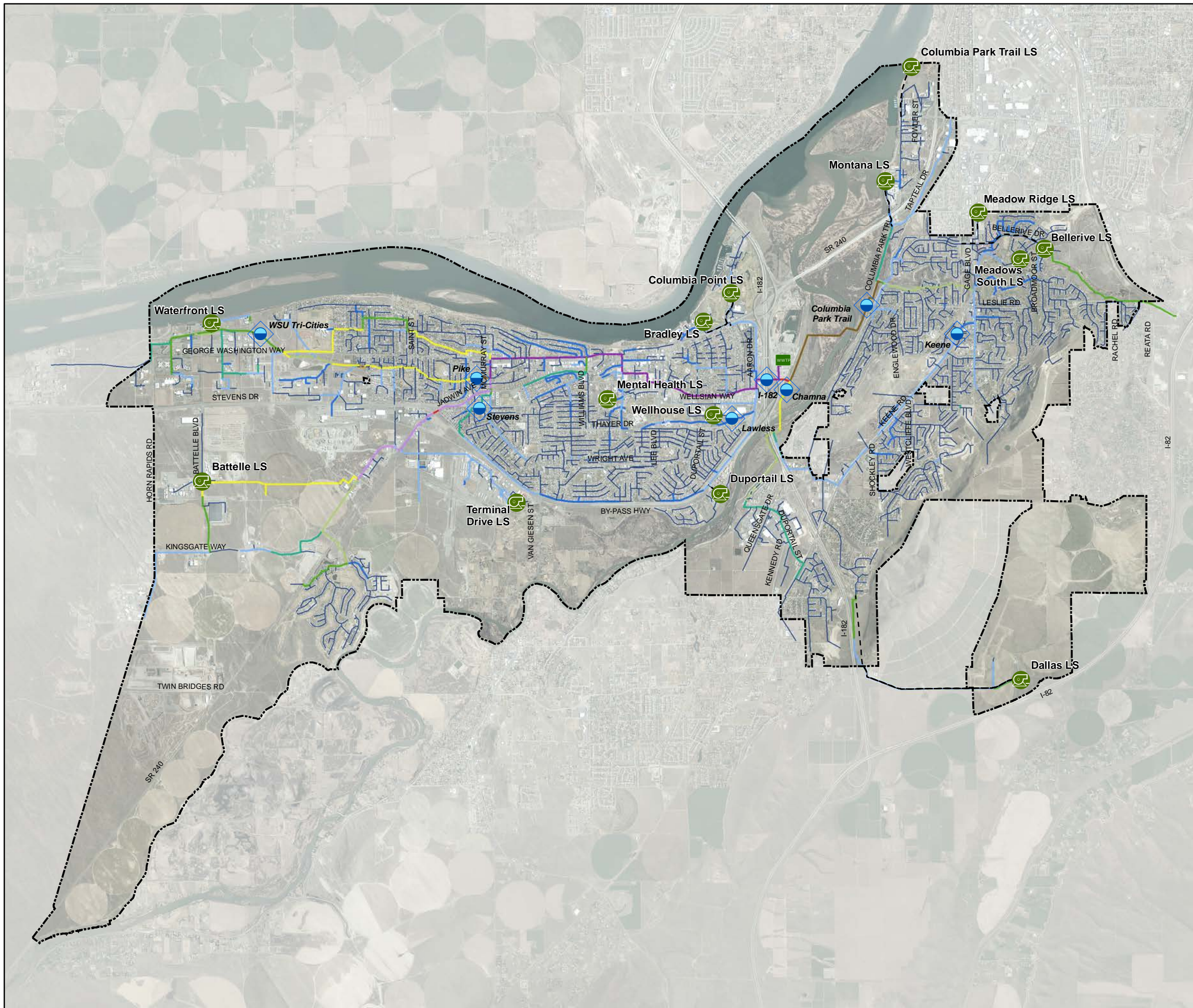
### Existing Pipe Size (in)

- Collector
- 10
- 12
- 15
- 18
- 21
- 24
- 27
- 30
- 36
- 42
- 54

0 1 2 Miles



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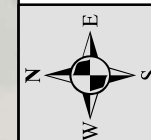
# Figure A4

## Depth Over Diameter Existing Model

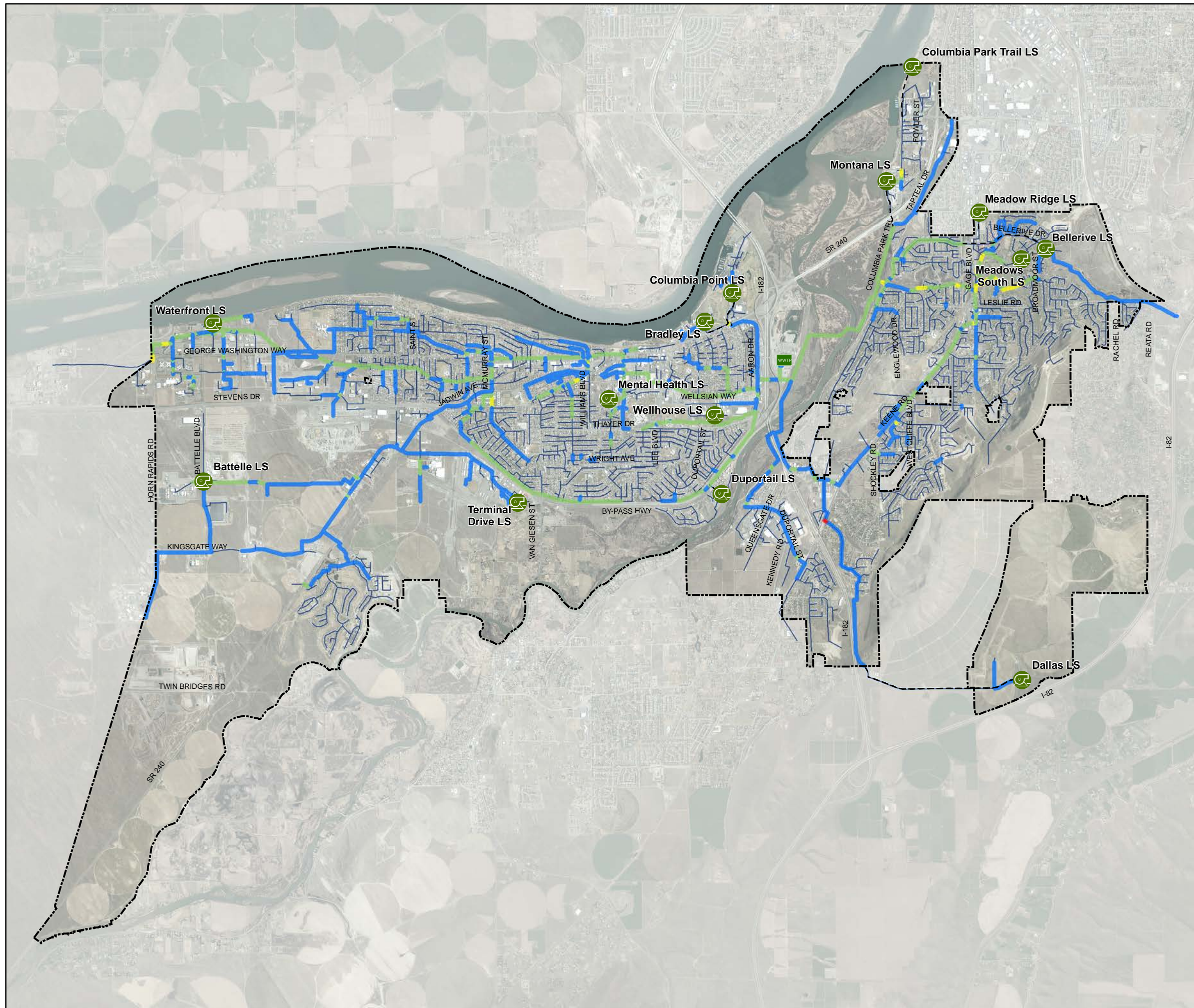
**Legend**

- City Limits
- Waste Water Treatment Plant
- City Lift Stations
- Forcemain
- Collector
- Existing Trunk Depth Over Diameter**
- 0.00 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.50

Notes:  
1. Results include the design storm event (2yr, 3hr)-0.424"



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# Figure A4.a Bottlenecks

**CORE ISSUE** Insufficient Capacity

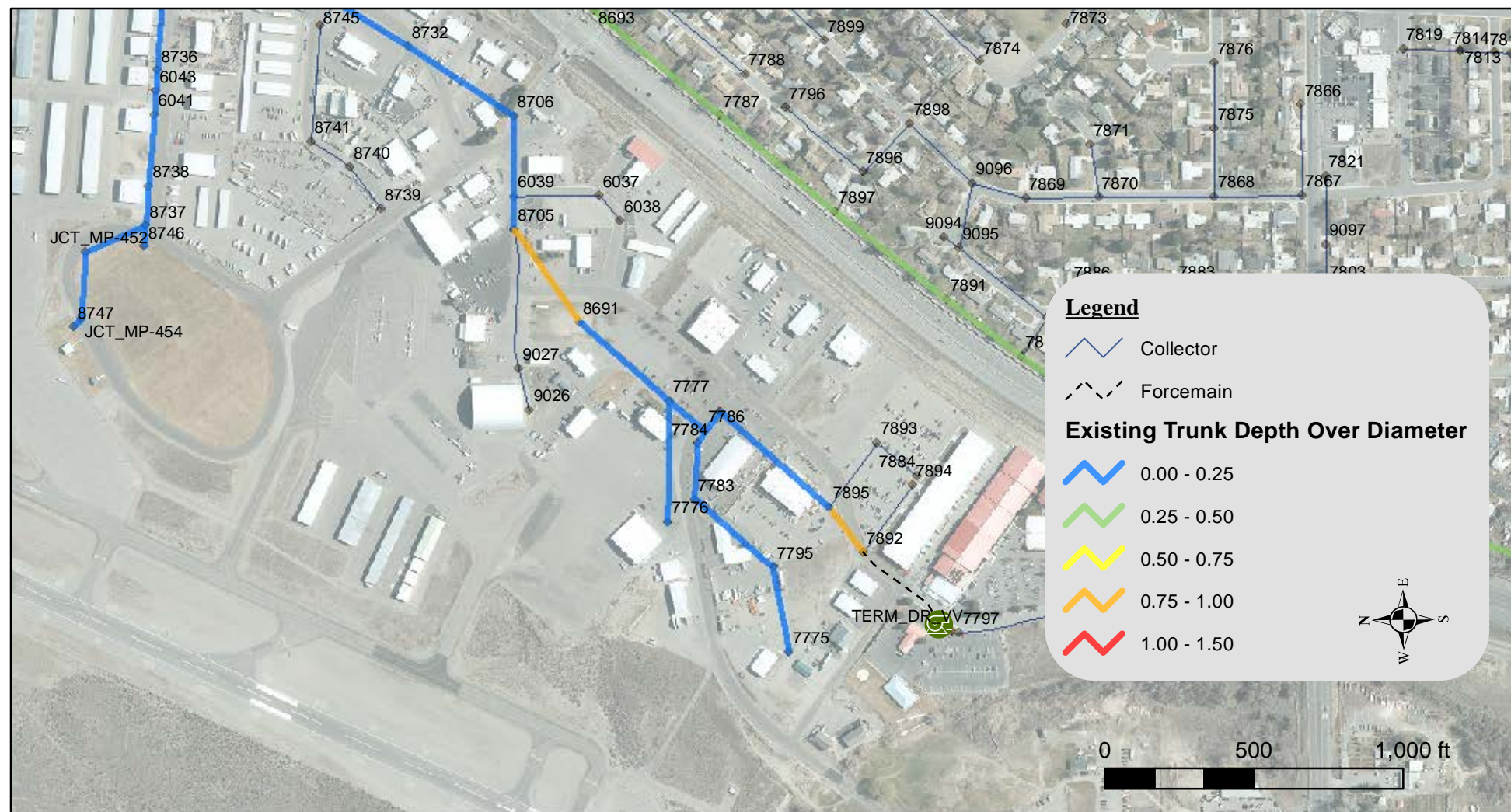
**BACKGROUND**

**RECOMMENDED SOLUTION**

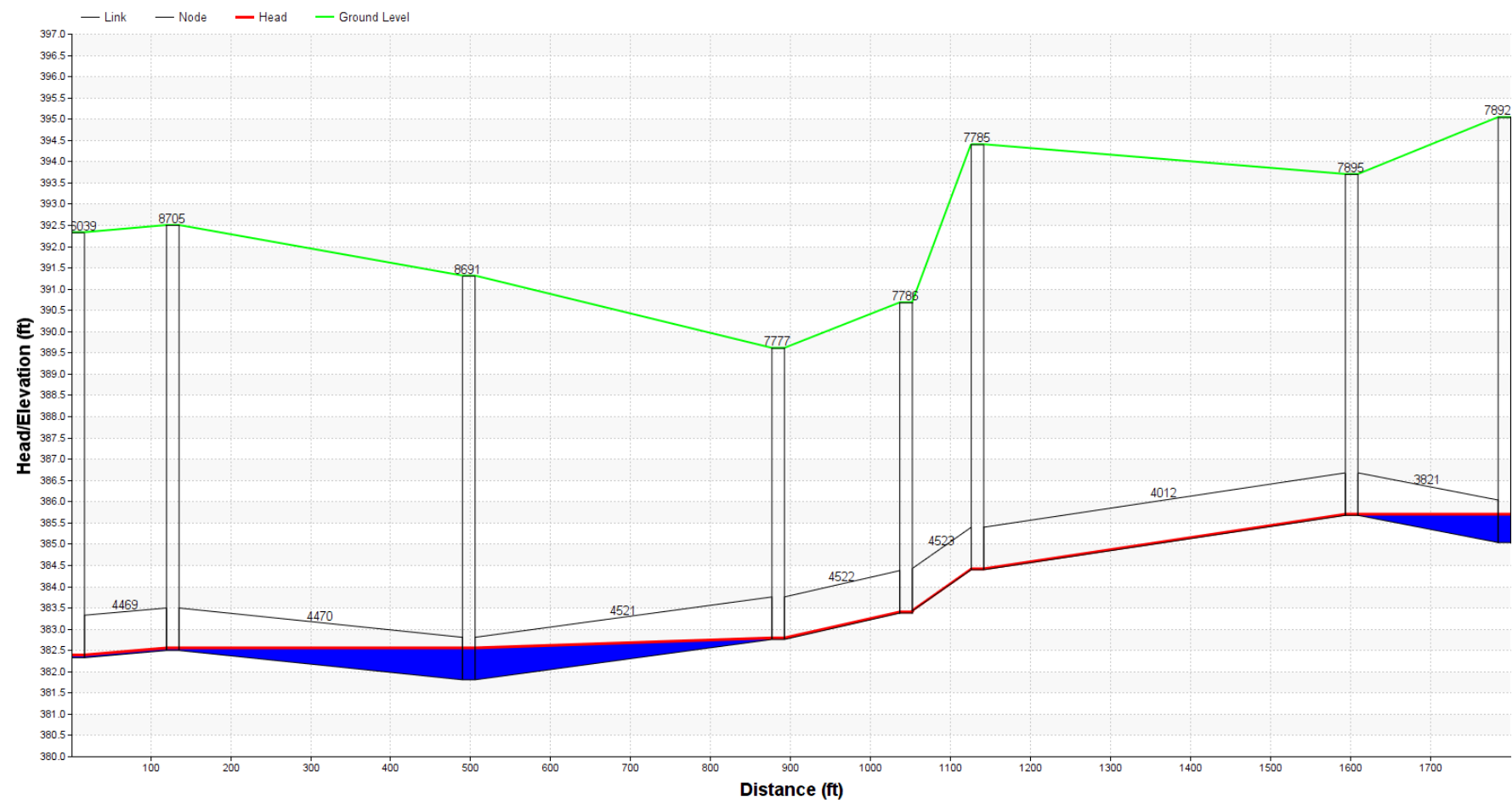
**PROJECT TIMING**

**NOTE**  
A Master Plan is conceptual in nature and intended for planning purposes only. Field verification, survey, utility locates, and investigation of other potential upstream and downstream conflicts should be completed prior to preliminary and final design.

Draft  
Progress  
Print  
Date: Feb 10, 2015



HGL Profile at Day 1; 00:00 of Links 4469,4470,....,3821



# Figure A5

## Reserve Capacity Existing Model

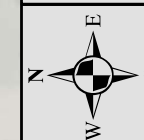
### Legend

- City Limits
  - Waste Water Treatment Plant
  - City Lift Stations
  - Collector
  - Forcemain
- Existing Trunk Reserve Capacity**
- > 10.00
  - 5.00 - 10.00
  - 3.00 - 5.00
  - 2.00 - 3.00
  - 1.50 - 2.00
  - 1.00 - 1.50
  - 0.50 - 1.00
  - 0.25 - 0.50
  - 0.01 - 0.25
  - Over Capacity

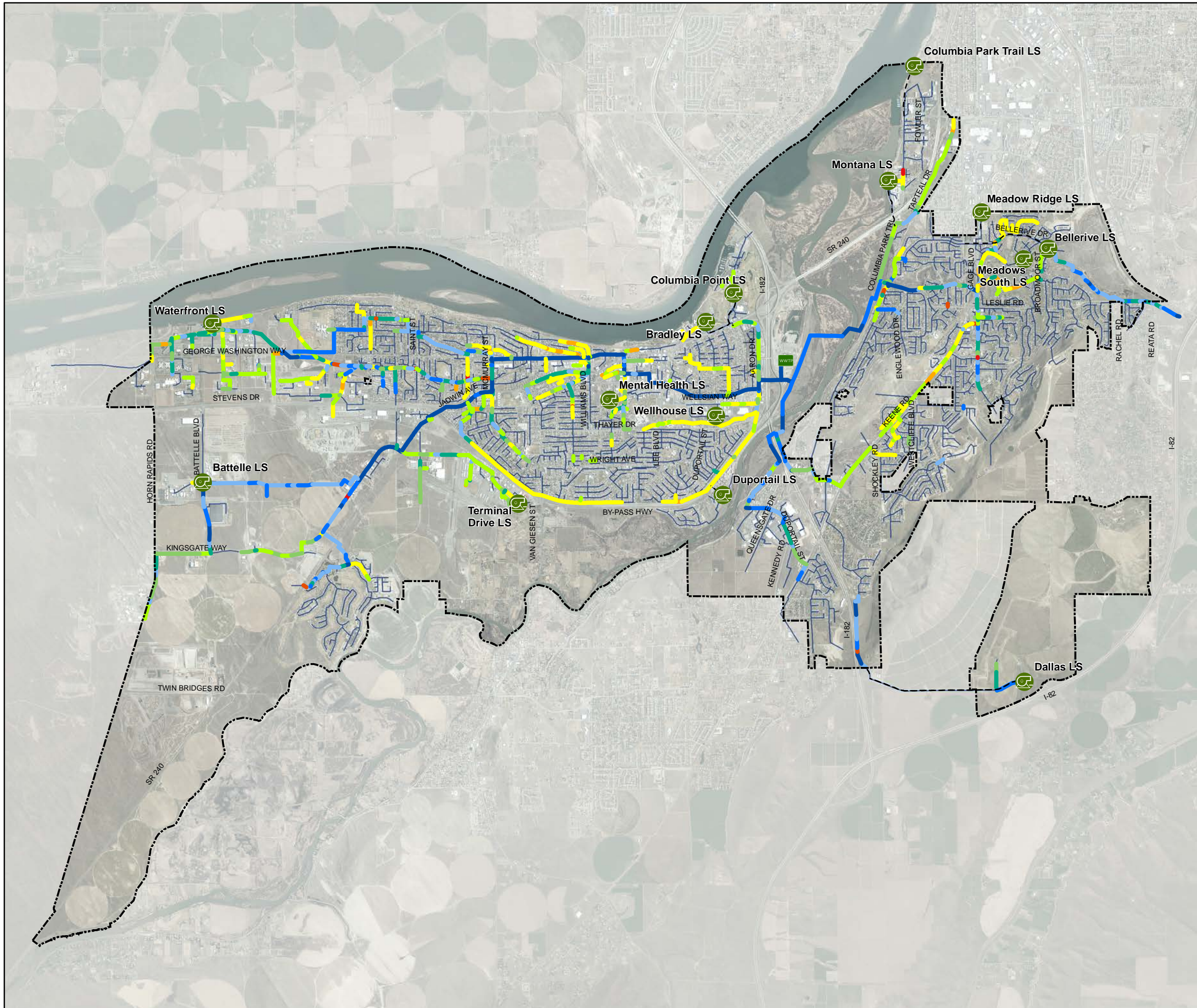
**Notes:**

1. Results include the design storm event  
(2yr, 3hr) - 0.424"

0 1 2 Miles



Date: Dec 4, 2015

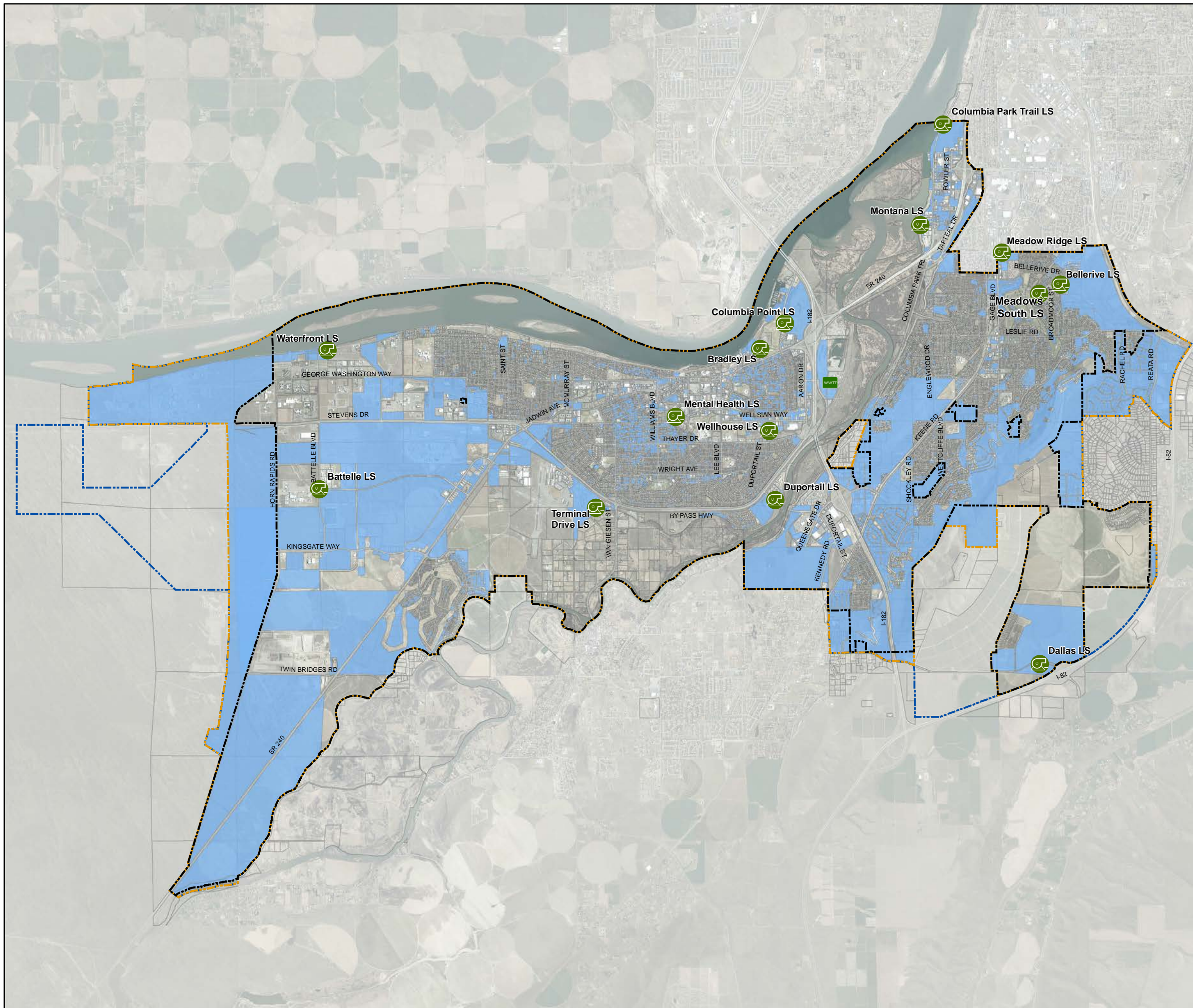


# Figure A6

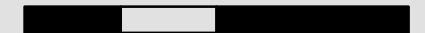
## Committed System

### Legend

- City Limits
- UGA
- 50-yr Planning
- Waste Water Treatment Plant
- City Lift Stations
- Infill Areas within UGA



0 6,000 12,000 Feet



Date: Dec 9, 2015



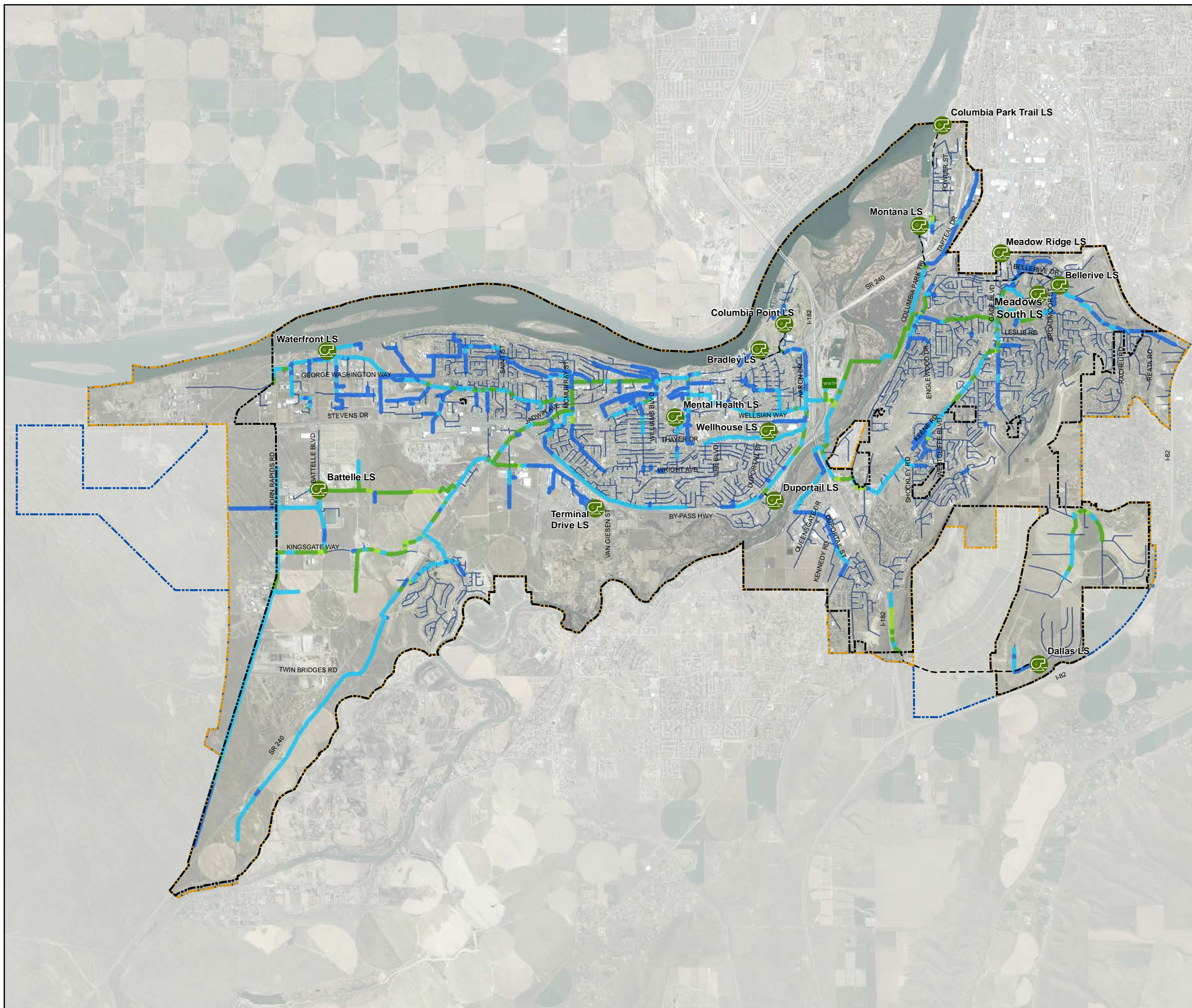


# Figure A7

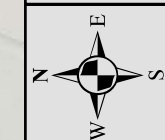
## Depth Over Diameter Committed System

### Legend

- City Limits
  - UGA
  - 50-yr Planning
  - Waste Water Treatment Plant
  - City Lift Stations
  - Collector
  - Forcemain
- Committed Trunk Depth Over Diameter**
- 0.00 - 0.25
  - 0.25 - 0.50
  - 0.50 - 0.75
  - 0.75 - 1.00
  - 1.00 - 1.50
  - 1.5 - 2.0
  - > 2 color swatch"/> > 2



0 6,000 12,000 Feet



Date: Dec 9, 2015



# Figure A8

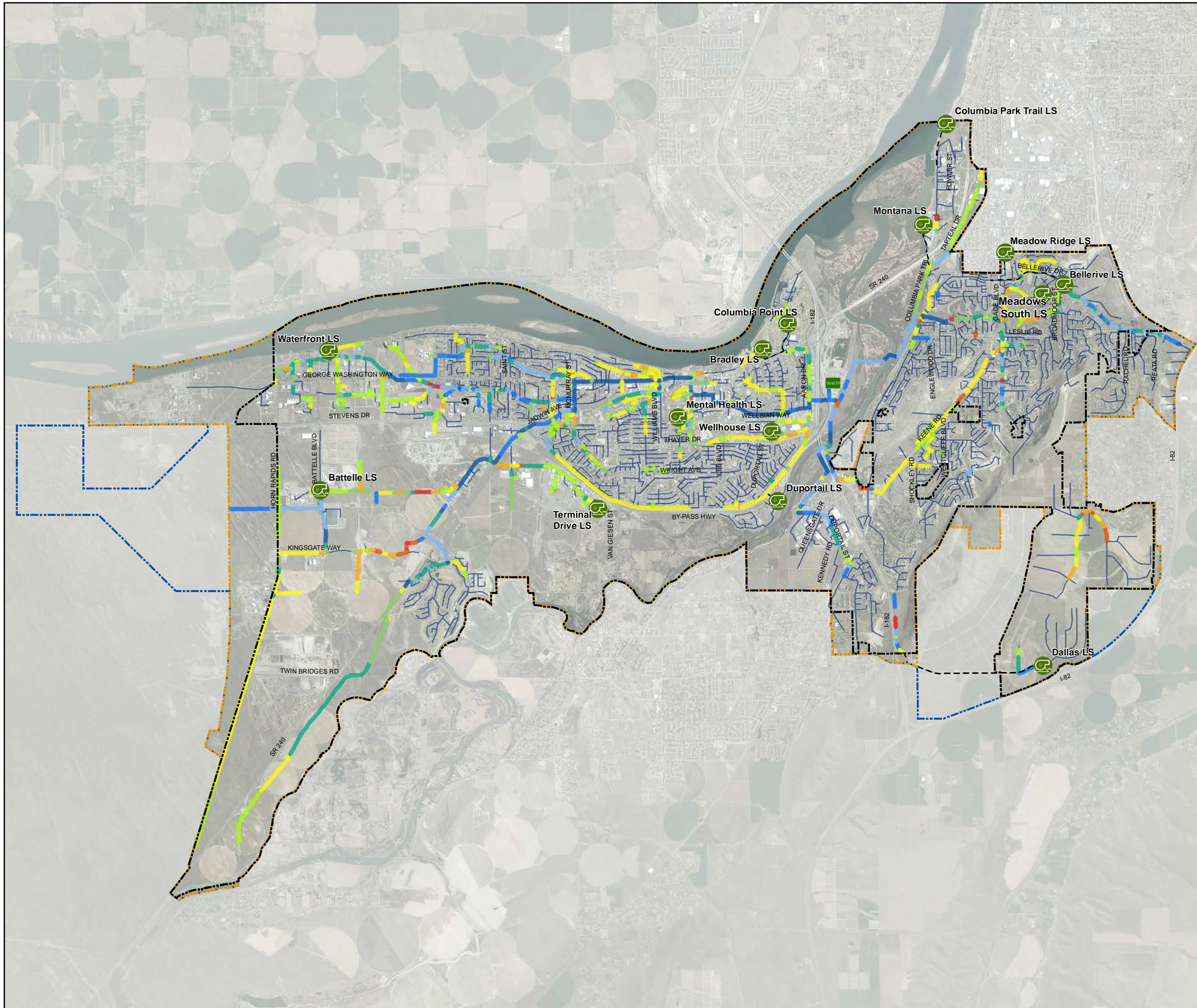
## Reserve Capacity Committed System

**Legend**

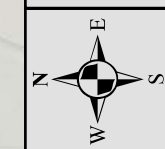
- City Limits
- UGA
- 50-yr Planning
- Waste Water Treatment Plant
- City Lift Stations
- Collector
- Forcemain

**Committed Trunk Reserve Capacity**

- > 10.00
- 5.00 - 10.00
- 3.00 - 5.00
- 2.00 - 3.00
- 1.50 - 2.00
- 1.00 - 1.50
- 0.50 - 1.00
- 0.25 - 0.50
- 0.01 - 0.25
- Over Capacity



0 6,000 12,000 Feet

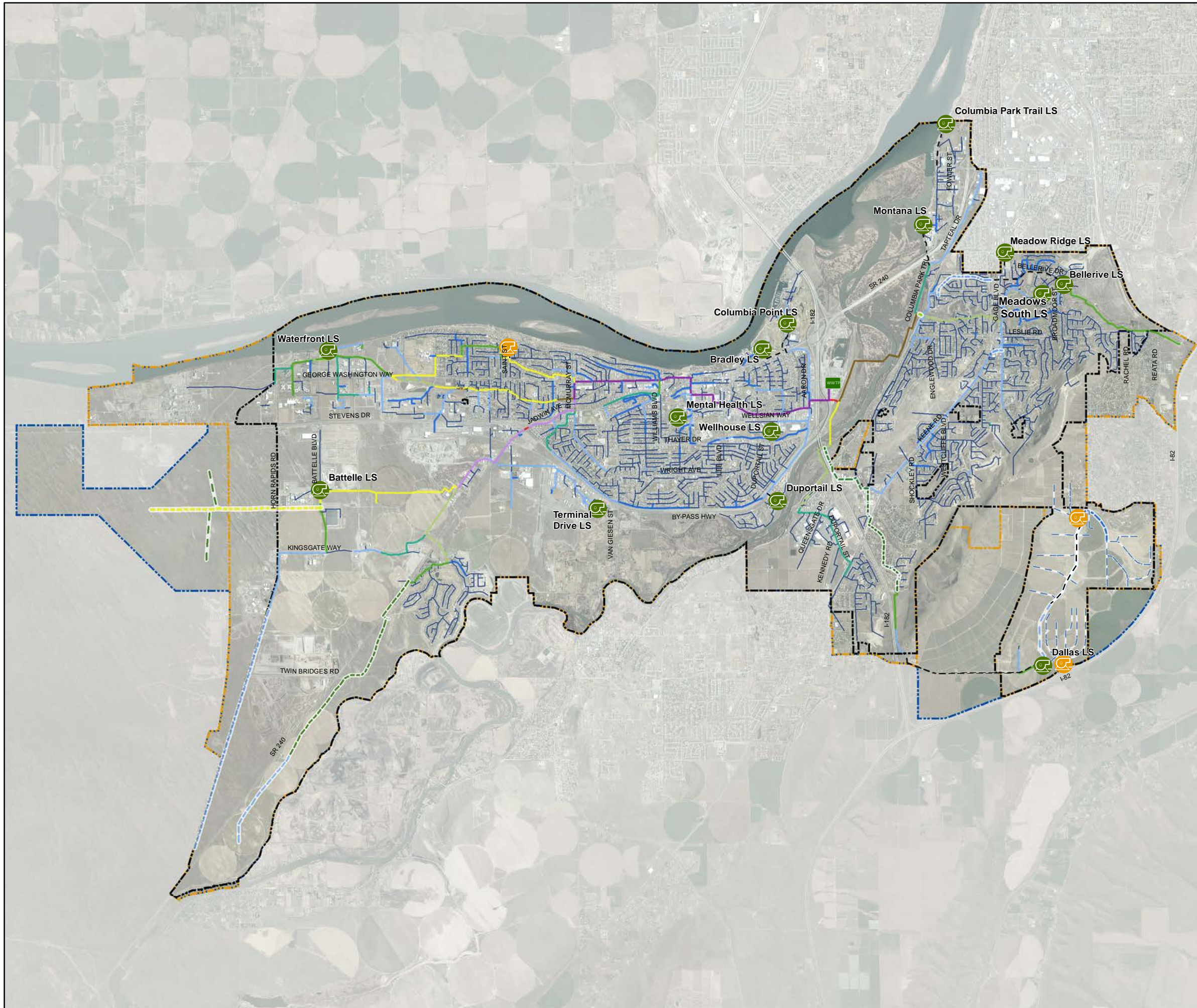


Date: Dec 9, 2015



# Figure A9

## Master Plan System



### Legend

- City Limits
- UGA
- 50-yr Planning
- Waste Water Treatment Plant
- City Lift Stations
- MP City Lift Station

Existing Size (in)		MP Pipe Size (in)	
	Collector		Collector
	10		10
	12		12
	15		15
	18		18
	21		21
	24		24
	27		27
	30		30
	36		36
	42		42
	54		54
	Forcemain		MP Forcemain

0 6,000 12,000 Feet

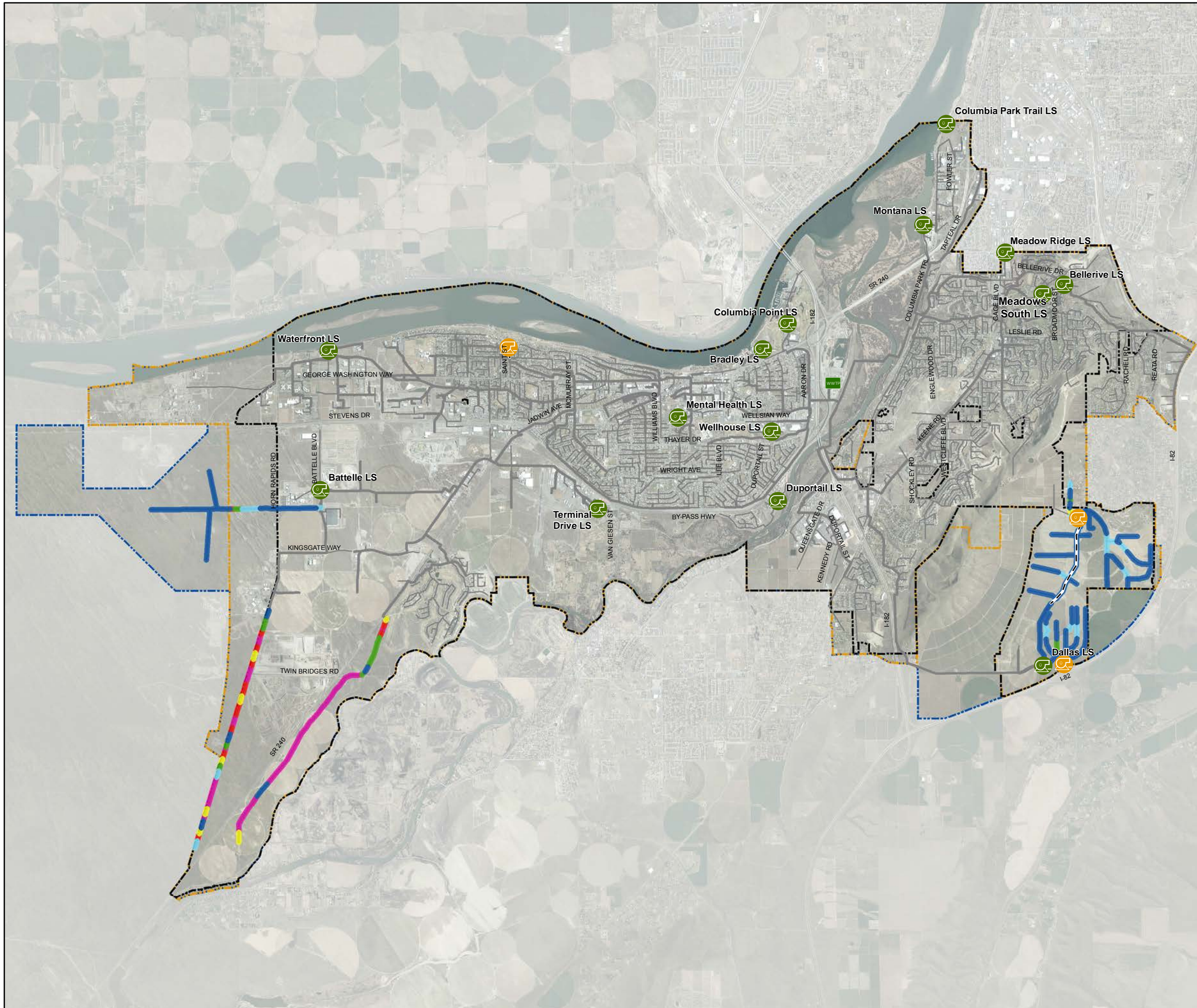


Date: Dec 10, 2015



# Figure A10

## Master Plan Trunk Depth



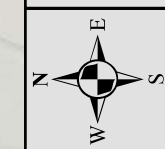
**Legend**

- City Limits
- UGA
- 50-yr Planning
- Waste Water Treatment Plant
- City Lift Stations
- MP City Lift Station
- Collector
- Trunk
- MP Forcemain

**Master Plan Depth (ft)**

- ≤ 10
- 10.1 - 15
- 15.1 - 20
- 20.1 - 25
- 25.1 - 30
- >30

0 6,000 12,000 Feet



Date: Dec 9, 2015



# Figure A11

## Depth Over Diameter Master Plan Model

### Legend

- City Limits
  - UGA
  - 50-yr Planning
  - Waste Water Treatment Plant
  - City Lift Stations
  - MP City Lift Station
  - Collector
  - Forcemain
  - MP Forcemain
- Master Trunk Depth Over Diameter**
- 0.00 - 0.25
  - 0.25 - 0.50
  - 0.50 - 0.75
  - 0.75 - 1.00
  - 1.00 - 1.50

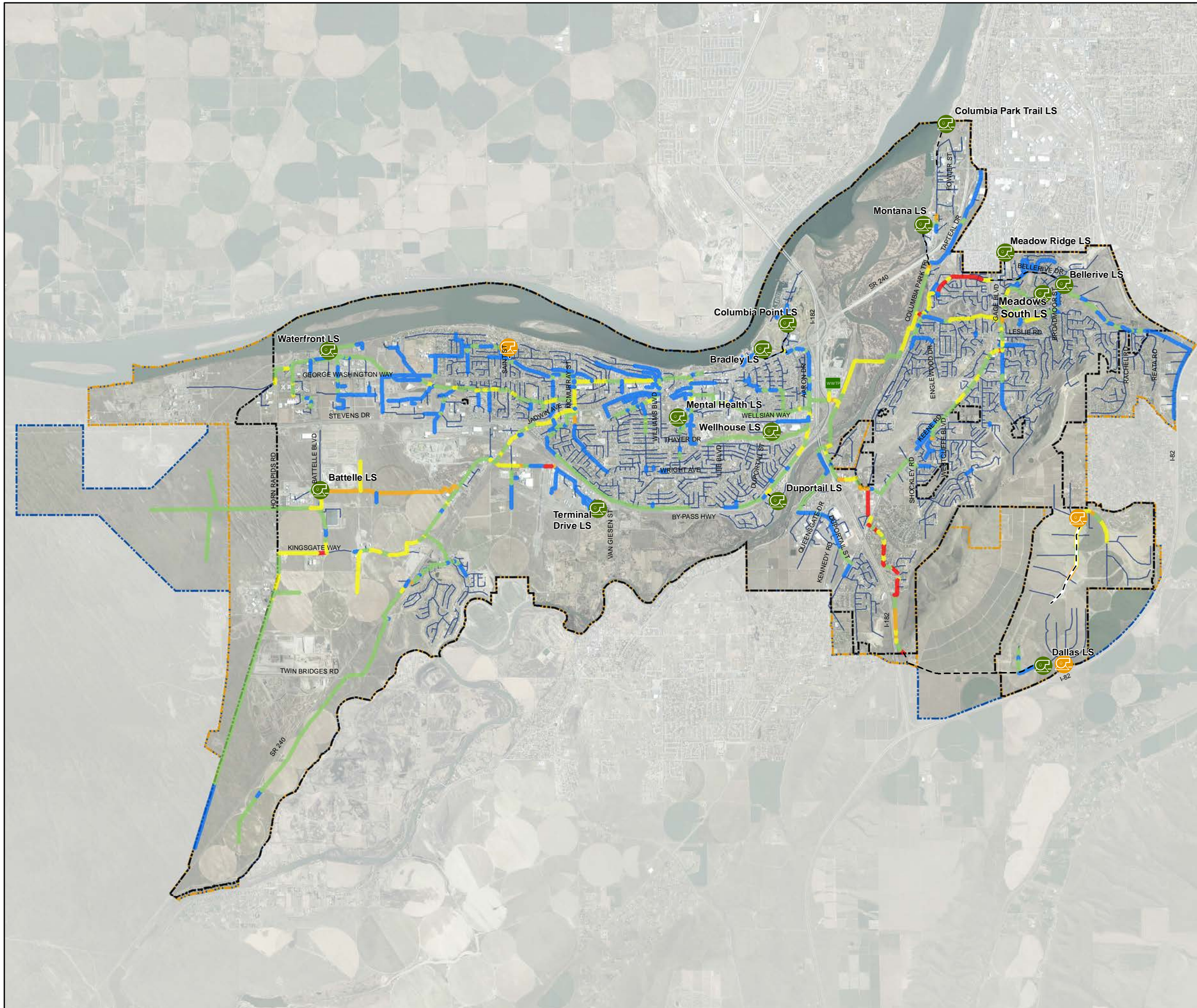
**Notes:**

1. Results include the design storm event (2yr, 3hr)-0.424"

0 6,000 12,000 Feet



Date: Dec 9, 2015



# Figure A12

## Reserve Capacity Master Plan Model

### Legend

- City Limits
- UGA
- 50-yr Planning
- Waste Water Treatment Plant
- City Lift Stations
- MP City Lift Station
- Collector
- Forcemain
- MP Forcemain

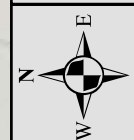
### Master Trunk Reserve Capacity (MGD)

- > 10.00
- 5.00 - 10.00
- 3.00 - 5.00
- 2.00 - 3.00
- 1.50 - 2.00
- 1.00 - 1.50
- 0.50 - 1.00
- 0.25 - 0.50
- 0.01 - 0.25
- Over Capacity

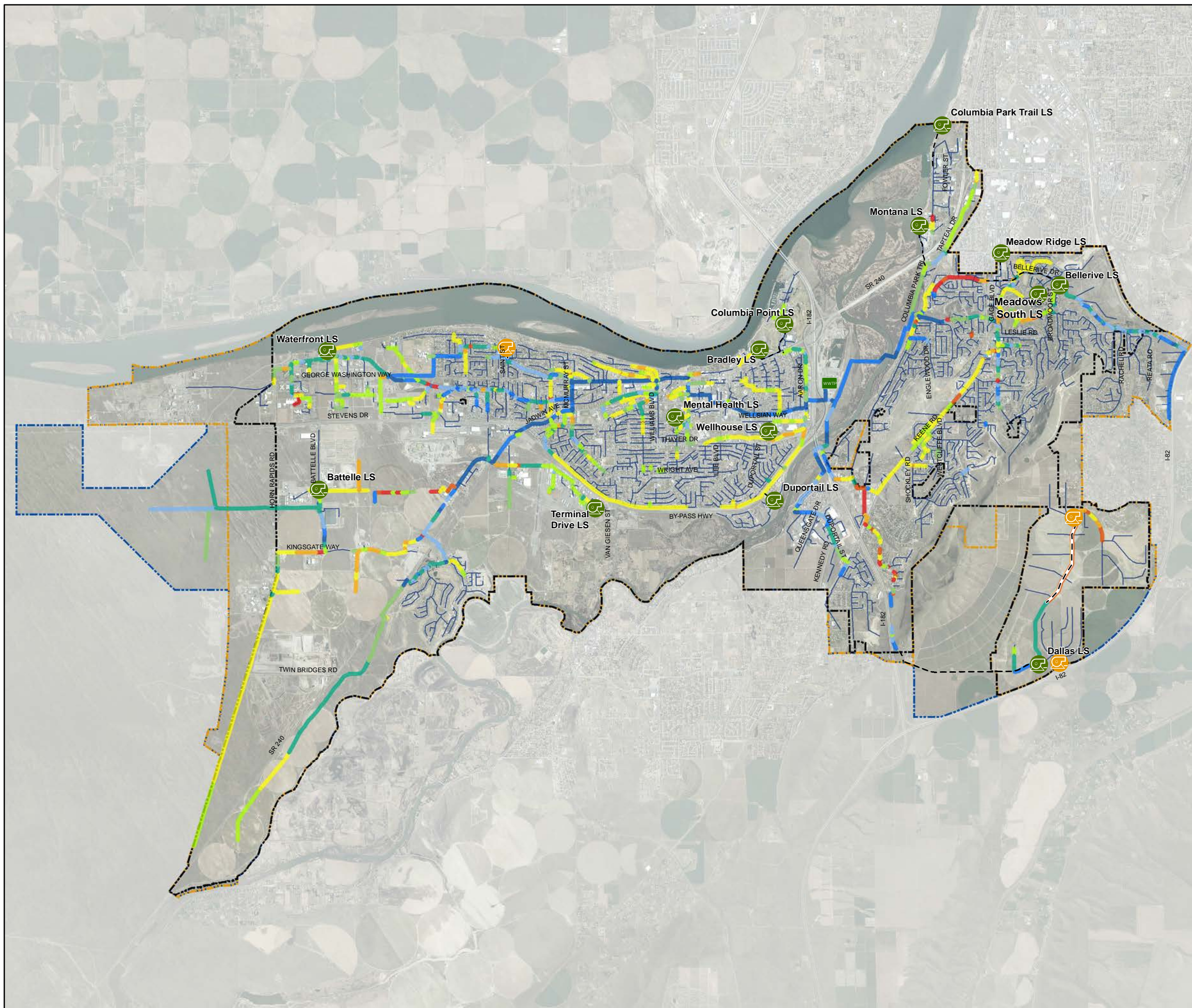
### Notes:

1. Results include the design storm event (2yr, 3hr)-0.424"

0 6,000 12,000 Feet

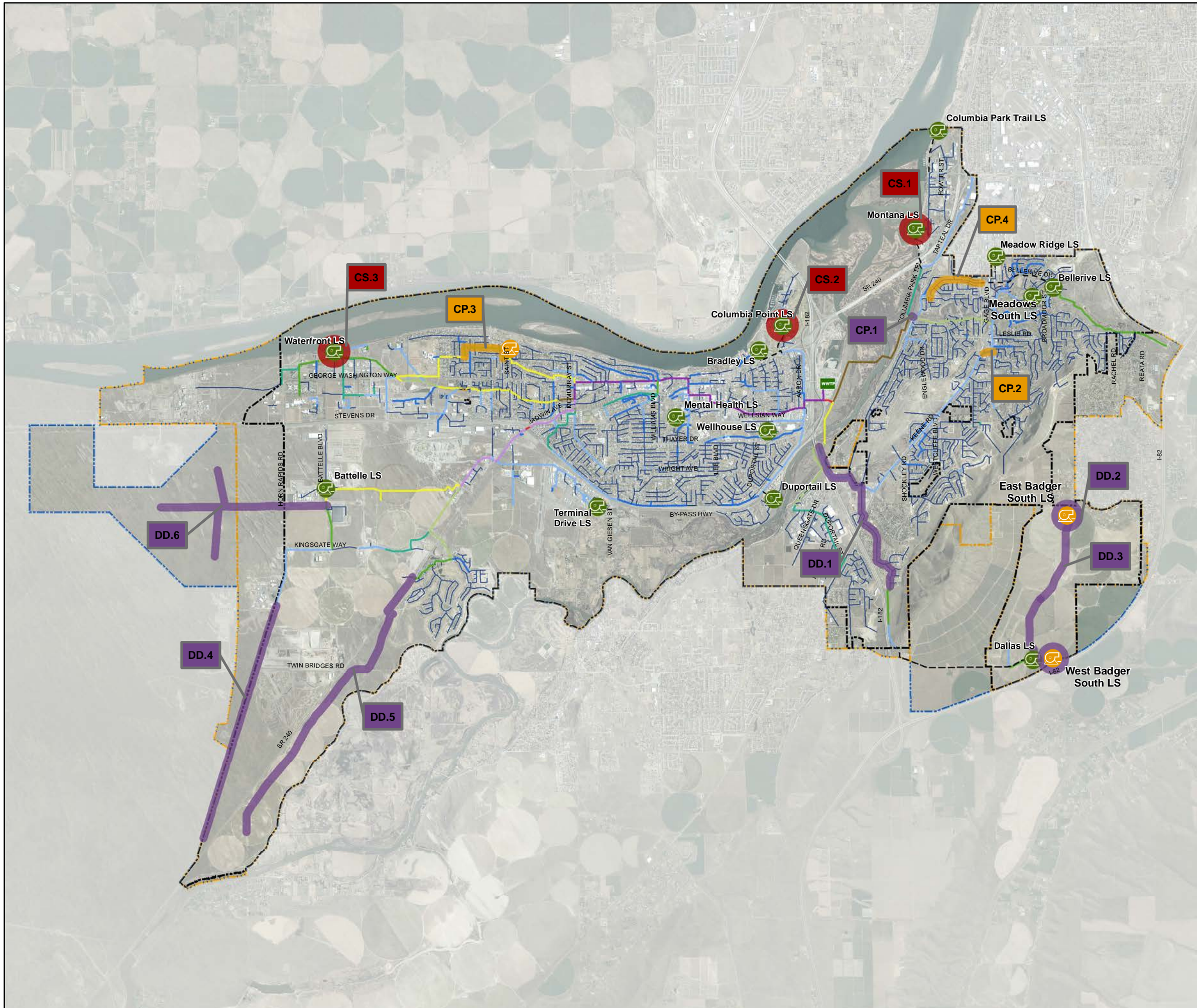


Date: Dec 9, 2015



# Figure A13

## CIP Summary Map



**Legend**

- |  |                             |  |                    |
|--|-----------------------------|--|--------------------|
|  | City Limits                 |  | Existing Size (in) |
|  | UGA                         |  | Collector          |
|  | 50-yr Planning              |  | 10                 |
|  | Waste Water Treatment Plant |  | 12                 |
|  | City Lift Stations          |  | 15                 |
|  | MP City Lift Station        |  | 18                 |
|  | 2015-2019                   |  | 21                 |
|  | 2020-2024                   |  | 24                 |
|  | With Growth                 |  | 27                 |
|  |                             |  | 30                 |
|  |                             |  | 36                 |
|  |                             |  | 42                 |
|  |                             |  | 54                 |
|  |                             |  | Forcemain          |

**NOTE**

A Master Plan is conceptual in nature and intended for planning purposes only. Field verification, survey, utility locates, and investigation of other potential upstream and downstream conflicts should be completed prior to preliminary and final design.

0 6,000 12,000 Feet



Date: Dec 9, 2015

