STORMWATER IMPACT FEE FACILITIES PLAN & ANALYSIS

Washington City
Stormwater

March 2022

Washington City
Where Dixie Begins

ORDINANCE NO. 2022-10

AN ORDINANCE OF WASHINGTON CITY APPROVING AND AMENDING A STORMWATER IMPACT FEE FACILITIES PLAN AND ANALYSIS PLAN.

WHEREAS, the City Council of Washington City ("City Council") finds and determines growth and development activity in the city will create additional demand and need for storm water control in the City and will require that the City's stormwater system be improved and enlarged to support said growth in the City; and

WHEREAS, the City has pursuant to Utah Code 11-36a-301, had a study and analysis performed addressing stormwater needs and impacts in the City to determine existing stormwater system conditions and needs, and to determine projected needs as the City grows during the next 20 years, which study and analysis shall serve as an Impact Fee Facilities Plan for the storm water system; and

WHEREAS, the City Council desires to give formal acceptance and approval of said master and capital facilities plan for the stormwater system; and

WHEREAS, the City Council desires to impose impact fees based upon said master and capital facilities plan for the stormwater system and the analysis contained therein; and

WHEREAS, the City Council finds that impact fees should be charged to all new connections to the City's stormwater system, which may be used to pay for the debt service associated with the debt capacity built into the system, the cost of improvements to the system that are required to support new growth and development as the new connections are added to the system; and

WHEREAS, the City Council, after a public notice as required by law, held a public hearing on March 9, 2022, to consider the adoption of this Ordinance, a copy of which, as well as well as the copy of the master and capital facilities plan for the stormwater system, has been made available for public inspection at the Washington City Office Building for a period of 10 days prior to such public hearing.

NOW THEREFORE, BE IT HEREBY ORDAINED by the City Council as follows:

1. Washington City hereby approves and adopts the following master plan and

impact fee facilities plan for the storm water system of the City: *Storm Water Capital Facilities Master Plan Update, Washington City, Utah,* dated January, 2022, prepared by Civil Science.

2. The City hereby establishes one service area consisting of the entire geographical area of Washington City, including future annexed area.

3. The City hereby establishes a $4,745 per acre impact fee to be charged to all new connections to the City's storm water system.

4. The impact fee shall be calculated and charged to all new connections to the City's storm water system as follows:

    (a) The 'per lot' impact fee area calculation shall be the total area of the final plat - including streets, open spaces and other common area - divided by the number of lots, with each lot in the final plat having an equal share of the cost. The impact fees shall be paid to the City prior to final plat recordation, or paid prior to issuance of a building permit if for an existing platted lot where fees were not collected at the time of final plat recordation (b) In specific cases where a property is developed on a parcel that is not part of a final plat, the impact fee area calculation shall include the parcel area, plus the area to the centerline of the property road frontage, plus the proportionate share of community common spaces. In these cases the impact fees shall be paid to the City prior to issuance of a building permit.

5. The City, through the Public Works Director or his designee, may adjust the amount of stormwater impact fees to be paid on any specific development based upon studies and/or data submitted by the developer demonstrating that a stormwater master plan requirement has been satisfied having a value equivalent to or greater than the value of the desired calculated impact fee credit.

6. The City Council may adjust the impact fee at the time the same is charged to (a) respond to unusual circumstances in specific cases and (b) ensure that impact fees are imposed fairly.

7. All impact fees received by the City pursuant to this Ordinance shall be used for, and, as appropriate refunded in compliance with Utah Code 11-36-601, 602, and 603.

8. Any fee payer that has paid an impact fee pursuant to this Ordinance may

challenge the impact fee by filing:

(a) an appeal to the City as outlined in Section 9 of this Ordinance, or pursuant to Utah Code 11-36a-701; or

(b) a request for arbitration as provided in Utah Code 11-362-705; or (C) an action in state district court as provided in Utah Code 11-36a 703(2)(c).

9. Any person or entity that has paid or made an impact fee required by this Ordinance may challenge or appeal the impact fee by filing a written notice of appeal with the City Recorder within 30 days of the date that the fee was paid or made. Upon receiving the challenge or appeal, the City shall set a hearing date to consider the merits of the challenge or appeal. The hearing panel, which shall consist of the City Council or such other body as the City shall designate, shall hold a hearing and make a decision within 30 days after the date that the challenge or appeal is filed. The person or entity challenging or appealing the fee may appear at the hearing and present any written or oral evidence deemed relevant to the imposition of the fee. The decision of the hearing panel shall be in writing and shall be supported by written findings. No appeal shall be permitted unless and until the impact fees at issue have been paid.

10. This Ordinance supersedes and/or repeals the provision(s) of any ordinance(s) or resolution(s) that is-are inconsistent with the provisions of this Ordinance.

11. The Storm Water Capital Facilities Master Plan portion of this Ordinance shall take effect upon publication or posting, as required by law.

12. The StormWater Impact Fee portion of this Ordinance shall take effect June 8, 2022 or upon posting, as required by law.

PASSED AND ORDERED POSTED on this 9th day of March, 2022.

Washington City

Attest:

Kress Staheli, Mayor

Tara Pentz, City Recorder

STORMWATER IMPACT FEE FACILITIES PLAN & IMPACT FEE ANALYSIS

March 2022

City Council

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

1 EXECUTIVE SUMMARY

1.1 Introduction

This study is an update to the 2014 Washington City Storm Water Capital Facilities Master Plan Update (2014 CFP) by Rosenberg Associates. The primary objective of this study is to establish plans to guide the development of future stormwater system improvements through modeling the existing system conditions, the 10-year conditions, as well as longer term 20-year conditions. The outcomes of the stormwater study are: recommended improvements, estimated project costs, a maximum allowable impact fee, recommended user rate schedule, and projected cash flow for Washington City's stormwater system.

1.2 User Analysis

Table 1, in Section 3 below, shows historical annual growth rates of 2%-4%. Projected annual growth rates for this study are shown in Table 1 as 3% per year for 20 years. It was assumed that residential and commercial (or non-residential) growth will occur at the same rate.

- 2020 estimated population – 29,030
- 2030 estimated population – 39,013
- 2040 estimated population – 52,431

1.3 Existing Facilities Inventory

Washington City currently maintains a gravity stormwater system that has miles of pipes, numerous inlets, local and regional detention basins, and open channels. Stormwater is generally conveyed to the Virgin River, which bisects the City into north and south sections. Because of low infiltration, steep slopes, and concentrated microburst rain events, Washington City has experienced serious stormwater runoff events. The City has taken major steps to mitigate the possible flooding from these storm events including constructing large detention basins and storm drain trunk lines, consistent maintenance of detention basins and storm drain network facilities, and preservation of natural channels.

1.4 System Analysis

Washington City provided GIS data for the stormwater system pipes, manholes, inlets, and detention basins, as well as spatial data for subdivisions, zoning, and other critical land uses within the City's annexation area. Civil Science collected field data of the missing attributes for elevations of manhole rims, pipe sizes, and inverts. Civil Science and Washington City worked together to identify and correct data outliers used for model input. Watershed basins were delineated manually using existing surface contours. Critical attributes of each watershed were calculated and imported into InfoSWMM, the computer modeling software used for this plan. Storm drain network data such as invert elevation, pipe size, and inlet locations were also imported into the model.

Rainfall data from the NOAA Atlas 14 database and appropriate rainfall distributions were input into the model to create runoff hydrographs that were routed through the stormwater infrastructure. Model output and results are presented in Appendix E

1.5 Recommended Improvements

The table below shows the recommended projects and impact fee calculations. The impact fee is calculated by dividing the total eligible project costs by the 10-year developable acreage. The developable area was determined by removing unbuildable areas from the City boundaries and annexation areas assumed to be developed within 10 years.

Project ID	Impact Fee Eligible %	Project Cost	Impact Fee Eligible Cost	User Fee Eligible Cost
GRP-01	20%	$ 775,400	$ 155,080	$ -
GSE-01	100%	$ 889,200	$ 889,200	$ -
GSE-02	100%	$ 358,100	$ 358,100	$ -
GSE-03	100%	$ 251,190	$ 251,190	$ -
GSW-01	0%	$ 73,400	$ -	$ 73,400
GYP-01	100%	$ 3,595,650	$ 3,595,650	$ -
MLC-01	0%	$ 984,400	$ -	$ 984,400
MLC-02	0%	$ 361,750	$ -	$ 361,750
MLC-03	30%	$ 1,049,170	$ 314,751	$ 734,419
MLC-04	0%	$ 160,645	$ -	$ 160,645
MLC-05	0%	$ 1,098,010	$ -	$ 1,098,010
STF-01	100%	$ 763,750	$ 763,750	$ -
STF-02	100%	$ 715,037	$ 715,037	$ -
STU-01	100%	$ 1,540,200	$ 1,540,200	$ -
STU-02	100%	$ 811,400	$ 811,400	$ -
WAD-01	100%	$ 2,170,435	$ 2,170,435	$ -
WAD-02	50%	$ 339,120	$ 169,560	$ 169,560
WAD-03	100%	$ 385,290	$ 385,290	$ -
WAD-04	100%	$ 604,140	$ 604,140	$ -
WAD-05	100%	$ 86,080	$ 86,080	$ -
WAD-06	100%	$ 555,120	$ 555,120	$ -
WAD-07	100%	$ 474,150	$ 474,150	$ -
WAD-08	100%	$ 345,180	$ 345,180	$ -
WAF-01	100%	$ 521,810	$ 521,810	$ -
WAF-02	100%	$ 635,910	$ 635,910	$ -
WAF-03	100%	$ 987,380	$ 987,380	$ -
WAF-04	50%	$ 359,450	$ 179,725	$ 179,725
WAF-05	100%	$ 319,170	$ 319,170	$ -
IFFP (5-yr & 10-yr)	100%	$ 140,000	$ 140,000	$ -
TOTAL		$ 21,350,537	$ 16,968,308	$ 3,761,909
Developable Area [acres]			3,573	
Maximum Allowable Impact Fee per Acre			**$4,749.04**	

The City's overall drainage system is separated into smaller watershed areas for convenience of referencing them. The table below shows the name of each watershed area the abbreviation used for the subbasin and project naming convention.

Watershed Area	Abbreviation
Cottonwood	CTW
Grapevine	GRP
Green Spring East	GSE
Green Spring West	GSW
Gypsum	GYP
Harrisburg	HRS
Mill Creek	MLC
Stucki Farms	STF
Stucki	STU
Washington Dam	WAD
Washington Fields	WAF
Warner Valley North	WVN
Warner Valley South	WVS

1.6 Financial Viability

The maximum allowable impact fee for all development is **$4,749.04 per acre**. In all cases, the impact fee eligible projects are planned to support continuing growth within the next ten years. The City Council adopted an ordinance to update the stormwater impact fee to $4,745.00 per acre.

The cash flow in Appendix C illustrates that if these rates and fees are established as presented, all recommended improvements can be constructed.

User rate calculations are presented to the right. The calculated monthly rate is **$6.80**, which is the same as the existing monthly rate.

Budget Item	Budget Costs
Salaries & Wages	$ 214,162.26
Employee Benefits	$ 156,639.36
Utilities	$ 5,986.38
Professional Services	$ 234,360.81
Repairs & Maintenance	$ 363,809.15
Miscellaneous	$ 14,099.46
Administrative Cost Allocation	$ 42,157.96
Supplies	$ 20,066.12
Totals	$ 1,051,281.50
ERC's	12,896
Calculated Monthly Rate	**$6.80**

**Current Monthly rate is $6.80 for residential users*

2 INTRODUCTION

2.1 Purpose and Scope

The primary objective of this Impact Fee Facilities Plan & Analysis (IFFPA) is to establish plans to guide the development of future stormwater system improvements. This study includes planning horizons for existing conditions, 10-year, as well as 20-year conditions. The analysis supporting these action plans show the current condition of the system (existing capacity), and how much growth can be allowed while still meeting State requirements and City Standards while providing an adequate level of service to existing customers.

Washington City's goal is to sustainably provide stormwater collection and conveyance for residents and enterprises within its service area while accommodating growth. The study area incorporates updated zoning conditions, and annexation areas consistent with recent City planning. Given the purpose and need described above, the following are key elements completed in the scope of work for this project:

- Conduct site visits and collect necessary data to define the system
- Coordinate the System User Analysis with other City master plans to project future demands
- Prepare base maps and background information
- Complete a hydraulic analysis for all aspects of the system:
    - Roadway conveyance
    - Storm drain systems
    - Detention basins
    - Drainage channels
    - Culvert crossings
- Evaluate the system under existing, 10-year, and 20-year conditions using a GIS based hydrologic and hydraulic network model
- Provide model output data to the City for use in its GIS system that is spatially accurate
- Prepare a written report with recommended improvements, an impact fee facilities plan, impact fee analysis, and user rate analysis

New Impact Fee Facilities Plan projects are required to convey stormwater runoff flows from new development. Undeveloped land does not require storm drain improvements to convey runoff. The action of land development requires that improvements be made to the storm drain system to route the water to natural drainage outlets like the Virgin River and requires the payment of impact fees to cover the cost or cost share of the IFFPA improvements.

2.2 Background Information

Washington is the second largest city in Washington County, Utah. Washington has a long history of farming in the Washington Fields area being irrigated by a system of canals and ditches. Development has caused the City to grow at approximately 3.0% annually for years. With the City's population growing at such a rate, residential development has dominated urban expansion, with commercial and industrial development also contributing.

Washington City has varied topography including several small valleys, rock cliffs, washes, level fields, and the Virgin River. Because of low infiltration, steep slopes, and concentrated microburst rain events, the City has experienced serious stormwater runoff events in the past. During the past several years, the City has completed multiple projects as recommended in the 2014 CFP, helping to fulfill the City's goals in stormwater protection and conveyance.

2.3 Miscellaneous Resources

Governing documents/codes for this study include the existing Washington City General Plan, Washington City Construction and Design Standards, Grading Manual, Hydrology Manual, as well as all current zoning and development criteria.

Resources used include previous construction documents, Washington City Staff, federal and state census information, Washington City Standards, the Impact Fees Act established under Utah State Code, and Washington City Financial Statements.

FIGURE 1: PHOTO OF WASHINGTON PARKWAY DRAINAGE IN WASHINGTON

3 USER ANALYSIS

3.1 Planning Horizon

This analysis considers three planning horizons: existing conditions, 10-year, and 20-year conditions. The existing condition scenario will evaluate the system based on the current service area and existing facilities. The 10-year planning horizon improvements were based on the potential development of the undeveloped areas. Improvements should be sized to reduce developed condition runoff flows to predevelopment conditions.

3.2 Population Growth Rates

Projecting the City's population and growth rate is essential to the development of a facilities plan. The City's current Culinary Water Master Plan completed in October 2017 was consulted for historical and projected growth rates. The user analysis from that plan was used as the basis for this plan. The census estimates for population for the last three years were updated in this plan. It is assumed that population growth will continue at 3.0% annually for the duration of the 20-year planning horizon. Annual population, Equivalent Residential Connections (ERC's), and growth rate projections for the 20-year planning horizon are shown in Table 1.

TABLE 1: GROWTH PROJECTIONS

Year	Est. Growth Rate	*Est. Residential ERC's	*Est. Commercial ERC's	*Est. Total ERC's	*Est. Total Connections	**Est. Population	New Conn. (i.e. Building Permits)
2010	-	7,020	2,215	9,235	7,359	18,761	-
2011	-	7,231	2,282	9,512	7,580	19,985	221
2012	-	7,447	2,350	9,798	7,808	20,888	227
2013	-	7,671	2,421	10,091	8,042	21,890	234
2014	-	7,901	2,493	10,394	8,283	23,360	241
2015	-	8,138	2,568	10,706	8,654	24,299	371
2016	-	8,475	2,744	11,219	9,016	25,339	362
2017	-	8,915	2,886	11,801	9,484	26,405	468
2018	-	9,182	2,973	12,155	9,768	27,686	285
2019	3.0%	9,458	3,062	12,520	10,062	28,184	293
2020	3.0%	9,742	3,154	12,896	10,363	29,030	302
2021	3.0%	10,034	3,249	13,282	10,674	29,901	311
2022	3.0%	10,335	3,346	13,681	10,994	30,798	320
2023	3.0%	10,645	3,447	14,091	11,324	31,722	330
2024	3.0%	10,964	3,550	14,514	11,664	32,673	340
2025	3.0%	11,293	3,656	14,949	12,014	33,653	350
2026	3.0%	11,632	3,766	15,398	12,374	34,663	360
2027	3.0%	11,981	3,879	15,860	12,746	35,703	371
2028	3.0%	12,340	3,995	16,336	13,128	36,774	382
2029	3.0%	12,710	4,115	16,826	13,522	37,877	394
2030	3.0%	13,092	4,239	17,331	13,927	39,013	406
2031	3.0%	13,485	4,366	17,850	14,345	40,184	418
2032	3.0%	13,889	4,497	18,386	14,776	41,389	430
2033	3.0%	14,306	4,632	18,938	15,219	42,631	443
2034	3.0%	14,735	4,771	19,506	15,675	43,910	457
2035	3.0%	15,177	4,914	20,091	16,146	45,227	470
2036	3.0%	15,632	5,061	20,694	16,630	46,584	484
2037	3.0%	16,101	5,213	21,314	17,129	47,982	499
2038	3.0%	16,584	5,369	21,953	17,643	49,421	514
2039	3.0%	17,082	5,530	22,612	18,172	50,904	529
2040	3.0%	17,594	5,696	23,290	18,717	52,431	545

* Estimated ERU's and Connections are based on the data from the City's Annual Rate Table Summary for July 2015 through July 2016. (Census Population data is based on estimates taken in July)

** Estimated Population is determined by multiplying the estimated residential ERU's by 2.98. 2.98 is the number of people per residential ERU in past years.

4 HYDROLOGIC ANALYSIS

4.1 Basin Delineation & Flow Patterns

A drainage subbasin is a portion of a greater watershed area that has specific, well-defined boundaries and produces runoff at a downstream point location. A subbasin is an area within a watershed that is characterized by similar drainage features and homogeneous land use. Dividing larger watershed areas into individual subbasins allows for more detailed and accurate analyses.

Subbasins contributing runoff through and within the service area were identified along with the hydraulic flow paths these basins follow to discharge their stormwater runoff. Subbasins and flow paths were delineated using the 2014 CFP, publicly available elevation data, and aerial imagery. Maps showing the FEMA regulated flood plains are shown in Appendix A (Map 8). They are also available through FEMA's website.

FIGURE 2: PHOTO OF GREEN SPRING WEST DETENTION BASIN

The general method for conveying stormwater to outlet locations in trunk lines, streams, and rivers is summarized below for each greater watershed area.

- Cottonwood – Coral Canyon PCD generally conveys runoff water to the Cottonwood Wash and uses a large wetland area north of Telegraph Road as a storage facility. Cottonwood Wash merges with Grapevine Wash just before emptying into the Virgin River.
- Harrisburg – The south end of Purgatory Valley drains runoff water via two natural washes that formed on either side of the ridge in the middle of the valley. Both washes discharge to the Virgin River.
- Grapevine – Sienna Hills PCD manages development of approximately half of the watershed area. Several culverts allow runoff to pass under I-15. Two large detention basins, one upstream of Grapevine Crossing and one just upstream of Telegraph Road, provide stormwater storage for the watershed area. Grapevine Wash merges with Cottonwood Wash before reaching the Virgin River.
- Green Spring East – Runoff is conveyed via channels to subdivision and regional detention facilities. The system is designed to pipe the flows to Mill Creek along the east side of the watershed area. In the past, storms beyond the 100-year recurrence interval have produced runoff that is conveyed south under I-15 and down Main Street. Main Street was recently redesigned with an inverted crown to increase the conveyance capacity of the road and decrease the likelihood of property damage from flooding.

- Green Spring West – Offsite runoff is captured by regional detention facilities then piped to Mill Creek along the east side of the watershed area. Urban runoff is generally captured by subdivision detention facilities and routed to the golf course or to Mill Creek.
- Gypsum – Runoff flows from the cliffs of Warner Ridge and Washington Dome are captured by washes and levees and conveyed to the NRCS Gypsum Debris Basin. The outlet for the regional detention basin is a concrete pipe that connects to the outlets of Warner Valley Debris Basin and Stucki Debris Basin and is a separate system from the City's stormwater pipe network.
- Mill Creek – Downtown Washington has developed with few detention facilities. Older and Newer subdivisions that have detention facilities convey runoff to several pipe networks that convey water to Mill Creek. Mill Creek converges with the Virgin River, which is the south boundary of the watershed area.
- Stucki – This undeveloped area collects runoff from the cliffs of Warner Ridge and conveys flows via natural channels to the NRCS Stucki Debris Basin. The outlet for the regional detention basin is a concrete pipe that connects to the outlets of Warner Valley Debris Basin and Gypsum Debris Basin and is a separate system from the City's stormwater pipe network.
- Stucki Farms – This watershed area includes the Stucki Farms PCD and is limited in discharge flow rate per the PCD agreement with the City. There is combination of regional and subdivision detention basins, plus a restrictor orifice to limit the overall discharge to the City's trunk line in the Washington Fields Road.
- Warner Valley North – This area is undeveloped public land where a future WCWCD reservoir is planned on the north end of the valley, near the Virgin River. Currently, runoff is conveyed via natural channels and a large culvert under Southern Parkway.
- Warner Valley South – This area is undeveloped public land. Natural channels convey runoff to the NRCS Warner Valley Debris Basin. The outlet for the regional detention basin is a concrete pipe that connects to the outlets of Stucki Debris Basin and Gypsum Debris Basin and is a separate system from the City's stormwater pipe network.
- Washington Dam – Runoff from Washington Dome is conveyed around each side of Shinob Kibe. A combination of subdivision and regional detention basins collect developed stormwater runoff. Outlets from this watershed are relatively flat pipes that release runoff flows to the Virgin River.
- Washington Fields – Irrigated farm fields are quickly becoming developed residential neighborhoods. Runoff is routed through subdivision detention basins and conveyed by trunk lines and naturally lined outlet channels to the Virgin River.

4.2 Soil Type

The soil type within a watershed area has a significant impact on how much excess stormwater is available for runoff because the soil type determines the infiltration rate. Infiltration rate is a measure of how fast water enters the soil. If the infiltration rate is high, stormwater runoff generated by precipitation events is lower because a greater volume of water is absorbed by the soil. Conversely, if the infiltration rate is low, higher volumes of runoff are generated. The Natural Resources Conservation Service (NRCS) has studied soil types throughout the United States and has grouped soils according to their type and infiltration rates. These hydrologic soil groups are described below:

• Group A: Soils have a high infiltration rate. They are typically well drained sands or gravels, or well aggregated loams. They have low runoff potential when thoroughly wet.

• Group B: Soils have a moderate infiltration rate. They are moderately deep and well drained and of moderately fine to moderately coarse texture. Examples are loamy sand and sandy loam. They have moderately low runoff potential when thoroughly wet.

• Group C: Soils have a slow infiltration rate. They are soils with a layer that impedes downward movement of water and typically have moderately fine to fine texture. Examples are clay loams or shallow sandy loams. These soils are typically low in organic content and high in clay content. They have moderately high runoff potential when thoroughly wet.

• Group D: Soils have a very slow infiltration rate. They are typically clay soils with high swelling potential. A high-water table is often permanent. Clay pan is often found at or near the surface. A shallow layer of soil may cover a nearly impervious material. Examples include heavy plastic clays and certain saline soils. They have high runoff potential when thoroughly wet.

The NRCS has performed a study of the soils in Washington County and the surrounding area. This study reveals that all four soil groups exist in the study area. There are several areas that did not have a classification from the NRCS study. Soil classifications for these areas were assigned based on surrounding soils, aerial imagery, site visits, and engineering judgment. A soil type map is given in Appendix A (Map 4).

4.3 Land Use & Curve Numbers

The type of land use in each watershed area is a factor that significantly affects the magnitude of stormwater peak flow and runoff volume generated by precipitation events over the watershed area. Land uses that have higher percentages of impervious surfaces, such as parking lots, shopping areas, storage yards and high-density residential housing tracts, generate more stormwater runoff than areas with lower percentages of impervious surfaces, such as parks and farmland. Current zoning data with the support of current aerial photographs and field investigations allowed identification of land use trends within the City for the purposes of this study. The City has a variety of land uses shown in Table 2 below.

After the land use characteristics for the area were determined, SCS Runoff Curve Numbers (CN) were determined. The NRCS, based on experiments and experience, relates soil groups and other drainage characteristics to CN values. This relationship between land use, soil type, and CN figures is presented in Appendix A (Map 4 & Map 5). The calculations of composite curve numbers are shown in Appendix E.

The calculation of Composite Curve Numbers for urban subbasins will follow the technical guidance for connected impervious areas and unconnected impervious areas in TR-55. Increases in impervious areas directly connected to the storm drain system, where runoff is routed from impervious areas directly to a curb inlet, increase the total runoff from a subbasin and exceed the design capacity of master planned networks. The “Urban Impervious Area Modifications” section, starting on page 2-9 of TR-55, and comprising Figures 2-3 and 2-4 will be followed in all studies referencing, coordinating, or complying with this IFFPA.

TABLE 2: LAND USES & CURVE NUMBERS

Description	A	B	C	D
Cultivated Land Straight Row; Poor Condition	66	77	85	89
Cultivated Land Straight Row; Fair Condition	58	72	81	85
Pasture or Range Land; Poor Condition	68	79	86	89
Pasture or Range Land; Fair Condition	49	69	79	84
Pasture or Range Land; Good Condition	39	61	74	80
Open Space; Poor Condition; Grass Cover < 50%	68	79	86	89
Open Space; Fair Condition; Grass Cover 50% to 75%	49	69	79	84
Open Space; Good Condition; Grass Cover > 75%	39	61	74	80
Impervious Areas; Streets and Roads; Paved; Roofs; Curbs and Storm Sewers	98	98	98	98
Impervious Areas; Roads with Open Ditches (w/ Right-of-Way)	83	89	92	93
Impervious Areas; Gravel Roads (w/ Right-of-Way)	76	85	89	91
Impervious Areas; Dirt Roads (w/ Right-of-Way)	72	82	87	89
Urban Districts; Commercial and Business; Average 85% Impervious	89	92	94	95
Urban Districts; Industrial; Average 72% Impervious	81	88	91	93
Residential Districts; 1/8 Acre (Town Houses); Average 65% Impervious	77	85	90	92
Residential Districts; 1/4 Acre; Average 38% Impervious	61	75	83	87
Residential Districts; 1/3 Acre; Average 30% Impervious	57	72	81	86
Residential Districts; 1/2 Acre; Average 25% Impervious	54	70	80	85
Residential Districts; 1 Acre; Average 20% Impervious	51	68	79	84
Residential Districts; 2 Acre; Average 12% Impervious	46	65	77	82
Natural Desert Vegetation; Fair Condition	63	77	85	88
Artificial Desert Landscaping	96	96	96	96
Newly Graded Area (Pervious Only)	77	86	91	94

4.4 Design Storm & Precipitation

The design storm is specified by the frequency of the storm event (years), the duration of the event (hours), and the temporal distribution of the event. Since this IFFPA is for major conveyance and detention facilities, the 100-year, 3-hour and 100-year, 24-hour storm events were used, respectively. The 10-year, 3-hour storm was also analyzed to meet the Hydrology Manual requirements for infrastructure conveyance. The Farmer-Fletcher storm distribution was used for the 3-hour storms, as shown in Figure 3. The 24-hour storm used the SCS Type II rainfall distribution.

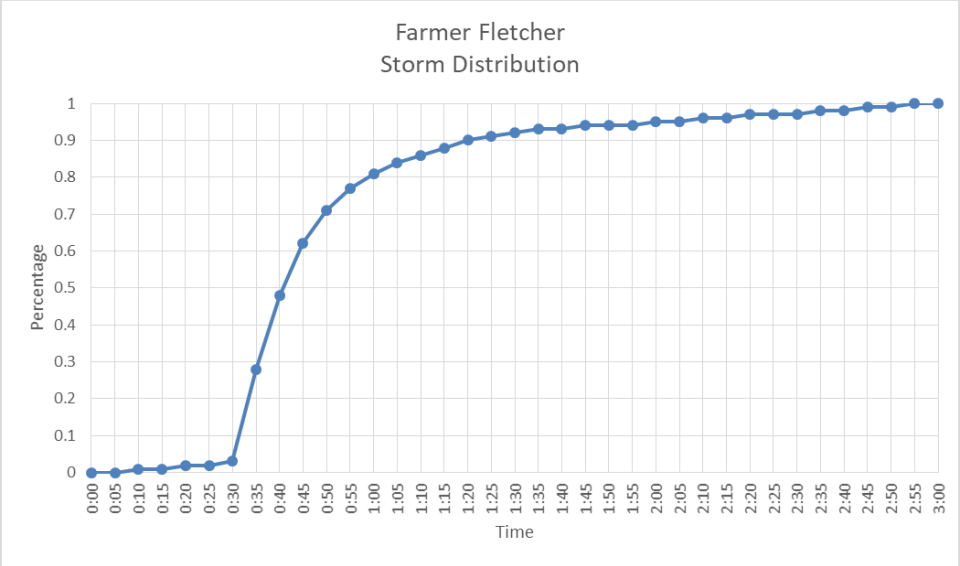


FIGURE 3: FARMER FLETCHER RAINFALL DISTRIBUTION

Rainfall data for the computer model was taken from the 2014 CFP, which updated the City precipitation data to the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 precipitation frequency data server. A summary of the precipitation data used in this plan can be found in Table 3.

TABLE 3: RAINFALL DATA SUMMARY

Return Time [yr]	Duration [hr]	Depth [in]
10	3	1.01
100	3	1.69
100	24	2.41

4.5 Stormwater Flow Results

The software used to model the system is InfoSWMM by Innovyze, which runs as an add-on to Esri's ArcMap software. This software seamlessly models both the hydrologic and hydraulic aspects of stormwater in one model. Hydrologic model results include soil infiltration and watershed runoff hydrographs that are then routed through the storm drain network. Critical model results are presented in Appendix E.

5 LEVEL OF SERVICE & EXISTING FACILITIES

5.1 Level of Service

The existing level of service for stormwater infrastructure in Washington City can be summarized in the following main points, as restated from the 2014 CFP:

- All major public facility drainage systems shall be sized to convey the 100-year 3-hour design storm, with regional detention facilities sized to accommodate the 100-year 24-hour storm.
- Conveyance depth for all major public facility drainage systems shall be maintained to a defined maximum value or kept within the public right-of-way.
- The minimum pipe diameter for storm drain main trunk lines shall be 18 inches.

The proposed level of service will match the existing level of service for this Impact Fee Facilities Plan.

5.2 Existing Facilities & Requirements

Washington City manages channels, culverts, detention basins, and a vast stormwater pipe network to intercept and convey runoff flows through the City. In addition, UDOT maintains culverts and ditches that are within UDOT rights-of-way. Design standards set forth in the Hydrology Manual Section 3.4 require that developments route stormwater runoff through a storm drain system (initial system) that can collect and convey a minimum of the 10-year, 3-hour storm, with major systems that can collect and convey the 100-year, 3-hour storm. Developments are also required to reduce post development peak flows through onsite detention facilities, designed to attenuate the 100-year, 24-hour storm event.

Washington City allows streets to be used for major stormwater runoff (100-year, 3-hour) conveyance according to the Hydrology Manual Section 3.4.4. Local and collector streets are allowed runoff encroachment provided residential dwellings, public, commercial, and industrial buildings shall not be inundated at the ground line and the depth of water at the gutter flowline shall not exceed 12 inches. Arterial streets are allowed runoff encroachment provided residential dwellings, public, commercial, and industrial buildings shall not be inundated at the ground line, and to allow for emergency vehicles, the depth of water shall not exceed 6 inches at the street crown, 12-inches at the gutter flowline, and must not encroach onto private land whichever is more restrictive.

FIGURE 4: PHOTO OF THE RED CLIFFS FROM WASHINGTON PARKWAY

6 HYDRAULIC MODEL

6.1 Data Collection

Washington City provided GIS data for the stormwater system pipes, manholes, inlets, and detention basins, as well as spatial data for subdivisions, zoning, hillside protection area, FEMA flood zones, and other critical land uses within the City's annexation area. Data for the underground stormwater system was filtered and reduced to necessary trunk lines and nodes (including manholes and inlets). Civil Science performed GPS survey of the missing attribute data for elevations of manholes rims and pipe sizes and inverts. Civil Science and Washington City worked together to identify and correct data outliers used for model input.

Regional and local detention basin locations and approximate footprint areas were provided in the GIS data from Washington City. To simplify the data collection and modeling, stage storage curves and detailed outlet curves were not developed. Instead, detention basin outlet flows were modeled as the peak flow from each detention basin per the approved drainage study and/or the Engineer's Post Construction Stormwater Certification document.

6.2 Hydrologic Demands

InfoSWMM performs a hydrologic analysis and uses the results as demands for the hydraulic portion of the model. Inflow to the storm drain system is represented as runoff hydrographs from the hydrologic model. See Section 4 of this study for more information about how these demands were calculated.

6.3 Street Capacity Analysis

Street capacities were modeled using Manning's equation for open channel flow based on the master planned street cross-section, assuming full street improvements were constructed. Capacities of each roadway classification were calculated for slopes between 0.4% and 5.0%. Figure 5 shows the graph for local street runoff capacities at various slopes. Tables and graphs showing street flow for all roadway classifications are in Appendix B.

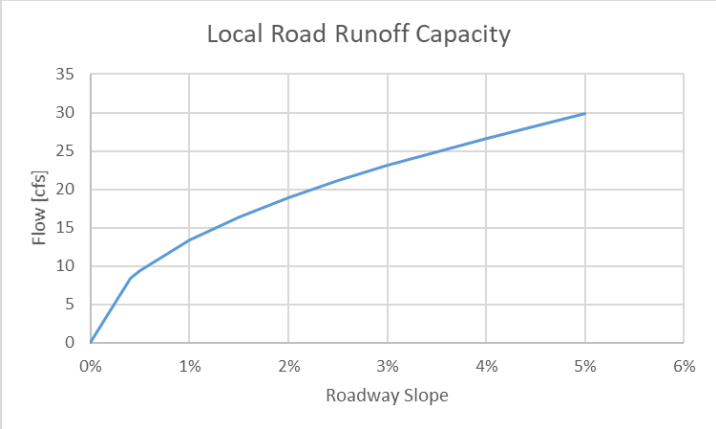


FIGURE 5: STREET FLOW CAPACITY

Model results for flooded nodes reveal streets that expect surface runoff flows from the 100-year, 3-hour storm under existing conditions. Table 4 summarizes half street flow capacity calculations for each roadway type and for several different slopes. City streets are expected to convey 100-year runoff flows. Map 7 in Appendix A highlights the model results of the proposed improvements. Section 5.2 of this study outlined the street flow allowances from the Washington City Hydrology Manual Section 3.4.4. The street flow allowances were followed for the calculations in Table 4.

TABLE 4: HALF STREET FLOW CAPACITY CALCULATION SUMMARY

Slope	Local	Minor Collector	Major Collector	Minor Arterial	Major Arterial
0.4%	8.43	6.89	8.99	9.58	9.58
0.5%	9.43	7.70	10.06	10.71	10.71
1.0%	13.33	10.89	14.22	15.15	15.15
1.5%	16.33	13.34	17.42	18.55	18.55
2.0%	18.86	15.40	20.11	21.42	21.42
2.5%	21.08	17.22	22.49	23.95	23.95
3.0%	23.10	18.87	24.63	26.23	26.23
4.0%	26.67	21.78	28.44	30.29	30.29
5.0%	29.82	24.35	31.80	33.87	33.87

**Roadway flows are shown in cubic-feet per second (cfs)*

Table 5 below highlights streets that model results show will convey stormwater runoff from surcharged pipe systems. Discussions with City staff identified basins that have different outlet locations, split outlet locations, and different governing flow paths (caused increases in time of concentration). A thorough investigation into the surcharged nodes revealed several nodes that had different peak flow times and durations so that the measured street flow could be reduced to the max peak flow for all nodes surcharging at the same time. In other cases, nodes surcharged for only a few seconds and had less than 1,000 gallons of water surcharged onto the streets (model results accuracy is to the thousandth of one million gallons).

TABLE 5: STREET FLOW MODEL RESULTS

Street Name	Classification	Slope	Street Capacity [cfs]	Model Results* [cfs]
Washington Dam Rd (at 1900 E)	Minor Arterial	1.0%	30.3	24.5
Merrill Rd (240 W to 20 E)	Minor Collector	0.4%	13.8	8.7
Merrill Rd (20 E to Washington Fields Rd)	Major Collector	0.6%	21.8	19.2
Washington Fields Rd (1525 S to Indian Springs Dr)	Minor Arterial	0.4%	19.2	13.2
Washington Fields Rd (Meadow Ln to 2000 S)	Minor Arterial	0.5%	21.4	21.3
Neilson Ranch Rd	Local	0.5%	18.9	17.5
Telegraph St (300 E to Main St)	Minor Arterial	1.5%	37.1	34.1
Telegraph St and 300 E	Minor Arterial	1.5%	37.1	32.5
Wagon Wheel Dr	Local	1.8%	32.7	18.4

**Based on 100-year, 3-hour Storm after Recommended Improvements*

6.4 Model Output

Three different storm scenarios were evaluated for this study as shown previously in Table 3:

1) 10-year, 3-hour storm
2) 100-year, 3-hour storm
3) 100-year, 24-hour storm

Local underground storm drain pipes should be designed for the 10-year, 3-hour storm runoff as a minimum design capacity. The 100-year, 3-hour storm event should be used to design the conveyance system, including the roadway per the Washington City Drainage Manual. The 100-year, 24-hour storm event should be used to design local detention basins for developments and for the City's regional detention requirements.

See Appendix A for model result maps showing pipe conveyance capacity. Selected model output data is available in Appendix E.

7 RECOMMENDED IMPROVEMENTS

Recommendations are based on replacing pipe segments that are modeled as being over capacity or areas of future development that need a runoff conveyance facility. Flow diversions were modeled in specific locations to best represent known flow splits. Every effort was made to establish the best outlet location for each watershed basin based on topography and observed flow paths.

Based on sound engineering judgment, practices, and through the hydrologic and hydraulic modeling effort and model results, a summary of recommended improvements is presented in Table 6. Maps showing the locations of the recommended improvements are available in Appendix A.

TABLE 6: RECOMMENDED IMPROVEMENTS SUMMARY

Project ID	Short Description
GRP-01	Reroute Grapevine Wash Channel
GSE-01	Main St North Channel
GSE-02	Main St North Detention Basin
GSE-03	Mill Creek Boilers Park Outfall Channel
GSW-01	Canyon Cove Channel
GYP-01	South Long Valley Pipe
MLC-01	Scenic Drive Pipe
MLC-02	WCCC Outfall Scenic Drive Pipe Connector
MLC-03	Main St South Bypass Pipe
MLC-04	300 South Main St Pipe Connector
MLC-05	100 South Pipe Replacement
STF-01	Stucki Farms Pipe
STF-02	Stucki Farms Detention Basin
STU-01	Stucki Debris Basin West Channel
STU-02	Stucki Debris Basin East Channel
WAD-01	Washington Dam Outfall Pipe
WAD-02	Morgan Lane Pipe
WAD-03	1900 East Pipe
WAD-04	1900 East Detention Basin
WAD-05	Wilbur Acres Pipe
WAD-06	2100 East Outfall Pipe
WAD-07	Granada Royale Outfall Pipe Connector
WAD-08	Granada Royale Outfall Pipe
WAF-01	Sandia Road Outfall Pipe
WAF-02	Merrill Road Parallel Pipe
WAF-03	515 West Outfall
WAF-04	Stahlei Farm Detention Pipe Reroute
WAF-05	Treasure Valley Bypass Pipe

Table 7 provides detailed project descriptions of all recommended improvements. Maps showing the location of the projects are provided in Appendix A (Map 1) and detailed cost estimates for each project are provided in Appendix C.

TABLE 7: RECOMMENDED IMPROVEMENT DESCRIPTIONS

Project ID	Project Description
GRP-01	Reroute Grapevine Wash south of I-15 to original channel to prevent flooding outside of FEMA 100-yr flood plain. Approximate length is 3,000 feet.
GSE-01	Construct channel improvements with access road to convey storm water from future development, maintaining minimum 50' ROW width for 2,500 feet of existing wash. The channel portion of this project was identified in the 2014 Master Plan as Project GRE-03.
GSE-02	Expand existing detention basin for approximately double the storage capacity to about 20 ac-ft. This will be the terminous of project GSE-01.
GSE-03	Add 500 feet of channel improvements and accept flows from open channel along I-15 right-of-way, between the Boilers Park and Mill Creek. This project was identified in the 2014 Master Plan as Project GRE-06. It was also identified in the 2005 Master Plan.
GSW-01	Construct 270 feet of channel to convey upstream stormwater runoff around residences in Canyon Cove to the street. This will redirect flows from a 30" pipe that are currently directed at the backs of homes. Not eligible for impact fees funds.
GYP-01	Install approximately 5,500' of 54" HDPE pipe to convey runoff in South Long Valley to the Gypsum Debris Basin. The alignment should stay in road right-of-way and be near the existing channel alignment. This project was identified in the 2014 Master Plan as Project GYP-01.
MLC-01	Install approximately 2,680' of 24" HDPE pipe to convey runoff from the intersection of Scenic Dr and Bulloch St to Frontier Dr near Telegraph St. The alignment will stay in existing right-of-way. This project was identified in the 2014 Master Plan as MLC-04. Not eligible for impact fees funds.
MLC-02	Install an outlet structure in the Washington City Community Center's storage basin converting it to a detention basin and install approximately 1,100' of 18" HDPE pipe to Park View Dr and connecting to Project MLC-01. Not eligible for impact fees funds.
MLC-03	Install approximately 2,750' of 24" HDPE pipe along Main St from Telegraph St to Mill Creek. This project will connect to the trunk lines in Telegraph St and 100 S to bypass overflow runoff.
MLC-04	Install 530' of 18" HDPE pipe along 300 S from 100 E to Main St. This project will connect to the Main St project MLC-03. Not eligible for impact fees funds.
MLC-05	Replace approximately 2,300' of pipe with 24", 30", & 36" HDPE pipe from 200 E to Mill Creek along 100 S. This is a maintenance project and is not eligible for impact fee funds.
STF-01	Install 2,300' of 36" HDPE pipe to convey storm water northward along Stucki Farms Pkwy to Washington Fields Rd from the southern most detention basin, designated as STF-02. A version of this project was identified in the 2014 Master Plan as Project ARP-01.
STF-02	Construct detention basins for the Stucki Farms MP Community, limiting total peak discharge out of the Stucki Farms drainage basin to a maximum of 29.0 cfs. This project was identified in the 2014 Master Plan as Project ARP-02.
STU-01	Construct 3,200' of rip rap lined channel from the west side of Southern Parkway to the Stucki Debris Basin. It is intended that the existing drainage path be protected from future development. This project was identified in the 2014 Master Plan as Project STU-01.
STU-02	Construct 2,200' of rip rap lined channel from the base of Warner Ridge to the east side of Southern Parkway. It is intended that the existing drainage path be protected from future development. This project was identified in the 2014 Master Plan as Project STU-02.

WAD-01	Install 1,620' of 60" HDPE pipe from Washington Dam Rd around Rancho Vista Estates in an existing easement to Washington Fields Rd and 1,170' of 60" HDPE pipe from Washington Fields Rd to the Virgin River. The upstream segment will parallel the existing 36" pipe around Rancho Vista Estates. The downstream segment will replace the existing 24" HDPE pipe to the Virgin River.
WAD-02	Install approximately 940' of 24" HDPE pipe to convey storm water from future development along Morgan Lane and tie into Washington Dam Road. This project will tie into the Scenic Sunrise development storage basin. A version of this project was identified in the 2014 Master Plan as Project WAD-01.
WAD-03	Install approximately 1,060' of 18" HDPE pipe through the Dennett East Industrial Park to Washington Dam Rd. This project was identified in the 2014 Master Plan as Project WAD-03.
WAD-04	Construct a channel with culvert and approximately 3.5 ac-ft detention basin to protect Washington Dam Rd from the upstream flows of subbasins WAD-11 and WAD-13 as it flows through a natural deep channel. The outlet of the detention basin connects to Project WAD-03.
WAD-05	Install approximately 200' of 42" HDPE pipe north of Wilbur Acres development and west of 1900 E. This segment will replace an existing 30" HDPE pipe. The pipes on both sides of this segment are 42" in diameter.
WAD-06	Install approximately 1,880' of 24" HDPE pipe from Washington Dam Rd to the Virgin River at about 2100 E. This will convey upstream runoff from subbasin WAD-14 and WAD-08 to the river.
WAD-07	Install approximately 1,750' of 24" HDPE pipe to convey storm water from future development along – and to the south of – Granada Royale Drive. It is intended that this project connects to Project WAD-10 to outfall to the river. This project was identified in the 2014 Master Plan as Project WAD-
WAD-08	Install approximately 1,250' of 24" HDPE pipe to convey storm water from future development and convey discharge from Project WAD-09 to the Virgin River from Washington Dam Road. This project was identified in the 2014 Master Plan as Project WAD-09.
WAF-01	Install approximately 1,120' of 36" HDPE pipe on the north boundary of Riverside Elementary School to Sandia Rd for future development. This project was identified in the 2014 Master Plan as Project WAF-09.
WAF-02	Install approximately 1,420' of a parallel 36" HDPE pipe on the south side of Merrill Rd between 20 E and 240 W to convey flows from the east and the new 20 E storm drain system to the double 54" outfall pipes.
WAF-03	Install approximately 3,340' of 24" HDPE pipe connecting to the existing 24" HDPE pipe on the southeast corner of the intersection of 3650 S and 515 W to convey runoff around the existing church to the east property boundary and then north along the west boundary of Sycamore Estates and Daybreak Park. This project will connect to the existing storm drain system on 3090 S at the Daybreak Park detention basin outlet pipe.
WAF-04	Install approximately 700' of 36" HDPE pipe connecting to the existing manhole in the intersection of Camino Real and Majestic Dr and rerouting upstream flow south to the Stahlei Farm Detention Basin.
WAF-05	Install approximately 1,420' of 18" HDPE pipe bypass pipe from Washington Fields Rd to the existing manhole by the Freedom Village development on Treasure Valley Rd. This project will reduce peak flows from the Washington Fields Rd trunk line and convey runoff to the Treasure Valley detention basin. The Treasure Valley detention basin outlet structure will be adjusted with this project.

7.1 Key Considerations

The best stormwater management facility design cannot preclude the need for long term maintenance and repair of these facilities to keep the facility functioning as originally designed. The lack of proper operation and maintenance is often cited as the number one reason for failure of stormwater facilities or damage to property from flooding events.

Routine maintenance addresses the expected activities required to keep the stormwater facilities in proper condition. Routine maintenance may include mowing, vegetation maintenance, and removal of accumulated debris and sediment.

The party responsible for the stormwater facilities needs to keep accurate and complete records. Typical records include a log of all inspections, repairs and maintenance performed at the site, copies of inspection reports, invoices for work performed, photographs of the facilities, etc. These records, along with establishing an ongoing operation maintenance program is the key to successful stormwater maintenance.

7.2 Hydrology Manual Recommendations

Civil Science reviewed the City's Hydrology Manual and recommends several edits to update data, modify design and certification processes, and bring the manual current to Federal and State EPA MS4 requirements.

- Update precipitation data from NOAA Atlas 14.
- Require double ring infiltrometer test (ASTM D3385) in the Geotechnical Report, especially in areas where the soils are unclassified (Badlands classification). This will help classify the soils and better determine curve number values for the Drainage Report calculations.
- Update the Drainage Report Checklist to include a section with the results and discussion of the double ring infiltrometer test.
- Update the outlet release rate guidelines to detain both the 100-year, 3-hour and the 100-year, 24-hour storms, but release detained flows at the pre-developed 100-year, 3-hour storm runoff rate.
- Include Low Impact Development (LID) in the basic principles of the drainage policy. Reference the Dixie Storm Water Coalition Green Infrastructure and Low-Impact Development Application Guidance published June 12, 2020.
- Update the Drainage Report Checklist to include results and discussion of LID retention requirements and include the Dixie Storm Water Coalition LID Report in the Appendix or as a separate document.
- Update the Engineer's Post Construction Stormwater Certification to include a basin stage-storage curve (depth vs. area) and a description or detail showing the size and elevations of the outlet configuration, or an outlet stage-discharge curve.

8 FINANCIAL VIABILITY

8.1 Cost Estimates

Civil Science has prepared cost estimates for each project identified in Table 6 & 7. While only for planning, each cost estimate captures anticipated construction costs including mobilization, general construction items, demolition, material and labor costs, surface restoration, and non-construction items such as professional services, miscellaneous services, land and right-of-way acquisition, and contingency. The projects are organized in a manner so that costs are not shared between projects. This allows for better understanding of a singular project's cost compared to showing all the projects in an abbreviated cost estimate format. Table 8 shows all improvement project costs in 2021 dollars.

TABLE 8: COST ESTIMATE SUMMARY & IMPACT FEE CALCULATION

Project ID	Impact Fee Eligible %	Project Cost	Impact Fee Eligible Cost	User Fee Eligible Cost
GRP-01	20%	$ 775,400	$ 155,080	$ -
GSE-01	100%	$ 889,200	$ 889,200	$ -
GSE-02	100%	$ 358,100	$ 358,100	$ -
GSE-03	100%	$ 251,190	$ 251,190	$ -
GSW-01	0%	$ 73,400	$ -	$ 73,400
GYP-01	100%	$ 3,595,650	$ 3,595,650	$ -
MLC-01	0%	$ 984,400	$ -	$ 984,400
MLC-02	0%	$ 361,750	$ -	$ 361,750
MLC-03	30%	$ 1,049,170	$ 314,751	$ 734,419
MLC-04	0%	$ 160,645	$ -	$ 160,645
MLC-05	0%	$ 1,098,010	$ -	$ 1,098,010
STF-01	100%	$ 763,750	$ 763,750	$ -
STF-02	100%	$ 715,037	$ 715,037	$ -
STU-01	100%	$ 1,540,200	$ 1,540,200	$ -
STU-02	100%	$ 811,400	$ 811,400	$ -
WAD-01	100%	$ 2,170,435	$ 2,170,435	$ -
WAD-02	50%	$ 339,120	$ 169,560	$ 169,560
WAD-03	100%	$ 385,290	$ 385,290	$ -
WAD-04	100%	$ 604,140	$ 604,140	$ -
WAD-05	100%	$ 86,080	$ 86,080	$ -
WAD-06	100%	$ 555,120	$ 555,120	$ -
WAD-07	100%	$ 474,150	$ 474,150	$ -
WAD-08	100%	$ 345,180	$ 345,180	$ -
WAF-01	100%	$ 521,810	$ 521,810	$ -
WAF-02	100%	$ 635,910	$ 635,910	$ -
WAF-03	100%	$ 987,380	$ 987,380	$ -
WAF-04	50%	$ 359,450	$ 179,725	$ 179,725
WAF-05	100%	$ 319,170	$ 319,170	$ -
IFFP (5-yr & 10-yr)	100%	$ 140,000	$ 140,000	$ -
TOTAL		$ 21,350,537	$ 16,968,308	$ 3,761,909
Developable Area [acres]			3,573	
Maximum Allowable Impact Fee per Acre			$4,749.04	

8.2 Project Phasing

Recommended improvements were given a time frame in which the projects are expected based on growth projections, localized growth, and available impact fee funds as shown in the cash flow. Table 8 shows the recommended improvements within a 10-year period with their projected costs.

In all cases, the improvements are planned to support continuing growth within the next ten years and are planned for implementation at times when the growing population base can theoretically generate enough revenue to fund the impact fee eligible portions of the projects. It should be noted that growth in the study area may occur at a rate faster or slower than that predicted in the cash flow analysis. If growth occurs at a faster rate, more funds will be available to construct the projects at an earlier schedule than that specified by the phasing projections. On the other hand, if growth slows more than expected, implementation of the projects may be delayed until the population base can fund the improvements. Washington City must also "expend or encumber an impact fee collected with respect to a lot… within six years after the impact fee with respect to that lot is collected" (UAC 11-36a-602.2). For these reasons, we recommend updating the IFFPA every 5-6 years so impact fees can be spent to maintain the established and expected level of service of the stormwater system.

Only 10-year projects were used to calculate the impact fee because impact fee funds must be used within six years of their receipt. Also, there is more uncertainty about future development and its impact on stormwater improvements if a longer time frame is considered for calculating impact fees. Reevaluating the IFFPA every 5 years aids in preparation for proposed development.

8.3 Impact Fee Analysis

The proposed impact fee was calculated based on the estimated costs and impact fee eligibility. Project impact fee eligibility is based on whether the project is needed to address an existing issue or if the project is needed to serve new growth and development to the stormwater system. The impact fee calculations are presented in Table 8 on the previous page. Impact fee eligible costs are based on 2021 estimated project costs and impact fee eligibility.

Impact fee eligible percentages were calculated by estimating the developable area in the drainage basin that is the serviced by the proposed project. Projects servicing parts of the City that are fully developed are not impact fee eligible, and those project costs are covered by user rates.

Washington City charges the stormwater impact fee based on development acreage to keep costs fair for all development. This requires that the 10-year developable area be calculated. The 10-year developable area was created by taking the area within the City boundaries and the annexation areas assumed to be developed within 10-years and then removing unbuildable areas, such as existing development, hillside, flood plain, and preserved lands, using GIS spatial analysis tools. Table 9 shows the results of the developable area analysis. A map showing the City's developable area is in Appendix A (Map 8).

TABLE 9: DEVELOPABLE AREA SUMMARY

Total Drainage Area [acre]	Developable Area [acre]
19,624	3,573

The maximum allowable impact fee for all development is **$4,749.04 per acre**.

As required by the Utah Impact Fees Act, an Impact Fee Certification is included in Appendix D. It states that this analysis was done according to the Impact Fees Act and its requirements.

Rules regarding the use of impact fees are covered by the Impact Fees Act. Generally, impact fees may only be used for system improvements that are required to service new development within the existing level of service or expected service requirements (runoff collection, storage, etc.) and are included in this Impact Fee Facilities Plan. Impact fees must be used within six years of payment, or they must be paid back. Alternative sources of revenue such as grants, or shared construction costs, should be investigated to reduce the financial burden of the City and its consumers. At the time of this study, Washington City is working on several projects with funds from the NRCS.

8.4 User Rate Analysis

The user rate for stormwater services in Washington City was analyzed based on recent costs from State Audit documents, approved budgets, and project costs recommended in this study. User rate eligible project costs were divided into equal annual costs and are labeled as "Repairs & Maintenance" in Table 10. Budget costs shown are annual costs. The monthly rate was calculated by dividing the total annual cost by the total number of ERC's and then dividing by twelve. The analyzed monthly rate is **$6.80**, which is the same as the existing monthly rate. This calculation assumes commercial billings are captured in the total system ERC's. A commercial rate analysis was not part of the analysis.

TABLE 10: USER RATE CALCULATIONS

Budget Item	Budget Costs
Salaries & Wages	$ 214,162.26
Employee Benefits	$ 156,639.36
Utilities	$ 5,986.38
Professional Services	$ 234,360.81
Repairs & Maintenance	$ 363,809.15
Miscellaneous	$ 14,099.46
Administrative Cost Allocation	$ 42,157.96
Supplies	$ 20,066.12
Totals	$ 1,051,281.50
ERC's	12,896
Calculated Monthly Rate	**$6.80**

**Current Monthly rate is $6.80 for residential users*

8.5 Cash Flow Analysis

A stormwater utility cash flow analysis for a 20-year planning horizon was completed to show how the 10-year planning horizon improvement projects could be implemented, to analyze the continued viability of proposed user rates, and to show possible trends in impact fee and cash fund balances. Data for the cash flow analysis was estimated from Washington City audits during fiscal years 2017-2019 in conjunction with

City Staff confirmation. Values projected through the analysis are based on growth and interest trends determined during the process of the study. It should be noted that the analysis is a general forecast only and will vary with the speed and pattern of development in the City. The entire cash flow analysis is given in Appendix C.

The upper section of the cash flow printout, entitled "Revenue", contains the basic data upon which many of the values in the cash flow spreadsheet were generated. We highlight the projected growth trends, the assumed inflation rates, user rates, impact fees and inspection fees, and the projected ERC quantities for the coming fiscal years. Most of the revenue in later parts of the cash flow spreadsheet are generated from the impact fees, and user rates.

The following section is the utility expenses section which seeks to quantify all the expenses incurred by the stormwater utility. Included in the expenses section are the operation and maintenance costs, existing debt service costs and new debt service costs. The difference between the total revenues and total expenses is the net cash flow for the utility.

Total revenues and total expenses were broken down into impact fee and cash fund categories. This shows that adequate funds would be available over the course of the projection period.

The cash flow analysis shows system improvements being paid for evenly over the 10-year horizon for non- impact fee eligible projects and impact fee eligible projects.

TABLE 11: CASH FLOW SETUP

Title
Revenue
Total ERCs
New ERCs
Average User Rate
Impact Fees Collected
Charges for Services
Miscellaneous
Total Operating Revenue
Expenses
Salaries & Wages
Employee Benefits
Utilities
Professional Services
Repairs & Maintenance
Miscellaneous
Administrative Cost Allocation
Supplies
Total Operating Expenses
Project Costs
Non-Impact Fee Eligible Cost
Impact Fee Eligible Cost
Accounts
Net Cash
Operating Account Balance
Impact Fee Balance

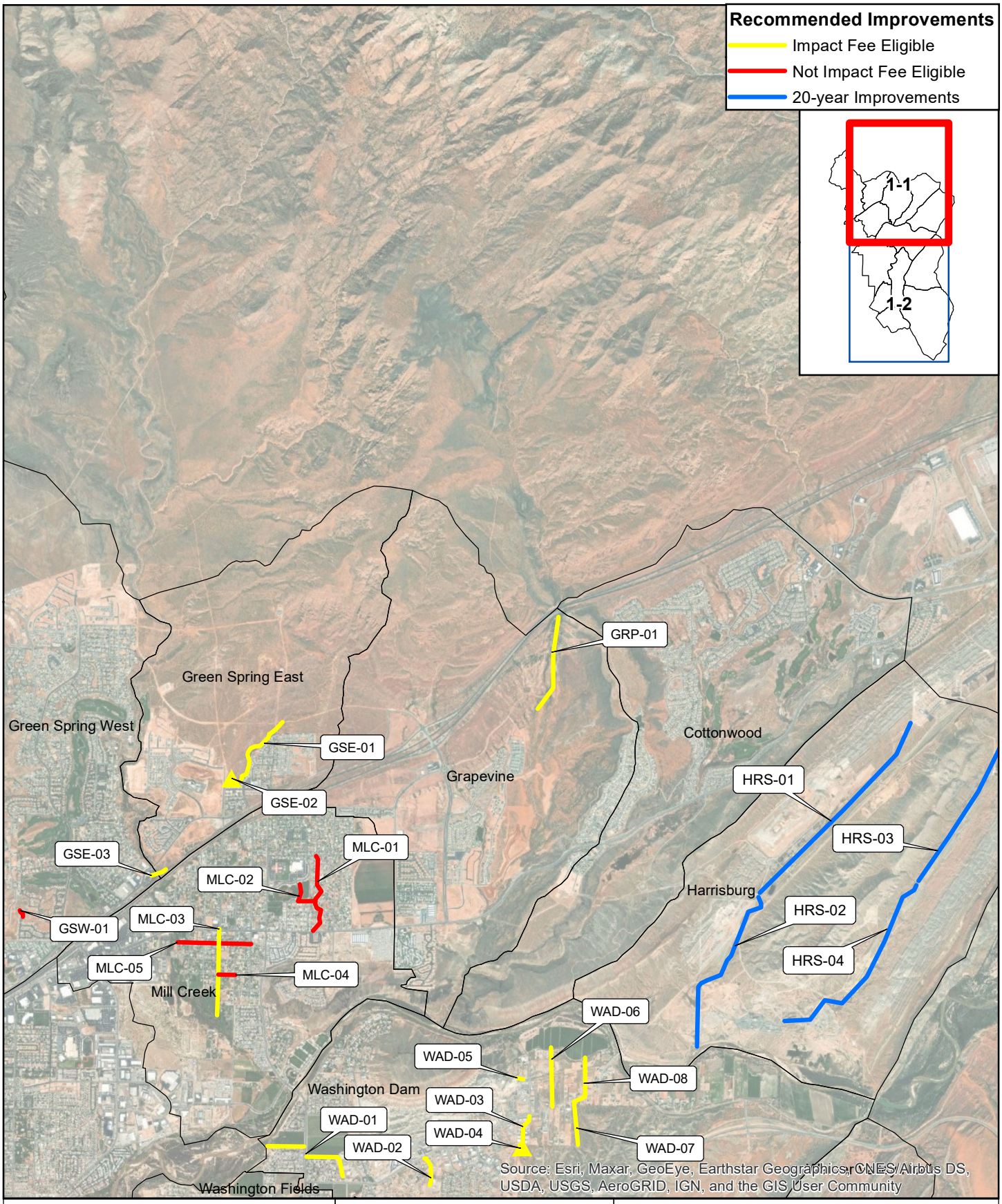
Other Financing Options

Where possible, Washington City should seek alternative financing for projects to reduce the financial burden of the consumers in the form of lower user rates or lower impact fees. Grant or loan options available to Washington City are included below:

- Permanent Community Impact Fund Board (CIB)
- Utah Community Development Block Grant (CDBG)
- FEMA Building Resilient Infrastructure and Communities (BRIC) Program
- USDA-NRCS Emergency Watershed Protection Program (EWP)
- USDA-NRCS Watershed and Flood Prevention Operations Program (WFPO)
- USDA-NRCS Regional Conservation Partnership Program (RCPP)
- Accepted dedications of system improvements
- Interfund loans

Appendix A

Maps



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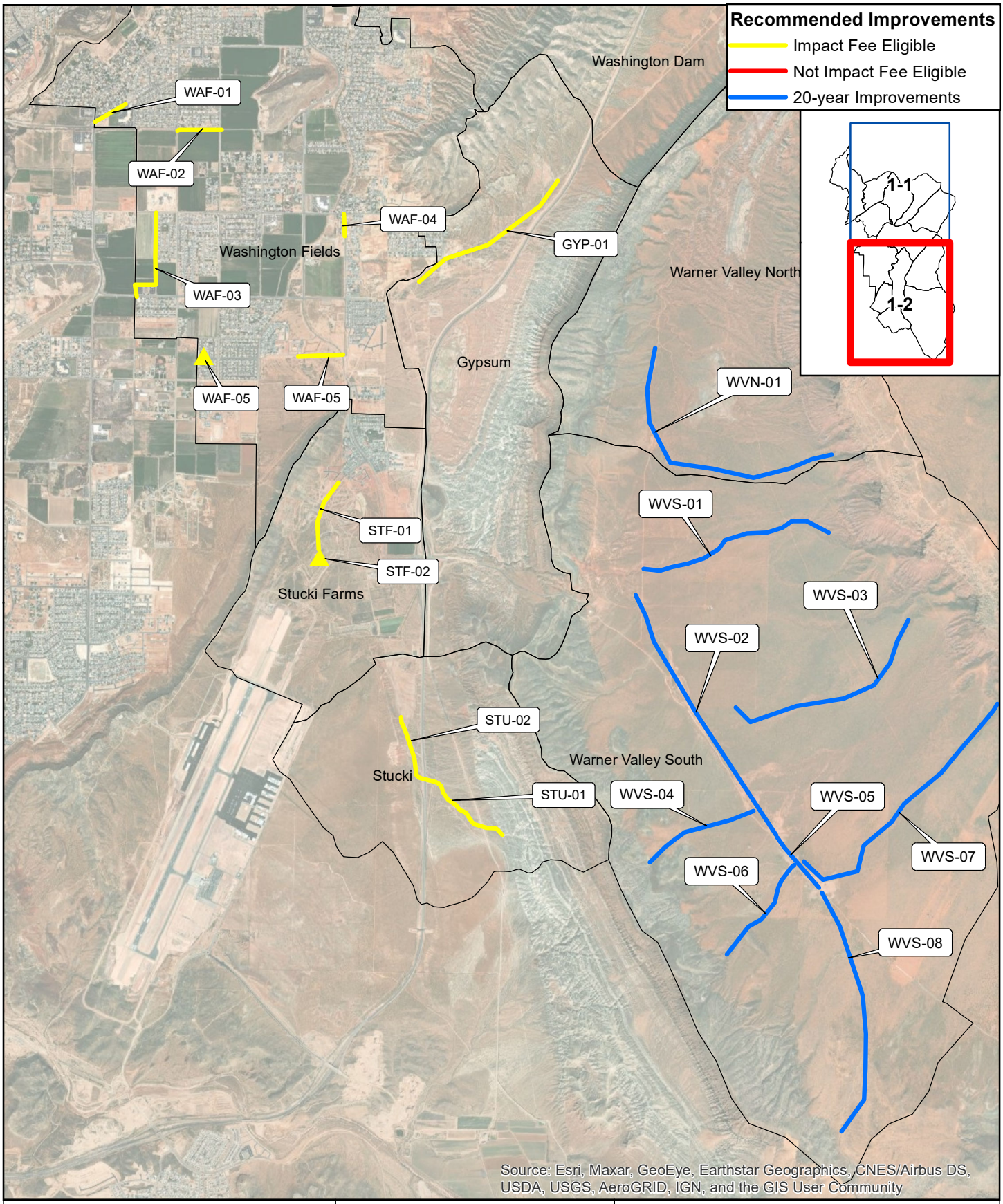
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Recommended Improvements

Map 1-1



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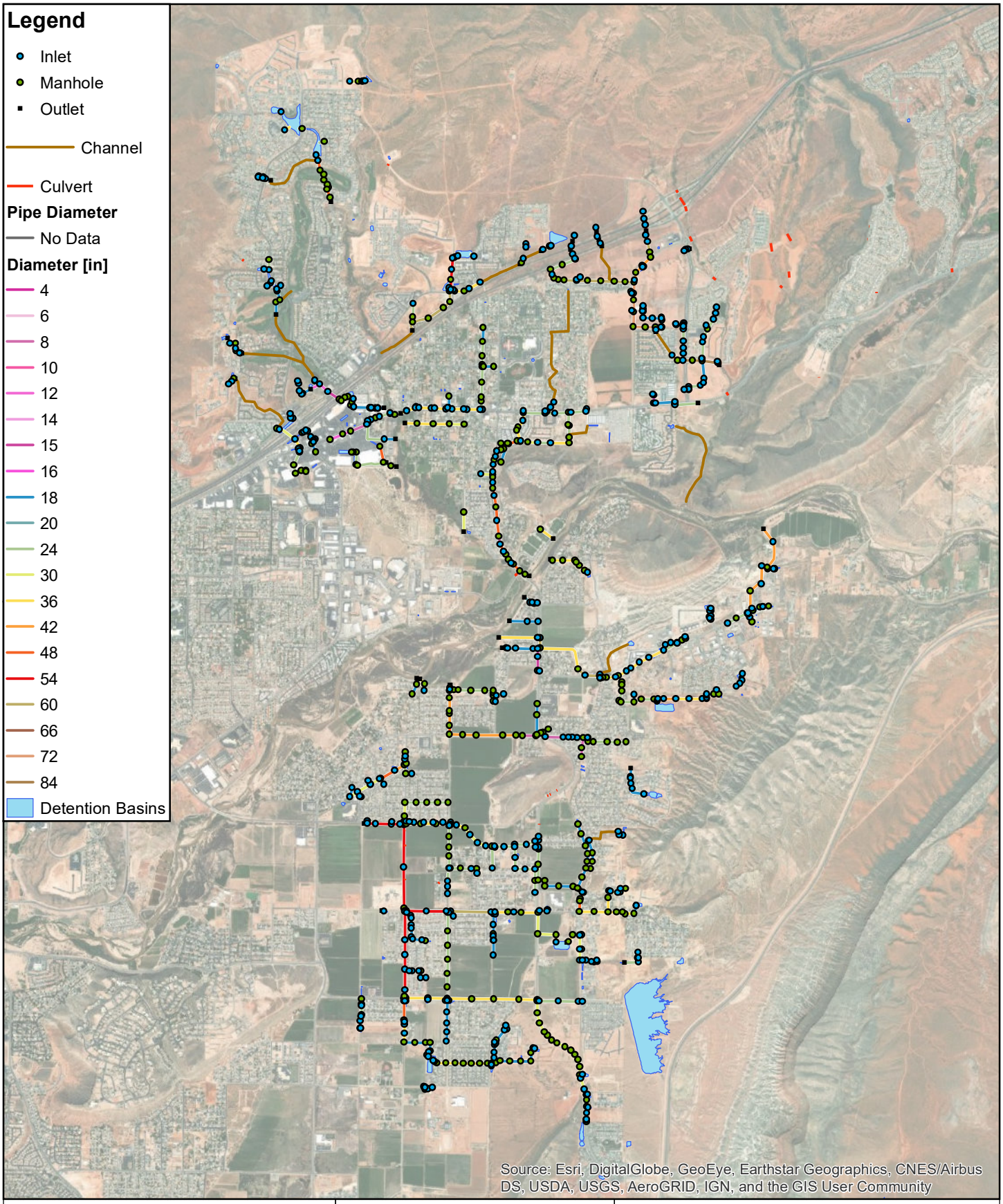
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Recommended Improvements

Map 1-2



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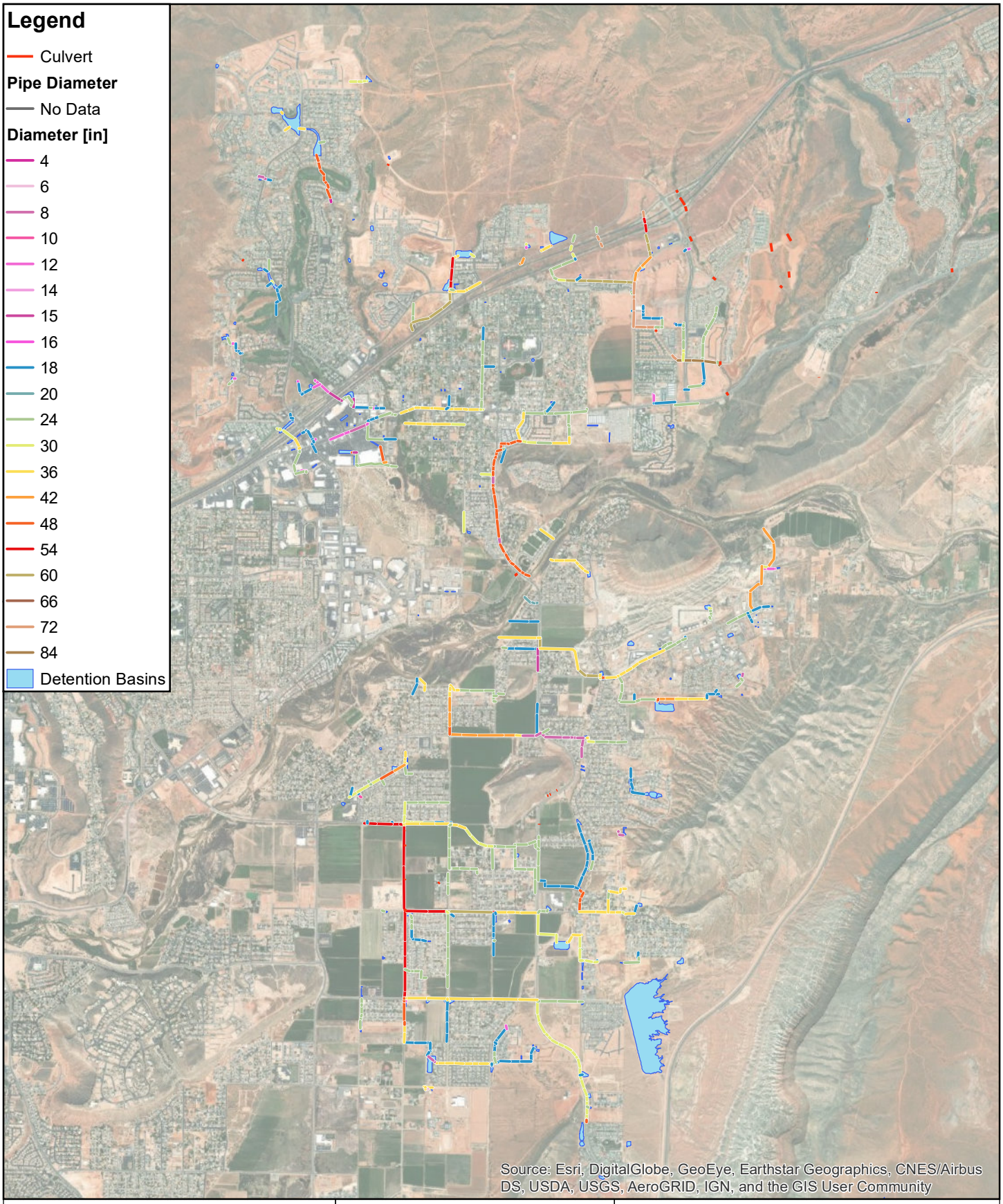
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Existing Facilities

Map 2-1



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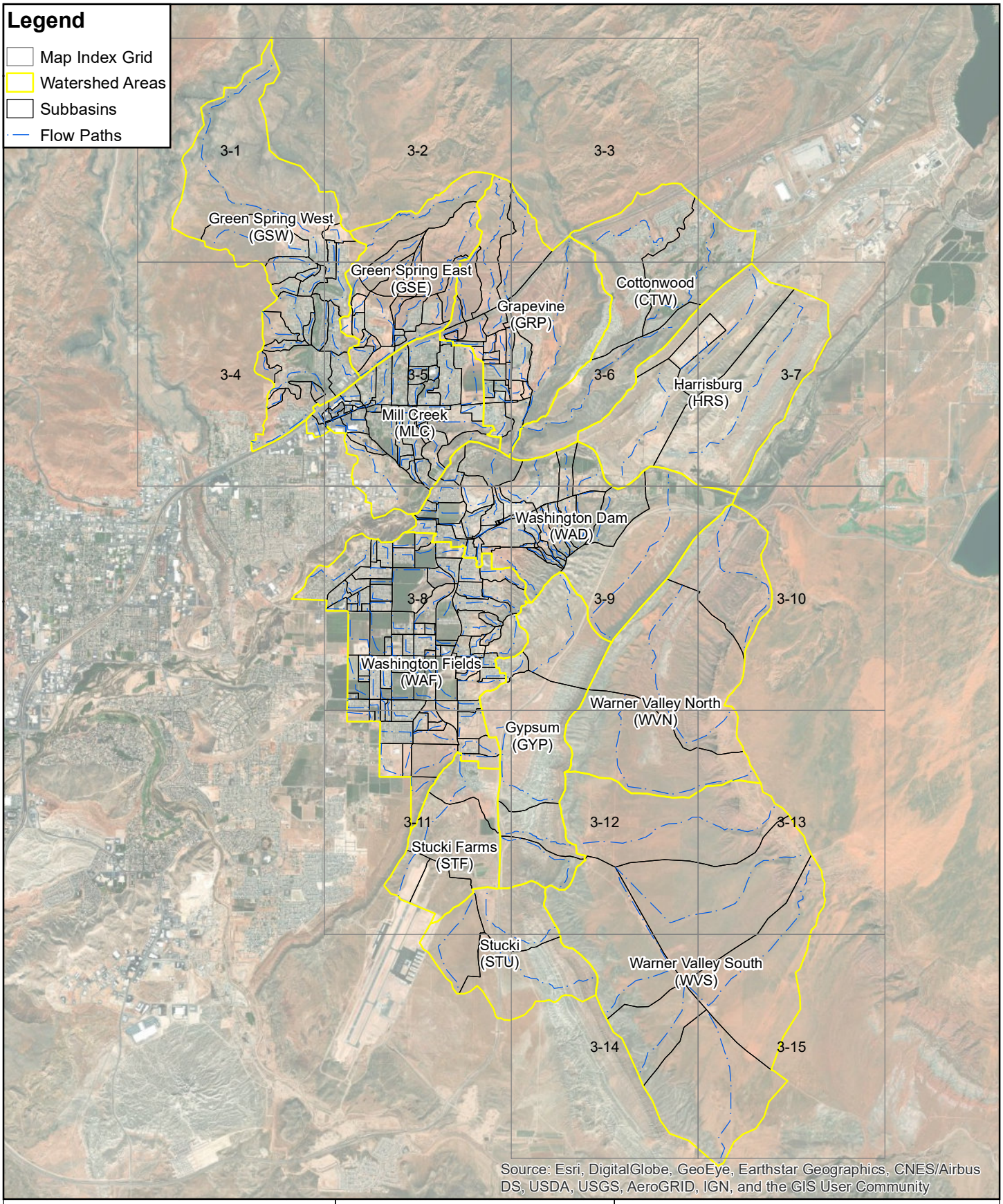
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Existing Facilities
(Pipes Only)

Map 2-2



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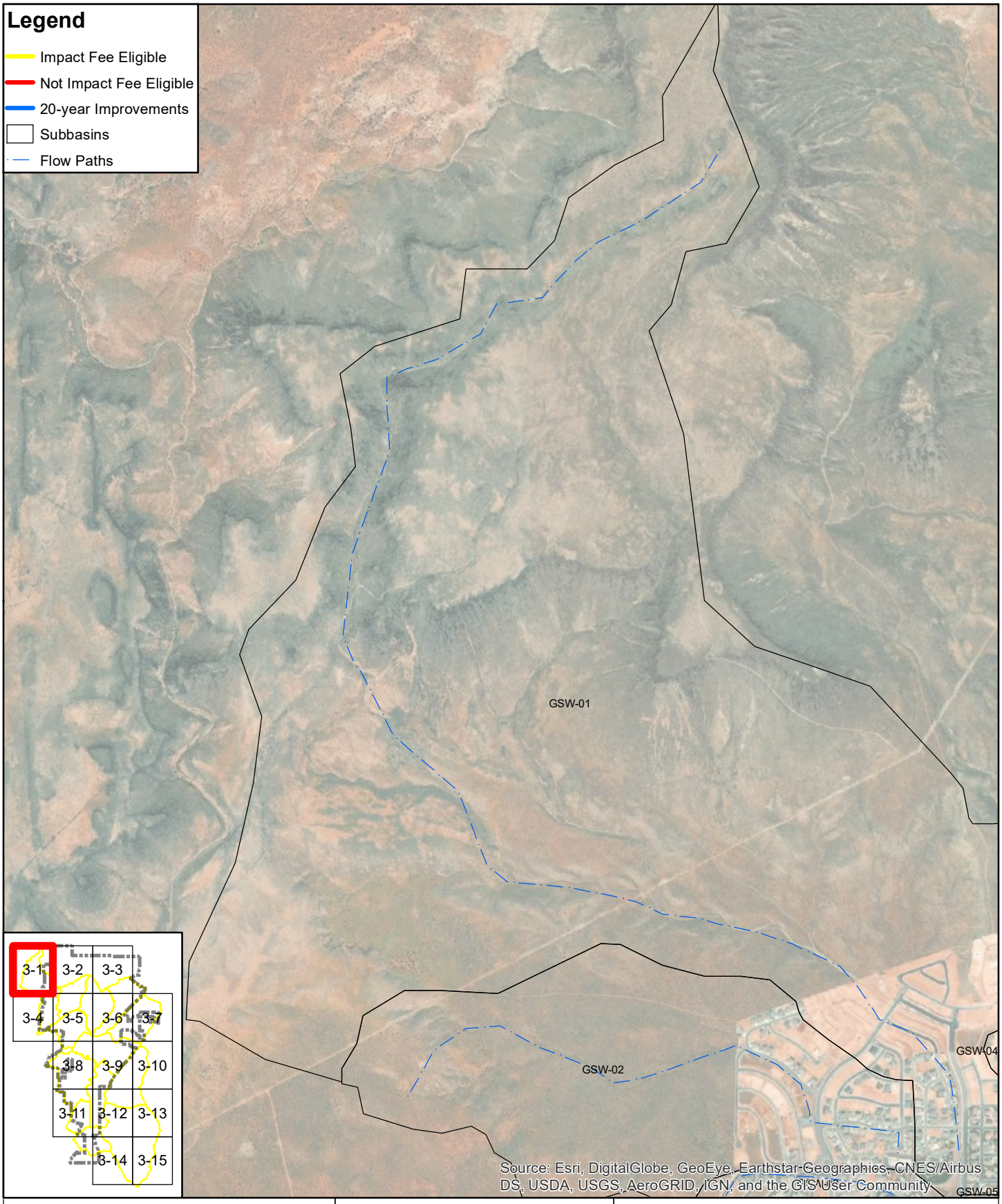
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Watersheds & Flow Paths Overview

Map 3



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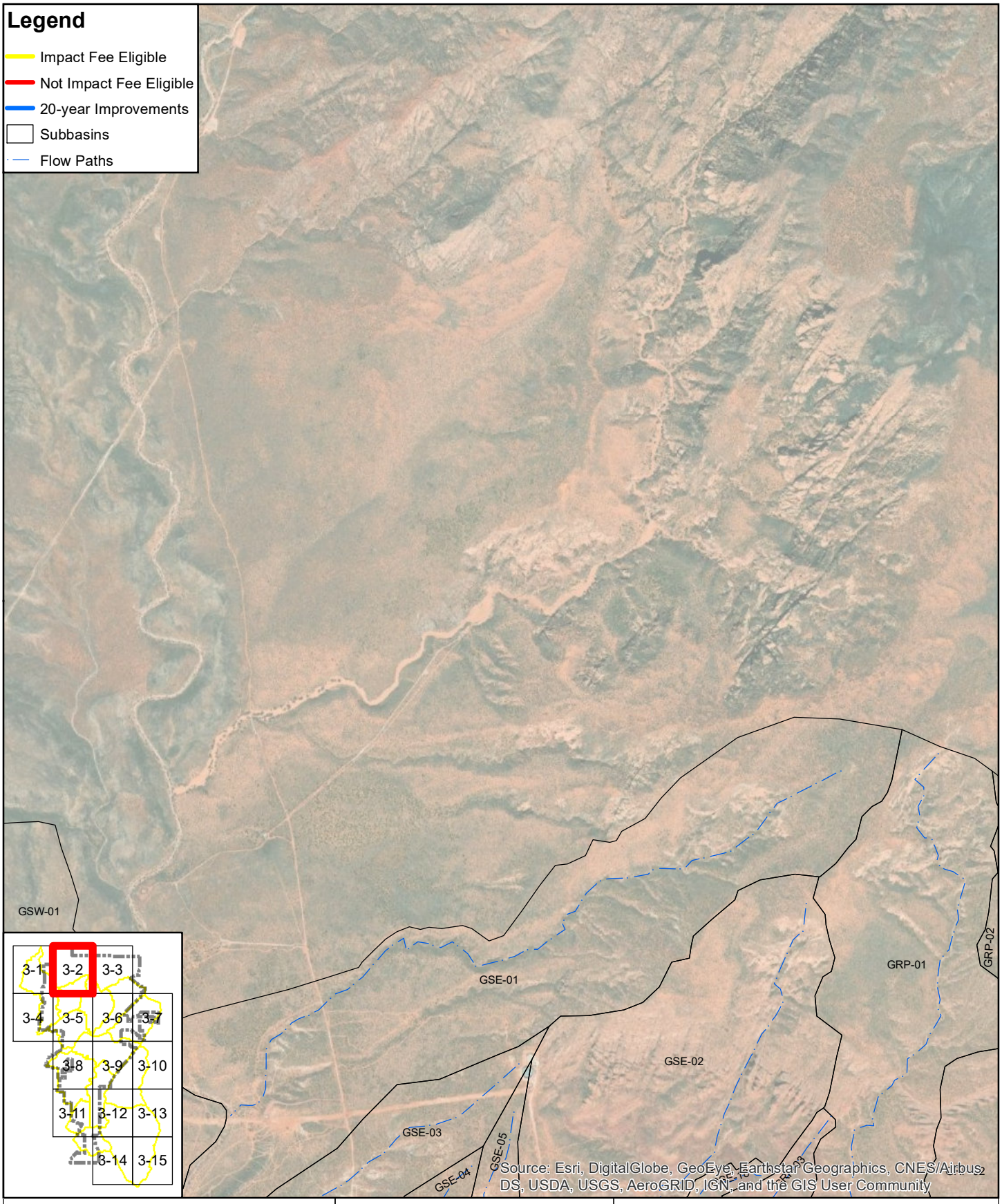
WASHINGTON CITY STORMWATER
IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-1



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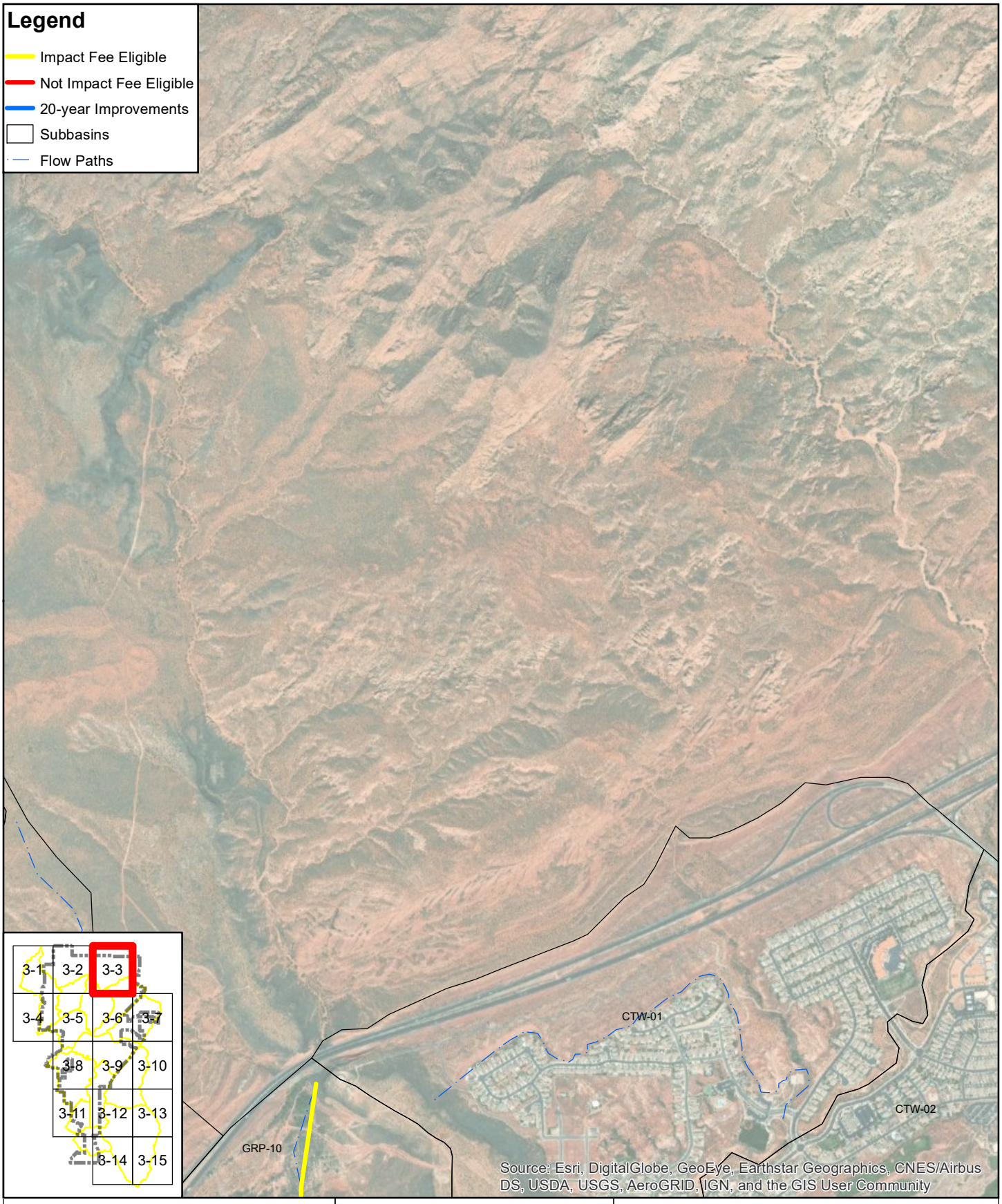
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-2



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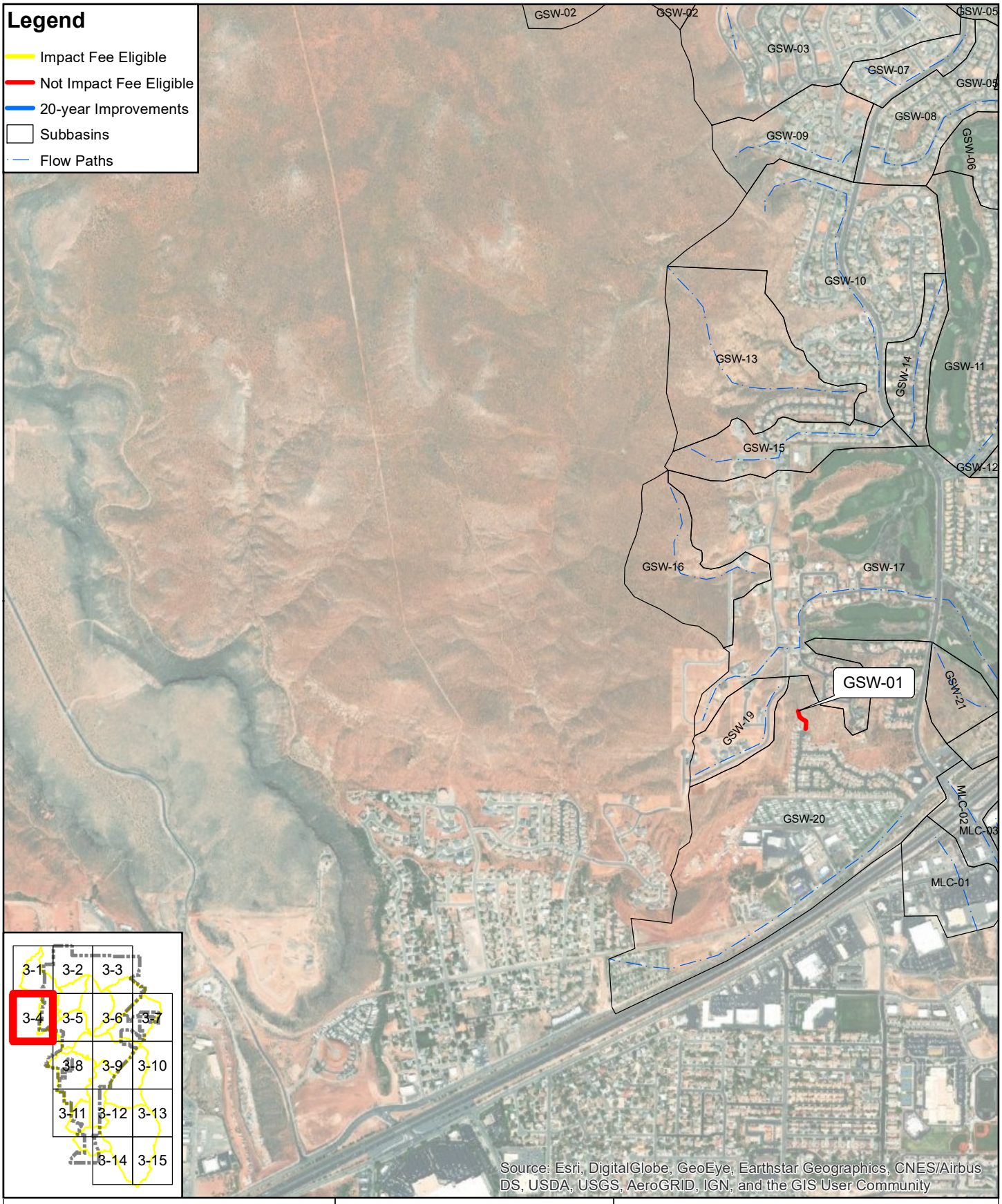
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-3



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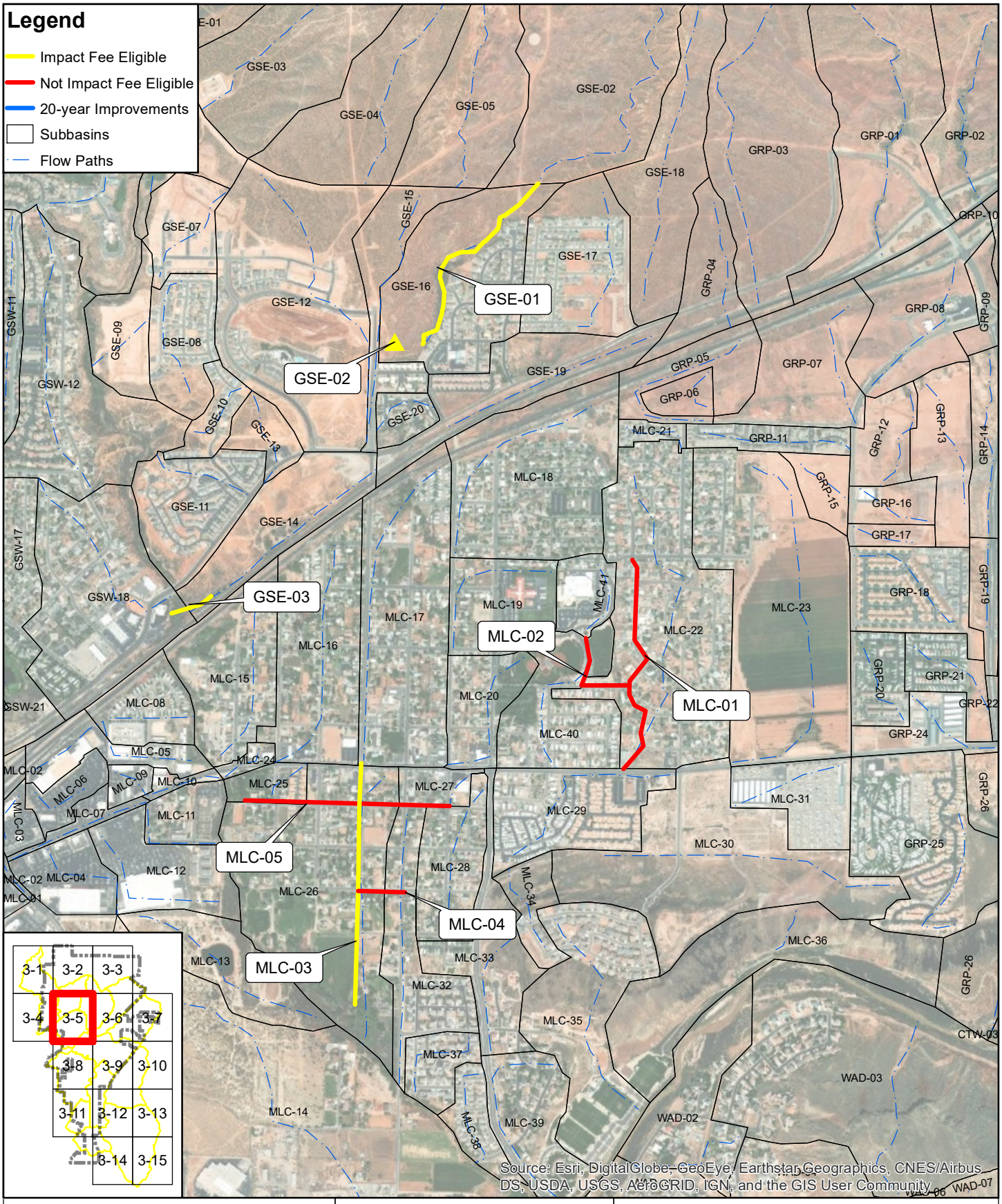
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-4



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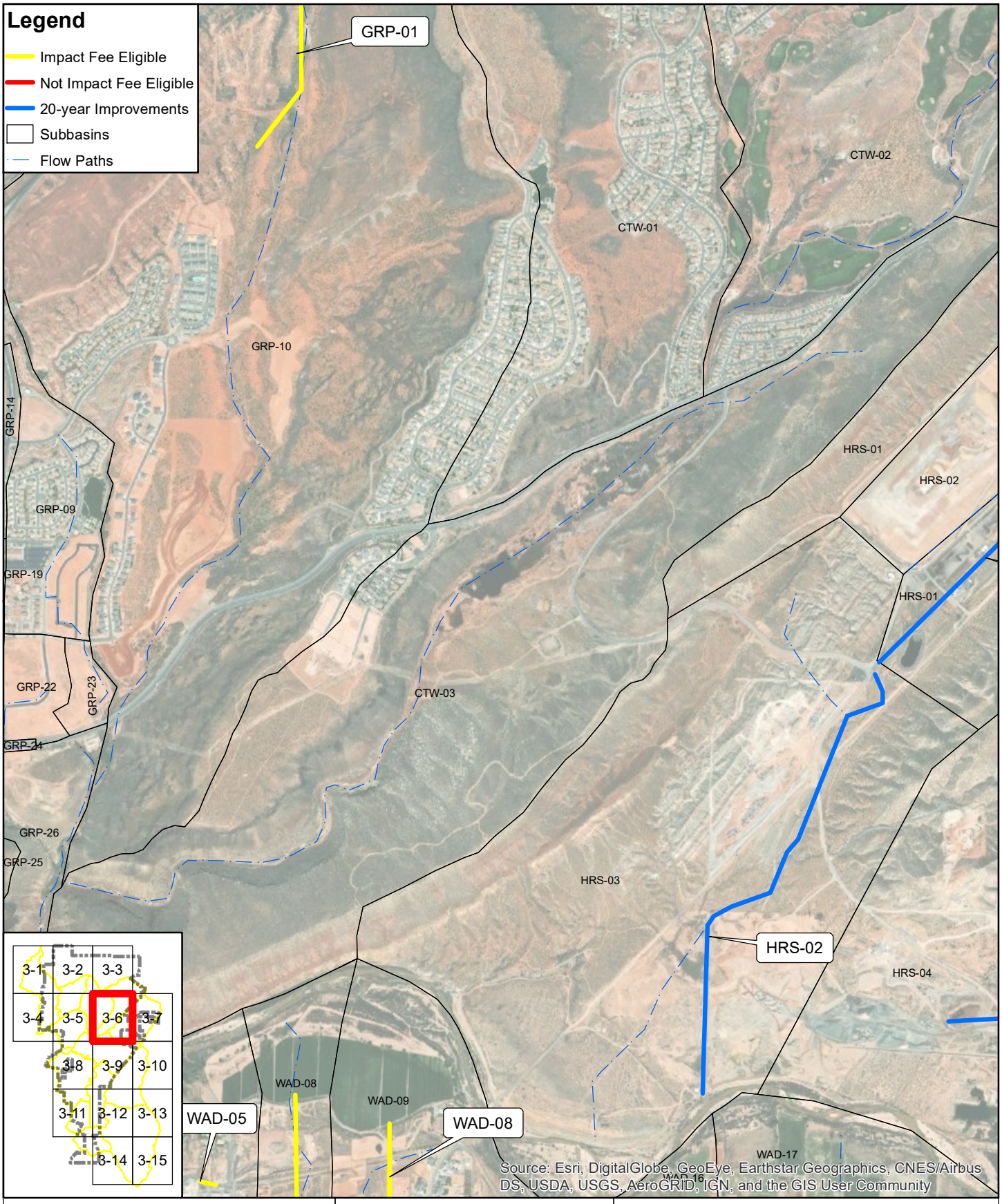
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-5



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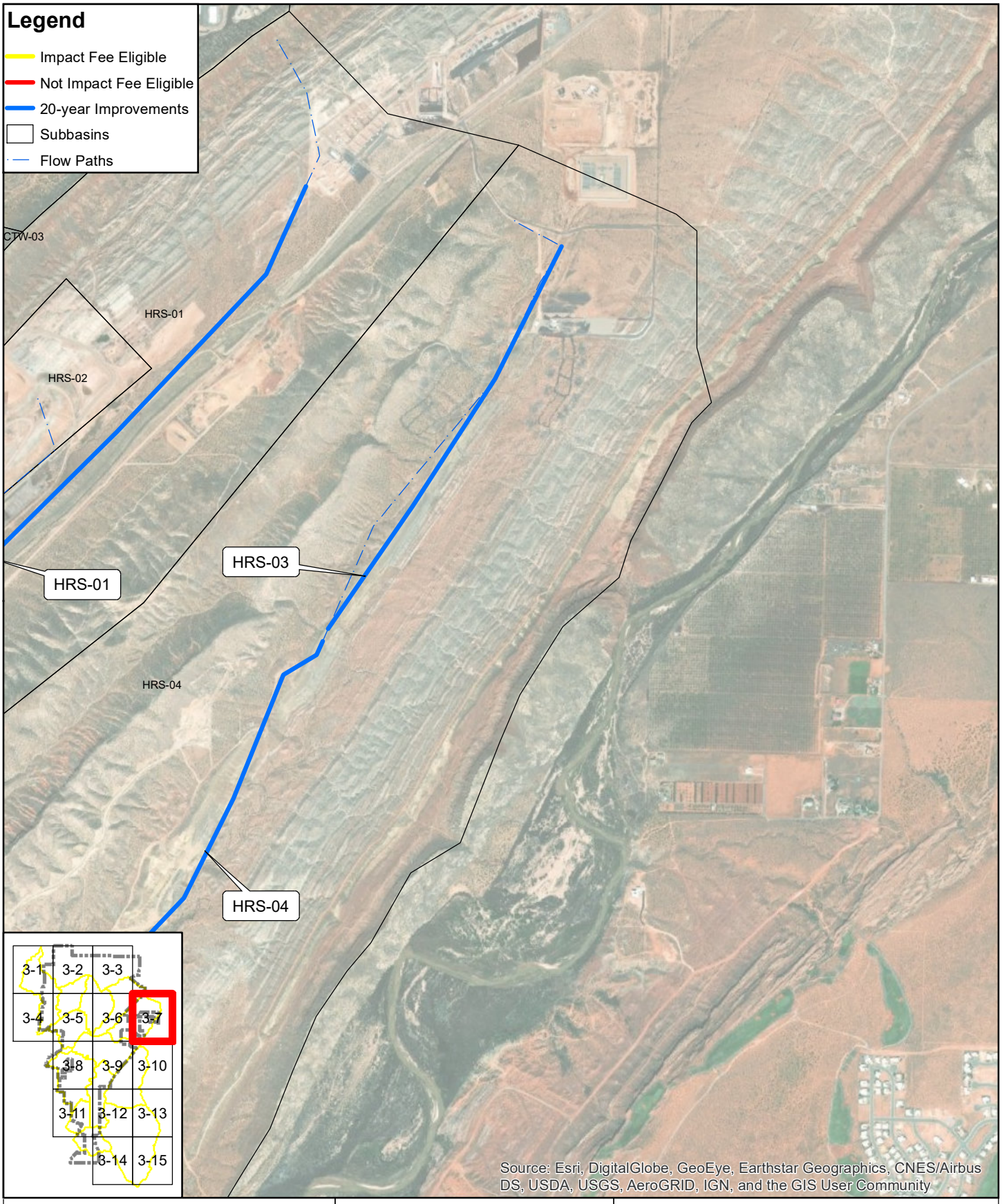
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-6



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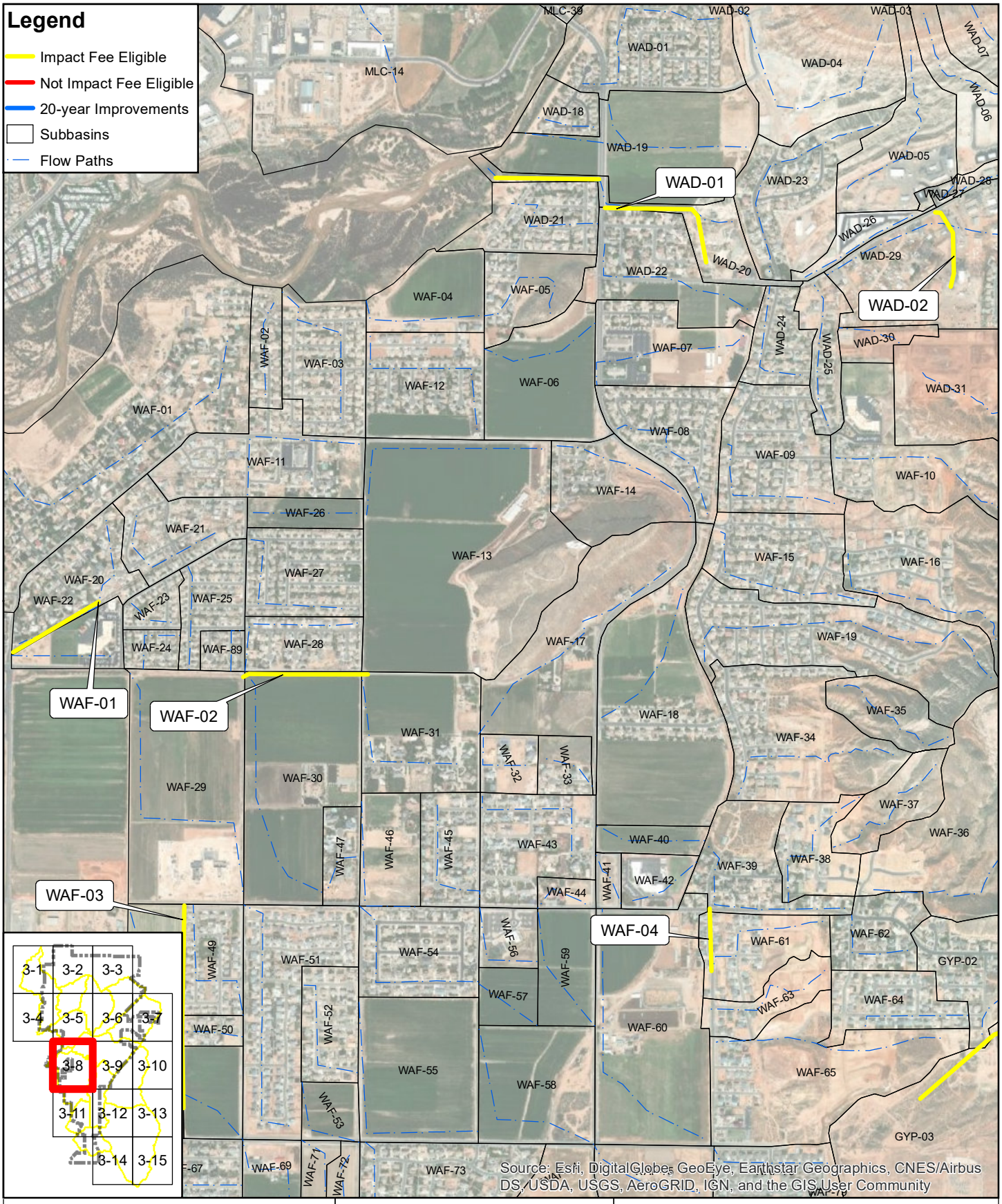
Watersheds & Flow Paths with Recommended Improvements

Map 3-7



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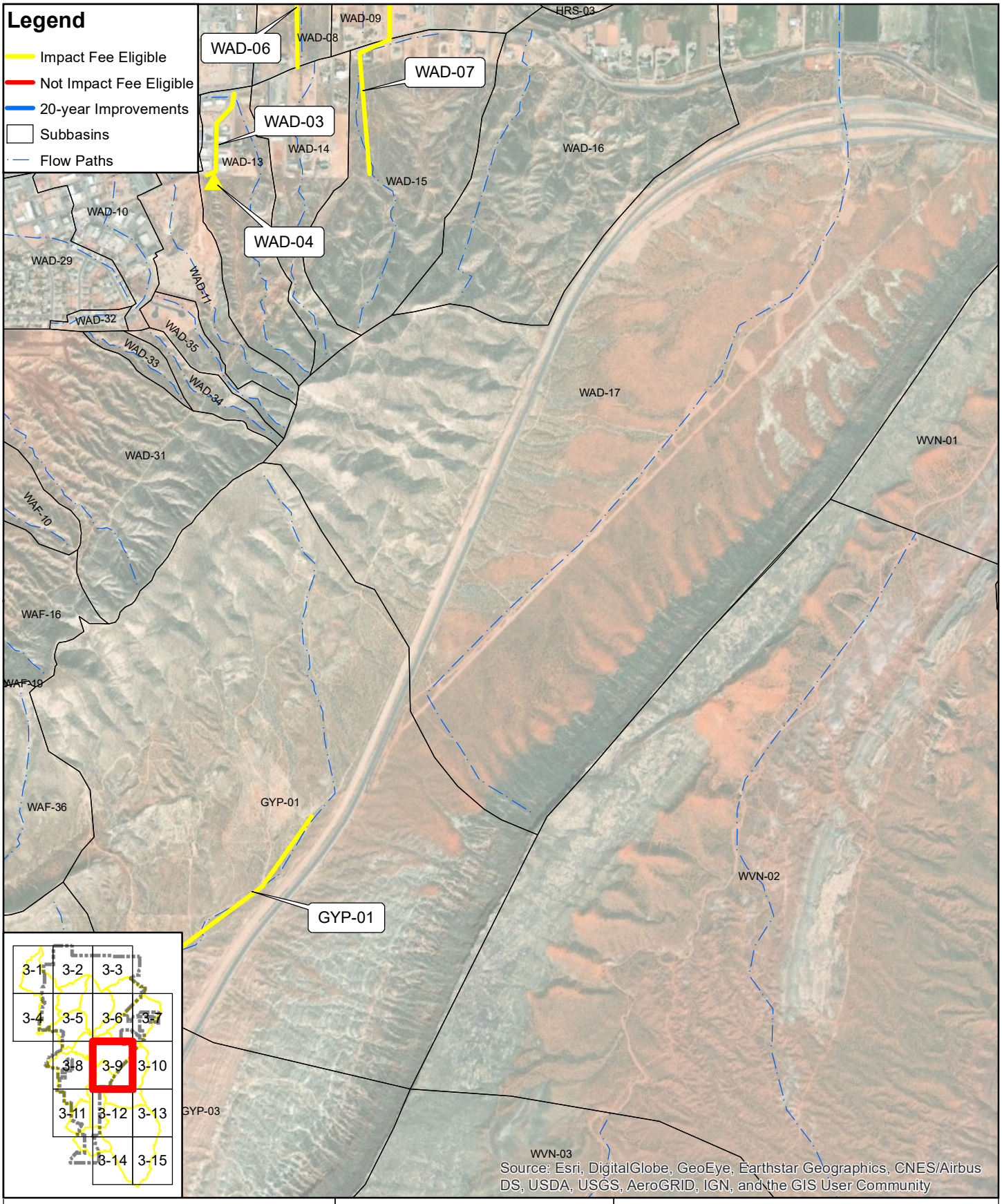
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-8



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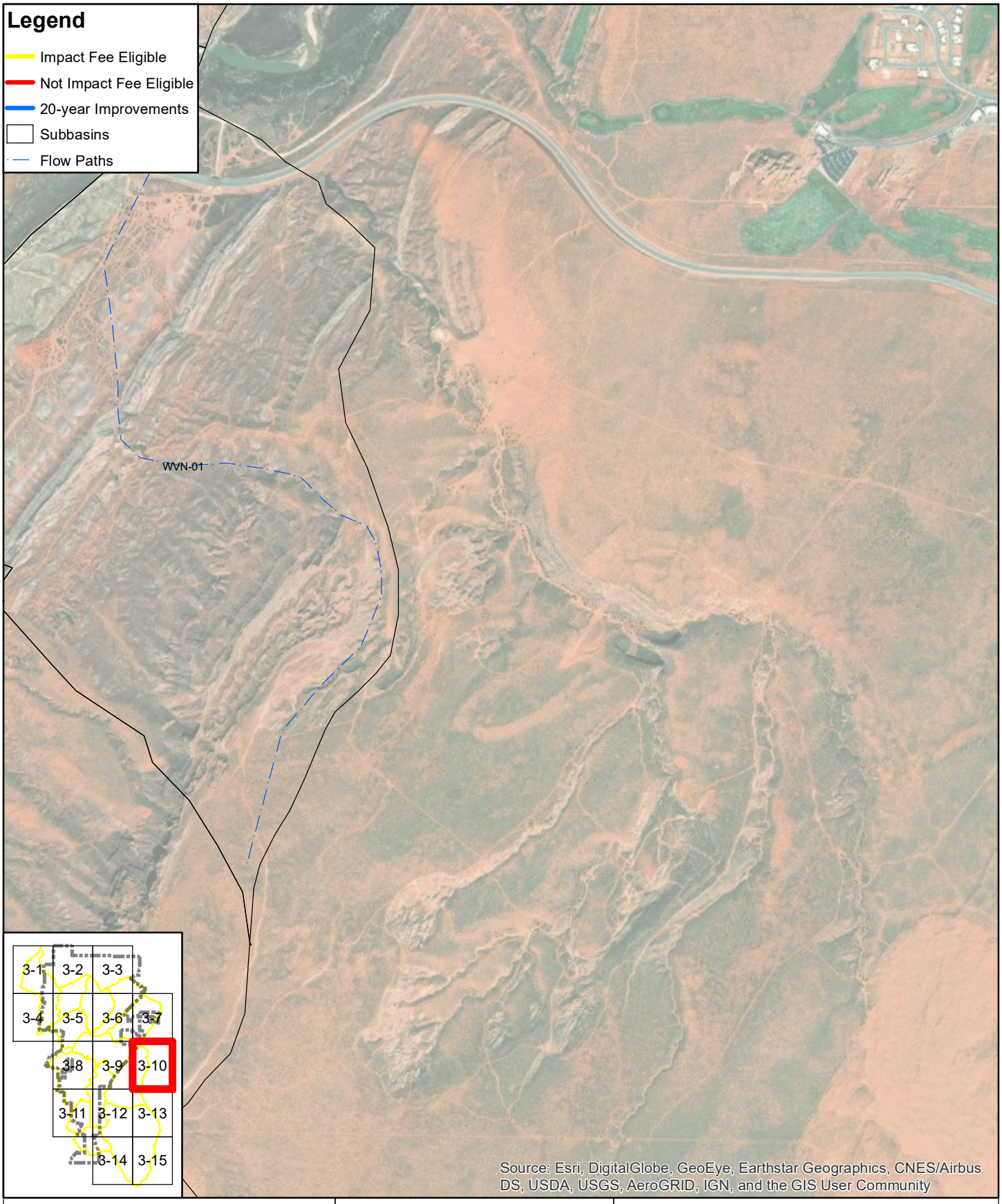
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-9



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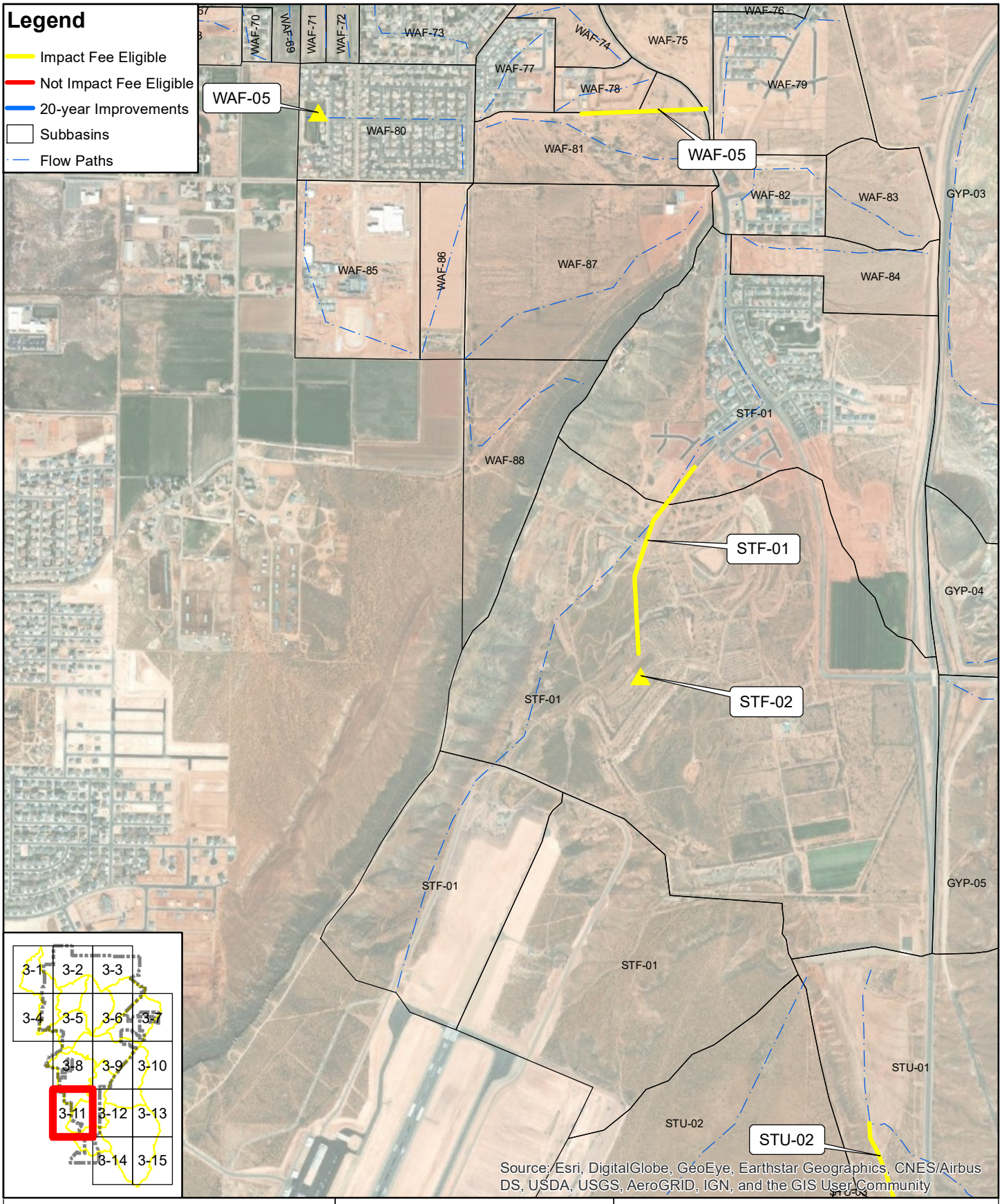
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-10



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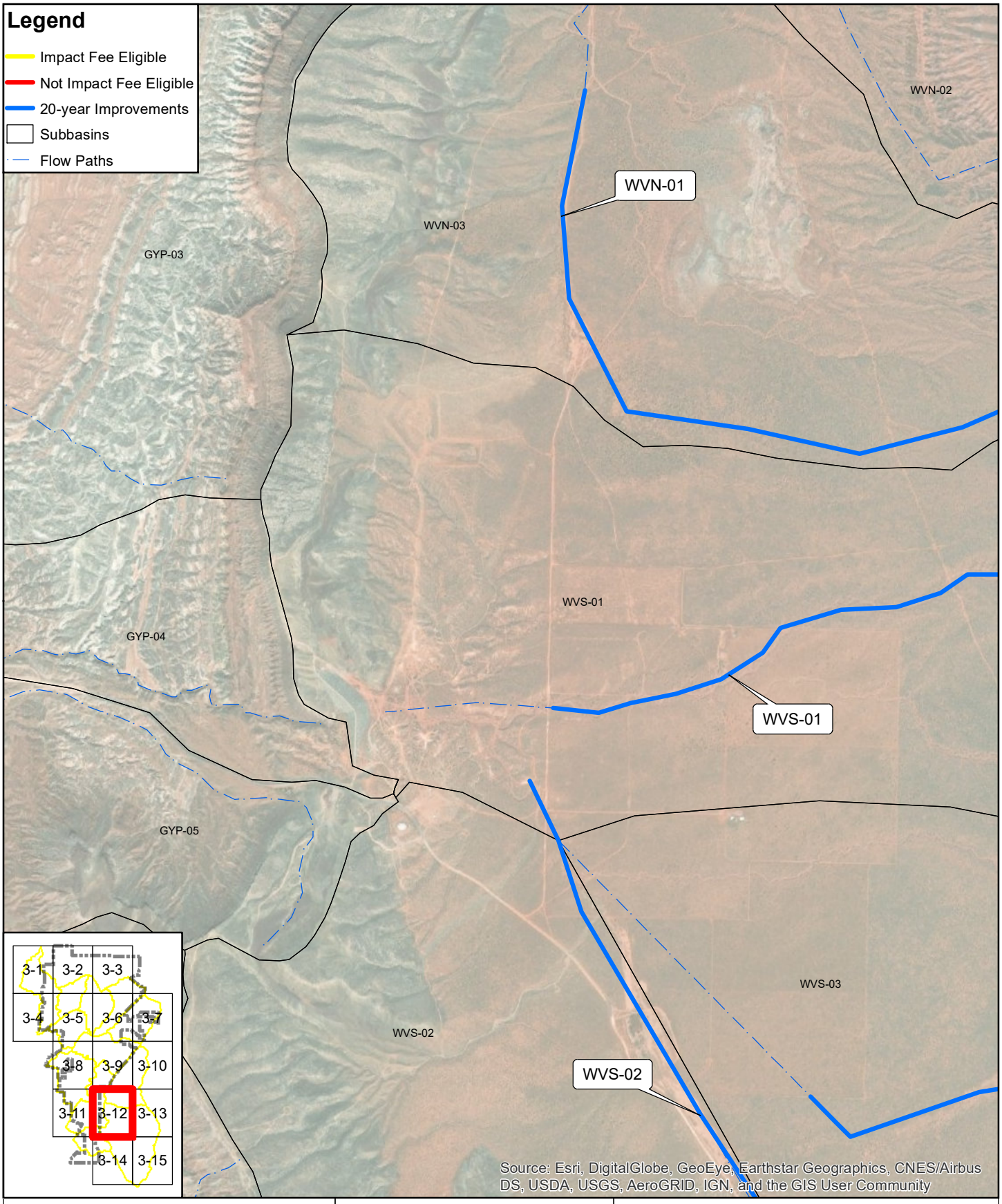
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-11



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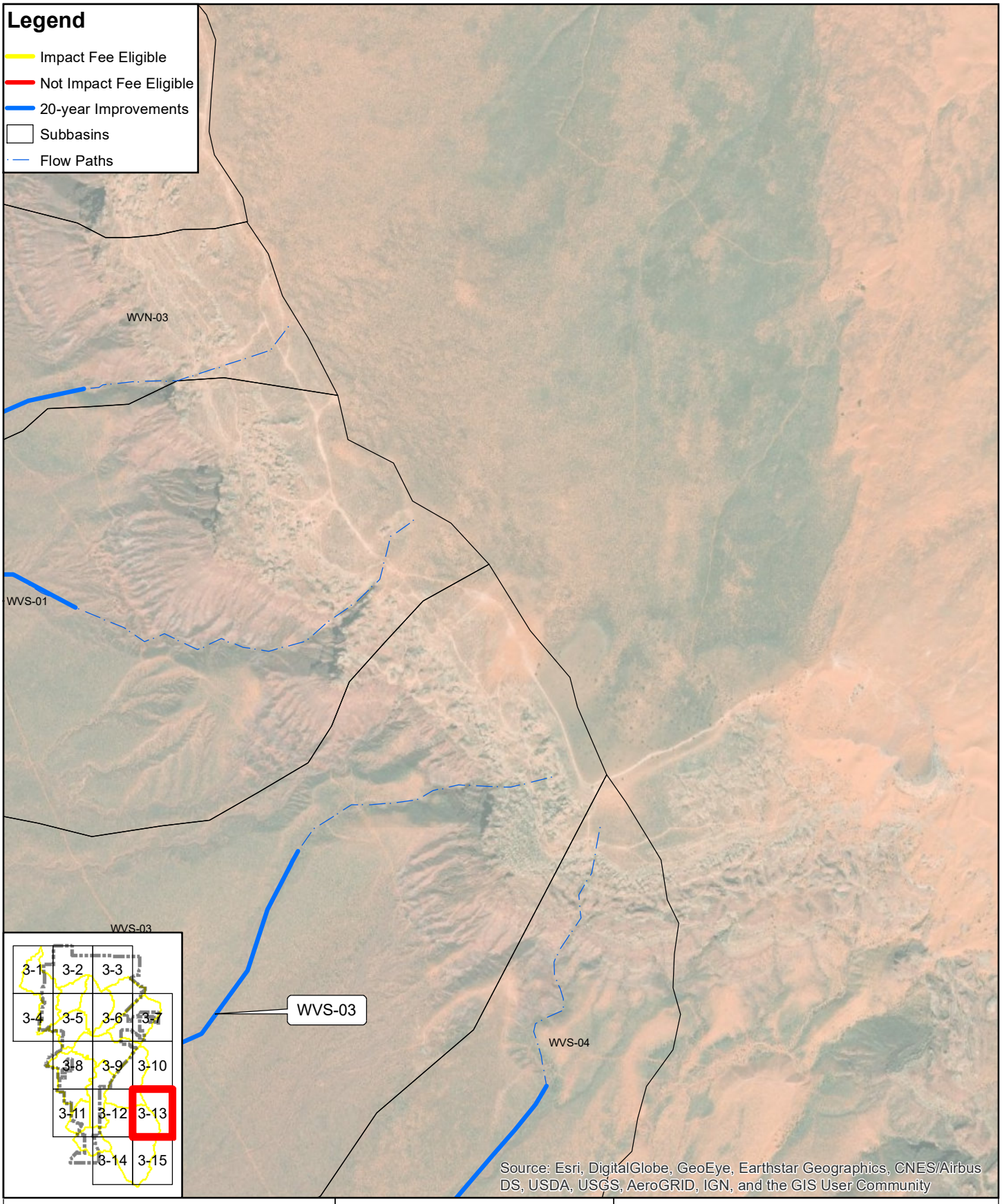
Watersheds & Flow Paths
with Recommended Improvements

Map 3-12



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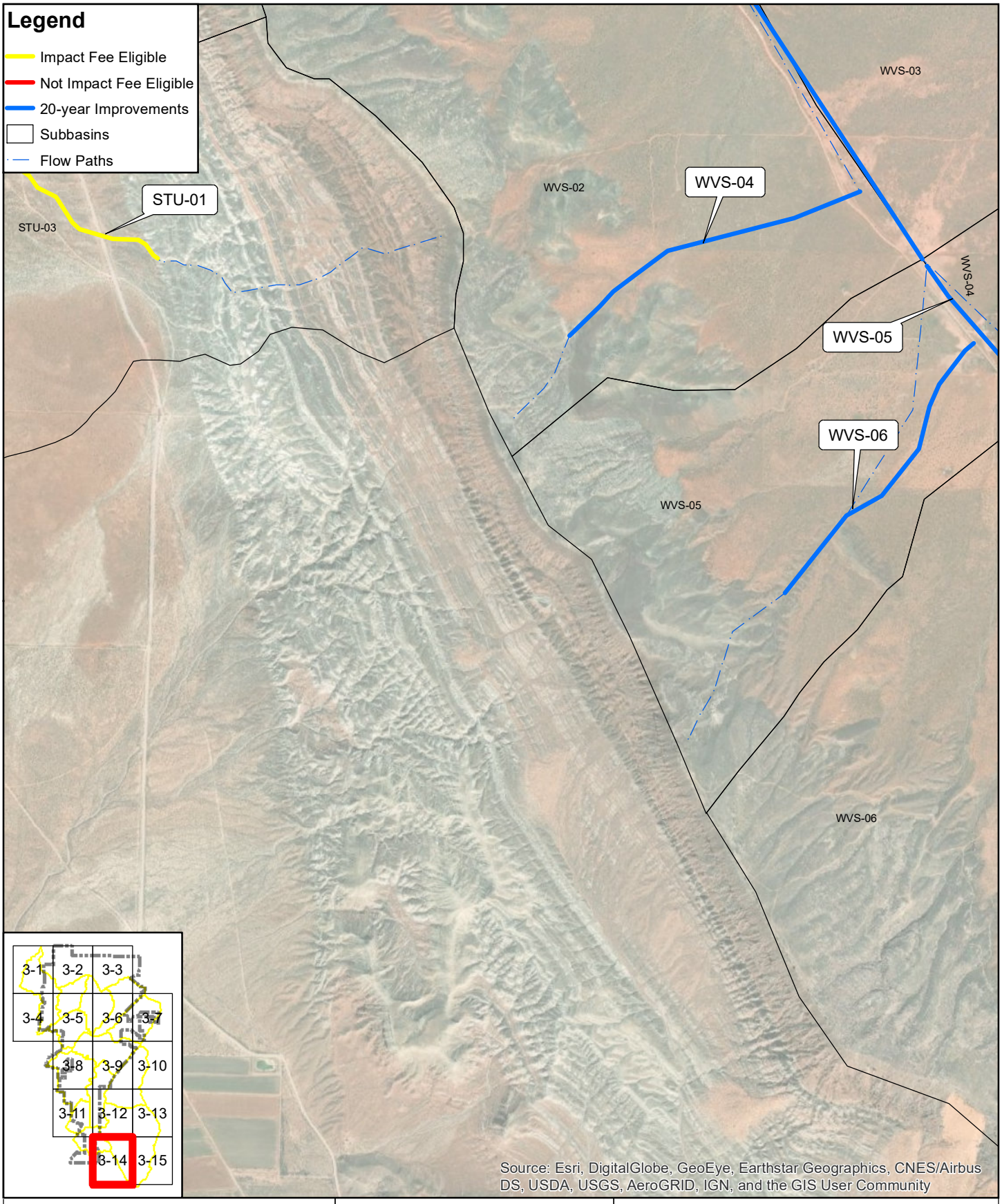
Watersheds & Flow Paths
with Recommended Improvements

Map 3-13



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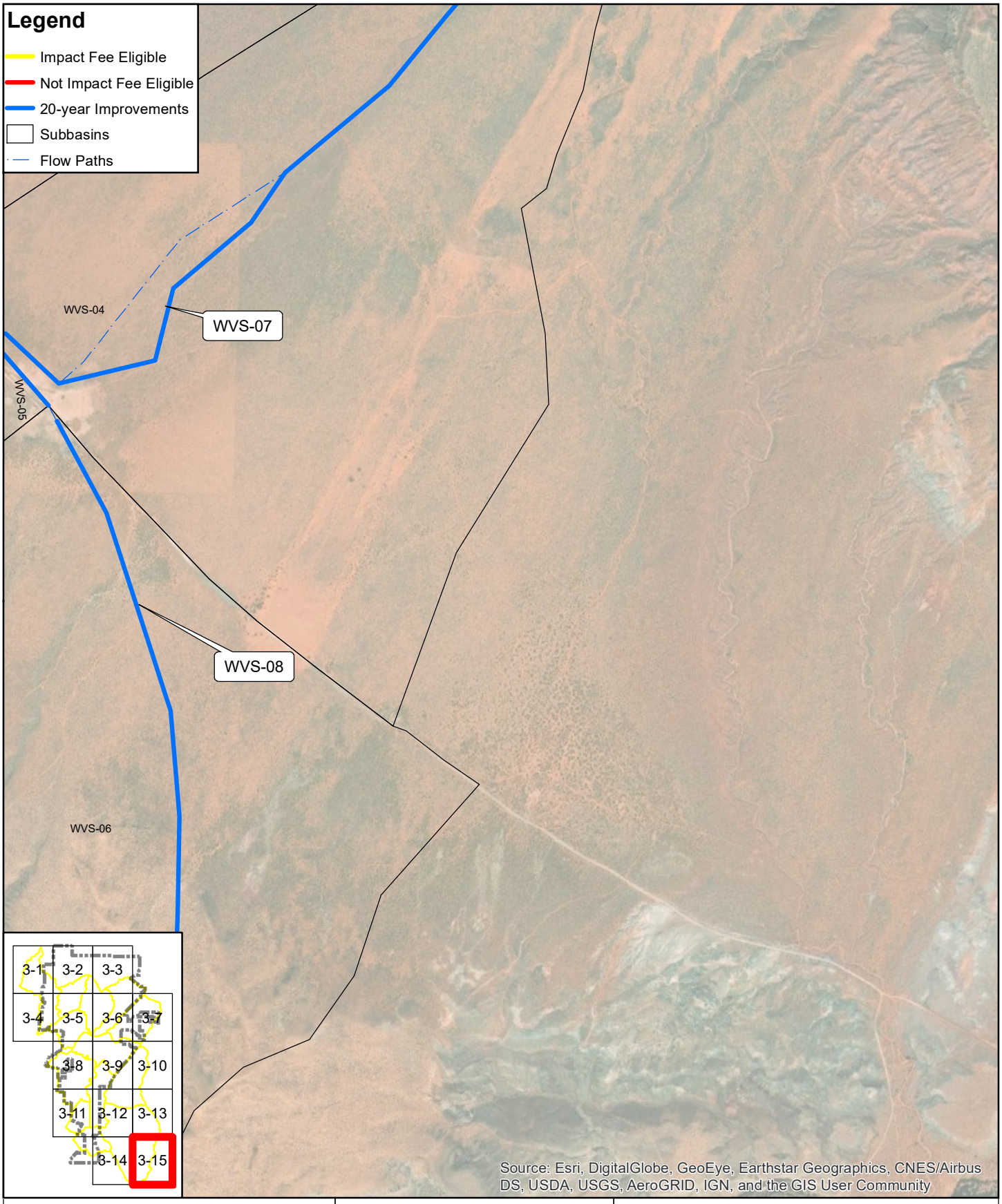
Watersheds & Flow Paths
with Recommended Improvements

Map 3-14



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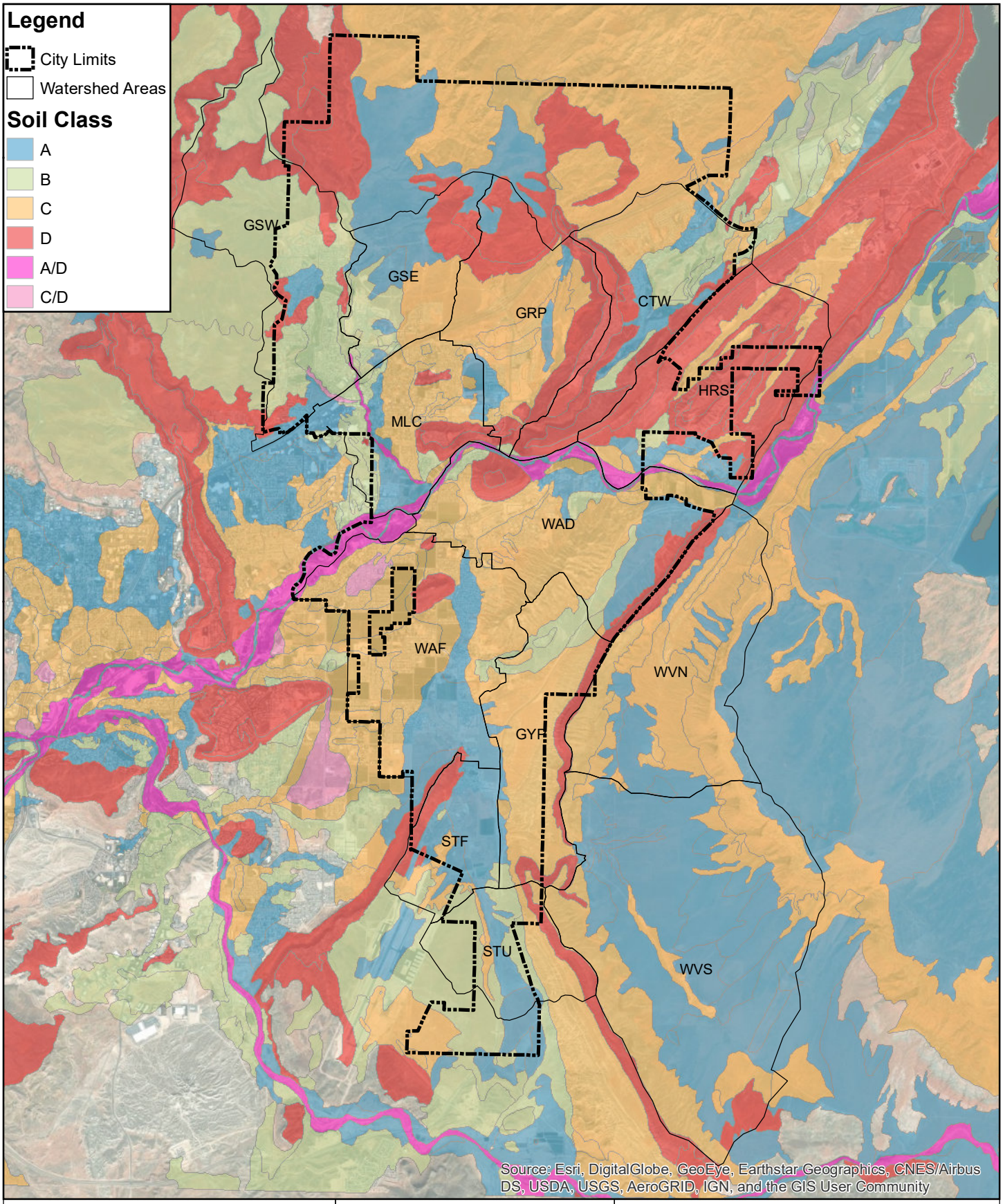
IFFPA UPDATE 2021

Watersheds & Flow Paths
with Recommended Improvements

Map 3-15



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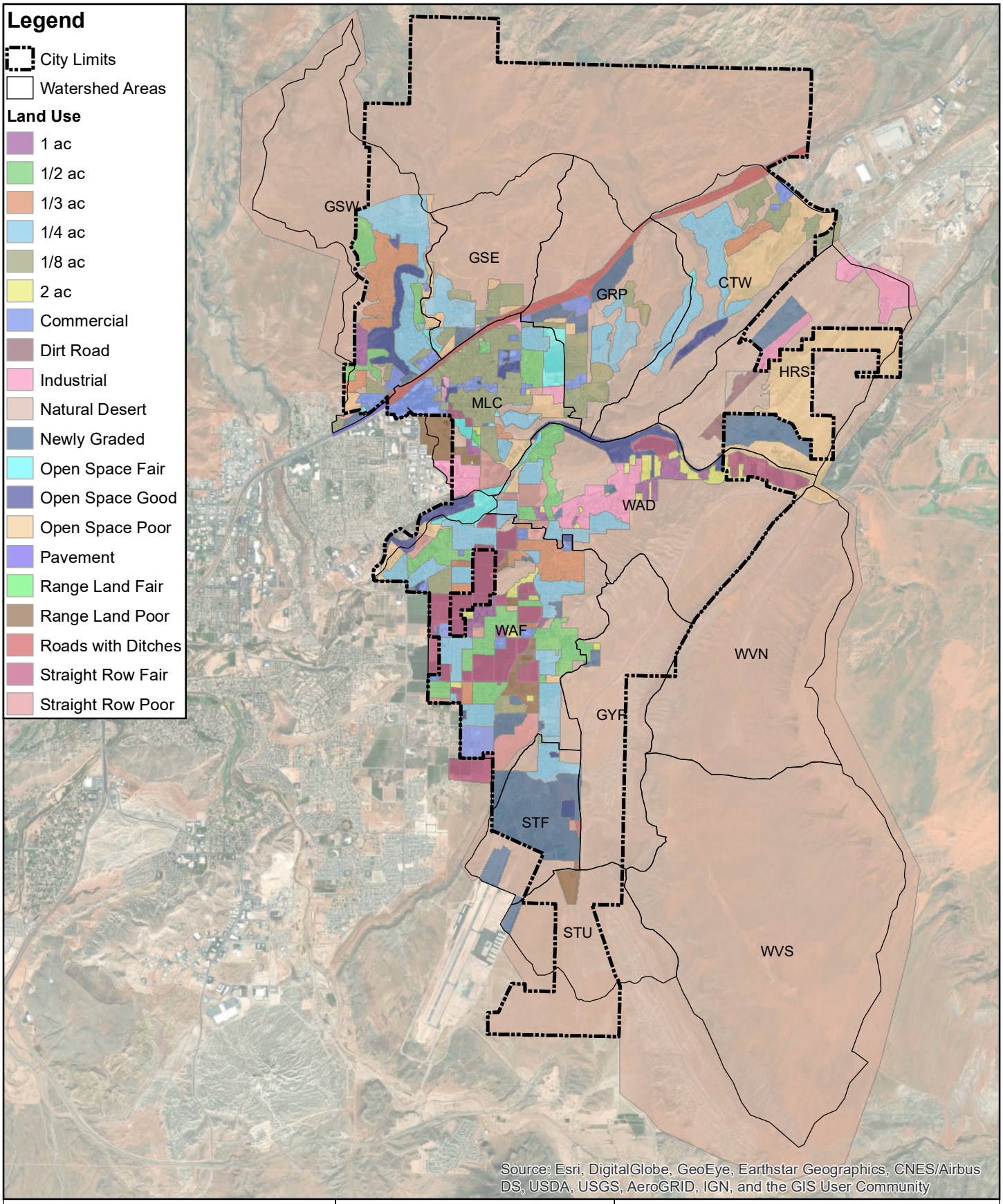
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Soil Classification Map

Map 4



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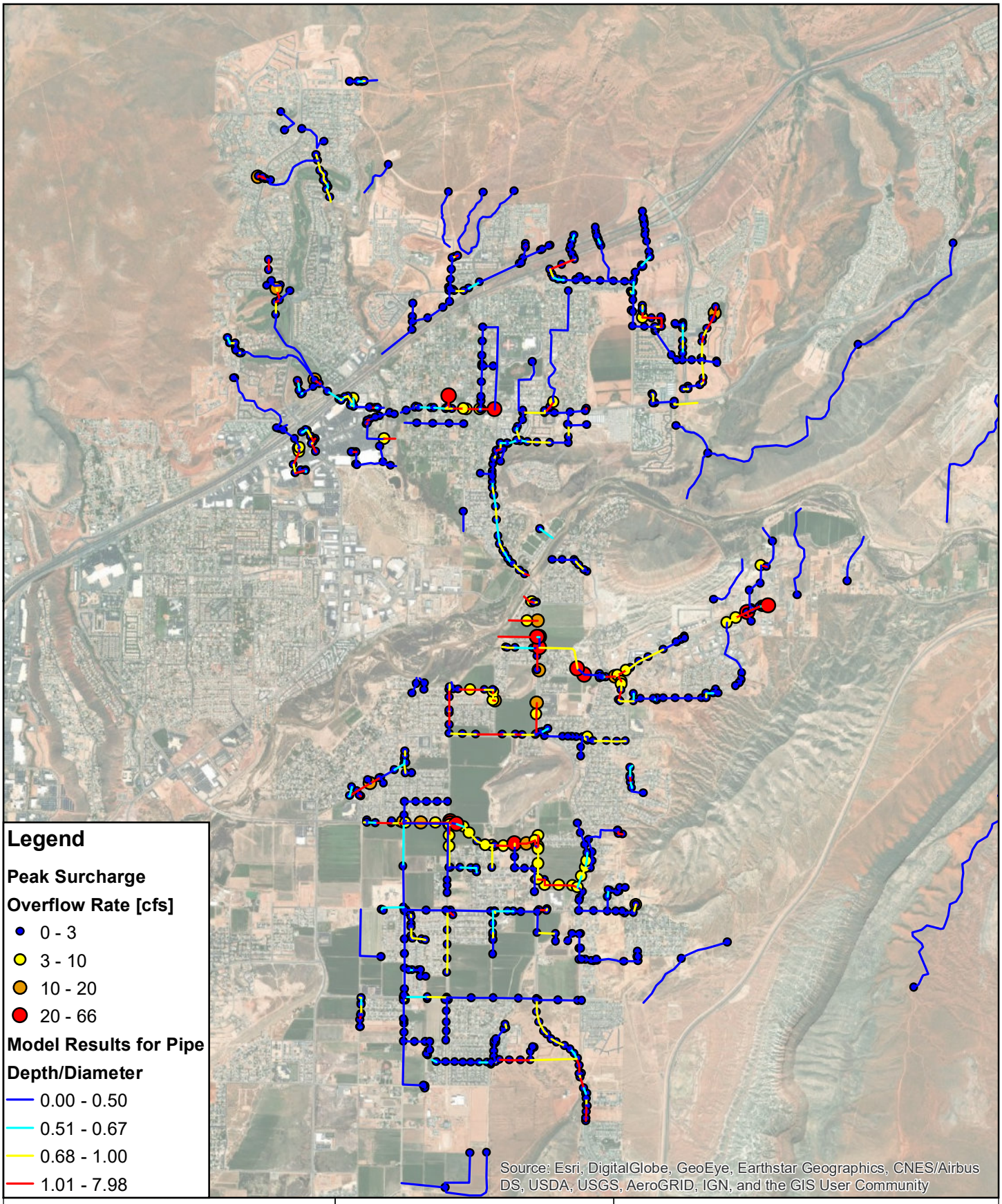
WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Land Use Map

Map 5



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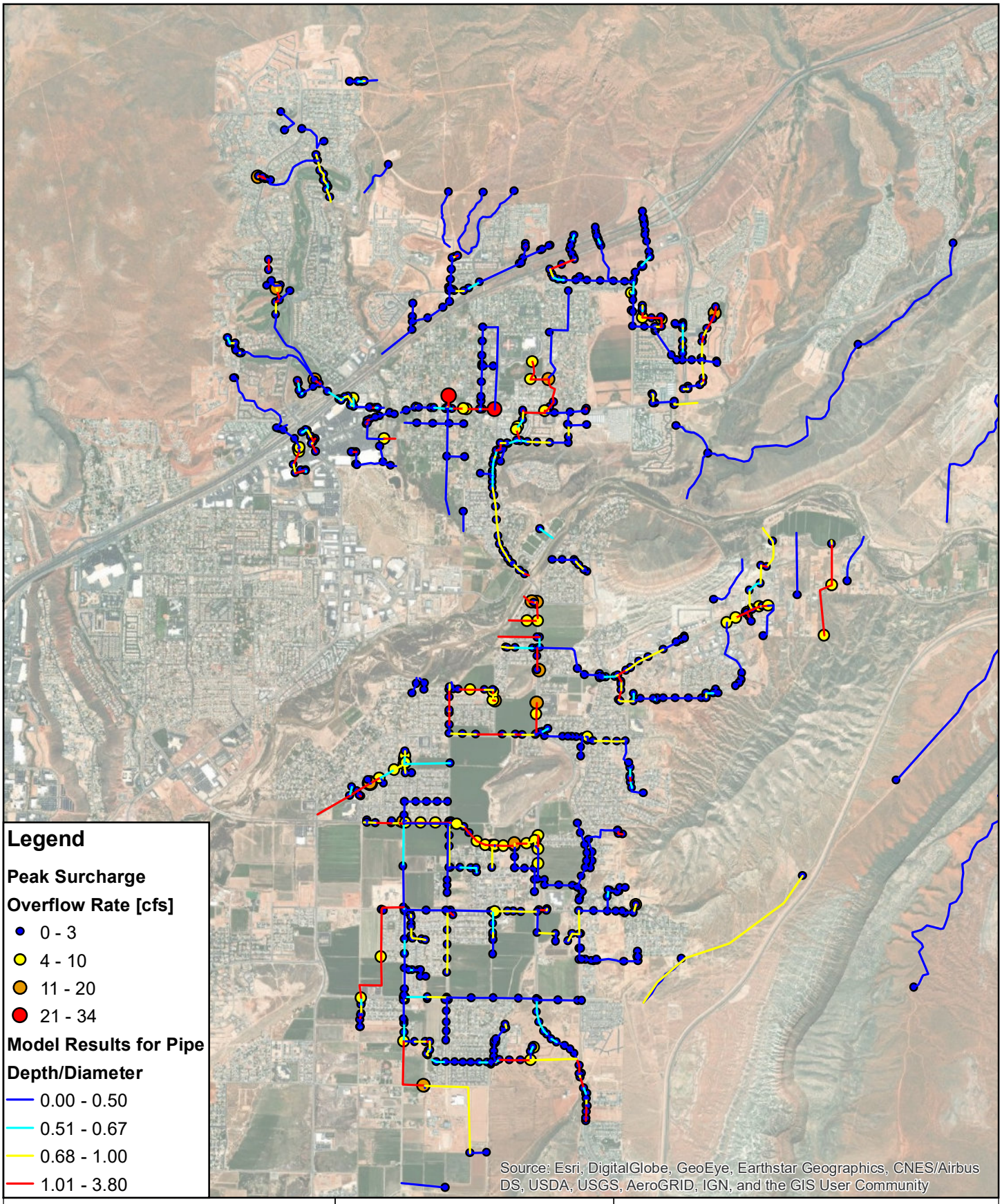
WASHINGTON CITY STORMWATER
IFFPA UPDATE 2020

Existing Facilities
Model Results 100-year, 3-hour

Map 6



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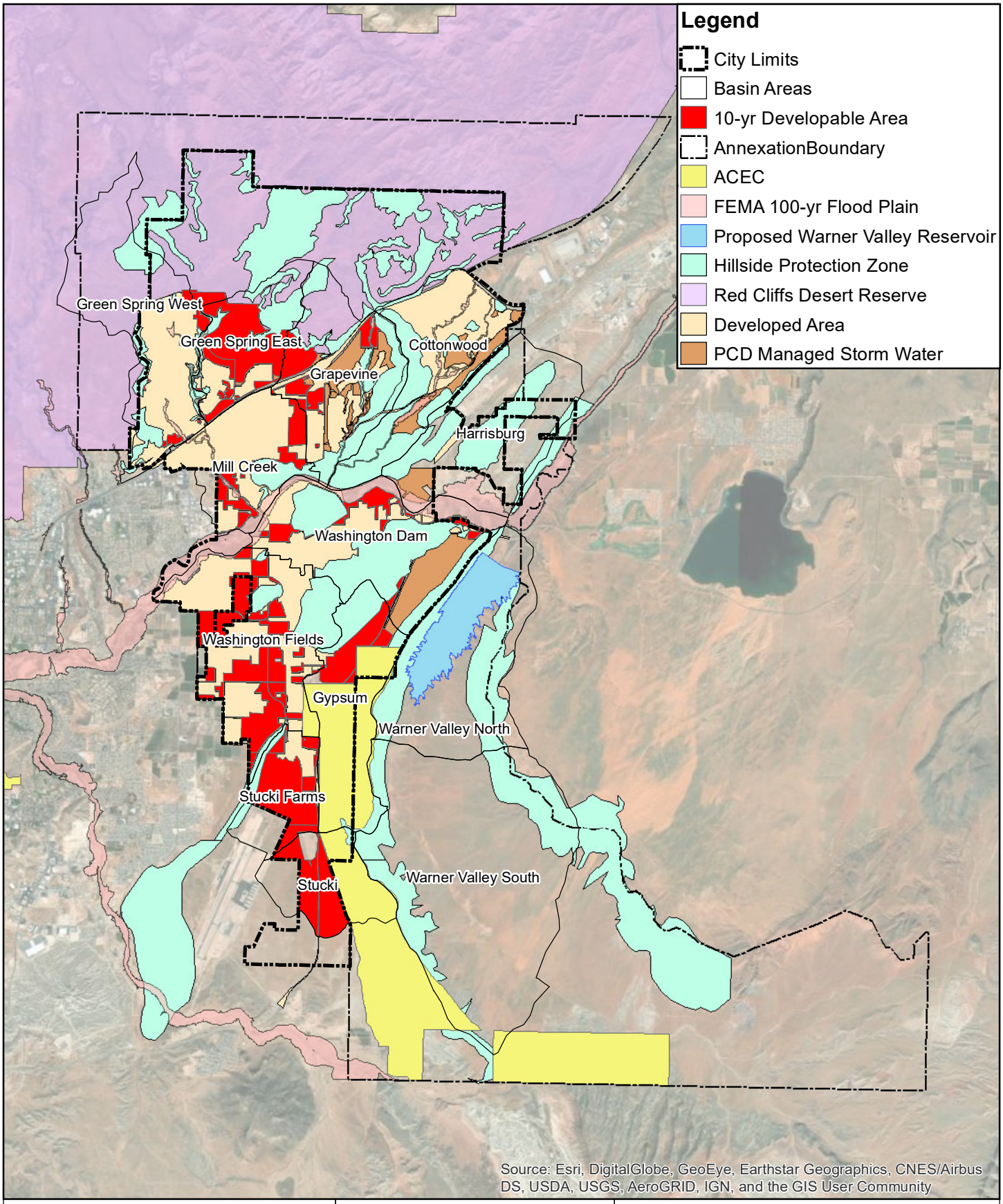
WASHINGTON CITY STORMWATER
IFFPA UPDATE 2020

Recommended Facilities
Model Results 100-year, 3-hour

Map 7



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WASHINGTON CITY STORMWATER IFFPA UPDATE 2021

Developable Areas

Map 8

Appendix B

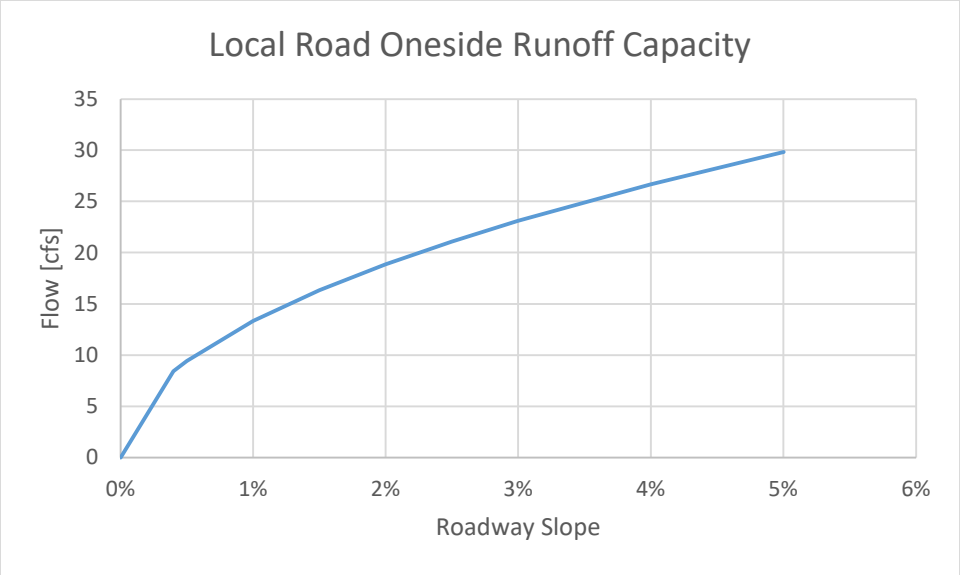
Tables & Figures

NOAA Precipitation Data

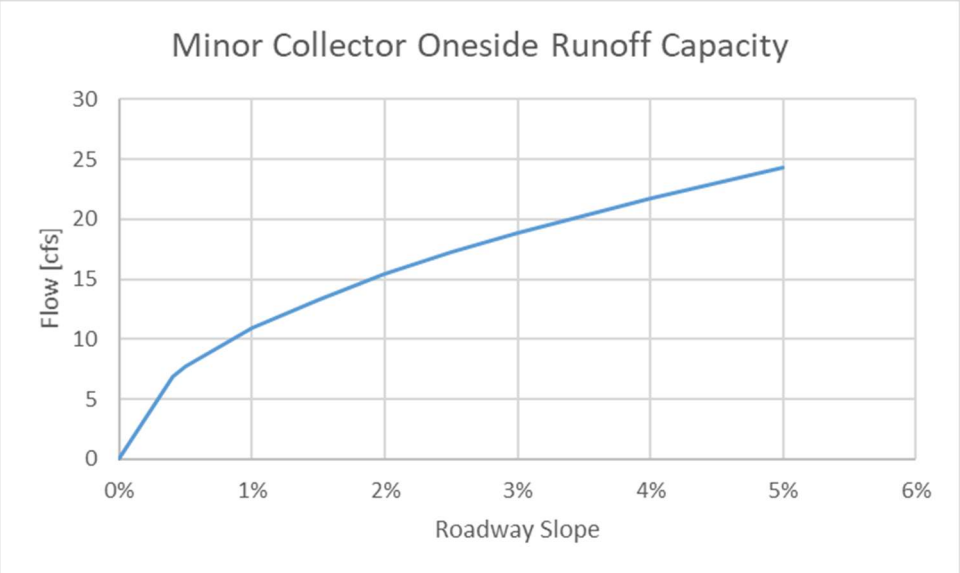
Single Side Roadway Flow Capacity Tables

NOAA ATLAS POINT PRECIPITATION FREQUENCY ESTIMATES

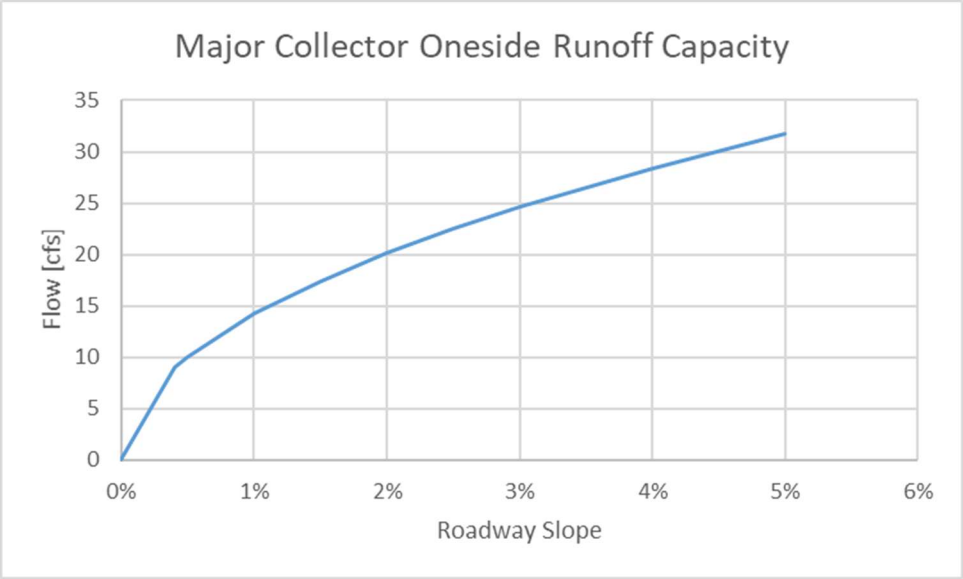
Duration	5-Year		10-Year		25-Year		100-Year	
	(in)	(in/hr)	(in)	(in/hr)	(in)	(in/hr)	(in)	(in/hr)
5 min	0.20	2.40	0.27	3.24	0.35	4.20	0.49	5.88
10 min	0.33	1.98	0.41	2.46	0.53	3.18	0.75	4.50
15 min	0.41	1.64	0.50	2.00	0.65	2.60	0.93	3.72
30 min	0.55	1.10	0.68	1.36	0.88	1.76	1.25	2.50
1 hr	0.68	0.68	0.84	0.84	1.09	1.09	1.54	1.54
2 hr	0.78	0.39	0.95	0.48	1.20	0.10	1.65	0.83
3 hr	0.85	0.28	1.01	0.34	1.25	0.42	1.69	0.56
6 hr	1.05	0.18	1.24	0.21	1.51	0.25	1.97	0.33
12 hr	1.24	0.10	1.46	0.12	1.74	0.15	2.19	0.18
24 hr	1.41	0.06	1.63	0.07	1.94	0.08	2.41	0.10
48-hr	1.53	0.03	1.77	0.04	2.08	0.04	2.57	0.05
72 hr	1.62	0.02	1.87	0.03	2.19	0.03	2.70	0.04



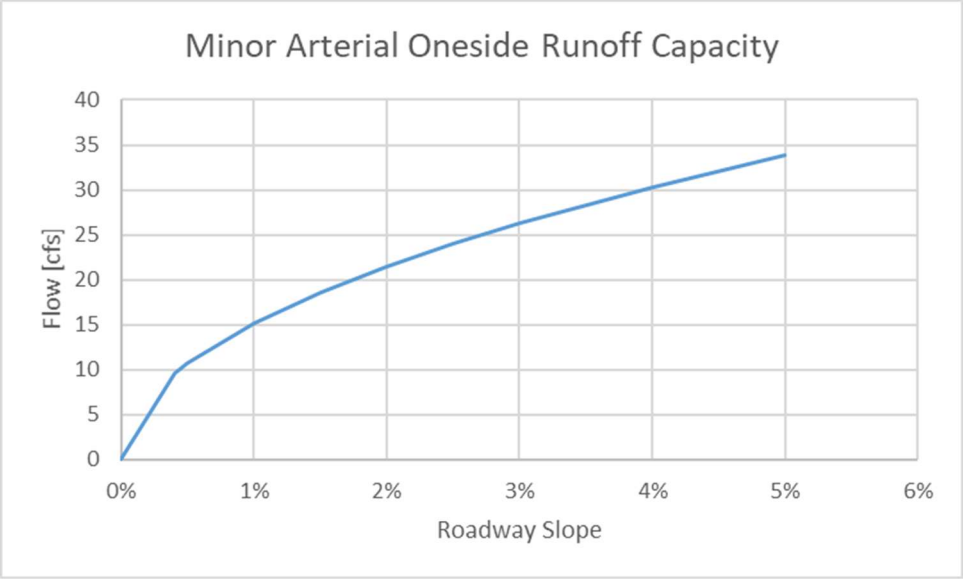
slope	0%	0.4%	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	4.0%	5.0%
flow	0	8.434	9.429	13.33	16.33	18.86	21.08	23.1	26.67	29.82



slope	0%	0.4%	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	4.0%	5.0%
flow	0	6.889	7.702	10.89	13.34	15.4	17.22	18.87	21.78	24.35



slope	0%	0.4%	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	4.0%	5.0%
flow	0	8.994	10.06	14.22	17.42	20.11	22.49	24.63	28.44	31.8



slope	0%	0.4%	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	4.0%	5.0%
flow at top of curb	0	9.579	10.71	15.15	18.55	21.42	23.95	26.23	30.29	33.87

Appendix C

Financial Analysis

Cost Estimate Summary and Impact Fee Calculation

Cash Flow

Project Cost Estimates:

- GRP-01
- GSE-01
- GSE-02
- GSE-03
- GSW-01
- GYP-01
- MLC-01
- MLC-02
- MLC-03
- MLC-04
- MLC-05
- STF-01
- STF-02
- STU-01
- STU-02
- WAD-01
- WAD-02
- WAD-03
- WAD-04
- WAD-05
- WAD-06
- WAD-07
- WAD-08
- WAD-09
- WAF-01
- WAF-02
- WAF-03
- WAF-04
- WAF-05

Project ID	Impact Fee Eligible %	Project Cost	Impact Fee Eligible Cost	User Fee Eligible Cost
GRP-01	20%	$ 775,400	$ 155,080	$ -
GSE-01	100%	$ 889,200	$ 889,200	$ -
GSE-02	100%	$ 358,100	$ 358,100	$ -
GSE-03	100%	$ 251,190	$ 251,190	$ -
GSW-01	0%	$ 73,400	$ -	$ 73,400
GYP-01	100%	$ 3,595,650	$ 3,595,650	$ -
MLC-01	0%	$ 984,400	$ -	$ 984,400
MLC-02	0%	$ 361,750	$ -	$ 361,750
MLC-03	30%	$ 1,049,170	$ 314,751	$ 734,419
MLC-04	0%	$ 160,645	$ -	$ 160,645
MLC-05	0%	$ 1,098,010	$ -	$ 1,098,010
STF-01	100%	$ 763,750	$ 763,750	$ -
STF-02	100%	$ 715,037	$ 715,037	$ -
STU-01	100%	$ 1,540,200	$ 1,540,200	$ -
STU-02	100%	$ 811,400	$ 811,400	$ -
WAD-01	100%	$ 2,170,435	$ 2,170,435	$ -
WAD-02	50%	$ 339,120	$ 169,560	$ 169,560
WAD-03	100%	$ 385,290	$ 385,290	$ -
WAD-04	100%	$ 604,140	$ 604,140	$ -
WAD-05	100%	$ 86,080	$ 86,080	$ -
WAD-06	100%	$ 555,120	$ 555,120	$ -
WAD-07	100%	$ 474,150	$ 474,150	$ -
WAD-08	100%	$ 345,180	$ 345,180	$ -
WAF-01	100%	$ 521,810	$ 521,810	$ -
WAF-02	100%	$ 635,910	$ 635,910	$ -
WAF-03	100%	$ 987,380	$ 987,380	$ -
WAF-04	50%	$ 359,450	$ 179,725	$ 179,725
WAF-05	100%	$ 319,170	$ 319,170	$ -
IFFP (5-yr & 10-yr)	100%	$ 140,000	$ 140,000	$ -
	TOTAL	$ 21,350,537	$ 16,968,308	$ 3,761,909
		Developable Area [acres]	3,573	
		Maximum Allowable Impact Fee per Acre	$4,749.04	

Cashflow - Washington Stormwater Impact Fee Analysis

Proposed Impact Fee = $ 4,749.04 Inflation Rate 2%

Title	2017	2018	2019	2020	2021	2022	2023
Revenue							
Total ERCs	11,801	12,155	12,520	12,896	13,282	13,681	14,091
New ERCs	-	354	365	376	386	399	410
Average User Rate	$ 6.99	$ 7.07	$ 7.19	$ 6.88	$ 6.88	$ 6.88	$ 6.88
Impact Fees Collected	**$ 442,023**	**$ 614,757**	**$ 638,627**	$ 1,481,673	$ 1,521,079	$ 1,572,307	$ 1,615,654
Charges for Services	$ 989,858	$ 1,030,538	$ 1,080,545	$ 1,064,694	$ 1,096,562	$ 1,129,503	$ 1,163,353
Miscellaneous	$ 42,406	$ 60,151	$ 54,322	$ 55,408	$ 56,517	$ 57,647	$ 58,800
Total Operating Revenue	$ 1,032,264	$ 1,090,689	$ 1,134,867	$ 1,120,102	$ 1,153,079	$ 1,187,150	$ 1,222,153
Expenses							
Salaries & Wages	$ 177,960	$ 196,778	$ 209,963	$ 214,162	$ 218,446	$ 222,814	$ 227,271
Employee Benefits	$ 122,172	$ 131,685	$ 153,568	$ 156,639	$ 159,772	$ 162,968	$ 166,227
Utilities	$ 6,894	$ 5,154	$ 5,559	$ 5,986	$ 6,106	$ 6,228	$ 6,353
Professional Services	$ 200,950	$ 198,280	$ 258,581	$ 234,361	$ 239,048	$ 243,829	$ 248,706
Repairs & Maintenance	$ 22,964	$ 7,246	$ 934,471	$ 20,000	$ 20,400	$ 20,808	$ 21,224
Miscellaneous	$ 3,818	$ 14,482	$ 13,823	$ 14,099	$ 14,381	$ 14,669	$ 14,962
Administrative Cost Allocation	$ 38,430	$ 42,604	$ 42,960	$ 42,158	$ 43,001	$ 43,861	$ 44,738
Supplies	$ 13,678	$ 14,224	$ 31,116	$ 20,066	$ 20,467	$ 20,877	$ 21,294
Total Operating Expenses	$ 586,866	$ 610,453	$ 1,650,041	$ 707,472	$ 721,622	$ 736,054	$ 750,775
Project Costs							
Non-Impact Fee Eligible Cost	$ -	$ -	$ -	$ 376,191	$ 376,191	$ 376,191	$ 376,191
Impact Fee Eligible Cost	$ -	$ -	$ -	$ 1,696,831	$ 1,696,831	$ 1,696,831	$ 1,696,831
Accounts							
Net Cash	$ 445,398	$ 480,236	$ (515,174)	$ 412,630	$ 431,457	$ 451,096	$ 471,378
Operating Account Balance	***$ 425,716***	***$ 905,952***	***$ 390,778***	$ 427,217	$ 482,483	$ 557,388	$ 652,575
Impact Fee Balance	***$ 442,023***	***$ 1,056,780***	***$ 1,695,407***	$ 1,480,249	$ 1,304,498	$ 1,179,974	$ 1,098,797

Title	2024	2025	2026	2027	2028	2029	2030
Revenue							
Total ERCs	14,514	14,949	15,398	15,860	16,336	16,826	17,331
New ERCs	423	435	449	462	476	490	505
Average User Rate	$ 6.88	$ 6.88	$ 6.88	$ 6.88	$ 6.88	$ 6.88	$ 6.88
Impact Fees Collected	$ 1,666,882	$ 1,714,170	$ 1,769,338	$ 1,820,566	$ 1,875,735	$ 1,930,904	$ 1,930,904
Charges for Services	$ 1,198,276	$ 1,234,189	$ 1,271,259	$ 1,309,402	$ 1,348,700	$ 1,389,155	$ 1,430,847
Miscellaneous	$ 59,976	$ 61,175	$ 62,399	$ 63,647	$ 64,920	$ 66,218	$ 67,543
Total Operating Revenue	$ 1,258,252	$ 1,295,365	$ 1,333,658	$ 1,373,048	$ 1,413,620	$ 1,455,373	$ 1,498,390
Expenses							
Salaries & Wages	$ 231,816	$ 236,452	$ 241,181	$ 246,005	$ 250,925	$ 255,944	$ 261,063
Employee Benefits	$ 169,551	$ 172,943	$ 176,401	$ 179,929	$ 183,528	$ 187,199	$ 190,943
Utilities	$ 6,480	$ 6,609	$ 6,742	$ 6,876	$ 7,014	$ 7,154	$ 7,297
Professional Services	$ 253,680	$ 258,753	$ 263,928	$ 269,207	$ 274,591	$ 280,083	$ 285,685
Repairs & Maintenance	$ 21,649	$ 22,082	$ 22,523	$ 22,974	$ 23,433	$ 23,902	$ 24,380
Miscellaneous	$ 15,262	$ 15,567	$ 15,878	$ 16,196	$ 16,520	$ 16,850	$ 17,187
Administrative Cost Allocation	$ 45,633	$ 46,546	$ 47,477	$ 48,426	$ 49,395	$ 50,383	$ 51,390
Supplies	$ 21,720	$ 22,155	$ 22,598	$ 23,050	$ 23,511	$ 23,981	$ 24,460
Total Operating Expenses	$ 765,791	$ 781,107	$ 796,729	$ 812,663	$ 828,917	$ 845,495	$ 862,405
Project Costs							
Non-Impact Fee Eligible Cost	$ 376,191	$ 376,191	$ 376,191	$ 376,191	$ 376,191	$ 376,191	$ 414,955
Impact Fee Eligible Cost	$ 1,696,831	$ 1,696,831	$ 1,696,831	$ 1,696,831	$ 1,696,831	$ 1,696,831	$ 2,021,607
Accounts							
Net Cash	$ 492,461	$ 514,258	$ 536,929	$ 560,385	$ 584,703	$ 609,878	$ 635,985
Operating Account Balance	$ 768,845	$ 906,912	$ 1,067,650	$ 1,251,844	$ 1,460,357	$ 1,694,044	$ 1,915,074
Impact Fee Balance	$ 1,068,848	$ 1,086,187	$ 1,158,695	$ 1,282,430	$ 1,461,334	$ 1,695,407	$ 1,604,704

Title	2031	2032	2033	2034	2035	2036	2037
Revenue							
Total ERCs	17,850	18,386	18,938	19,506	20,091	20,694	21,314
New ERCs	519	536	552	568	585	603	620
Average User Rate	$ 6.88	$ 6.88	$ 6.88	$ 6.88	$ 6.88	$ 6.88	$ 6.88
Impact Fees Collected	$ 1,930,904	$ 1,930,904	$ 1,930,904	$ 1,930,904	$ 1,930,904	$ 1,930,904	$ 1,930,904
Charges for Services	$ 1,473,696	$ 1,517,948	$ 1,563,521	$ 1,610,415	$ 1,658,713	$ 1,708,497	$ 1,759,684
Miscellaneous	$ 68,893	$ 70,271	$ 71,677	$ 73,110	$ 74,572	$ 76,064	$ 77,585
Total Operating Revenue	$ 1,542,589	$ 1,588,219	$ 1,635,198	$ 1,683,526	$ 1,733,285	$ 1,784,561	$ 1,837,269
Expenses							
Salaries & Wages	$ 266,284	$ 271,610	$ 277,042	$ 282,583	$ 288,234	$ 293,999	$ 299,879
Employee Benefits	$ 194,761	$ 198,657	$ 202,630	$ 206,682	$ 210,816	$ 215,032	$ 219,333
Utilities	$ 7,443	$ 7,592	$ 7,744	$ 7,899	$ 8,057	$ 8,218	$ 8,382
Professional Services	$ 291,398	$ 297,226	$ 303,171	$ 309,234	$ 315,419	$ 321,727	$ 328,162
Repairs & Maintenance	$ 24,867	$ 25,365	$ 25,872	$ 26,390	$ 26,917	$ 27,456	$ 28,005
Miscellaneous	$ 17,531	$ 17,882	$ 18,239	$ 18,604	$ 18,976	$ 19,356	$ 19,743
Administrative Cost Allocation	$ 52,418	$ 53,466	$ 54,536	$ 55,627	$ 56,739	$ 57,874	$ 59,031
Supplies	$ 24,950	$ 25,449	$ 25,958	$ 26,477	$ 27,006	$ 27,546	$ 28,097
Total Operating Expenses	$ 879,653	$ 897,246	$ 915,191	$ 933,495	$ 952,165	$ 971,208	$ 990,632
Project Costs							
Non-Impact Fee Eligible Cost	$ 414,955	$ 414,955	$ 414,955	$ 414,955	$ 414,955	$ 414,955	$ 414,955
Impact Fee Eligible Cost	$ 2,021,607	$ 2,021,607	$ 2,021,607	$ 2,021,607	$ 2,021,607	$ 2,021,607	$ 2,021,607
Accounts							
Net Cash	$ 662,936	$ 690,973	$ 720,007	$ 750,031	$ 781,121	$ 813,353	$ 846,637
Operating Account Balance	$ 2,163,055	$ 2,439,073	$ 2,744,125	$ 3,079,201	$ 3,445,366	$ 3,843,764	$ 4,275,446
Impact Fee Balance	$ 1,514,000	$ 1,423,297	$ 1,332,593	$ 1,241,890	$ 1,151,186	$ 1,060,483	$ 969,779

Title	2038	2039	2040
Revenue			
Total ERCs	21,953	22,612	23,290
New ERCs	639	659	678
Average User Rate	$ 6.88	$ 6.88	$ 6.88
Impact Fees Collected	$ 1,930,904	$ 1,930,904	$ 1,930,904
Charges for Services	$ 1,812,474	$ 1,866,849	$ 1,922,854
Miscellaneous	$ 79,137	$ 80,720	$ 82,334
Total Operating Revenue	$ 1,891,611	$ 1,947,568	$ 2,005,188
Expenses			
Salaries & Wages	$ 305,876	$ 311,994	$ 318,234
Employee Benefits	$ 223,720	$ 228,194	$ 232,758
Utilities	$ 8,550	$ 8,721	$ 8,895
Professional Services	$ 334,725	$ 341,419	$ 348,248
Repairs & Maintenance	$ 28,565	$ 29,136	$ 29,719
Miscellaneous	$ 20,138	$ 20,540	$ 20,951
Administrative Cost Allocation	$ 60,212	$ 61,416	$ 62,645
Supplies	$ 28,659	$ 29,233	$ 29,817
Total Operating Expenses	$ 1,010,445	$ 1,030,654	$ 1,051,267
Project Costs			
Non-Impact Fee Eligible Cost	$ 414,955	$ 414,955	$ 414,955
Impact Fee Eligible Cost	$ 2,021,607	$ 2,021,607	$ 2,021,607
Accounts			
Net Cash	$ 881,167	$ 916,915	$ 953,921
Operating Account Balance	$ 4,741,657	$ 5,243,617	$ 5,782,583
Impact Fee Balance	$ 879,076	$ 788,373	$ 697,669

WASHINGTON CITY **GRP-01**

Reroute Grapevine Wash south of I-15 to original channel to prevent flooding outside of FEMA 100-yr flood plain. Approximate length is 3,000 feet.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 25,200.00
2	Project Record Documents	1	LS	1%	$ 2,500.00
3	Traffic & Temporary Controls	1	LS	4%	$ 10,100.00
4	Materials Sampling & Testing	1	LS	3%	$ 7,600.00
5	Construction Layout & Staking	1	LS	2%	$ 5,000.00
6	Subsurface Investigation	6	HR	$ 300.00	$ 1,800.00
7	Utility Coordination	1	LS	$ 2,500.00	$ 2,500.00
8	Utility Conflicts & Misc Connections	1	LS	$ 2,500.00	$ 2,500.00
9	Earthwork	15000	CY	$ 13.00	$ 195,000.00
			Subtotal		$ 252,200.00
			Items Not Estimated	10%	$ 25,200.00
			Construction Total		$ 277,400.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 5,500.00
2	Design and Construction Engineering		EST	6%	$ 16,600.00
3	Miscellaneous Services		EST	3%	$ 8,300.00
4	Land & RoW Acquisition	3.5	AC	$ 100,000.00	$ 350,000.00
5	Environmental		EST	6%	$ 16,600.00
			Non-Construction Total		$ 397,000.00
			Project Contingency	15%	$ 101,000.00
				PROJECT TOTAL	**$ 775,400.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	0%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	100%	of Pipe in Native
		0	Feet Trench Width

WASHINGTON CITY **GSE-01**

Construct channel improvements with access road to convey storm water from future development, maintaining minimum 50' ROW width for 2,500 feet of existing wash. The channel portion of this project was identified in the 2014 Master Plan as Project GRE-03.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 38,200.00
2	Project Record Documents	1	LS	1%	$ 3,800.00
3	Traffic & Temporary Controls	1	LS	4%	$ 15,300.00
4	Materials Sampling & Testing	1	LS	3%	$ 11,500.00
5	Construction Layout & Staking	1	LS	2%	$ 7,600.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 3,800.00	$ 3,800.00
8	Rip Rap	7500	CY	$ 35.00	$ 262,500.00
9	Utility Conflicts & Misc Connections	1	LS	$ 3,800.00	$ 3,800.00
10	Earthwork	2500	CY	$ 13.00	$ 32,500.00
			Subtotal		$ 382,000.00
			Items Not Estimated	10%	$ 38,200.00
			Construction Total		$ 420,200.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 8,400.00
2	Design and Construction Engineering		EST	6%	$ 25,200.00
3	Miscellaneous Services		EST	5%	$ 21,000.00
4	Land & RoW Acquisition	2.9	AC	$ 100,000.00	$ 290,000.00
5	Environmental		EST	2%	$ 8,400.00
			Non-Construction Total		$ 353,000.00
			Project Contingency	15%	$ 116,000.00
				PROJECT TOTAL	**$ 889,200.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	0%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	100%	of Pipe in Native
		0	Feet Trench Width

WASHINGTON CITY **GSE-02**

Expand existing detention basin for approximately double the storage capacity to about 20 ac-ft. This will be the terminous of project GSE-01.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 8,800.00
2	Project Record Documents	1	LS	1%	$ 900.00
3	Traffic & Temporary Controls	1	LS	4%	$ 3,500.00
4	Materials Sampling & Testing	1	LS	3%	$ 2,600.00
5	Construction Layout & Staking	1	LS	2%	$ 1,800.00
6	Subsurface Investigation	0	HR	$ 300.00	$ -
7	Utility Coordination	1	LS	$ 900.00	$ 900.00
8	Rip Rap	100	CY	$ 35.00	$ 3,500.00
9	Utility Conflicts & Misc Connections	1	LS	$ 900.00	$ 900.00
10	Earthwork	5000	CY	$ 13.00	$ 65,000.00
			Subtotal		$ 87,900.00
			Items Not Estimated	10%	$ 8,800.00
			Construction Total		$ 96,700.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 1,900.00
2	Design and Construction Engineering		EST	6%	$ 5,800.00
3	Miscellaneous Services		EST	5%	$ 4,800.00
4	Land & RoW Acquisition	2.0	AC	$ 100,000.00	$ 200,000.00
5	Environmental		EST	2%	$ 1,900.00
			Non-Construction Total		$ 214,400.00
			Project Contingency	15%	$ 47,000.00
				PROJECT TOTAL	**$ 358,100.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	0%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	100%	of Pipe in Native
		0	Feet Trench Width

WASHINGTON CITY **GSE-03**

Add 500 feet of channel improvements and accept flows from open channel along I-15 right-of-way, between the Boilers Park and Mill Creek. This project was identified in the 2014 Master Plan as Project GRE-06. It was also identified in the 2005 Master Plan.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 14,900.00
2	Project Record Documents	1	LS	1%	$ 1,500.00
3	Traffic & Temporary Controls	1	LS	4%	$ 6,000.00
4	Materials Sampling & Testing	1	LS	3%	$ 4,500.00
5	Construction Layout & Staking	1	LS	2%	$ 3,000.00
6	Subsurface Investigation	4	HR	$ 300.00	$ 1,200.00
7	Utility Coordination	1	LS	$ 3,000.00	$ 3,000.00
8	Rip Rap	2170	CY	$ 35.00	$ 75,950.00
9	Utility Conflicts & Misc Connections	1	LS	$ 3,000.00	$ 3,000.00
10	Earthwork	2780	CY	$ 13.00	$ 36,140.00
			Subtotal		$ 149,190.00
			Items Not Estimated	10%	$ 14,900.00
			Construction Total		$ 164,090.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 3,300.00
2	Design and Construction Engineering		EST	6%	$ 9,800.00
3	Miscellaneous Services		EST	5%	$ 8,200.00
4	Land & RoW Acquisition		EST	5%	$ 8,200.00
5	Environmental		EST	15%	$ 24,600.00
			Non-Construction Total		$ 54,100.00
			Project Contingency	15%	$ 33,000.00
				PROJECT TOTAL	**$ 251,190.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	30%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	70%	of Pipe in Native
		0	Feet Trench Width

WASHINGTON CITY **GSW-01**

Construct 270' feet of channel to convey upstream stormwater runoff around residences in Canyon Cove to the street. This will redirect flows from a 30" pipe that are currently directed at the backs of homes.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 4,300.00
2	Project Record Documents	1	LS	1%	$ 400.00
3	Traffic & Temporary Controls	1	LS	4%	$ 1,700.00
4	Materials Sampling & Testing	1	LS	3%	$ 1,300.00
5	Construction Layout & Staking	1	LS	2%	$ 900.00
6	Subsurface Investigation	3	HR	$ 300.00	$ 900.00
7	Utility Coordination	1	LS	$ 400.00	$ 400.00
8	Rip Rap	600	CY	$ 35.00	$ 21,000.00
9	Utility Conflicts & Misc Connections	1	LS	$ 1,700.00	$ 1,700.00
10	Earthwork	800	CY	$ 13.00	$ 10,400.00
			Subtotal		$ 43,000.00
			Items Not Estimated	10%	$ 4,300.00
			Construction Total		$ 47,300.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 900.00
2	Design and Construction Engineering		EST	6%	$ 2,800.00
3	Miscellaneous Services		EST	5%	$ 2,400.00
4	Land & RoW Acquisition	0.1	AC	$ 100,000.00	$ 10,000.00
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 16,100.00
			Project Contingency	15%	$ 10,000.00
				PROJECT TOTAL	**$ 73,400.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	0%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	100%	of Pipe in Native
		0	Feet Trench Width

WASHINGTON CITY **GYP-01**

Install approximately 5,500' of 54" HDPE pipe to convey runoff in South Long Valley to the Gypsum Debris Basin. The alignment should stay in road right-of-way and be near the existing channel alignment. This project was identified in the 2014 Master Plan as Project GYP-01.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 237,700.00
2	Project Record Documents	1	LS	1%	$ 23,800.00
3	Traffic & Temporary Controls	1	LS	4%	$ 95,100.00
4	Materials Sampling & Testing	1	LS	3%	$ 71,300.00
5	Construction Layout & Staking	1	LS	2%	$ 47,500.00
6	Subsurface Investigation	60	HR	$ 300.00	$ 18,000.00
7	Utility Coordination	1	LS	$ 23,800.00	$ 23,800.00
8	Pavement Removal	12100	SF	$ 3.00	$ 36,300.00
9	Asphalt Trench Repair w/ Base	12100	SF	$ 7.00	$ 84,700.00
10	54" HDPE Storm Drain Pipe	5500	LF	$ 280.50	$ 1,542,750.00
11	Storm Drain Box	14	EA	$ 11,000.00	$ 154,000.00
12	Standard Catch Basin	4	EA	$ 4,500.00	$ 18,000.00
13	Utility Conflicts & Misc Connections	1	LS	$ 23,800.00	$ 23,800.00
14	Earthwork	0	CY	$ 13.00	$ -
			Subtotal		$ 2,376,750.00
		Items Not Estimated		10%	$ 237,700.00
		Construction Total			$ 2,614,450.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 52,300.00
2	Design and Construction Engineering		EST	6%	$ 156,900.00
3	Miscellaneous Services		EST	5%	$ 130,700.00
4	Land & RoW Acquisition	1.2	AC	$ 100,000.00	$ 120,000.00
5	Environmental		EST	2%	$ 52,300.00
		Non-Construction Total			$ 512,200.00
		Project Contingency		15%	$ 469,000.00
				PROJECT TOTAL	**$ 3,595,650.00**

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Assumptions

Y	Total Import Trench Bedding
N	Dewatering
4	Inch Thick Asphalt Repair
8	Inch Thick Untreated Base Course
400	Feet Average Distance Between Manholes
500	Feet Average Distance per Inlet
20%	of Pipe in Roadway
80%	of Pipe in Native
11	Feet Trench Width

WASHINGTON CITY **MLC-01**

Install approximately 2,680' of 24" HDPE pipe to convey runoff from the intersection of Scenic Dr and Bulloch St to Frontier Dr near Telegraph St. The alignment will stay in existing right-of-way. This project was identified in the 2014 Master Plan as MLC-04.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 68,900.00
2	Project Record Documents	1	LS	1%	$ 6,900.00
3	Traffic & Temporary Controls	1	LS	4%	$ 27,600.00
4	Materials Sampling & Testing	1	LS	3%	$ 20,700.00
5	Construction Layout & Staking	1	LS	2%	$ 13,800.00
6	Subsurface Investigation	20	HR	$ 300.00	$ 6,000.00
7	Utility Coordination	1	LS	$ 6,900.00	$ 6,900.00
8	Pavement Removal	18760	SF	$ 3.00	$ 56,280.00
9	Asphalt Trench Repair w/ Base	18760	SF	$ 6.00	$ 112,560.00
10	24" HDPE Storm Drain Pipe	2680	LF	$ 99.00	$ 265,320.00
11	60" Storm Drain Manhole or Box	7	EA	$ 5,500.00	$ 38,500.00
12	Standard Catch Basin	9	EA	$ 4,500.00	$ 40,500.00
13	Standard Double Catch Basin	2	EA	$ 9,000.00	$ 18,000.00
14	Utility Conflicts & Misc Connections	1	LS	$ 6,900.00	$ 6,900.00
			Subtotal		$ 688,860.00
			Items Not Estimated	10%	$ 68,940.00
			Construction Total		$ 757,800.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 15,200.00
2	Design and Construction Engineering		EST	6%	$ 45,500.00
3	Miscellaneous Services		EST	5%	$ 37,900.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 98,600.00
			Project Contingency	15%	$ 128,000.00
				PROJECT TOTAL	**$ 984,400.00**

Disclaimer:

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	100%	of Pipe in Roadway
8	Inch Thick Untreated Base Course	0%	of Pipe in Native
		7	Feet Trench Width

WASHINGTON CITY **MLC-02**

Install an outlet structure in the Washington City Community Center's storage basin converting it to a detention basin and install approximately 1,100' of 18" HDPE pipe to Park View Dr and connecting to Project MLC-01.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 25,300.00
2	Project Record Documents	1	LS	1%	$ 2,500.00
3	Traffic & Temporary Controls	1	LS	4%	$ 10,100.00
4	Materials Sampling & Testing	1	LS	3%	$ 7,600.00
5	Construction Layout & Staking	1	LS	2%	$ 5,100.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 2,500.00	$ 2,500.00
8	Pavement Removal	6600	SF	$ 3.00	$ 19,800.00
9	Asphalt Trench Repair w/ Base	6600	SF	$ 6.00	$ 39,600.00
10	18" HDPE Storm Drain Pipe	1100	LF	$ 82.50	$ 90,750.00
11	60" Storm Drain Manhole or Box	3	EA	$ 5,500.00	$ 16,500.00
12	Standard Catch Basin	4	EA	$ 4,500.00	$ 18,000.00
13	Utility Conflicts & Misc Connections	1	LS	$ 2,500.00	$ 2,500.00
14	Detention Outlet Structure	1	LS	$ 10,000.00	$ 10,000.00
			Subtotal		$ 253,250.00
			Items Not Estimated	10%	$ 25,300.00
			Construction Total		$ 278,550.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 5,600.00
2	Design and Construction Engineering		EST	6%	$ 16,700.00
3	Miscellaneous Services		EST	5%	$ 13,900.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 36,200.00
			Project Contingency	15%	$ 47,000.00
				PROJECT TOTAL	**$ 361,750.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	100%	of Pipe in Roadway
8	Inch Thick Untreated Base Course	0%	of Pipe in Native
		6	Feet Trench Width

WASHINGTON CITY **MLC-03**

Install approximately 2,750' of 24" HDPE pipe along Main St from Telegraph St to Mill Creek. This project will connect to the trunk lines in Telegraph St and 100 S to bypass overflow runoff.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 69,700.00
2	Project Record Documents	1	LS	1%	$ 7,000.00
3	Traffic & Temporary Controls	1	LS	4%	$ 27,900.00
4	Materials Sampling & Testing	1	LS	3%	$ 20,900.00
5	Construction Layout & Staking	1	LS	2%	$ 13,900.00
6	Subsurface Investigation	20	HR	$ 300.00	$ 6,000.00
7	Utility Coordination	1	LS	$ 7,000.00	$ 7,000.00
8	Pavement Removal	13480	SF	$ 3.00	$ 40,440.00
9	Asphalt Trench Repair w/ Base	13480	SF	$ 6.00	$ 80,880.00
10	24" HDPE Storm Drain Pipe	2750	LF	$ 117.00	$ 321,750.00
11	60" Storm Drain Manhole or Box	7	EA	$ 5,500.00	$ 38,500.00
12	Standard Catch Basin	8	EA	$ 4,500.00	$ 36,000.00
13	Utility Conflicts & Misc Connections	1	LS	$ 7,000.00	$ 7,000.00
14	Bypass Conn. at Telegraph St and 100 S	1	LS	$ 13,900.00	$ 13,900.00
15	Headwall Outfall at Mill Creek	1	LS	$ 6,000.00	$ 6,000.00
			Subtotal		$ 696,870.00
			Items Not Estimated	10%	$ 69,700.00
			Construction Total		$ 766,570.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 15,300.00
2	Design and Construction Engineering		EST	6%	$ 46,000.00
3	Miscellaneous Services		EST	5%	$ 38,300.00
4	Land & RoW Acquisition		EST	4%	$ 30,700.00
5	Environmental		EST	2%	$ 15,300.00
			Non-Construction Total		$ 145,600.00
			Project Contingency	15%	$ 137,000.00
				PROJECT TOTAL	**$ 1,049,170.00**

Disclaimer:

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
Y	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	70%	of Pipe in Roadway
8	Inch Thick Untreated Base Course	30%	of Pipe in Native
		7	Feet Trench Width

WASHINGTON CITY **MLC-04**

Install 530' of 18" HDPE pipe along 300 S from 100 E to Main St. This project will connect to the Main St project MLC-03.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 11,200.00
2	Project Record Documents	1	LS	1%	$ 1,100.00
3	Traffic & Temporary Controls	1	LS	4%	$ 4,500.00
4	Materials Sampling & Testing	1	LS	3%	$ 3,400.00
5	Construction Layout & Staking	1	LS	2%	$ 2,200.00
6	Subsurface Investigation	3	HR	$ 300.00	$ 900.00
7	Utility Coordination	1	LS	$ 1,100.00	$ 1,100.00
8	Pavement Removal	3180	SF	$ 3.00	$ 9,540.00
9	Asphalt Trench Repair w/ Base	3180	SF	$ 6.00	$ 19,080.00
10	18" HDPE Storm Drain Pipe	530	LF	$ 82.50	$ 43,725.00
11	60" Storm Drain Manhole or Box	1	EA	$ 5,500.00	$ 5,500.00
12	Standard Catch Basin	2	EA	$ 4,500.00	$ 9,000.00
13	Utility Conflicts & Misc Connections	1	LS	$ 1,100.00	$ 1,100.00
			Subtotal		$ 112,345.00
			Items Not Estimated	10%	$ 11,200.00
			Construction Total		$ 123,545.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 2,500.00
2	Design and Construction Engineering		EST	6%	$ 7,400.00
3	Miscellaneous Services		EST	5%	$ 6,200.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 16,100.00
			Project Contingency	15%	$ 21,000.00
				PROJECT TOTAL	**$ 160,645.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	100%	of Pipe in Roadway
8	Inch Thick Untreated Base Course	0%	of Pipe in Native
		6	Feet Trench Width

WASHINGTON CITY **MLC-05**

Replace approximately 2,300' of pipe with 24", 30", & 36" HDPE pipe from 200 E to Mill Creek along 100 S.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 76,800.00
2	Project Record Documents	1	LS	1%	$ 7,700.00
3	Traffic & Temporary Controls	1	LS	4%	$ 30,700.00
4	Materials Sampling & Testing	1	LS	3%	$ 23,000.00
5	Construction Layout & Staking	1	LS	2%	$ 15,400.00
6	Subsurface Investigation	20	HR	$ 300.00	$ 6,000.00
7	Utility Coordination	1	LS	$ 7,700.00	$ 7,700.00
8	Pavement Removal	17480	SF	$ 3.00	$ 52,440.00
9	Asphalt Trench Repair w/ Base	17480	SF	$ 6.00	$ 104,880.00
10	24" HDPE Storm Drain Pipe	500	LF	$ 117.00	$ 58,500.00
11	30" HDPE Storm Drain Pipe	450	LF	$ 136.50	$ 61,425.00
12	36" HDPE Storm Drain Pipe	1350	LF	$ 188.50	$ 254,475.00
13	72" Storm Drain Manhole or Box	3	EA	$ 11,000.00	$ 33,000.00
14	Standard Catch Basin	5	EA	$ 4,500.00	$ 22,500.00
15	Utility Conflicts & Misc Connections	1	LS	$ 7,700.00	$ 7,700.00
16	Mill Creek Outfall Structure	1	LS	$ 6,000.00	$ 6,000.00
			Subtotal		$ 768,220.00
			Items Not Estimated	10%	$ 76,890.00
			Construction Total		$ 845,110.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 16,900.00
2	Design and Construction Engineering		EST	6%	$ 50,700.00
3	Miscellaneous Services		EST	5%	$ 42,300.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 109,900.00
			Project Contingency	15%	$ 143,000.00
				PROJECT TOTAL	**$ 1,098,010.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
Y	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	95%	of Pipe in Roadway
8	Inch Thick Untreated Base Course	5%	of Pipe in Native
		8	Feet Trench Width

WASHINGTON CITY **STF-01**

Install 2,300' of 36" HDPE pipe to convey storm water northward along Stucki Farms Pkwy to Washington Fields Rd from the southern most detention basin, designated as STF-02. A version of this project was identified in the 2014 Master Plan as Project ARP-01.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 55,900.00
2	Project Record Documents	1	LS	1%	$ 5,600.00
3	Traffic & Temporary Controls	1	LS	4%	$ 22,400.00
4	Materials Sampling & Testing	1	LS	3%	$ 16,800.00
5	Construction Layout & Staking	1	LS	2%	$ 11,200.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 5,600.00	$ 5,600.00
8	36" HDPE Storm Drain Pipe	2300	LF	$ 159.50	$ 366,850.00
9	72" Storm Drain Manhole or Box	6	EA	$ 11,000.00	$ 66,000.00
10	Utility Conflicts & Misc Connections	1	LS	$ 5,600.00	$ 5,600.00
			Subtotal		$ 558,950.00
			Items Not Estimated	10%	$ 55,900.00
			Construction Total		$ 614,850.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 12,300.00
2	Design and Construction Engineering		EST	6%	$ 36,900.00
3	Miscellaneous Services		EST	5%	$ 30,700.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 79,900.00
			Project Contingency	10%	$ 69,000.00
				PROJECT TOTAL	**$ 763,750.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	0%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	100%	of Pipe in Native
		8	Feet Trench Width

WASHINGTON CITY **STF-02**

Construct detention basins for the Stucki Farms MP Community, limiting total peak discharge out of the Stucki Farms drainage basin to a maximum of 29.0 cfs. This project was identified in the 2014 Master Plan as Project ARP-02.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 37,100.00
2	Project Record Documents	1	LS	1%	$ 3,700.00
3	Traffic & Temporary Controls	1	LS	4%	$ 14,800.00
4	Materials Sampling & Testing	1	LS	3%	$ 11,100.00
5	Construction Layout & Staking	1	LS	2%	$ 7,400.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 3,700.00	$ 3,700.00
8	Outlet Structure	1	LS	$ 20,000.00	$ 20,000.00
9	Utility Conflicts & Misc Connections	1	LS	$ 3,700.00	$ 3,700.00
10	Earthwork	26620	CY	$ 10.00	$ 266,200.00
			Subtotal		$ 370,700.00
			Items Not Estimated	10%	$ 37,100.00
			Construction Total		$ 407,800.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 8,200.00
2	Design and Construction Engineering		EST	6%	$ 24,500.00
3	Miscellaneous Services		EST	5%	$ 20,400.00
4	Land & RoW Acquisition	9.5	AC	$ 19,900.00	$ 189,050.00
5	Environmental		EST	0%	$ -
6			EST	0%	$ -
			Non-Construction Total		$ 242,150.00
			Project Contingency	10%	$ 65,087.00
				PROJECT TOTAL	**$ 715,037.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	30%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	70%	of Pipe in Native
		0	Feet Trench Width

WASHINGTON CITY **STU-01**

Construct 3,200' of rip rap lined channel from the west side of Southern Parkway to the Stucki Debris Basin. It is intended that the existing drainage path be protected from future development. This project was identified in the 2014 Master Plan as Project STU-01.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 78,000.00
2	Project Record Documents	1	LS	1%	$ 7,800.00
3	Traffic & Temporary Controls	1	LS	4%	$ 31,200.00
4	Materials Sampling & Testing	1	LS	3%	$ 23,400.00
5	Construction Layout & Staking	1	LS	2%	$ 15,600.00
6	Subsurface Investigation	20	HR	$ 300.00	$ 6,000.00
7	Utility Coordination	1	LS	$ 7,800.00	$ 7,800.00
8	Rip Rap	12000	CY	$ 35.00	$ 420,000.00
9	Utility Conflicts & Misc Connections	1	LS	$ 7,800.00	$ 7,800.00
10	Earthwork	14000	CY	$ 13.00	$ 182,000.00
			Subtotal		$ 779,600.00
			Items Not Estimated	10%	$ 78,000.00
			Construction Total		$ 857,600.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 17,200.00
2	Design and Construction Engineering		EST	6%	$ 51,500.00
3	Miscellaneous Services		EST	5%	$ 42,900.00
4	Land & RoW Acquisition	3.7	AC	$ 100,000.00	$ 370,000.00
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 481,600.00
			Project Contingency	15%	$ 201,000.00
				PROJECT TOTAL	**$ 1,540,200.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	30%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	70%	of Pipe in Native
		0	Feet Trench Width

WASHINGTON CITY **STU-02**

Construct 2,200' of rip rap lined channel from the base of Warner Ridge to the east side of Southern Parkway. It is intended that the existing drainage path be protected from future development. This project was identified in the 2014 Master Plan as Project STU-02.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 40,700.00
2	Project Record Documents	1	LS	1%	$ 4,100.00
3	Traffic & Temporary Controls	1	LS	4%	$ 16,300.00
4	Materials Sampling & Testing	1	LS	3%	$ 12,200.00
5	Construction Layout & Staking	1	LS	2%	$ 8,100.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 4,100.00	$ 4,100.00
8	Rip Rap	6520	CY	$ 35.00	$ 228,200.00
9	Utility Conflicts & Misc Connections	1	LS	$ 4,100.00	$ 4,100.00
10	Earthwork	6600	CY	$ 13.00	$ 85,800.00
			Subtotal		$ 406,600.00
			Items Not Estimated	10%	$ 40,700.00
			Construction Total		$ 447,300.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 8,900.00
2	Design and Construction Engineering		EST	6%	$ 26,800.00
3	Miscellaneous Services		EST	5%	$ 22,400.00
4	Land & RoW Acquisition	2.0	AC	$ 100,000.00	$ 200,000.00
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 258,100.00
			Project Contingency	15%	$ 106,000.00
				PROJECT TOTAL	**$ 811,400.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	30%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	70%	of Pipe in Native
		0	Feet Trench Width

WASHINGTON CITY **WAD-01**

Install 1,620' of 60" HDPE pipe from Washington Dam Rd around Rancho Vista Estates to Washington Fields Rd and 1,170' of 60" HDPE pipe from Washington Fields Rd to the Virgin River. The downstream segment will replace the existing 24" HDPE pipe to the Virgin River.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 151,800.00
2	Project Record Documents	1	LS	1%	$ 15,200.00
3	Traffic & Temporary Controls	1	LS	4%	$ 60,700.00
4	Materials Sampling & Testing	1	LS	3%	$ 45,600.00
5	Construction Layout & Staking	1	LS	2%	$ 30,400.00
6	Subsurface Investigation	40	HR	$ 300.00	$ 12,000.00
7	Utility Coordination	1	LS	$ 15,200.00	$ 15,200.00
8	Pavement Removal	1670	SF	$ 3.00	$ 5,010.00
9	Asphalt Trench Repair w/ Base	1670	SF	$ 7.00	$ 11,690.00
10	60" HDPE Storm Drain Pipe	2790	LF	$ 370.50	$ 1,033,695.00
11	Storm Drain Box	7	EA	$ 11,000.00	$ 77,000.00
12	Standard Double Catch Basin	1	EA	$ 9,000.00	$ 9,000.00
13	Utility Conflicts & Misc Connections	1	LS	$ 15,200.00	$ 15,200.00
14	Flow Split Vault for Parallel Pipes	3	EA	$ 12,000.00	$ 36,000.00
			Subtotal		$ 1,518,495.00
			Items Not Estimated	10%	$ 151,840.00
			Construction Total		$ 1,670,335.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 33,400.00
2	Design and Construction Engineering		EST	6%	$ 100,200.00
3	Miscellaneous Services		EST	5%	$ 83,500.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 217,100.00
			Project Contingency	15%	$ 283,000.00
				PROJECT TOTAL	**$ 2,170,435.00**

Disclaimer:

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
Y	Dewatering	500	Feet Average Distance per Inlet
4	Inch Thick Asphalt Repair	5%	of Pipe in Roadway
8	Inch Thick Untreated Base Course	95%	of Pipe in Native
		12	Feet Trench Width

WASHINGTON CITY **WAD-02**

Install approximately 940' of 24" HDPE pipe to convey storm water from future development along Morgan Lane and tie into Washington Dam Road. This project will tie into the Scenic Sunrise development storage basin. A version of this project was identified in the 2014 Master Plan as Project WAD-01.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 23,700.00
2	Project Record Documents	1	LS	1%	$ 2,400.00
3	Traffic & Temporary Controls	1	LS	4%	$ 9,500.00
4	Materials Sampling & Testing	1	LS	3%	$ 7,100.00
5	Construction Layout & Staking	1	LS	2%	$ 4,700.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 2,400.00	$ 2,400.00
8	Pavement Removal	6580	SF	$ 3.00	$ 19,740.00
9	Asphalt Trench Repair w/ Base	6580	SF	$ 5.00	$ 32,900.00
10	24" HDPE Storm Drain Pipe	940	LF	$ 99.00	$ 93,060.00
11	60" Storm Drain Manhole or Box	2	EA	$ 5,500.00	$ 11,000.00
12	Standard Catch Basin	4	EA	$ 4,500.00	$ 18,000.00
13	Utility Conflicts & Misc Connections	1	LS	$ 2,400.00	$ 2,400.00
14	Detention Basin Outlet Structure	1	LS	$ 6,000.00	$ 6,000.00
15	Connection to Outlet Structure	1	LS	$ 1,500.00	$ 1,500.00
			Subtotal		$ 237,400.00
			Items Not Estimated	10%	$ 23,720.00
			Construction Total		$ 261,120.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 5,200.00
2	Design and Construction Engineering		EST	6%	$ 15,700.00
3	Miscellaneous Services		EST	5%	$ 13,100.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 34,000.00
			Project Contingency	15%	$ 44,000.00
			PROJECT TOTAL		**$ 339,120.00**

Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	100%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	0%	of Pipe in Native
		7	Feet Trench Width

WASHINGTON CITY **WAD-03**

Install approximately 1,060' of 18" HDPE pipe through the Dennett East Industrial Park to Washington Dam Rd. This project was identified in the 2014 Master Plan as Project WAD-03.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 27,000.00
2	Project Record Documents	1	LS	1%	$ 2,700.00
3	Traffic & Temporary Controls	1	LS	4%	$ 10,800.00
4	Materials Sampling & Testing	1	LS	3%	$ 8,100.00
5	Construction Layout & Staking	1	LS	2%	$ 5,400.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 2,700.00	$ 2,700.00
8	Pavement Removal	6360	SF	$ 3.00	$ 19,080.00
9	Asphalt Trench Repair w/ Base	6360	SF	$ 5.00	$ 31,800.00
10	18" HDPE Storm Drain Pipe	1060	LF	$ 82.50	$ 87,450.00
11	72" Storm Drain Manhole or Box	3	EA	$ 11,000.00	$ 33,000.00
12	Standard Catch Basin	4	EA	$ 4,500.00	$ 18,000.00
13	Standard Double Catch Basin	2	EA	$ 9,000.00	$ 18,000.00
14	Utility Conflicts & Misc Connections	1	LS	$ 2,700.00	$ 2,700.00
			Subtotal		$ 269,730.00
			Items Not Estimated	10%	$ 27,060.00
			Construction Total		$ 296,790.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 5,900.00
2	Design and Construction Engineering		EST	6%	$ 17,800.00
3	Miscellaneous Services		EST	5%	$ 14,800.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 38,500.00
			Project Contingency	15%	$ 50,000.00
				PROJECT TOTAL	**$ 385,290.00**

Disclaimer:

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	100%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	0%	of Pipe in Native
		6	Feet Trench Width

WASHINGTON CITY **WAD-04**

Construct a channel with culvert and approximately 3.5 ac-ft detention basin to protect Washington Dam Rd from the upstream flows of subbasins WAD-11 and WAD-13 as it flows through a natural deep channel. The outlet of the detention basin connects to Project WAD-03.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 35,200.00
2	Project Record Documents	1	LS	1%	$ 3,500.00
3	Traffic & Temporary Controls	1	LS	4%	$ 14,100.00
4	Materials Sampling & Testing	1	LS	3%	$ 10,600.00
5	Construction Layout & Staking	1	LS	2%	$ 7,000.00
6	Subsurface Investigation	8	HR	$ 300.00	$ 2,400.00
7	Utility Coordination	1	LS	$ 3,500.00	$ 3,500.00
8	Outlet Structure	1	LS	$ 10,000.00	$ 10,000.00
9	Utility Conflicts & Misc Connections	1	LS	$ 7,000.00	$ 7,000.00
10	Rip Rap	2540	CY	$ 35.00	$ 88,900.00
11	42" HDPE Pipe Culvert w/ End Sections	70	LF	$ 200.00	$ 14,000.00
12	Earthwork	11980	CY	$ 13.00	$ 155,740.00
			Subtotal		$ 351,940.00
			Items Not Estimated	10%	$ 35,200.00
			Construction Total		$ 387,140.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 7,700.00
2	Design and Construction Engineering		EST	6%	$ 23,200.00
3	Miscellaneous Services		EST	5%	$ 19,400.00
4	Land & RoW Acquisition	0.8	AC	$ 100,000.00	$ 80,000.00
5	Environmental		EST	2%	$ 7,700.00
			Non-Construction Total		$ 138,000.00
			Project Contingency	15%	$ 79,000.00
				PROJECT TOTAL	**$ 604,140.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	30%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	70%	of Pipe in Native
		0	Feet Trench Width

WASHINGTON CITY **WAD-05**

Install approximately 200' of 42" HDPE pipe north of Wilbur Acres development and west of 1900 E. This segment will replace an existing 30" HDPE pipe. The pipes on both sides of this segment are 42" in diameter.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 5,900.00
2	Project Record Documents	1	LS	1%	$ 600.00
3	Traffic & Temporary Controls	1	LS	4%	$ 2,400.00
4	Materials Sampling & Testing	1	LS	3%	$ 1,800.00
5	Construction Layout & Staking	1	LS	2%	$ 1,200.00
6	Subsurface Investigation	1	HR	$ 300.00	$ 300.00
7	Utility Coordination	1	LS	$ 600.00	$ 600.00
8	Pavement Removal	360	SF	$ 3.00	$ 1,080.00
9	Asphalt Trench Repair w/ Base	360	SF	$ 5.00	$ 1,800.00
10	42" HDPE Storm Drain Pipe	200	LF	$ 203.50	$ 40,700.00
11	Utility Conflicts & Misc Connections	1	LS	$ 3,000.00	$ 3,000.00
			Subtotal		$ 59,380.00
			Items Not Estimated	10%	$ 5,900.00
			Construction Total		$ 65,280.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 1,300.00
2	Design and Construction Engineering		EST	7%	$ 4,600.00
3	Miscellaneous Services		EST	6%	$ 3,900.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 9,800.00
			Project Contingency	15%	$ 11,000.00
				PROJECT TOTAL	**$ 86,080.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	20%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	80%	of Pipe in Native
		9	Feet Trench Width

WASHINGTON CITY **WAD-06**

Install approximately 1,880' of 24" HDPE pipe from Washington Dam Rd to the Virgin River at about 2100 E. This will convey upstream runoff from subbasin WAD-14 and WAD-08 to the river.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 33,400.00
2	Project Record Documents	1	LS	1%	$ 3,300.00
3	Traffic & Temporary Controls	1	LS	4%	$ 13,400.00
4	Materials Sampling & Testing	1	LS	3%	$ 10,000.00
5	Construction Layout & Staking	1	LS	2%	$ 6,700.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 3,300.00	$ 3,300.00
8	Pavement Removal	1320	SF	$ 3.00	$ 3,960.00
9	Asphalt Trench Repair w/ Base	1320	SF	$ 5.00	$ 6,600.00
10	24" HDPE Storm Drain Pipe	1880	LF	$ 117.00	$ 219,960.00
11	60" Storm Drain Manhole or Box	5	EA	$ 5,500.00	$ 27,500.00
12	Utility Conflicts & Misc Connections	1	LS	$ 3,300.00	$ 3,300.00
			Subtotal		$ 334,420.00
			Items Not Estimated	10%	$ 33,400.00
			Construction Total		$ 367,820.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 7,400.00
2	Design and Construction Engineering		EST	6%	$ 22,100.00
3	Miscellaneous Services		EST	5%	$ 18,400.00
4	Land & RoW Acquisition	0.6	AC	$ 100,000.00	$ 60,000.00
5	Environmental		EST	2%	$ 7,400.00
			Non-Construction Total		$ 115,300.00
			Project Contingency	15%	$ 72,000.00
				PROJECT TOTAL	**$ 555,120.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
Y	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	10%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	90%	of Pipe in Native
		7	Feet Trench Width

WASHINGTON CITY **WAD-07**

Install approximately 1,750' of 24" HDPE pipe to convey storm water from future development along – and to the south of – Granada Royale Drive. It is intended that this project connects to Project WAD-10 to outfall to the river. This project was identified in the 2014 Master Plan as Project WAD-04.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 28,300.00
2	Project Record Documents	1	LS	1%	$ 2,800.00
3	Traffic & Temporary Controls	1	LS	4%	$ 11,300.00
4	Materials Sampling & Testing	1	LS	3%	$ 8,500.00
5	Construction Layout & Staking	1	LS	2%	$ 5,700.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 2,800.00	$ 2,800.00
8	Pavement Removal	610	SF	$ 3.00	$ 1,830.00
9	Asphalt Trench Repair w/ Base	610	SF	$ 5.00	$ 3,050.00
10	24" HDPE Storm Drain Pipe	1750	LF	$ 99.00	$ 173,250.00
11	60" Storm Drain Manhole or Box	4	EA	$ 5,500.00	$ 22,000.00
12	Standard Double Catch Basin	2	EA	$ 9,000.00	$ 18,000.00
13	Utility Conflicts & Misc Connections	1	LS	$ 2,800.00	$ 2,800.00
			Subtotal		$ 283,330.00
			Items Not Estimated	10%	$ 28,320.00
			Construction Total		$ 311,650.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 6,200.00
2	Design and Construction Engineering		EST	6%	$ 18,700.00
3	Miscellaneous Services		EST	5%	$ 15,600.00
4	Land & RoW Acquisition	0.6	AC	$ 100,000.00	$ 60,000.00
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 100,500.00
			Project Contingency	15%	$ 62,000.00
			PROJECT TOTAL		**$ 474,150.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	5%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	95%	of Pipe in Native
		7	Feet Trench Width

WASHINGTON CITY **WAD-08**

Install approximately 1,250' of 24" HDPE pipe to convey storm water from future development and convey discharge from Project WAD-09 to the Virgin River from Washington Dam Road. This project was identified in the 2014 Master Plan as Project WAD-09.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 20,900.00
2	Project Record Documents	1	LS	1%	$ 2,100.00
3	Traffic & Temporary Controls	1	LS	4%	$ 8,400.00
4	Materials Sampling & Testing	1	LS	3%	$ 6,300.00
5	Construction Layout & Staking	1	LS	2%	$ 4,200.00
6	Subsurface Investigation	5	HR	$ 300.00	$ 1,500.00
7	Utility Coordination	1	LS	$ 2,100.00	$ 2,100.00
8	Pavement Removal	440	SF	$ 3.00	$ 1,320.00
9	Asphalt Trench Repair w/ Base	440	SF	$ 5.00	$ 2,200.00
10	24" HDPE Storm Drain Pipe	1250	LF	$ 99.00	$ 123,750.00
11	60" Storm Drain Manhole or Box	3	EA	$ 5,500.00	$ 16,500.00
12	Standard Double Catch Basin	2	EA	$ 9,000.00	$ 18,000.00
13	Utility Conflicts & Misc Connections	1	LS	$ 2,100.00	$ 2,100.00
			Subtotal		$ 209,370.00
			Items Not Estimated	10%	$ 20,910.00
			Construction Total		$ 230,280.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 4,600.00
2	Design and Construction Engineering		EST	6%	$ 13,800.00
3	Miscellaneous Services		EST	5%	$ 11,500.00
4	Land & RoW Acquisition	0.4	AC	$ 100,000.00	$ 40,000.00
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 69,900.00
			Project Contingency	15%	$ 45,000.00
			PROJECT TOTAL		**$ 345,180.00**

Disclaimer:

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	5%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	95%	of Pipe in Native
		7	Feet Trench Width

WASHINGTON CITY **WAF-01**

Install approximately 1,120' of 36" HDPE pipe on the north boundary of Riverside Elementary School to Sandia Rd for future development. This project was identified in the 2014 Master Plan as Project WAF-09.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 33,300.00
2	Project Record Documents	1	LS	1%	$ 3,300.00
3	Traffic & Temporary Controls	1	LS	4%	$ 13,300.00
4	Materials Sampling & Testing	1	LS	3%	$ 10,000.00
5	Construction Layout & Staking	1	LS	2%	$ 6,700.00
6	Subsurface Investigation	8	HR	$ 300.00	$ 2,400.00
7	Utility Coordination	1	LS	$ 3,300.00	$ 3,300.00
8	36" HDPE Storm Drain Pipe	1120	LF	$ 188.50	$ 211,120.00
9	72" Storm Drain Manhole or Box	3	EA	$ 11,000.00	$ 33,000.00
10	Utility Conflicts & Misc Connections	1	LS	$ 6,700.00	$ 6,700.00
11	Earthwork	750	CY	$ 13.00	$ 9,750.00
			Subtotal		$ 332,870.00
			Items Not Estimated	10%	$ 33,340.00
			Construction Total		$ 366,210.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 7,300.00
2	Design and Construction Engineering		EST	6%	$ 22,000.00
3	Miscellaneous Services		EST	5%	$ 18,300.00
4	Land & RoW Acquisition	0.4	AC	$ 100,000.00	$ 40,000.00
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 87,600.00
			Project Contingency	15%	$ 68,000.00
			PROJECT TOTAL		**$ 521,810.00**

Disclaimer:
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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
Y	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	0%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	100%	of Pipe in Native
		8	Feet Trench Width

WASHINGTON CITY **WAF-02**

Install approximately 1,420' of a parallel 36" HDPE pipe on the south side of Merrill Rd between 20 E and 240 W to convey flows from the east and the new 20 E storm drain system to the double 54" outfall pipes.

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ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 44,500.00
2	Project Record Documents	1	LS	1%	$ 4,400.00
3	Traffic & Temporary Controls	1	LS	4%	$ 17,800.00
4	Materials Sampling & Testing	1	LS	3%	$ 13,300.00
5	Construction Layout & Staking	1	LS	2%	$ 8,900.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 4,400.00	$ 4,400.00
8	Pavement Removal	2280	SF	$ 3.00	$ 6,840.00
9	Asphalt Trench Repair w/ Base	2280	SF	$ 6.00	$ 13,680.00
10	36" HDPE Storm Drain Pipe	1420	LF	$ 188.50	$ 267,670.00
11	72" Storm Drain Manhole or Box	4	EA	$ 11,000.00	$ 44,000.00
12	Standard Catch Basin	1	EA	$ 4,500.00	$ 4,500.00
13	Utility Conflicts & Misc Connections	1	LS	$ 8,900.00	$ 8,900.00
14	Earthwork	210	CY	$ 13.00	$ 2,730.00
			Subtotal		$ 444,620.00
			Items Not Estimated	10%	$ 44,590.00
			Construction Total		$ 489,210.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 9,800.00
2	Design and Construction Engineering		EST	6%	$ 29,400.00
3	Miscellaneous Services		EST	5%	$ 24,500.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 63,700.00
			Project Contingency	15%	$ 83,000.00
				PROJECT TOTAL	**$ 635,910.00**

Disclaimer:

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
Y	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	20%	of Pipe in Roadway
8	Inch Thick Untreated Base Course	80%	of Pipe in Native
		8	Feet Trench Width

WASHINGTON CITY **WAF-03**

Install 24" HDPE pipe on the southeast corner of the intersection of 3650 S and 515 W to convey runoff around the existing church and then north along the west boundary of Sycamore Estates and Daybreak Park. This project will connect to the existing storm drain system on 3090 S at the Daybreak Park detention basin outlet pipe.

CivilScience
Engineers | Surveyors | Solutions
1453 S Dixie Drive, Ste 150
St. George, UT 84770
435 986 0100

ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 59,400.00
2	Project Record Documents	1	LS	1%	$ 5,900.00
3	Traffic & Temporary Controls	1	LS	4%	$ 23,800.00
4	Materials Sampling & Testing	1	LS	3%	$ 17,800.00
5	Construction Layout & Staking	1	LS	2%	$ 11,900.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 5,900.00	$ 5,900.00
8	Pavement Removal	2340	SF	$ 3.00	$ 7,020.00
9	Asphalt Trench Repair w/ Base	2340	SF	$ 6.00	$ 14,040.00
10	24" HDPE Storm Drain Pipe	3340	LF	$ 117.00	$ 390,780.00
11	60" Storm Drain Manhole or Box	8	EA	$ 5,500.00	$ 44,000.00
12	Standard Catch Basin	1	EA	$ 4,500.00	$ 4,500.00
13	Utility Conflicts & Misc Connections	1	LS	$ 5,900.00	$ 5,900.00
			Subtotal		$ 593,940.00
			Items Not Estimated	10%	$ 59,440.00
			Construction Total		$ 653,380.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 13,100.00
2	Design and Construction Engineering		EST	6%	$ 39,200.00
3	Miscellaneous Services		EST	5%	$ 32,700.00
4	Land & RoW Acquisition	1.2	AC	$ 100,000.00	$ 120,000.00
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 205,000.00
			Project Contingency	15%	$ 129,000.00
			PROJECT TOTAL		**$ 987,380.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
Y	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	10%	of Pipe in Roadway
8	Inch Thick Untreated Base Course	90%	of Pipe in Native
		7	Feet Trench Width

WASHINGTON CITY **WAF-04**

Install approximately 700' of 36" HDPE pipe connecting to the existing manhole in the intersection of Camino Real and Majestic Dr and rerouting upstream flow south to the Stahlei Farm Detention Basin.

CivilScience
Engineers | Surveyors | Solutions
1453 S Dixie Drive, Ste 150
St. George, UT 84770
435 986 0100

ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 25,100.00
2	Project Record Documents	1	LS	1%	$ 2,500.00
3	Traffic & Temporary Controls	1	LS	4%	$ 10,100.00
4	Materials Sampling & Testing	1	LS	3%	$ 7,500.00
5	Construction Layout & Staking	1	LS	2%	$ 5,000.00
6	Subsurface Investigation	6	HR	$ 300.00	$ 1,800.00
7	Utility Coordination	1	LS	$ 2,500.00	$ 2,500.00
8	Pavement Removal	5600	SF	$ 3.00	$ 16,800.00
9	Asphalt Trench Repair w/ Base	5600	SF	$ 5.00	$ 28,000.00
10	36" HDPE Storm Drain Pipe	700	LF	$ 159.50	$ 111,650.00
11	72" Storm Drain Manhole or Box	2	EA	$ 11,000.00	$ 22,000.00
12	Standard Catch Basin	3	EA	$ 4,500.00	$ 13,500.00
13	Utility Conflicts & Misc Connections	1	LS	$ 5,000.00	$ 5,000.00
14	Earthwork	0	CY	$ 13.00	$ -
			Subtotal		$ 251,450.00
		Items Not Estimated		10%	$ 25,100.00
		Construction Total			$ 276,550.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 5,500.00
2	Design and Construction Engineering		EST	6%	$ 16,600.00
3	Miscellaneous Services		EST	5%	$ 13,800.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
6			EST	0%	$ -
		Non-Construction Total			$ 35,900.00
		Project Contingency		15%	$ 47,000.00
				PROJECT TOTAL	**$ 359,450.00**

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Assumptions

Y	Total Import Trench Bedding	400	Feet Average Distance Between Manholes
N	Dewatering	500	Feet Average Distance per Inlet
3	Inch Thick Asphalt Repair	100%	of Pipe in Roadway
6	Inch Thick Untreated Base Course	0%	of Pipe in Native
		8	Feet Trench Width

WASHINGTON CITY **WAF-05**

Install 18" HDPE bypass pipe along Treasure Valley Rd from Washington Fields Rd. This project will reduce peak flows from the Washington Fields Rd trunk line and convey runoff to the Treasure Valley detention basin. The Treasure Valley detention basin outlet structure will be adjusted with this project.

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Engineers | Surveyors | Solutions
1453 S Dixie Drive, Ste 150
St. George, UT 84770
435 986 0100

ITEM NO.	ITEM DESCRIPTION	EST QTY	UNIT	UNIT COST	AMOUNT
CONSTRUCTION ITEMS					
1	Mobilization & Demobilization	1	LS	10%	$ 22,300.00
2	Project Record Documents	1	LS	1%	$ 2,200.00
3	Traffic & Temporary Controls	1	LS	4%	$ 8,900.00
4	Materials Sampling & Testing	1	LS	3%	$ 6,700.00
5	Construction Layout & Staking	1	LS	2%	$ 4,500.00
6	Subsurface Investigation	10	HR	$ 300.00	$ 3,000.00
7	Utility Coordination	1	LS	$ 2,200.00	$ 2,200.00
8	Pavement Removal	1710	SF	$ 3.00	$ 5,130.00
9	Asphalt Trench Repair w/ Base	1710	SF	$ 10.00	$ 17,100.00
10	18" HDPE Storm Drain Pipe	1420	LF	$ 82.50	$ 117,150.00
11	60" Storm Drain Manhole or Box	4	EA	$ 5,500.00	$ 22,000.00
12	Standard Catch Basin	1	EA	$ 4,500.00	$ 4,500.00
13	Utility Conflicts & Misc Connections	1	LS	$ 2,200.00	$ 2,200.00
14	Adjust Detention Outlet Structure	1	LS	$ 5,000.00	$ 5,000.00
			Subtotal		$ 222,880.00
			Items Not Estimated	10%	$ 22,390.00
			Construction Total		$ 245,270.00
NON-CONSTRUCTION ITEMS					
1	Preliminary Engineering		EST	2%	$ 4,900.00
2	Design and Construction Engineering		EST	6%	$ 14,700.00
3	Miscellaneous Services		EST	5%	$ 12,300.00
4	Land & RoW Acquisition		EST	0%	$ -
5	Environmental		EST	0%	$ -
			Non-Construction Total		$ 31,900.00
			Project Contingency	15%	$ 42,000.00
				PROJECT TOTAL	**$ 319,170.00**

Disclaimer:

This Engineer's Opinion of Cost (EOC) is made on the basis of Engineer's experience, qualifications, general familiarity with the construction industry and represents the Engineer's best judgement as an experienced and qualified professional. However, because Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractor's methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual construction cost will not vary from opinions of probable construction cost prepared by Engineer.

Assumptions

Y	Total Import Trench Bedding
N	Dewatering
6	Inch Thick Asphalt Repair
8	Inch Thick Untreated Base Course
400	Feet Average Distance Between Manholes
500	Feet Average Distance per Inlet
20%	of Pipe in Roadway
80%	of Pipe in Native
6	Feet Trench Width

Appendix D

Impact Fee Certification

Certification of Impact Fee Analysis

In accordance with Utah Code Title 11-36a-306 Cody Howick, P.E., on behalf of Civil Science, Inc., make the following certification:

I certify that the attached impact fee facilities plan and impact fee analysis:

1. includes only the costs of public facilities that are:
    a. allowed under the Impact Fees Act; and
    b. actually incurred; or
    c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. does not include:
    a. costs of operation and maintenance of public facilities;
    b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents; or
    c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement;
3. offsets costs with grants or other alternate sources of payment; and
4. complies in each and every relevant respect with the Impact Fees Act.

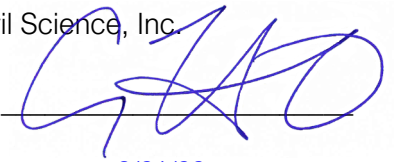
This Certification is made with the following assumptions:

1. All data provided to Civil Science, Inc. is assumed to be correct, complete, and accurate.
2. Any changes to the impact fee facilities plan and impact fee analysis after the issuance of this certification will void same certification.
3. The undersigned is trained and licensed as a professional engineer and has not been trained or licensed as a lawyer. Nothing in the foregoing certification shall be deemed an opinion of law or an opinion of compliance with law which under applicable professional licensing laws

or regulations or other laws or regulations must be rendered by a lawyer licensed in the State of Utah.

4. This certification expresses professional opinion base on the undersigned best knowledge and understanding, and shall not be taken as a guarantee, warranty, or fact.

Civil Science, Inc.

By: 

Dated: 3/21/22

Appendix E

Model Output

Watershed Summary Report

- 10-year, 3-hour Storm Event
- 100-year, 3-hour Storm Event
- 100-year, 24-hour Storm Event

Curve Number Calculations

10-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
CTW-01	83.9	01:44 hrs	1.01	0.50	0.13	2.672	70.314	0.111
CTW-02	13.0	02:43 hrs	1.01	0.40	0.04	0.772	155.26	0.020
CTW-03	36.5	02:24 hrs	1.01	0.49	0.11	1.888	132.527	0.057
GRP-01	26.4	01:44 hrs	1.01	0.49	0.11	0.825	68.366	0.097
GRP-02	49.9	01:27 hrs	1.01	0.52	0.18	1.288	50.47	0.192
GRP-03	19.7	01:20 hrs	1.01	0.52	0.16	0.452	40.446	0.194
GRP-04	7.8	01:02 hrs	1.01	0.52	0.20	0.126	19.443	0.339
GRP-05	11.6	01:07 hrs	1.01	0.48	0.35	0.214	29.368	0.518
GRP-06	5.1	00:55 hrs	1.01	0.48	0.35	0.069	13.254	0.704
GRP-07	23.9	00:56 hrs	1.01	0.50	0.30	0.333	14.194	0.585
GRP-08	35.4	00:56 hrs	1.01	0.45	0.41	0.504	16.581	0.775
GRP-09	12.4	01:20 hrs	1.01	0.51	0.14	0.28	38.906	0.163
GRP-10	91.7	02:01 hrs	1.01	0.51	0.15	3.757	99.666	0.101
GRP-11	5.6	01:05 hrs	1.01	0.51	0.28	0.096	24.402	0.446
GRP-12	6.3	01:00 hrs	1.01	0.52	0.22	0.093	15.909	0.396
GRP-13	15.3	00:57 hrs	1.01	0.50	0.32	0.219	15.76	0.597
GRP-14	4.5	01:08 hrs	1.01	0.51	0.14	0.082	25.075	0.211
GRP-15	0.0	01:45 hrs	1.01	0.12	0.00	0	17.856	0.001
GRP-16	4.6	01:00 hrs	1.01	0.52	0.24	0.068	16.308	0.436
GRP-17	1.5	00:59 hrs	1.01	0.51	0.14	0.022	11.737	0.268
GRP-18	5.1	01:12 hrs	1.01	0.49	0.11	0.096	26.398	0.161
GRP-19	2.5	01:04 hrs	1.01	0.51	0.15	0.04	17.793	0.248
GRP-20	0.5	01:28 hrs	1.01	0.35	0.03	0.011	30.026	0.034
GRP-21	2.0	01:08 hrs	1.01	0.47	0.08	0.035	20.955	0.124
GRP-22	11.5	00:56 hrs	1.01	0.51	0.28	0.16	13.672	0.541
GRP-23	4.4	01:05 hrs	1.01	0.51	0.27	0.075	24.398	0.422
GRP-24	6.6	01:06 hrs	1.01	0.51	0.25	0.116	25.076	0.390
GRP-25	32.7	00:56 hrs	1.01	0.51	0.26	0.447	12.666	0.512
GRP-26	16.5	01:14 hrs	1.01	0.52	0.18	0.342	33.692	0.238
GSE-01	0.5	02:20 hrs	1.01	0.16	0.00	0.02	90.674	0.002
GSE-02	33.1	01:29 hrs	1.01	0.50	0.12	0.855	49.22	0.121
GSE-03	0.0	00:00 hrs	1.01	0.00	0.00	0	63.396	0.000
GSE-04	0.0	00:00 hrs	1.01	0.00	0.00	0	39.436	0.000
GSE-05	4.1	01:19 hrs	1.01	0.43	0.06	0.086	30.236	0.071
GSE-06	1.1	01:28 hrs	1.01	0.34	0.02	0.022	28.841	0.031
GSE-07	0.6	01:29 hrs	1.01	0.33	0.02	0.012	29.107	0.028
GSE-08	1.0	01:19 hrs	1.01	0.35	0.03	0.019	22.709	0.038
GSE-09	1.0	01:07 hrs	1.01	0.37	0.03	0.017	11.316	0.052
GSE-10	0.4	01:09 hrs	1.01	0.35	0.03	0.007	12.103	0.043
GSE-11	2.0	01:14 hrs	1.01	0.38	0.04	0.036	19.663	0.055
GSE-12	1.8	01:49 hrs	1.01	0.30	0.02	0.047	54.491	0.017
GSE-13	0.6	01:13 hrs	1.01	0.37	0.03	0.01	18.795	0.051
GSE-14	2.9	01:30 hrs	1.01	0.46	0.07	0.073	45.381	0.080
GSE-15	2.0	01:25 hrs	1.01	0.45	0.07	0.048	40.43	0.080
GSE-16	9.4	01:16 hrs	1.01	0.49	0.11	0.196	32.782	0.144
GSE-17	7.4	01:10 hrs	1.01	0.50	0.12	0.141	26.378	0.167
GSE-18	10.2	01:20 hrs	1.01	0.51	0.15	0.231	39.02	0.180
GSE-19	18.0	01:06 hrs	1.01	0.51	0.28	0.312	24.919	0.433
GSE-20	2.8	00:59 hrs	1.01	0.52	0.19	0.04	13.397	0.350

10-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
GSW-01	54.2	02:21 hrs	1.01	0.46	0.08	2.665	125.146	0.041
GSW-02	4.7	02:08 hrs	1.01	0.33	0.02	0.171	89.084	0.016
GSW-03	0.3	01:53 hrs	1.01	0.18	0.00	0.007	46.234	0.004
GSW-04	2.5	01:16 hrs	1.01	0.42	0.05	0.05	27.338	0.073
GSW-05	0.7	01:40 hrs	1.01	0.30	0.02	0.016	42.859	0.020
GSW-06	0.9	02:15 hrs	1.01	0.24	0.01	0.031	90.435	0.006
GSW-07	0.0	00:00 hrs	1.01	0.00	0.00	0	44.1	0.000
GSW-08	0.0	00:00 hrs	1.01	0.00	0.00	0	81.812	0.000
GSW-09	0.1	01:43 hrs	1.01	0.13	0.00	0.001	17.908	0.002
GSW-10	5.0	01:25 hrs	1.01	0.39	0.04	0.11	33.734	0.047
GSW-11	0.0	03:38 hrs	1.01	0.03	0.00	0	82.687	0.000
GSW-12	0.7	02:12 hrs	1.01	0.28	0.01	0.025	88.737	0.009
GSW-13	6.7	01:13 hrs	1.01	0.45	0.07	0.127	24.17	0.103
GSW-14	0.1	01:55 hrs	1.01	0.17	0.00	0.001	48.826	0.003
GSW-15	0.3	01:38 hrs	1.01	0.23	0.01	0.005	29.041	0.011
GSW-16	1.2	01:20 hrs	1.01	0.34	0.03	0.023	23.199	0.035
GSW-17	0.2	02:13 hrs	1.01	0.13	0.00	0.005	70.317	0.001
GSW-18	12.6	01:09 hrs	1.01	0.50	0.12	0.234	25.225	0.172
GSW-19	0.2	01:36 hrs	1.01	0.22	0.01	0.003	23.898	0.010
GSW-20	15.5	02:04 hrs	1.01	0.51	0.15	0.655	103.971	0.095
GSW-21	1.1	01:10 hrs	1.01	0.43	0.06	0.021	21.065	0.087
GYP-01	43.4	01:52 hrs	1.01	0.48	0.10	1.492	78.788	0.079
GYP-02	3.9	01:09 hrs	1.01	0.42	0.05	0.069	19.043	0.082
GYP-03	96.2	01:43 hrs	1.01	0.51	0.14	3.017	68.695	0.118
GYP-04	26.0	01:35 hrs	1.01	0.50	0.12	0.728	56.938	0.119
GYP-05	34.6	01:25 hrs	1.01	0.50	0.12	0.85	45.258	0.134
HRS-01	101.1	01:50 hrs	1.01	0.52	0.23	3.667	85.002	0.171
HRS-02	77.9	01:00 hrs	1.01	0.43	0.45	1.203	21.002	0.788
HRS-03	40.1	02:05 hrs	1.01	0.49	0.10	1.666	101.916	0.066
HRS-04	106.6	02:36 hrs	1.01	0.52	0.18	6.487	158.914	0.082
MLC-01	11.7	00:57 hrs	1.01	0.51	0.25	0.167	14.385	0.469
MLC-02	3.6	01:09 hrs	1.01	0.51	0.14	0.067	25.631	0.205
MLC-03	3.4	00:56 hrs	1.01	0.51	0.25	0.046	11.623	0.497
MLC-04	7.3	01:10 hrs	1.01	0.50	0.29	0.144	32.928	0.403
MLC-05	5.1	01:12 hrs	1.01	0.52	0.21	0.101	31.359	0.286
MLC-06	4.2	01:01 hrs	1.01	0.51	0.25	0.067	19.678	0.434
MLC-07	2.1	01:14 hrs	1.01	0.51	0.27	0.044	35.46	0.357
MLC-08	7.3	00:56 hrs	1.01	0.52	0.18	0.098	10.271	0.368
MLC-09	2.6	00:52 hrs	1.01	0.51	0.26	0.033	8.823	0.562
MLC-10	1.5	00:55 hrs	1.01	0.52	0.23	0.02	9.479	0.479
MLC-11	2.6	01:02 hrs	1.01	0.50	0.12	0.04	15.653	0.200
MLC-12	12.0	01:01 hrs	1.01	0.52	0.24	0.187	18.81	0.408
MLC-13	0.6	01:39 hrs	1.01	0.28	0.01	0.012	38.813	0.017
MLC-14	2.2	02:15 hrs	1.01	0.26	0.01	0.083	93.106	0.008
MLC-15	1.0	01:37 hrs	1.01	0.32	0.02	0.022	39.337	0.023
MLC-16	3.3	01:30 hrs	1.01	0.42	0.05	0.08	41.723	0.057
MLC-17	11.7	01:23 hrs	1.01	0.51	0.13	0.279	42.955	0.151
MLC-18	18.6	01:09 hrs	1.01	0.52	0.17	0.347	27.129	0.253
MLC-19	7.9	01:07 hrs	1.01	0.52	0.18	0.138	23.647	0.273

10-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
MLC-20	3.0	01:12 hrs	1.01	0.48	0.10	0.056	25.325	0.139
MLC-21	2.4	00:56 hrs	1.01	0.51	0.28	0.033	13.96	0.551
MLC-22	10.1	01:28 hrs	1.01	0.48	0.09	0.251	45.343	0.100
MLC-23	1.6	02:12 hrs	1.01	0.32	0.02	0.063	95.204	0.015
MLC-24	0.0	01:40 hrs	1.01	0.15	0.00	0	11.344	0.004
MLC-25	0.0	00:00 hrs	1.01	0.00	0.00	0	25.061	0.000
MLC-26	0.3	01:59 hrs	1.01	0.17	0.00	0.008	53.955	0.003
MLC-27	2.9	01:00 hrs	1.01	0.52	0.19	0.042	14.531	0.350
MLC-28	4.9	01:07 hrs	1.01	0.50	0.12	0.086	21.723	0.189
MLC-29	15.8	01:08 hrs	1.01	0.51	0.27	0.297	29.404	0.393
MLC-30	17.9	01:30 hrs	1.01	0.52	0.19	0.483	54.254	0.195
MLC-31	4.0	01:19 hrs	1.01	0.51	0.14	0.089	37.19	0.168
MLC-32	3.9	01:21 hrs	1.01	0.48	0.10	0.087	37.922	0.118
MLC-33	9.4	00:57 hrs	1.01	0.51	0.15	0.13	11.098	0.294
MLC-34	5.2	00:52 hrs	1.01	0.52	0.20	0.065	7.364	0.438
MLC-35	11.8	01:06 hrs	1.01	0.50	0.12	0.198	19.217	0.187
MLC-36	12.3	00:56 hrs	1.01	0.47	0.09	0.159	5	0.178
MLC-37	1.4	01:13 hrs	1.01	0.46	0.08	0.027	25.816	0.112
MLC-38	1.0	01:19 hrs	1.01	0.44	0.06	0.021	30.966	0.080
MLC-39	1.2	01:29 hrs	1.01	0.37	0.03	0.028	35.3	0.038
MLC-40	7.8	01:07 hrs	1.01	0.51	0.14	0.139	23.043	0.208
MLC-41	11.1	00:52 hrs	1.01	0.46	0.40	0.134	9.37	0.903
STF-01	17.2	02:47 hrs	1.01	0.39	0.04	1.061	162.273	0.017
STU-01	19.7	01:36 hrs	1.01	0.42	0.05	0.519	50.43	0.056
STU-02	5.2	02:56 hrs	1.01	0.40	0.04	0.347	176.07	0.017
STU-03	15.2	02:11 hrs	1.01	0.39	0.04	0.618	100.442	0.026
WAD-01	4.3	01:30 hrs	1.01	0.46	0.07	0.11	46.482	0.079
WAD-02	0.0	00:00 hrs	1.01	0.00	0.00	0	28.338	0.000
WAD-03	10.7	01:06 hrs	1.01	0.40	0.04	0.171	11.924	0.072
WAD-04	18.1	01:02 hrs	1.01	0.51	0.14	0.288	17.301	0.237
WAD-05	13.9	00:59 hrs	1.01	0.52	0.21	0.201	14.545	0.390
WAD-06	24.6	00:55 hrs	1.01	0.51	0.28	0.319	10.597	0.579
WAD-07	1.3	01:49 hrs	1.01	0.21	0.01	0.026	40.685	0.007
WAD-08	0.0	00:00 hrs	1.01	0.00	0.00	0	89.393	0.000
WAD-09	0.0	00:00 hrs	1.01	0.00	0.00	0	63.439	0.000
WAD-10	16.6	01:00 hrs	1.01	0.51	0.28	0.257	18.967	0.485
WAD-11	14.7	01:02 hrs	1.01	0.52	0.23	0.238	20.449	0.385
WAD-12	4.4	00:49 hrs	1.01	0.49	0.32	0.05	5.624	0.762
WAD-13	10.9	01:08 hrs	1.01	0.51	0.14	0.2	25.191	0.211
WAD-14	0.2	01:50 hrs	1.01	0.17	0.00	0.003	37.02	0.004
WAD-15	12.7	01:16 hrs	1.01	0.47	0.09	0.262	31.05	0.117
WAD-16	17.2	01:15 hrs	1.01	0.45	0.07	0.342	27.171	0.092
WAD-17	17.7	02:24 hrs	1.01	0.36	0.03	0.827	119.337	0.082
WAD-18	0.7	01:30 hrs	1.01	0.43	0.06	0.016	44.81	0.061
WAD-19	9.1	01:22 hrs	1.01	0.51	0.13	0.215	42.164	0.152
WAD-20	1.0	01:45 hrs	1.01	0.42	0.05	0.029	63.54	0.048
WAD-21	2.9	01:24 hrs	1.01	0.49	0.10	0.071	42.783	0.116
WAD-22	4.5	01:20 hrs	1.01	0.48	0.10	0.098	35.75	0.123
WAD-23	6.5	01:12 hrs	1.01	0.49	0.11	0.124	27.086	0.155

10-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
WAD-24	0.9	01:23 hrs	1.01	0.42	0.05	0.021	34.387	0.061
WAD-25	2.8	01:13 hrs	1.01	0.51	0.13	0.056	29.871	0.184
WAD-26	4.5	01:01 hrs	1.01	0.50	0.31	0.071	20.507	0.529
WAD-27	1.4	00:49 hrs	1.01	0.49	0.32	0.016	5	0.775
WAD-28	2.8	00:53 hrs	1.01	0.49	0.32	0.036	11.239	0.667
WAD-29	23.6	01:15 hrs	1.01	0.52	0.20	0.495	35.062	0.263
WAD-30	1.3	01:01 hrs	1.01	0.48	0.09	0.019	12.224	0.170
WAD-31	34.2	01:06 hrs	1.01	0.51	0.14	0.584	21.164	0.223
WAD-32	0.9	00:59 hrs	1.01	0.49	0.11	0.013	10.199	0.217
WAD-33	2.0	00:59 hrs	1.01	0.51	0.15	0.028	11.93	0.280
WAD-34	3.3	00:56 hrs	1.01	0.51	0.15	0.046	10.226	0.291
WAD-35	3.7	01:00 hrs	1.01	0.51	0.13	0.054	12.629	0.250
WAF-01	1.0	03:29 hrs	1.01	0.31	0.02	0.083	226.043	0.006
WAF-02	0.6	01:55 hrs	1.01	0.44	0.06	0.019	79.692	0.050
WAF-03	1.2	02:33 hrs	1.01	0.46	0.08	0.069	146.67	0.039
WAF-04	1.8	01:38 hrs	1.01	0.46	0.08	0.05	57.73	0.075
WAF-05	5.7	01:00 hrs	1.01	0.51	0.14	0.083	13.117	0.267
WAF-06	4.3	01:20 hrs	1.01	0.47	0.09	0.096	35.847	0.110
WAF-07	7.9	01:13 hrs	1.01	0.52	0.18	0.16	31.997	0.240
WAF-08	3.4	01:19 hrs	1.01	0.47	0.09	0.072	33.424	0.109
WAF-09	0.0	03:15 hrs	1.01	0.02	0.00	0	36.222	0.000
WAF-10	9.1	01:10 hrs	1.01	0.49	0.11	0.171	25.628	0.161
WAF-11	3.4	01:37 hrs	1.01	0.47	0.09	0.096	57.83	0.082
WAF-12	3.1	01:49 hrs	1.01	0.49	0.10	0.103	75.421	0.083
WAF-13	22.8	01:07 hrs	1.01	0.49	0.11	0.393	20.707	0.175
WAF-14	8.8	01:07 hrs	1.01	0.52	0.18	0.158	24.775	0.273
WAF-15	0.0	00:00 hrs	1.01	0.00	0.00	0	43.882	0.000
WAF-16	15.1	01:05 hrs	1.01	0.50	0.12	0.245	17.701	0.193
WAF-17	13.1	01:01 hrs	1.01	0.50	0.12	0.2	14.903	0.221
WAF-18	2.9	01:36 hrs	1.01	0.37	0.03	0.069	43.49	0.036
WAF-19	1.1	01:38 hrs	1.01	0.28	0.01	0.023	35.565	0.016
WAF-20	1.8	02:12 hrs	1.01	0.49	0.11	0.079	111.413	0.064
WAF-21	1.9	01:57 hrs	1.01	0.48	0.10	0.069	86.368	0.073
WAF-22	3.6	01:24 hrs	1.01	0.52	0.23	0.089	48.618	0.243
WAF-23	1.3	01:06 hrs	1.01	0.49	0.11	0.022	18.633	0.178
WAF-24	0.9	01:21 hrs	1.01	0.49	0.11	0.019	37.838	0.132
WAF-25	1.6	01:46 hrs	1.01	0.49	0.11	0.052	71.868	0.092
WAF-26	1.0	01:22 hrs	1.01	0.46	0.08	0.022	37.255	0.094
WAF-27	2.7	01:47 hrs	1.01	0.49	0.11	0.09	73.746	0.090
WAF-28	1.3	01:49 hrs	1.01	0.46	0.08	0.041	72.755	0.066
WAF-29	4.6	02:20 hrs	1.01	0.49	0.11	0.231	127.597	0.058
WAF-30	3.4	02:05 hrs	1.01	0.46	0.07	0.138	98.313	0.049
WAF-31	2.1	01:55 hrs	1.01	0.44	0.06	0.073	80.57	0.050
WAF-32	0.8	01:24 hrs	1.01	0.44	0.07	0.018	38.586	0.078
WAF-33	1.7	01:02 hrs	1.01	0.49	0.11	0.026	14.799	0.185
WAF-34	0.6	01:34 hrs	1.01	0.23	0.01	0.011	22.362	0.012
WAF-35	5.3	00:56 hrs	1.01	0.51	0.15	0.07	8.586	0.297
WAF-36	15.8	01:10 hrs	1.01	0.50	0.12	0.297	26.133	0.173
WAF-37	4.9	00:57 hrs	1.01	0.51	0.14	0.067	10.428	0.273

10-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
WAF-38	2.0	01:09 hrs	1.01	0.45	0.07	0.036	20.926	0.104
WAF-39	0.0	00:00 hrs	1.01	0.00	0.00	0	49.836	0.000
WAF-40	0.6	01:20 hrs	1.01	0.41	0.05	0.012	29.457	0.061
WAF-41	0.5	01:07 hrs	1.01	0.46	0.08	0.009	18.807	0.120
WAF-42	7.2	00:56 hrs	1.01	0.49	0.34	0.1	14.748	0.662
WAF-43	1.9	01:44 hrs	1.01	0.43	0.06	0.054	61.73	0.055
WAF-44	0.2	01:43 hrs	1.01	0.38	0.04	0.005	54.682	0.037
WAF-45	1.4	01:29 hrs	1.01	0.44	0.07	0.036	43.701	0.073
WAF-46	1.9	01:35 hrs	1.01	0.48	0.09	0.05	53.996	0.093
WAF-47	0.8	01:21 hrs	1.01	0.43	0.06	0.017	32.448	0.071
WAF-48	2.7	02:03 hrs	1.01	0.46	0.08	0.108	95.424	0.054
WAF-49	2.1	01:32 hrs	1.01	0.49	0.11	0.057	53.067	0.110
WAF-50	1.0	01:05 hrs	1.01	0.49	0.11	0.016	17.903	0.179
WAF-51	4.0	01:57 hrs	1.01	0.49	0.11	0.15	87.262	0.080
WAF-52	1.3	01:34 hrs	1.01	0.45	0.07	0.035	49.131	0.069
WAF-53	0.9	01:23 hrs	1.01	0.46	0.08	0.021	38.827	0.092
WAF-54	2.1	01:42 hrs	1.01	0.45	0.07	0.06	60.347	0.065
WAF-55	3.0	01:58 hrs	1.01	0.46	0.08	0.109	85.637	0.059
WAF-56	8.5	00:59 hrs	1.01	0.43	0.46	0.127	19.77	0.822
WAF-57	1.3	01:10 hrs	1.01	0.47	0.09	0.024	24.179	0.127
WAF-58	0.1	02:14 hrs	1.01	0.17	0.00	0.003	78.649	0.002
WAF-59	1.4	01:25 hrs	1.01	0.44	0.06	0.033	39.342	0.070
WAF-60	0.0	00:00 hrs	1.01	0.00	0.00	0	109.856	0.000
WAF-61	0.0	00:00 hrs	1.01	0.00	0.00	0	42.726	0.000
WAF-62	0.4	01:30 hrs	1.01	0.29	0.02	0.008	23.169	0.021
WAF-63	0.2	01:35 hrs	1.01	0.26	0.01	0.004	27.412	0.015
WAF-64	0.7	01:29 hrs	1.01	0.35	0.03	0.016	31.9	0.034
WAF-65	1.7	01:40 hrs	1.01	0.34	0.02	0.043	46.7	0.026
WAF-66	4.3	00:59 hrs	1.01	0.43	0.45	0.065	20.0	0.811
WAF-67	1.3	01:44 hrs	1.01	0.44	0.07	0.038	62.4	0.061
WAF-68	2.3	01:23 hrs	1.01	0.49	0.10	0.055	41.4	0.116
WAF-69	0.8	01:45 hrs	1.01	0.44	0.06	0.025	64.0	0.055
WAF-70	0.7	01:16 hrs	1.01	0.49	0.11	0.014	33.4	0.140
WAF-71	1.0	01:15 hrs	1.01	0.46	0.08	0.02	28.1	0.107
WAF-72	0.9	01:29 hrs	1.01	0.46	0.08	0.022	45.1	0.086
WAF-73	0.9	02:00 hrs	1.01	0.32	0.02	0.029	75.7	0.017
WAF-74	0.1	01:59 hrs	1.01	0.20	0.00	0.003	58.4	0.005
WAF-75	0.0	00:00 hrs	1.01	0.00	0.00	0	62.9	0.000
WAF-76	0.0	00:00 hrs	1.01	0.00	0.00	0	53.7	0.000
WAF-77	0.0	00:00 hrs	1.01	0.00	0.00	0	158.9	0.000
WAF-78	0.5	01:36 hrs	1.01	0.37	0.03	0.011	43.8	0.035
WAF-79	0.0	00:00 hrs	1.01	0.00	0.00	0	121.3	0.000
WAF-80	1.3	02:02 hrs	1.01	0.35	0.03	0.044	82.6	0.021
WAF-81	0.4	02:15 hrs	1.01	0.26	0.01	0.015	92.9	0.007
WAF-82	0.0	03:24 hrs	1.01	0.03	0.00	0	54.5	0.000
WAF-83	0.0	03:17 hrs	1.01	0.01	0.00	0	35.6	0.000
WAF-84	0.0	00:00 hrs	1.01	0.00	0.00	0	65.1	0.000
WAF-85	19.0	01:57 hrs	1.01	0.43	0.45	0.79	102.2	0.293
WAF-86	2.1	02:02 hrs	1.01	0.50	0.13	0.086	99.3	0.088

10-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
WAF-87	0.2	02:33 hrs	1.01	0.18	0.00	0.009	115.5	0.002
WAF-88	1.8	02:08 hrs	1.01	0.33	0.02	0.066	88.9	0.016
WAF-89	0.8	01:09 hrs	1.01	0.49	0.11	0.016	24.6	0.160
WVN-01	47.2	01:51 hrs	1.01	0.47	0.08	1.583	76.3	0.067
WVN-02	73.9	02:00 hrs	1.01	0.46	0.08	2.802	90.7	0.056
WVN-03	15.8	02:15 hrs	1.01	0.34	0.02	0.652	103.3	0.016
WVS-01	2.3	02:30 hrs	1.01	0.18	0.00	0.098	109.9	0.002
WVS-02	6.2	03:04 hrs	1.01	0.30	0.02	0.426	182.6	0.007
WVS-03	0.1	04:05 hrs	1.01	0.04	0.00	0.003	140.6	0.000
WVS-04	0.0	00:00 hrs	1.01	0.00	0.00	0	131.5	0.000
WVS-05	7.9	01:59 hrs	1.01	0.34	0.02	0.254	75.0	0.020
WVS-06	17.604	02:28 hrs	1.01	0.368	0.032	0.868	126.334	0.018

100-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
CTW-01	301.9	01:38 hrs	1.69	0.85	0.47	9.556	70.314	0.400
CTW-02	78.0	02:34 hrs	1.69	0.86	0.27	4.646	155.26	0.121
CTW-03	140.9	02:18 hrs	1.69	0.86	0.42	7.3	132.527	0.221
GRP-01	101.2	01:37 hrs	1.69	0.86	0.43	3.148	68.366	0.374
GRP-02	158.8	01:22 hrs	1.69	0.81	0.57	4.011	50.47	0.611
GRP-03	66.5	01:15 hrs	1.69	0.83	0.53	1.471	40.446	0.652
GRP-04	24.7	01:00 hrs	1.69	0.80	0.60	0.378	19.443	1.068
GRP-05	29.0	01:06 hrs	1.69	0.66	0.85	0.519	29.368	1.293
GRP-06	13.0	00:53 hrs	1.69	0.66	0.85	0.167	13.254	1.788
GRP-07	64.3	00:55 hrs	1.69	0.71	0.77	0.855	14.194	1.575
GRP-08	84.3	00:56 hrs	1.69	0.61	0.93	1.159	16.581	1.846
GRP-09	45.2	01:15 hrs	1.69	0.85	0.48	0.984	38.906	0.596
GRP-10	307.3	01:58 hrs	1.69	0.83	0.51	12.579	99.666	0.339
GRP-11	15.2	01:02 hrs	1.69	0.73	0.74	0.251	24.402	1.219
GRP-12	19.2	00:56 hrs	1.69	0.78	0.63	0.271	15.909	1.212
GRP-13	40.2	00:56 hrs	1.69	0.70	0.80	0.552	15.76	1.574
GRP-14	16.2	01:05 hrs	1.69	0.84	0.49	0.281	25.075	0.767
GRP-15	1.5	01:08 hrs	1.69	0.71	0.09	0.026	17.856	0.141
GRP-16	13.5	00:56 hrs	1.69	0.77	0.67	0.191	16.308	1.282
GRP-17	5.7	00:55 hrs	1.69	0.84	0.49	0.076	11.737	0.995
GRP-18	20.5	01:07 hrs	1.69	0.86	0.43	0.367	26.398	0.649
GRP-19	9.1	01:00 hrs	1.69	0.84	0.50	0.137	17.793	0.899
GRP-20	4.5	01:14 hrs	1.69	0.84	0.21	0.089	30.026	0.289
GRP-21	9.4	01:04 hrs	1.69	0.87	0.36	0.155	20.955	0.593
GRP-22	32.1	00:55 hrs	1.69	0.73	0.73	0.425	13.672	1.506
GRP-23	12.2	01:02 hrs	1.69	0.74	0.72	0.202	24.398	1.177
GRP-24	19.0	01:04 hrs	1.69	0.75	0.69	0.319	25.076	1.114
GRP-25	93.6	00:53 hrs	1.69	0.75	0.70	1.216	12.666	1.468
GRP-26	53.7	01:10 hrs	1.69	0.81	0.57	1.066	33.692	0.773
GSE-01	26.1	02:02 hrs	1.69	0.74	0.11	0.986	90.674	0.077
GSE-02	128.5	01:23 hrs	1.69	0.86	0.43	3.229	49.22	0.469
GSE-03	5.3	01:50 hrs	1.69	0.61	0.05	0.154	63.396	0.049
GSE-04	3.7	01:32 hrs	1.69	0.61	0.05	0.088	39.436	0.062
GSE-05	23.7	01:12 hrs	1.69	0.87	0.29	0.464	30.236	0.408
GSE-06	9.8	01:13 hrs	1.69	0.84	0.20	0.192	28.841	0.281
GSE-07	5.4	01:13 hrs	1.69	0.83	0.20	0.106	29.107	0.271
GSE-08	8.3	01:07 hrs	1.69	0.84	0.22	0.147	22.709	0.334
GSE-09	8.5	00:59 hrs	1.69	0.85	0.23	0.12	11.316	0.440
GSE-10	4.1	00:59 hrs	1.69	0.84	0.21	0.059	12.103	0.400
GSE-11	14.4	01:05 hrs	1.69	0.85	0.25	0.238	19.663	0.405
GSE-12	18.8	01:34 hrs	1.69	0.82	0.18	0.513	54.491	0.177
GSE-13	4.3	01:04 hrs	1.69	0.85	0.24	0.07	18.795	0.395
GSE-14	14.1	01:22 hrs	1.69	0.87	0.34	0.341	45.381	0.382
GSE-15	10.0	01:19 hrs	1.69	0.87	0.33	0.227	40.43	0.397
GSE-16	37.8	01:12 hrs	1.69	0.86	0.43	0.753	32.782	0.580
GSE-17	29.5	01:07 hrs	1.69	0.86	0.44	0.528	26.378	0.665
GSE-18	35.9	01:15 hrs	1.69	0.84	0.51	0.779	39.02	0.631
GSE-19	49.4	01:02 hrs	1.69	0.73	0.73	0.826	24.919	1.192
GSE-20	9.1	00:56 hrs	1.69	0.81	0.57	0.123	13.397	1.150

100-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
GSW-01	247.9	02:15 hrs	1.69	0.87	0.35	12.229	125.146	0.190
GSW-02	41.3	01:57 hrs	1.69	0.83	0.20	1.551	89.084	0.142
GSW-03	10.0	01:30 hrs	1.69	0.75	0.12	0.253	46.234	0.125
GSW-04	14.3	01:09 hrs	1.69	0.87	0.29	0.268	27.338	0.425
GSW-05	6.8	01:24 hrs	1.69	0.82	0.18	0.163	42.859	0.204
GSW-06	14.0	02:00 hrs	1.69	0.79	0.15	0.529	90.435	0.104
GSW-07	0.0	01:57 hrs	1.69	0.23	0.00	0.001	44.1	0.003
GSW-08	0.2	02:14 hrs	1.69	0.32	0.01	0.006	81.812	0.005
GSW-09	4.6	01:08 hrs	1.69	0.72	0.10	0.081	17.908	0.151
GSW-10	34.0	01:15 hrs	1.69	0.86	0.25	0.71	33.734	0.325
GSW-11	3.1	02:00 hrs	1.69	0.65	0.06	0.108	82.687	0.050
GSW-12	8.8	01:59 hrs	1.69	0.81	0.16	0.33	88.737	0.118
GSW-13	34.0	01:07 hrs	1.69	0.87	0.34	0.595	24.17	0.522
GSW-14	1.9	01:32 hrs	1.69	0.74	0.11	0.049	48.826	0.116
GSW-15	5.0	01:15 hrs	1.69	0.78	0.14	0.1	29.041	0.187
GSW-16	10.8	01:07 hrs	1.69	0.84	0.21	0.192	23.199	0.318
GSW-17	16.8	01:50 hrs	1.69	0.72	0.10	0.533	70.317	0.081
GSW-18	50.0	01:06 hrs	1.69	0.86	0.44	0.876	25.225	0.681
GSW-19	3.2	01:12 hrs	1.69	0.77	0.13	0.06	23.898	0.191
GSW-20	52.5	02:00 hrs	1.69	0.84	0.50	2.223	103.971	0.321
GSW-21	6.5	01:05 hrs	1.69	0.87	0.30	0.109	21.065	0.494
GYP-01	174.9	01:45 hrs	1.69	0.86	0.40	6.003	78.788	0.317
GYP-02	23.3	01:04 hrs	1.69	0.87	0.29	0.376	19.043	0.490
GYP-03	340.5	01:37 hrs	1.69	0.85	0.48	10.603	68.695	0.416
GYP-04	97.1	01:30 hrs	1.69	0.85	0.45	2.673	56.938	0.444
GYP-05	131.3	01:21 hrs	1.69	0.85	0.45	3.132	45.258	0.510
HRS-01	288.9	01:46 hrs	1.69	0.77	0.65	10.442	85.002	0.490
HRS-02	177.8	00:59 hrs	1.69	0.57	1.00	2.668	21.002	1.800
HRS-03	159.6	02:00 hrs	1.69	0.86	0.41	6.654	101.916	0.263
HRS-04	331.3	02:32 hrs	1.69	0.81	0.57	20.172	158.914	0.254
MLC-01	34.0	00:56 hrs	1.69	0.76	0.68	0.462	14.385	1.365
MLC-02	13.3	01:06 hrs	1.69	0.84	0.48	0.233	25.631	0.751
MLC-03	10.0	00:52 hrs	1.69	0.76	0.68	0.128	11.623	1.452
MLC-04	19.5	01:08 hrs	1.69	0.72	0.76	0.374	32.928	1.076
MLC-05	15.8	01:08 hrs	1.69	0.79	0.62	0.3	31.359	0.878
MLC-06	12.1	01:00 hrs	1.69	0.75	0.69	0.183	19.678	1.244
MLC-07	5.9	01:10 hrs	1.69	0.74	0.73	0.118	35.46	0.982
MLC-08	24.2	00:52 hrs	1.69	0.81	0.57	0.305	10.271	1.223
MLC-09	7.5	00:51 hrs	1.69	0.75	0.70	0.089	8.823	1.614
MLC-10	4.6	00:52 hrs	1.69	0.78	0.65	0.056	9.479	1.454
MLC-11	10.4	00:59 hrs	1.69	0.86	0.43	0.152	15.653	0.810
MLC-12	35.3	00:59 hrs	1.69	0.77	0.66	0.528	18.81	1.204
MLC-13	6.6	01:22 hrs	1.69	0.81	0.17	0.152	38.813	0.199
MLC-14	31.3	02:01 hrs	1.69	0.80	0.15	1.214	93.106	0.108
MLC-15	9.5	01:22 hrs	1.69	0.83	0.19	0.217	39.337	0.224
MLC-16	19.4	01:21 hrs	1.69	0.86	0.28	0.452	41.723	0.329
MLC-17	43.0	01:19 hrs	1.69	0.85	0.47	0.991	42.955	0.555
MLC-18	61.9	01:06 hrs	1.69	0.82	0.55	1.103	27.129	0.841
MLC-19	26.1	01:04 hrs	1.69	0.82	0.56	0.435	23.647	0.904

100-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
MLC-20	13.0	01:07 hrs	1.69	0.86	0.39	0.23	25.325	0.604
MLC-21	6.5	00:55 hrs	1.69	0.73	0.74	0.087	13.96	1.519
MLC-22	43.6	01:22 hrs	1.69	0.87	0.38	1.048	45.343	0.432
MLC-23	14.8	02:00 hrs	1.69	0.83	0.19	0.586	95.204	0.134
MLC-24	0.6	01:02 hrs	1.69	0.73	0.10	0.009	11.344	0.181
MLC-25	0.0	01:45 hrs	1.69	0.24	0.00	0.001	25.061	0.005
MLC-26	11.1	01:37 hrs	1.69	0.75	0.11	0.303	53.955	0.111
MLC-27	9.3	00:56 hrs	1.69	0.81	0.58	0.129	14.531	1.136
MLC-28	19.3	01:02 hrs	1.69	0.85	0.45	0.317	21.723	0.742
MLC-29	43.6	01:07 hrs	1.69	0.74	0.73	0.791	29.404	1.085
MLC-30	55.6	01:25 hrs	1.69	0.80	0.59	1.469	54.254	0.605
MLC-31	14.7	01:15 hrs	1.69	0.84	0.48	0.313	37.19	0.614
MLC-32	16.3	01:15 hrs	1.69	0.86	0.40	0.354	37.922	0.499
MLC-33	33.7	00:53 hrs	1.69	0.84	0.51	0.438	11.098	1.057
MLC-34	16.6	00:51 hrs	1.69	0.80	0.60	0.194	7.364	1.405
MLC-35	47.6	01:01 hrs	1.69	0.86	0.44	0.745	19.217	0.754
MLC-36	60.0	00:51 hrs	1.69	0.87	0.37	0.691	5	0.865
MLC-37	6.8	01:07 hrs	1.69	0.87	0.36	0.123	25.816	0.536
MLC-38	5.3	01:12 hrs	1.69	0.87	0.31	0.105	30.966	0.430
MLC-39	9.3	01:16 hrs	1.69	0.85	0.23	0.201	35.3	0.291
MLC-40	29.2	01:04 hrs	1.69	0.85	0.48	0.488	23.043	0.775
MLC-41	26.6	00:49 hrs	1.69	0.61	0.93	0.31	9.37	2.166
STF-01	110.1	02:40 hrs	1.69	0.86	0.25	6.825	162.273	0.110
STU-01	107.9	01:27 hrs	1.69	0.87	0.29	2.792	50.43	0.308
STU-02	31.8	02:47 hrs	1.69	0.86	0.26	2.123	176.07	0.106
STU-03	96.1	02:02 hrs	1.69	0.86	0.25	3.957	100.442	0.166
WAD-01	20.7	01:23 hrs	1.69	0.87	0.34	0.509	46.482	0.377
WAD-02	1.9	01:29 hrs	1.69	0.55	0.04	0.04	28.338	0.048
WAD-03	74.6	00:57 hrs	1.69	0.86	0.26	1.053	11.924	0.501
WAD-04	67.3	01:00 hrs	1.69	0.84	0.48	1.004	17.301	0.880
WAD-05	43.3	00:56 hrs	1.69	0.79	0.62	0.595	14.545	1.215
WAD-06	68.7	00:52 hrs	1.69	0.73	0.73	0.845	10.597	1.617
WAD-07	26.7	01:25 hrs	1.69	0.77	0.13	0.632	40.685	0.146
WAD-08	0.0	00:00 hrs	1.69	0.00	0.00	0	89.393	0.000
WAD-09	0.0	03:27 hrs	1.69	0.06	0.00	0	63.439	0.000
WAD-10	45.8	00:59 hrs	1.69	0.73	0.73	0.68	18.967	1.341
WAD-11	43.7	01:00 hrs	1.69	0.77	0.65	0.677	20.449	1.145
WAD-12	11.5	00:47 hrs	1.69	0.69	0.80	0.126	5.624	1.994
WAD-13	39.7	01:06 hrs	1.69	0.84	0.49	0.69	25.191	0.766
WAD-14	6.4	01:23 hrs	1.69	0.74	0.11	0.145	37.02	0.130
WAD-15	56.8	01:10 hrs	1.69	0.87	0.38	1.109	31.05	0.525
WAD-16	89.6	01:08 hrs	1.69	0.87	0.33	1.659	27.171	0.477
WAD-17	132.5	02:15 hrs	1.69	0.85	0.22	6.272	119.337	0.615
WAD-18	3.6	01:22 hrs	1.69	0.87	0.30	0.086	44.81	0.335
WAD-19	33.6	01:17 hrs	1.69	0.85	0.47	0.766	42.164	0.559
WAD-20	5.3	01:37 hrs	1.69	0.87	0.29	0.159	63.54	0.264
WAD-21	12.1	01:19 hrs	1.69	0.86	0.41	0.28	42.783	0.478
WAD-22	18.9	01:14 hrs	1.69	0.86	0.40	0.396	35.75	0.520
WAD-23	26.3	01:07 hrs	1.69	0.86	0.42	0.477	27.086	0.633

100-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
WAD-24	5.6	01:15 hrs	1.69	0.86	0.28	0.117	34.387	0.364
WAD-25	10.5	01:08 hrs	1.69	0.85	0.48	0.197	29.871	0.683
WAD-26	11.9	01:00 hrs	1.69	0.70	0.79	0.181	20.507	1.399
WAD-27	3.8	00:45 hrs	1.69	0.69	0.80	0.04	5	2.031
WAD-28	7.3	00:52 hrs	1.69	0.69	0.80	0.09	11.239	1.757
WAD-29	73.1	01:12 hrs	1.69	0.80	0.61	1.478	35.062	0.813
WAD-30	5.8	00:56 hrs	1.69	0.86	0.39	0.08	12.224	0.768
WAD-31	125.6	01:02 hrs	1.69	0.84	0.49	2.024	21.164	0.819
WAD-32	3.7	00:55 hrs	1.69	0.86	0.43	0.048	10.199	0.898
WAD-33	7.2	00:55 hrs	1.69	0.84	0.50	0.095	11.93	1.021
WAD-34	12.2	00:53 hrs	1.69	0.84	0.50	0.155	10.226	1.062
WAD-35	14.2	00:56 hrs	1.69	0.85	0.47	0.193	12.629	0.949
WAF-01	10.3	03:17 hrs	1.69	0.82	0.18	0.87	226.043	0.058
WAF-02	2.8	01:47 hrs	1.69	0.87	0.32	0.097	79.692	0.247
WAF-03	5.4	02:29 hrs	1.69	0.87	0.36	0.308	146.67	0.172
WAF-04	8.0	01:31 hrs	1.69	0.87	0.35	0.225	57.73	0.342
WAF-05	20.8	00:56 hrs	1.69	0.84	0.49	0.284	13.117	0.981
WAF-06	19.3	01:15 hrs	1.69	0.87	0.38	0.406	35.847	0.487
WAF-07	26.0	01:09 hrs	1.69	0.82	0.56	0.502	31.997	0.786
WAF-08	15.3	01:13 hrs	1.69	0.87	0.37	0.31	33.424	0.495
WAF-09	2.9	01:29 hrs	1.69	0.64	0.06	0.065	36.222	0.073
WAF-10	37.1	01:07 hrs	1.69	0.86	0.43	0.656	25.628	0.654
WAF-11	14.9	01:31 hrs	1.69	0.87	0.37	0.416	57.83	0.357
WAF-12	12.3	01:44 hrs	1.69	0.86	0.41	0.409	75.421	0.332
WAF-13	93.2	01:02 hrs	1.69	0.86	0.43	1.504	20.707	0.717
WAF-14	29.0	01:05 hrs	1.69	0.82	0.56	0.494	24.775	0.896
WAF-15	0.5	01:49 hrs	1.69	0.38	0.01	0.011	43.882	0.015
WAF-16	60.8	01:00 hrs	1.69	0.86	0.44	0.925	17.701	0.777
WAF-17	51.1	00:57 hrs	1.69	0.85	0.45	0.729	14.903	0.863
WAF-18	20.8	01:23 hrs	1.69	0.85	0.23	0.499	43.49	0.261
WAF-19	13.7	01:20 hrs	1.69	0.81	0.16	0.3	35.565	0.200
WAF-20	6.9	02:05 hrs	1.69	0.86	0.41	0.311	111.413	0.250
WAF-21	7.6	01:51 hrs	1.69	0.86	0.40	0.277	86.368	0.296
WAF-22	10.4	01:21 hrs	1.69	0.78	0.65	0.256	48.618	0.714
WAF-23	5.5	01:00 hrs	1.69	0.86	0.42	0.085	18.633	0.738
WAF-24	3.4	01:15 hrs	1.69	0.86	0.42	0.074	37.838	0.531
WAF-25	6.3	01:40 hrs	1.69	0.86	0.42	0.202	71.868	0.356
WAF-26	4.6	01:15 hrs	1.69	0.87	0.35	0.1	37.255	0.445
WAF-27	10.6	01:42 hrs	1.69	0.86	0.42	0.348	73.746	0.350
WAF-28	5.6	01:43 hrs	1.69	0.87	0.35	0.183	72.755	0.296
WAF-29	17.9	02:15 hrs	1.69	0.86	0.42	0.898	127.597	0.226
WAF-30	15.8	01:59 hrs	1.69	0.87	0.34	0.641	98.313	0.228
WAF-31	10.4	01:49 hrs	1.69	0.87	0.32	0.362	80.57	0.247
WAF-32	4.0	01:17 hrs	1.69	0.87	0.32	0.088	38.586	0.396
WAF-33	7.2	00:59 hrs	1.69	0.86	0.41	0.104	14.799	0.781
WAF-34	11.5	01:09 hrs	1.69	0.78	0.14	0.208	22.362	0.208
WAF-35	19.4	00:52 hrs	1.69	0.84	0.49	0.239	8.586	1.093
WAF-36	62.0	01:07 hrs	1.69	0.85	0.45	1.102	26.133	0.679
WAF-37	18.2	00:53 hrs	1.69	0.84	0.48	0.234	10.428	1.021

100-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
WAF-38	10.4	01:04 hrs	1.69	0.87	0.33	0.173	20.926	0.541
WAF-39	0.6	01:47 hrs	1.69	0.45	0.02	0.016	49.836	0.022
WAF-40	3.5	01:12 hrs	1.69	0.86	0.27	0.068	29.457	0.383
WAF-41	2.5	01:01 hrs	1.69	0.87	0.35	0.04	18.807	0.594
WAF-42	18.5	00:55 hrs	1.69	0.67	0.83	0.247	14.748	1.695
WAF-43	9.6	01:36 hrs	1.69	0.87	0.31	0.28	61.73	0.284
WAF-44	1.3	01:31 hrs	1.69	0.85	0.25	0.035	54.682	0.246
WAF-45	7.3	01:22 hrs	1.69	0.87	0.32	0.174	43.701	0.369
WAF-46	7.8	01:28 hrs	1.69	0.87	0.39	0.209	53.996	0.393
WAF-47	4.4	01:14 hrs	1.69	0.87	0.30	0.088	32.448	0.401
WAF-48	12.2	01:57 hrs	1.69	0.87	0.35	0.483	95.424	0.242
WAF-49	8.4	01:27 hrs	1.69	0.86	0.42	0.222	53.067	0.434
WAF-50	4.0	01:00 hrs	1.69	0.86	0.42	0.061	17.903	0.746
WAF-51	15.6	01:51 hrs	1.69	0.86	0.42	0.579	87.262	0.309
WAF-52	6.7	01:25 hrs	1.69	0.87	0.32	0.17	49.131	0.346
WAF-53	4.3	01:16 hrs	1.69	0.87	0.35	0.094	38.827	0.433
WAF-54	10.0	01:34 hrs	1.69	0.87	0.33	0.287	60.347	0.312
WAF-55	13.4	01:51 hrs	1.69	0.87	0.35	0.491	85.637	0.263
WAF-56	19.2	00:57 hrs	1.69	0.56	1.00	0.28	19.77	1.867
WAF-57	5.8	01:06 hrs	1.69	0.87	0.37	0.101	24.179	0.581
WAF-58	3.5	01:54 hrs	1.69	0.74	0.11	0.119	78.649	0.087
WAF-59	7.5	01:19 hrs	1.69	0.87	0.31	0.167	39.342	0.374
WAF-60	2.2	02:18 hrs	1.69	0.58	0.05	0.096	109.856	0.028
WAF-61	1.1	01:37 hrs	1.69	0.56	0.04	0.027	42.726	0.045
WAF-62	4.8	01:09 hrs	1.69	0.81	0.17	0.088	23.169	0.258
WAF-63	3.3	01:14 hrs	1.69	0.80	0.16	0.064	27.412	0.215
WAF-64	6.1	01:15 hrs	1.69	0.84	0.22	0.126	31.9	0.285
WAF-65	14.7	01:27 hrs	1.69	0.84	0.20	0.367	46.7	0.222
WAF-66	9.9	00:57 hrs	1.69	0.56	1.00	0.145	20.0	1.849
WAF-67	6.4	01:36 hrs	1.69	0.87	0.32	0.188	62.4	0.298
WAF-68	9.7	01:19 hrs	1.69	0.86	0.40	0.221	41.4	0.482
WAF-69	4.3	01:37 hrs	1.69	0.87	0.31	0.128	64.0	0.281
WAF-70	2.7	01:13 hrs	1.69	0.86	0.42	0.054	33.4	0.568
WAF-71	4.9	01:08 hrs	1.69	0.87	0.35	0.091	28.1	0.513
WAF-72	4.1	01:22 hrs	1.69	0.87	0.35	0.1	45.1	0.399
WAF-73	8.1	01:49 hrs	1.69	0.83	0.19	0.27	75.7	0.156
WAF-74	2.6	01:39 hrs	1.69	0.76	0.12	0.075	58.4	0.117
WAF-75	1.8	01:50 hrs	1.69	0.60	0.05	0.053	62.9	0.045
WAF-76	0.6	01:49 hrs	1.69	0.49	0.03	0.015	53.7	0.027
WAF-77	0.1	02:55 hrs	1.69	0.40	0.01	0.007	158.9	0.006
WAF-78	3.3	01:23 hrs	1.69	0.85	0.23	0.08	43.8	0.259
WAF-79	0.6	02:31 hrs	1.69	0.43	0.02	0.029	121.3	0.010
WAF-80	9.9	01:52 hrs	1.69	0.84	0.21	0.352	82.6	0.163
WAF-81	5.8	02:01 hrs	1.69	0.80	0.15	0.225	92.9	0.106
WAF-82	1.7	01:42 hrs	1.69	0.64	0.06	0.045	54.5	0.063
WAF-83	2.2	01:28 hrs	1.69	0.63	0.06	0.051	35.6	0.072
WAF-84	1.1	01:53 hrs	1.69	0.54	0.04	0.033	65.1	0.033
WAF-85	42.1	01:54 hrs	1.69	0.56	1.00	1.75	102.2	0.651
WAF-86	7.5	01:58 hrs	1.69	0.85	0.47	0.305	99.3	0.312

100-year, 3-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
WAF-87	7.2	02:16 hrs	1.69	0.75	0.11	0.33	115.5	0.067
WAF-88	16.0	01:57 hrs	1.69	0.83	0.20	0.601	88.9	0.142
WAF-89	3.5	01:06 hrs	1.69	0.86	0.42	0.06	24.6	0.659
WVN-01	206.5	01:45 hrs	1.69	0.87	0.36	6.934	76.3	0.293
WVN-02	330.6	01:53 hrs	1.69	0.87	0.35	12.601	90.7	0.251
WVN-03	130.6	02:05 hrs	1.69	0.84	0.21	5.494	103.3	0.133
WVS-01	88.1	02:13 hrs	1.69	0.75	0.11	3.879	109.9	0.069
WVS-02	66.4	02:54 hrs	1.69	0.82	0.18	4.59	182.6	0.070
WVS-03	43.2	02:34 hrs	1.69	0.66	0.07	2.343	140.6	0.034
WVS-04	30.2	02:30 hrs	1.69	0.62	0.06	1.54	131.5	0.029
WVS-05	64.6	01:47 hrs	1.69	0.84	0.21	2.147	75.0	0.168
WVS-06	124.74	02:18 hrs	1.69	0.849	0.232	6.197	126.334	0.127

100-year, 24-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
CTW-01	378.2	13:02 hrs	2.41	0.98	1.06	21.68	70.314	0.501
CTW-02	118.1	14:03 hrs	2.41	1.12	0.73	12.767	155.26	0.183
CTW-03	189.0	13:45 hrs	2.41	1.01	0.99	17.12	132.527	0.296
GRP-01	129.6	13:00 hrs	2.41	1.01	1.00	7.344	68.366	0.478
GRP-02	184.8	12:48 hrs	2.41	0.89	1.21	8.539	50.47	0.710
GRP-03	77.8	12:42 hrs	2.41	0.92	1.16	3.199	40.446	0.763
GRP-04	25.0	12:33 hrs	2.41	0.86	1.26	0.79	19.443	1.080
GRP-05	26.8	12:37 hrs	2.41	0.64	1.60	0.971	29.368	1.195
GRP-06	10.2	12:30 hrs	2.41	0.64	1.59	0.314	13.254	1.403
GRP-07	54.0	12:30 hrs	2.41	0.71	1.49	1.652	14.194	1.323
GRP-08	65.7	12:30 hrs	2.41	0.56	1.70	2.106	16.581	1.438
GRP-09	54.7	12:42 hrs	2.41	0.97	1.07	2.216	38.906	0.720
GRP-10	382.1	13:21 hrs	2.41	0.94	1.13	27.704	99.666	0.421
GRP-11	14.5	12:34 hrs	2.41	0.74	1.45	0.492	24.402	1.165
GRP-12	18.3	12:30 hrs	2.41	0.84	1.30	0.559	15.909	1.158
GRP-13	34.0	12:30 hrs	2.41	0.69	1.52	1.056	15.76	1.330
GRP-14	18.6	12:36 hrs	2.41	0.96	1.09	0.628	25.075	0.879
GRP-15	3.1	12:34 hrs	2.41	1.13	0.39	0.109	17.856	0.300
GRP-16	12.5	12:30 hrs	2.41	0.80	1.35	0.386	16.308	1.194
GRP-17	5.9	12:30 hrs	2.41	0.96	1.09	0.17	11.737	1.027
GRP-18	24.8	12:37 hrs	2.41	1.01	1.00	0.856	26.398	0.787
GRP-19	9.9	12:33 hrs	2.41	0.95	1.11	0.305	17.793	0.975
GRP-20	6.9	12:40 hrs	2.41	1.14	0.63	0.265	30.026	0.448
GRP-21	11.9	12:33 hrs	2.41	1.06	0.89	0.382	20.955	0.752
GRP-22	27.5	12:30 hrs	2.41	0.75	1.44	0.833	13.672	1.291
GRP-23	11.8	12:34 hrs	2.41	0.76	1.42	0.399	24.398	1.142
GRP-24	18.8	12:34 hrs	2.41	0.78	1.38	0.639	25.076	1.105
GRP-25	81.0	12:30 hrs	2.41	0.77	1.40	2.42	12.666	1.269
GRP-26	60.2	12:40 hrs	2.41	0.89	1.21	2.273	33.692	0.868
GSE-01	44.9	13:25 hrs	2.41	1.14	0.42	3.905	90.674	0.132
GSE-02	162.3	12:48 hrs	2.41	1.00	1.01	7.498	49.22	0.592
GSE-03	10.6	13:08 hrs	2.41	1.09	0.29	0.86	63.396	0.098
GSE-04	8.0	12:49 hrs	2.41	1.09	0.30	0.484	39.436	0.134
GSE-05	33.0	12:38 hrs	2.41	1.10	0.78	1.229	30.236	0.569
GSE-06	15.3	12:38 hrs	2.41	1.14	0.62	0.581	28.841	0.441
GSE-07	8.5	12:38 hrs	2.41	1.14	0.61	0.325	29.107	0.429
GSE-08	12.8	12:36 hrs	2.41	1.14	0.64	0.434	22.709	0.513
GSE-09	12.4	12:30 hrs	2.41	1.13	0.66	0.347	11.316	0.641
GSE-10	6.1	12:30 hrs	2.41	1.14	0.64	0.175	12.103	0.604
GSE-11	21.0	12:33 hrs	2.41	1.13	0.70	0.672	19.663	0.590
GSE-12	29.5	12:56 hrs	2.41	1.15	0.57	1.639	54.491	0.278
GSE-13	6.3	12:33 hrs	2.41	1.13	0.68	0.2	18.795	0.583
GSE-14	19.0	12:48 hrs	2.41	1.07	0.86	0.858	45.381	0.517
GSE-15	13.6	12:45 hrs	2.41	1.08	0.84	0.577	40.43	0.539
GSE-16	46.7	12:40 hrs	2.41	1.01	1.00	1.758	32.782	0.719
GSE-17	35.5	12:36 hrs	2.41	1.00	1.01	1.223	26.378	0.799
GSE-18	42.5	12:42 hrs	2.41	0.95	1.12	1.723	39.02	0.748
GSE-19	47.7	12:34 hrs	2.41	0.74	1.44	1.622	24.919	1.150
GSE-20	8.9	12:30 hrs	2.41	0.89	1.22	0.262	13.397	1.119

100-year, 24-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
GSW-01	345.5	13:41 hrs	2.41	1.07	0.86	30.674	125.146	0.264
GSW-02	62.9	13:19 hrs	2.41	1.14	0.60	4.765	89.084	0.216
GSW-03	17.6	12:52 hrs	2.41	1.15	0.44	0.964	46.234	0.219
GSW-04	19.9	12:37 hrs	2.41	1.10	0.78	0.711	27.338	0.591
GSW-05	10.9	12:48 hrs	2.41	1.15	0.57	0.518	42.859	0.327
GSW-06	22.6	13:22 hrs	2.41	1.15	0.50	1.836	90.435	0.168
GSW-07	0.3	13:12 hrs	2.41	0.84	0.11	0.044	44.1	0.019
GSW-08	0.9	13:38 hrs	2.41	0.91	0.14	0.132	81.812	0.025
GSW-09	9.7	12:34 hrs	2.41	1.14	0.40	0.334	17.908	0.314
GSW-10	50.0	12:41 hrs	2.41	1.12	0.70	1.993	33.734	0.478
GSW-11	6.0	13:22 hrs	2.41	1.11	0.32	0.546	82.687	0.096
GSW-12	14.0	13:21 hrs	2.41	1.15	0.54	1.095	88.737	0.186
GSW-13	44.7	12:36 hrs	2.41	1.07	0.85	1.504	24.17	0.686
GSW-14	3.3	12:53 hrs	2.41	1.14	0.43	0.191	48.826	0.204
GSW-15	8.7	12:40 hrs	2.41	1.15	0.49	0.353	29.041	0.330
GSW-16	16.8	12:36 hrs	2.41	1.14	0.63	0.577	23.199	0.495
GSW-17	29.6	13:10 hrs	2.41	1.14	0.40	2.225	70.317	0.143
GSW-18	59.8	12:36 hrs	2.41	1.00	1.02	2.026	25.225	0.814
GSW-19	5.9	12:37 hrs	2.41	1.15	0.48	0.218	23.898	0.347
GSW-20	65.9	13:25 hrs	2.41	0.95	1.11	4.929	103.971	0.403
GSW-21	8.8	12:34 hrs	2.41	1.10	0.80	0.285	21.065	0.668
GYP-01	228.1	13:08 hrs	2.41	1.03	0.96	14.313	78.788	0.413
GYP-02	31.9	12:33 hrs	2.41	1.10	0.77	1.001	19.043	0.669
GYP-03	423.6	13:00 hrs	2.41	0.97	1.07	23.871	68.695	0.518
GYP-04	122.1	12:53 hrs	2.41	0.99	1.03	6.135	56.938	0.558
GYP-05	163.6	12:47 hrs	2.41	0.99	1.03	7.195	45.258	0.636
HRS-01	332.1	13:10 hrs	2.41	0.82	1.33	21.272	85.002	0.563
HRS-02	141.1	12:32 hrs	2.41	0.51	1.77	4.754	21.002	1.428
HRS-03	210.5	13:23 hrs	2.41	1.03	0.96	15.815	101.916	0.348
HRS-04	424.1	14:00 hrs	2.41	0.89	1.21	42.916	158.914	0.325
MLC-01	30.7	12:30 hrs	2.41	0.79	1.37	0.928	14.385	1.231
MLC-02	15.4	12:36 hrs	2.41	0.96	1.09	0.523	25.631	0.867
MLC-03	8.7	12:30 hrs	2.41	0.79	1.37	0.257	11.623	1.258
MLC-04	19.3	12:37 hrs	2.41	0.72	1.48	0.726	32.928	1.068
MLC-05	17.0	12:37 hrs	2.41	0.85	1.28	0.622	31.359	0.946
MLC-06	11.5	12:33 hrs	2.41	0.78	1.39	0.366	19.678	1.179
MLC-07	6.0	12:40 hrs	2.41	0.75	1.43	0.232	35.46	1.005
MLC-08	22.6	12:30 hrs	2.41	0.89	1.21	0.649	10.271	1.145
MLC-09	6.1	12:29 hrs	2.41	0.77	1.40	0.178	8.823	1.306
MLC-10	4.0	12:30 hrs	2.41	0.82	1.33	0.114	9.479	1.246
MLC-11	11.8	12:32 hrs	2.41	1.00	1.01	0.352	15.653	0.917
MLC-12	33.9	12:32 hrs	2.41	0.81	1.34	1.07	18.81	1.157
MLC-13	10.9	12:45 hrs	2.41	1.15	0.55	0.496	38.813	0.326
MLC-14	50.2	13:23 hrs	2.41	1.15	0.52	4.114	93.106	0.172
MLC-15	15.0	12:45 hrs	2.41	1.15	0.59	0.678	39.337	0.355
MLC-16	27.7	12:45 hrs	2.41	1.11	0.76	1.215	41.723	0.469
MLC-17	52.5	12:45 hrs	2.41	0.97	1.07	2.24	42.955	0.678
MLC-18	68.4	12:36 hrs	2.41	0.91	1.19	2.37	27.129	0.928
MLC-19	28.1	12:34 hrs	2.41	0.90	1.19	0.933	23.647	0.977

100-year, 24-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
MLC-20	16.2	12:36 hrs	2.41	1.03	0.94	0.552	25.325	0.753
MLC-21	5.6	12:30 hrs	2.41	0.74	1.45	0.17	13.96	1.298
MLC-22	56.9	12:47 hrs	2.41	1.04	0.93	2.536	45.343	0.565
MLC-23	22.7	13:23 hrs	2.41	1.15	0.60	1.807	95.204	0.205
MLC-24	1.2	12:32 hrs	2.41	1.14	0.41	0.037	11.344	0.379
MLC-25	0.2	12:49 hrs	2.41	0.85	0.11	0.026	25.061	0.025
MLC-26	19.3	12:57 hrs	2.41	1.14	0.43	1.175	53.955	0.193
MLC-27	9.1	12:30 hrs	2.41	0.88	1.23	0.273	14.531	1.115
MLC-28	22.5	12:33 hrs	2.41	0.99	1.03	0.728	21.723	0.865
MLC-29	43.4	12:37 hrs	2.41	0.75	1.43	1.558	29.404	1.082
MLC-30	64.2	12:51 hrs	2.41	0.87	1.24	3.091	54.254	0.699
MLC-31	17.7	12:41 hrs	2.41	0.97	1.08	0.703	37.19	0.738
MLC-32	20.9	12:42 hrs	2.41	1.03	0.95	0.846	37.922	0.638
MLC-33	33.8	12:30 hrs	2.41	0.94	1.12	0.968	11.098	1.061
MLC-34	14.4	12:29 hrs	2.41	0.86	1.26	0.405	7.364	1.211
MLC-35	55.3	12:33 hrs	2.41	1.00	1.01	1.73	19.217	0.877
MLC-36	64.7	12:29 hrs	2.41	1.05	0.90	1.697	5	0.933
MLC-37	8.8	12:37 hrs	2.41	1.06	0.88	0.305	25.816	0.695
MLC-38	7.3	12:38 hrs	2.41	1.09	0.81	0.272	30.966	0.588
MLC-39	14.1	12:42 hrs	2.41	1.13	0.67	0.581	35.3	0.438
MLC-40	33.4	12:34 hrs	2.41	0.97	1.07	1.098	23.043	0.887
MLC-41	18.4	12:29 hrs	2.41	0.57	1.69	0.564	9.37	1.498
STF-01	169.9	14:10 hrs	2.41	1.12	0.70	19.135	162.273	0.170
STU-01	152.0	12:51 hrs	2.41	1.10	0.78	7.406	50.43	0.434
STU-02	49.3	14:18 hrs	2.41	1.12	0.72	5.862	176.07	0.165
STU-03	140.2	13:26 hrs	2.41	1.12	0.71	11.08	100.442	0.242
WAD-01	28.1	12:48 hrs	2.41	1.07	0.86	1.281	46.482	0.510
WAD-02	4.9	12:42 hrs	2.41	1.06	0.25	0.271	28.338	0.123
WAD-03	102.8	12:30 hrs	2.41	1.12	0.72	2.913	11.924	0.691
WAD-04	73.6	12:32 hrs	2.41	0.96	1.08	2.251	17.301	0.963
WAD-05	41.2	12:30 hrs	2.41	0.85	1.28	1.234	14.545	1.156
WAD-06	56.1	12:30 hrs	2.41	0.74	1.44	1.659	10.597	1.321
WAD-07	46.7	12:48 hrs	2.41	1.15	0.47	2.318	40.685	0.255
WAD-08	0.3	16:42 hrs	2.41	0.59	0.04	0.074	89.393	0.004
WAD-09	0.9	14:26 hrs	2.41	0.71	0.07	0.206	63.439	0.008
WAD-10	42.0	12:32 hrs	2.41	0.75	1.44	1.335	18.967	1.228
WAD-11	43.0	12:33 hrs	2.41	0.82	1.33	1.379	20.449	1.126
WAD-12	8.2	12:29 hrs	2.41	0.68	1.53	0.24	5.624	1.421
WAD-13	45.6	12:36 hrs	2.41	0.96	1.09	1.54	25.191	0.878
WAD-14	11.7	12:45 hrs	2.41	1.14	0.43	0.567	37.02	0.239
WAD-15	73.0	12:38 hrs	2.41	1.05	0.92	2.698	31.05	0.674
WAD-16	120.2	12:37 hrs	2.41	1.08	0.83	4.244	27.171	0.640
WAD-17	201.2	13:40 hrs	2.41	1.14	0.65	18.411	119.337	0.935
WAD-18	5.0	12:48 hrs	2.41	1.10	0.79	0.228	44.81	0.470
WAD-19	41.0	12:45 hrs	2.41	0.97	1.06	1.732	42.164	0.683
WAD-20	7.5	12:59 hrs	2.41	1.10	0.77	0.424	63.54	0.371
WAD-21	15.4	12:45 hrs	2.41	1.02	0.97	0.663	42.783	0.611
WAD-22	24.0	12:41 hrs	2.41	1.03	0.96	0.943	35.75	0.661
WAD-23	32.1	12:37 hrs	2.41	1.01	0.99	1.118	27.086	0.774

100-year, 24-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
WAD-24	7.9	12:41 hrs	2.41	1.11	0.76	0.314	34.387	0.518
WAD-25	12.4	12:37 hrs	2.41	0.97	1.07	0.445	29.871	0.807
WAD-26	10.7	12:33 hrs	2.41	0.70	1.51	0.347	20.507	1.258
WAD-27	2.6	12:29 hrs	2.41	0.68	1.53	0.077	5	1.426
WAD-28	5.7	12:30 hrs	2.41	0.68	1.53	0.172	11.239	1.378
WAD-29	80.3	12:40 hrs	2.41	0.86	1.26	3.081	35.062	0.894
WAD-30	6.7	12:30 hrs	2.41	1.04	0.93	0.192	12.224	0.887
WAD-31	141.2	12:33 hrs	2.41	0.96	1.09	4.528	21.164	0.922
WAD-32	4.0	12:30 hrs	2.41	1.01	1.00	0.112	10.199	0.969
WAD-33	7.3	12:30 hrs	2.41	0.95	1.11	0.211	11.93	1.042
WAD-34	12.2	12:30 hrs	2.41	0.95	1.11	0.345	10.226	1.062
WAD-35	15.0	12:30 hrs	2.41	0.97	1.07	0.435	12.629	1.002
WAF-01	18.3	15:00 hrs	2.41	1.15	0.58	2.755	226.043	0.104
WAF-02	3.9	13:10 hrs	2.41	1.09	0.82	0.25	79.692	0.341
WAF-03	7.7	13:55 hrs	2.41	1.06	0.89	0.762	146.67	0.242
WAF-04	10.8	12:55 hrs	2.41	1.06	0.88	0.559	57.73	0.460
WAF-05	21.7	12:30 hrs	2.41	0.96	1.10	0.632	13.117	1.023
WAF-06	25.0	12:41 hrs	2.41	1.05	0.92	0.988	35.847	0.632
WAF-07	29.1	12:38 hrs	2.41	0.90	1.20	1.075	31.997	0.880
WAF-08	19.8	12:40 hrs	2.41	1.05	0.91	0.759	33.424	0.643
WAF-09	6.1	12:48 hrs	2.41	1.10	0.32	0.336	36.222	0.154
WAF-10	45.0	12:36 hrs	2.41	1.01	1.00	1.534	25.628	0.793
WAF-11	19.8	12:55 hrs	2.41	1.05	0.90	1.021	57.83	0.475
WAF-12	16.0	13:06 hrs	2.41	1.02	0.97	0.97	75.421	0.431
WAF-13	110.3	12:33 hrs	2.41	1.01	1.00	3.513	20.707	0.848
WAF-14	31.4	12:34 hrs	2.41	0.90	1.20	1.054	24.775	0.970
WAF-15	1.5	13:00 hrs	2.41	0.95	0.16	0.153	43.882	0.044
WAF-16	70.0	12:33 hrs	2.41	1.00	1.01	2.145	17.701	0.895
WAF-17	56.2	12:32 hrs	2.41	0.99	1.04	1.667	14.903	0.950
WAF-18	31.3	12:48 hrs	2.41	1.13	0.67	1.446	43.49	0.392
WAF-19	22.7	12:44 hrs	2.41	1.15	0.54	0.995	35.565	0.333
WAF-20	9.2	13:30 hrs	2.41	1.02	0.97	0.734	111.413	0.331
WAF-21	9.9	13:14 hrs	2.41	1.03	0.95	0.662	86.368	0.387
WAF-22	11.6	12:48 hrs	2.41	0.82	1.32	0.523	48.618	0.793
WAF-23	6.5	12:33 hrs	2.41	1.01	0.99	0.2	18.633	0.866
WAF-24	4.3	12:41 hrs	2.41	1.01	0.99	0.174	37.838	0.667
WAF-25	8.1	13:03 hrs	2.41	1.01	0.99	0.473	71.868	0.458
WAF-26	6.1	12:42 hrs	2.41	1.06	0.88	0.247	37.255	0.590
WAF-27	13.7	13:04 hrs	2.41	1.01	0.99	0.817	73.746	0.450
WAF-28	7.5	13:04 hrs	2.41	1.06	0.88	0.454	72.755	0.397
WAF-29	24.0	13:41 hrs	2.41	1.02	0.98	2.113	127.597	0.303
WAF-30	21.6	13:22 hrs	2.41	1.07	0.86	1.615	98.313	0.312
WAF-31	14.3	13:11 hrs	2.41	1.09	0.82	0.934	80.57	0.340
WAF-32	5.4	12:44 hrs	2.41	1.08	0.83	0.225	38.586	0.542
WAF-33	8.3	12:32 hrs	2.41	1.02	0.98	0.245	14.799	0.897
WAF-34	20.5	12:37 hrs	2.41	1.15	0.49	0.734	22.362	0.373
WAF-35	19.0	12:30 hrs	2.41	0.95	1.10	0.531	8.586	1.070
WAF-36	74.0	12:36 hrs	2.41	0.99	1.03	2.539	26.133	0.811
WAF-37	18.5	12:30 hrs	2.41	0.96	1.08	0.525	10.428	1.040

100-year, 24-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
WAF-38	13.7	12:33 hrs	2.41	1.08	0.84	0.44	20.926	0.708
WAF-39	1.7	13:03 hrs	2.41	1.00	0.20	0.156	49.836	0.058
WAF-40	5.0	12:38 hrs	2.41	1.11	0.75	0.184	29.457	0.547
WAF-41	3.2	12:33 hrs	2.41	1.07	0.87	0.099	18.807	0.756
WAF-42	15.0	12:30 hrs	2.41	0.65	1.57	0.464	14.748	1.374
WAF-43	13.3	12:57 hrs	2.41	1.09	0.80	0.733	61.73	0.395
WAF-44	1.9	12:53 hrs	2.41	1.13	0.70	0.097	54.682	0.360
WAF-45	10.0	12:47 hrs	2.41	1.08	0.83	0.446	43.701	0.506
WAF-46	10.3	12:52 hrs	2.41	1.04	0.93	0.505	53.996	0.514
WAF-47	6.1	12:40 hrs	2.41	1.10	0.79	0.232	32.448	0.558
WAF-48	16.5	13:21 hrs	2.41	1.06	0.88	1.201	95.424	0.328
WAF-49	10.7	12:52 hrs	2.41	1.01	0.99	0.519	53.067	0.555
WAF-50	4.7	12:33 hrs	2.41	1.01	0.99	0.144	17.903	0.872
WAF-51	20.2	13:14 hrs	2.41	1.01	0.99	1.357	87.262	0.400
WAF-52	9.2	12:49 hrs	2.41	1.08	0.83	0.436	49.131	0.475
WAF-53	5.7	12:44 hrs	2.41	1.06	0.88	0.235	38.827	0.576
WAF-54	13.6	12:56 hrs	2.41	1.08	0.84	0.732	60.347	0.425
WAF-55	18.1	13:14 hrs	2.41	1.06	0.88	1.22	85.637	0.354
WAF-56	14.9	12:32 hrs	2.41	0.50	1.78	0.498	19.77	1.452
WAF-57	7.3	12:36 hrs	2.41	1.05	0.91	0.246	24.179	0.737
WAF-58	6.0	13:15 hrs	2.41	1.14	0.43	0.468	78.649	0.148
WAF-59	10.3	12:44 hrs	2.41	1.09	0.80	0.436	39.342	0.518
WAF-60	4.9	13:47 hrs	2.41	1.08	0.27	0.579	109.856	0.063
WAF-61	2.6	12:53 hrs	2.41	1.06	0.26	0.176	42.726	0.102
WAF-62	8.0	12:37 hrs	2.41	1.15	0.56	0.283	23.169	0.429
WAF-63	5.6	12:38 hrs	2.41	1.15	0.52	0.217	27.412	0.367
WAF-64	9.4	12:41 hrs	2.41	1.14	0.64	0.373	31.9	0.438
WAF-65	22.7	12:49 hrs	2.41	1.14	0.62	1.112	46.7	0.342
WAF-66	7.7	12:32 hrs	2.41	0.50	1.78	0.257	20.0	1.445
WAF-67	8.7	12:57 hrs	2.41	1.08	0.83	0.481	62.4	0.408
WAF-68	12.4	12:45 hrs	2.41	1.03	0.96	0.526	41.4	0.617
WAF-69	5.9	12:59 hrs	2.41	1.09	0.81	0.333	64.0	0.389
WAF-70	3.3	12:40 hrs	2.41	1.01	0.99	0.127	33.4	0.707
WAF-71	6.4	12:37 hrs	2.41	1.06	0.88	0.227	28.1	0.670
WAF-72	5.5	12:47 hrs	2.41	1.06	0.88	0.248	45.1	0.534
WAF-73	12.3	13:10 hrs	2.41	1.15	0.60	0.838	75.7	0.238
WAF-74	4.4	13:00 hrs	2.41	1.15	0.46	0.278	58.4	0.198
WAF-75	3.8	13:08 hrs	2.41	1.08	0.28	0.31	62.9	0.093
WAF-76	1.4	13:04 hrs	2.41	1.02	0.22	0.121	53.7	0.066
WAF-77	0.5	14:41 hrs	2.41	0.96	0.17	0.095	158.9	0.025
WAF-78	5.0	12:48 hrs	2.41	1.13	0.67	0.231	43.8	0.389
WAF-79	2.1	14:07 hrs	2.41	0.98	0.19	0.314	121.3	0.033
WAF-80	14.8	13:15 hrs	2.41	1.14	0.64	1.049	82.6	0.244
WAF-81	9.3	13:23 hrs	2.41	1.15	0.52	0.765	92.9	0.170
WAF-82	3.3	13:00 hrs	2.41	1.11	0.32	0.229	54.5	0.123
WAF-83	4.8	12:47 hrs	2.41	1.10	0.31	0.263	35.6	0.155
WAF-84	2.5	13:12 hrs	2.41	1.05	0.25	0.228	65.1	0.073
WAF-85	42.5	13:18 hrs	2.41	0.51	1.77	3.116	102.2	0.656
WAF-86	9.5	13:22 hrs	2.41	0.98	1.06	0.69	99.3	0.396

100-year, 24-hour Storm Event

Watershed ID	Peak Runoff (cfs)	Peak Runoff Time (hrs)	Total Precipitation (in)	Total Infiltration (in)	Total Runoff Depth (in)	Total Runoff Volume (MG)	Time of Concentration (minutes)	Peak Flow [cfs/ac]
WAF-87	12.5	13:44 hrs	2.41	1.14	0.44	1.273	115.5	0.117
WAF-88	24.4	13:19 hrs	2.41	1.14	0.60	1.85	88.9	0.216
WAF-89	4.2	12:36 hrs	2.41	1.01	0.99	0.141	24.6	0.798
WVN-01	275.5	13:07 hrs	2.41	1.06	0.89	17.091	76.3	0.392
WVN-02	446.8	13:18 hrs	2.41	1.06	0.88	31.371	90.7	0.339
WVN-03	198.6	13:29 hrs	2.41	1.14	0.62	16.571	103.3	0.202
WVS-01	153.0	13:38 hrs	2.41	1.14	0.43	15.024	109.9	0.120
WVS-02	113.1	14:29 hrs	2.41	1.15	0.57	14.642	182.6	0.119
WVS-03	89.7	14:07 hrs	2.41	1.11	0.33	11.461	140.6	0.071
WVS-04	65.7	14:02 hrs	2.41	1.09	0.30	8.368	131.5	0.064
WVS-05	97.2	13:10 hrs	2.41	1.14	0.62	6.478	75.0	0.253
WVS-06	188.968	13:44 hrs	2.41	1.132	0.669	17.9	126.334	0.192

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Cottonwood	CTW-01	1/3 ac	A	57	72	81	86	57	0.044	84.18
Cottonwood	CTW-01	1/3 ac	B	57	72	81	86	72	0.002	84.18
Cottonwood	CTW-01	1/4 ac	A	61	75	83	87	61	60.680	84.18
Cottonwood	CTW-01	1/4 ac	B	61	75	83	87	75	5.192	84.18
Cottonwood	CTW-01	1/4 ac	C	61	75	83	87	83	124.271	84.18
Cottonwood	CTW-01	1/4 ac	D	61	75	83	87	87	61.350	84.18
Cottonwood	CTW-01	1/8 ac	B	77	85	90	92	85	0.017	84.18
Cottonwood	CTW-01	1/8 ac	C	77	85	90	92	90	66.040	84.18
Cottonwood	CTW-01	Natural Desert	A	63	77	85	88	63	11.330	84.18
Cottonwood	CTW-01	Natural Desert	B	63	77	85	88	77	0.699	84.18
Cottonwood	CTW-01	Natural Desert	C	63	77	85	88	85	144.162	84.18
Cottonwood	CTW-01	Natural Desert	D	63	77	85	88	88	172.836	84.18
Cottonwood	CTW-01	Open Space Fair	D	49	69	79	84	84	5.670	84.18
Cottonwood	CTW-01	Open Space Poor	A	68	79	86	89	68	12.225	84.18
Cottonwood	CTW-01	Roads with Ditches	C	83	89	92	93	92	88.053	84.18
Cottonwood	CTW-01	Roads with Ditches	D	83	89	92	93	93	2.360	84.18
Cottonwood	CTW-02	1/3 ac	A	57	72	81	86	57	15.317	77.98
Cottonwood	CTW-02	1/3 ac	B	57	72	81	86	72	36.540	77.98
Cottonwood	CTW-02	1/3 ac	C	57	72	81	86	81	0.730	77.98
Cottonwood	CTW-02	1/4 ac	A	61	75	83	87	61	16.367	77.98
Cottonwood	CTW-02	1/4 ac	B	61	75	83	87	75	5.197	77.98
Cottonwood	CTW-02	1/4 ac	D	61	75	83	87	87	0.548	77.98
Cottonwood	CTW-02	1/8 ac	A	77	85	90	92	77	33.994	77.98
Cottonwood	CTW-02	1/8 ac	B	77	85	90	92	85	22.644	77.98
Cottonwood	CTW-02	1/8 ac	C	77	85	90	92	90	31.664	77.98
Cottonwood	CTW-02	1/8 ac	D	77	85	90	92	92	0.067	77.98
Cottonwood	CTW-02	Commercial	A	89	92	94	95	89	23.468	77.98
Cottonwood	CTW-02	Natural Desert	A	63	77	85	88	63	35.316	77.98
Cottonwood	CTW-02	Natural Desert	B	63	77	85	88	77	3.016	77.98
Cottonwood	CTW-02	Natural Desert	C	63	77	85	88	85	19.615	77.98
Cottonwood	CTW-02	Natural Desert	D	63	77	85	88	88	44.888	77.98
Cottonwood	CTW-02	Open Space Poor	A	68	79	86	89	68	50.749	77.98
Cottonwood	CTW-02	Open Space Poor	B	68	79	86	89	79	278.232	77.98
Cottonwood	CTW-02	Open Space Poor	C	68	79	86	89	86	22.276	77.98
Cottonwood	CTW-02	Open Space Poor	D	68	79	86	89	89	4.262	77.98
Cottonwood	CTW-03	1/4 ac	A	61	75	83	87	61	0.932	82.98
Cottonwood	CTW-03	1/4 ac	B	61	75	83	87	75	0.501	82.98
Cottonwood	CTW-03	1/4 ac	D	61	75	83	87	87	25.075	82.98
Cottonwood	CTW-03	Natural Desert	A	63	77	85	88	63	3.027	82.98
Cottonwood	CTW-03	Natural Desert	A	63	77	85	88	63	3.211	82.98
Cottonwood	CTW-03	Natural Desert	B	63	77	85	88	77	45.163	82.98
Cottonwood	CTW-03	Natural Desert	C	63	77	85	88	85	0.021	82.98
Cottonwood	CTW-03	Natural Desert	D	63	77	85	88	88	500.745	82.98
Cottonwood	CTW-03	Open Space Good	A	39	61	74	80	39	38.590	82.98
Cottonwood	CTW-03	Open Space Good	A	39	61	74	80	39	6.855	82.98
Cottonwood	CTW-03	Open Space Good	B	39	61	74	80	61	7.990	82.98
Cottonwood	CTW-03	Open Space Good	D	39	61	74	80	80	6.120	82.98
Cottonwood	CTW-03	Open Space Poor	B	68	79	86	89	79	0.001	82.98

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Cottonwood	CTW-03	Open Space Poor	D	68	79	86	89	89	0.008	82.98
Grapevine	GRP-01	Natural Desert	A	63	77	85	88	63	49.623	83.17
Grapevine	GRP-01	Natural Desert	C	63	77	85	88	85	42.342	83.17
Grapevine	GRP-01	Natural Desert	D	63	77	85	88	88	164.112	83.17
Grapevine	GRP-01	Roads with Ditches	C	83	89	92	93	92	14.793	83.17
Grapevine	GRP-02	Natural Desert	A	63	77	85	88	63	9.672	86.59
Grapevine	GRP-02	Natural Desert	C	63	77	85	88	85	53.462	86.59
Grapevine	GRP-02	Natural Desert	D	63	77	85	88	88	188.123	86.59
Grapevine	GRP-02	Roads with Ditches	C	83	89	92	93	92	8.821	86.59
Grapevine	GRP-03	Natural Desert	C	63	77	85	88	85	80.755	85.76
Grapevine	GRP-03	Natural Desert	D	63	77	85	88	88	17.623	85.76
Grapevine	GRP-03	Roads with Ditches	C	83	89	92	93	92	3.581	85.76
Grapevine	GRP-04	Natural Desert	C	63	77	85	88	85	15.574	87.30
Grapevine	GRP-04	Roads with Ditches	C	83	89	92	93	92	7.597	87.30
Grapevine	GRP-05	1/8 ac	C	77	85	90	92	90	0.394	91.82
Grapevine	GRP-05	Commercial	C	89	92	94	95	94	3.342	91.82
Grapevine	GRP-05	Industrial	C	81	88	91	93	91	0.043	91.82
Grapevine	GRP-05	Newly Graded	C	77	86	91	94	91	9.346	91.82
Grapevine	GRP-05	Open Space Poor	C	68	79	86	89	86	0.101	91.82
Grapevine	GRP-05	Roads with Ditches	C	83	89	92	93	92	9.193	91.82
Grapevine	GRP-06	Commercial	C	89	92	94	95	94	1.825	91.75
Grapevine	GRP-06	Newly Graded	C	77	86	91	94	91	5.443	91.75
Grapevine	GRP-07	1/8 ac	C	77	85	90	92	90	1.192	90.51
Grapevine	GRP-07	Commercial	C	89	92	94	95	94	3.616	90.51
Grapevine	GRP-07	Newly Graded	C	77	86	91	94	91	19.536	90.51
Grapevine	GRP-07	Open Space Poor	C	68	79	86	89	86	8.112	90.51
Grapevine	GRP-07	Pavement	C	98	98	98	98	98	0.400	90.51
Grapevine	GRP-07	Roads with Ditches	C	83	89	92	93	92	7.960	90.51
Grapevine	GRP-08	Commercial	C	89	92	94	95	94	24.158	93.04
Grapevine	GRP-08	Newly Graded	C	77	86	91	94	91	5.097	93.04
Grapevine	GRP-08	Pavement	C	98	98	98	98	98	0.725	93.04
Grapevine	GRP-08	Roads with Ditches	C	83	89	92	93	92	15.716	93.04
Grapevine	GRP-09	1/4 ac	C	61	75	83	87	83	51.892	84.46
Grapevine	GRP-09	1/8 ac	C	77	85	90	92	90	0.000	84.46
Grapevine	GRP-09	Commercial	C	89	92	94	95	94	3.556	84.46
Grapevine	GRP-09	Natural Desert	C	63	77	85	88	85	15.974	84.46
Grapevine	GRP-09	Newly Graded	C	77	86	91	94	91	1.266	84.46
Grapevine	GRP-09	Roads with Ditches	C	83	89	92	93	92	3.266	84.46
Grapevine	GRP-10	1/4 ac	A	61	75	83	87	61	24.957	85.28
Grapevine	GRP-10	1/4 ac	C	61	75	83	87	83	78.127	85.28
Grapevine	GRP-10	1/4 ac	D	61	75	83	87	87	70.433	85.28
Grapevine	GRP-10	1/8 ac	A	77	85	90	92	77	16.200	85.28
Grapevine	GRP-10	1/8 ac	C	77	85	90	92	90	23.419	85.28
Grapevine	GRP-10	1/8 ac	D	77	85	90	92	92	1.879	85.28
Grapevine	GRP-10	Natural Desert	A	63	77	85	88	63	33.925	85.28
Grapevine	GRP-10	Natural Desert	C	63	77	85	88	85	242.566	85.28
Grapevine	GRP-10	Natural Desert	D	63	77	85	88	88	301.108	85.28
Grapevine	GRP-10	Newly Graded	C	77	86	91	94	91	76.704	85.28

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Grapevine	GRP-10	Open Space Fair	D	49	69	79	84	84	1.755	85.28
Grapevine	GRP-10	Roads with Ditches	A	83	89	92	93	83	0.085	85.28
Grapevine	GRP-10	Roads with Ditches	C	83	89	92	93	92	33.462	85.28
Grapevine	GRP-10	Roads with Ditches	D	83	89	92	93	93	2.289	85.28
Grapevine	GRP-11	1/8 ac	C	77	85	90	92	90	12.476	90.00
Grapevine	GRP-11	Open Space Fair	C	49	69	79	84	79	0.000	90.00
Grapevine	GRP-12	1/8 ac	C	77	85	90	92	90	0.304	87.91
Grapevine	GRP-12	Commercial	C	89	92	94	95	94	0.208	87.91
Grapevine	GRP-12	Newly Graded	C	77	86	91	94	91	6.011	87.91
Grapevine	GRP-12	Open Space Fair	C	49	69	79	84	79	0.390	87.91
Grapevine	GRP-12	Open Space Poor	C	68	79	86	89	86	8.931	87.91
Grapevine	GRP-12	Pavement	C	98	98	98	98	98	0.004	87.91
Grapevine	GRP-13	1/8 ac	C	77	85	90	92	90	7.273	90.91
Grapevine	GRP-13	Commercial	C	89	92	94	95	94	1.955	90.91
Grapevine	GRP-13	Natural Desert	C	63	77	85	88	85	0.152	90.91
Grapevine	GRP-13	Newly Graded	C	77	86	91	94	91	16.183	90.91
Grapevine	GRP-14	1/4 ac	C	61	75	83	87	83	3.986	84.76
Grapevine	GRP-14	1/8 ac	C	77	85	90	92	90	0.105	84.76
Grapevine	GRP-14	Commercial	C	89	92	94	95	94	0.140	84.76
Grapevine	GRP-14	Natural Desert	C	63	77	85	88	85	16.751	84.76
Grapevine	GRP-14	Newly Graded	C	77	86	91	94	91	0.197	84.76
Grapevine	GRP-15	1/8 ac	C	77	85	90	92	90	0.016	69.15
Grapevine	GRP-15	Open Space Fair	A	49	69	79	84	49	3.438	69.15
Grapevine	GRP-15	Open Space Fair	C	49	69	79	84	79	7.002	69.15
Grapevine	GRP-16	1/8 ac	A	77	85	90	92	77	0.043	88.67
Grapevine	GRP-16	1/8 ac	C	77	85	90	92	90	9.423	88.67
Grapevine	GRP-16	Newly Graded	C	77	86	91	94	91	0.066	88.67
Grapevine	GRP-16	Open Space Fair	A	49	69	79	84	49	0.171	88.67
Grapevine	GRP-16	Open Space Fair	C	49	69	79	84	79	0.464	88.67
Grapevine	GRP-16	Open Space Poor	C	68	79	86	89	86	0.336	88.67
Grapevine	GRP-17	1/8 ac	A	77	85	90	92	77	1.033	84.67
Grapevine	GRP-17	1/8 ac	C	77	85	90	92	90	4.311	84.67
Grapevine	GRP-17	Open Space Fair	A	49	69	79	84	49	0.422	84.67
Grapevine	GRP-18	1/8 ac	A	77	85	90	92	77	13.068	83.18
Grapevine	GRP-18	1/8 ac	C	77	85	90	92	90	16.019	83.18
Grapevine	GRP-18	Natural Desert	C	63	77	85	88	85	1.547	83.18
Grapevine	GRP-18	Open Space Fair	A	49	69	79	84	49	0.917	83.18
Grapevine	GRP-19	1/4 ac	C	61	75	83	87	83	3.399	84.97
Grapevine	GRP-19	1/8 ac	C	77	85	90	92	90	1.290	84.97
Grapevine	GRP-19	Natural Desert	C	63	77	85	88	85	5.462	84.97
Grapevine	GRP-20	1/8 ac	A	77	85	90	92	77	14.735	75.84
Grapevine	GRP-20	Commercial	A	89	92	94	95	89	0.027	75.84
Grapevine	GRP-20	Open Space Fair	A	49	69	79	84	49	0.651	75.84
Grapevine	GRP-21	1/8 ac	A	77	85	90	92	77	6.712	81.18
Grapevine	GRP-21	1/8 ac	C	77	85	90	92	90	3.964	81.18
Grapevine	GRP-21	Commercial	C	89	92	94	95	94	0.008	81.18
Grapevine	GRP-21	Natural Desert	A	63	77	85	88	63	1.217	81.18
Grapevine	GRP-21	Natural Desert	C	63	77	85	88	85	3.947	81.18

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Grapevine	GRP-22	1/4 ac	C	61	75	83	87	83	0.147	89.85
Grapevine	GRP-22	1/8 ac	C	77	85	90	92	90	20.722	89.85
Grapevine	GRP-22	Natural Desert	C	63	77	85	88	85	0.441	89.85
Grapevine	GRP-23	1/4 ac	C	61	75	83	87	83	0.299	89.58
Grapevine	GRP-23	1/8 ac	C	77	85	90	92	90	9.600	89.58
Grapevine	GRP-23	Natural Desert	C	63	77	85	88	85	0.458	89.58
Grapevine	GRP-24	1/8 ac	A	77	85	90	92	77	0.276	89.09
Grapevine	GRP-24	1/8 ac	C	77	85	90	92	90	1.992	89.09
Grapevine	GRP-24	Commercial	A	89	92	94	95	89	12.480	89.09
Grapevine	GRP-24	Commercial	C	89	92	94	95	94	1.867	89.09
Grapevine	GRP-24	Industrial	A	81	88	91	93	81	0.002	89.09
Grapevine	GRP-24	Natural Desert	A	63	77	85	88	63	0.022	89.09
Grapevine	GRP-24	Natural Desert	C	63	77	85	88	85	0.251	89.09
Grapevine	GRP-24	Open Space Fair	A	49	69	79	84	49	0.124	89.09
Grapevine	GRP-25	1/8 ac	A	77	85	90	92	77	4.557	89.28
Grapevine	GRP-25	1/8 ac	C	77	85	90	92	90	26.643	89.28
Grapevine	GRP-25	1/8 ac	D	77	85	90	92	92	18.454	89.28
Grapevine	GRP-25	Commercial	A	89	92	94	95	89	4.562	89.28
Grapevine	GRP-25	Commercial	C	89	92	94	95	94	0.120	89.28
Grapevine	GRP-25	Industrial	A	81	88	91	93	81	0.046	89.28
Grapevine	GRP-25	Natural Desert	D	63	77	85	88	88	9.408	89.28
Grapevine	GRP-26	1/8 ac	C	77	85	90	92	90	13.662	86.54
Grapevine	GRP-26	1/8 ac	D	77	85	90	92	92	16.625	86.54
Grapevine	GRP-26	Natural Desert	B	63	77	85	88	77	7.421	86.54
Grapevine	GRP-26	Natural Desert	C	63	77	85	88	85	3.675	86.54
Grapevine	GRP-26	Natural Desert	D	63	77	85	88	88	25.022	86.54
Grapevine	GRP-26	Open Space Good	A	39	61	74	80	39	0.002	86.54
Grapevine	GRP-26	Open Space Good	A	39	61	74	80	39	0.967	86.54
Grapevine	GRP-26	Open Space Good	B	39	61	74	80	61	2.034	86.54
Green Spring East	GSE-01	Natural Desert	A	63	77	85	88	63	240.860	70.26
Green Spring East	GSE-01	Natural Desert	B	63	77	85	88	77	1.177	70.26
Green Spring East	GSE-01	Natural Desert	D	63	77	85	88	88	97.741	70.26
Green Spring East	GSE-01	Open Space Poor	A	68	79	86	89	68	0.097	70.26
Green Spring East	GSE-01	Open Space Poor	B	68	79	86	89	79	0.916	70.26
Green Spring East	GSE-02	Natural Desert	A	63	77	85	88	63	41.673	83.34
Green Spring East	GSE-02	Natural Desert	C	63	77	85	88	85	78.649	83.34
Green Spring East	GSE-02	Natural Desert	D	63	77	85	88	88	153.615	83.34
Green Spring East	GSE-03	Natural Desert	A	63	77	85	88	63	84.296	66.08
Green Spring East	GSE-03	Natural Desert	B	63	77	85	88	77	23.303	66.08
Green Spring East	GSE-03	Natural Desert	D	63	77	85	88	88	0.216	66.08
Green Spring East	GSE-04	Natural Desert	A	63	77	85	88	63	46.575	66.18
Green Spring East	GSE-04	Natural Desert	B	63	77	85	88	77	13.255	66.18
Green Spring East	GSE-04	Natural Desert	C	63	77	85	88	85	0.241	66.18
Green Spring East	GSE-05	Natural Desert	A	63	77	85	88	63	14.808	79.04
Green Spring East	GSE-05	Natural Desert	B	63	77	85	88	77	2.544	79.04
Green Spring East	GSE-05	Natural Desert	C	63	77	85	88	85	40.675	79.04
Green Spring East	GSE-06	1/4 ac	B	61	75	83	87	75	0.751	75.43
Green Spring East	GSE-06	Natural Desert	A	63	77	85	88	63	4.593	75.43

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Green Spring East	GSE-06	Natural Desert	B	63	77	85	88	77	23.628	75.43
Green Spring East	GSE-06	Open Space Poor	B	68	79	86	89	79	5.722	75.43
Green Spring East	GSE-07	1/4 ac	B	61	75	83	87	75	18.877	75.15
Green Spring East	GSE-07	Natural Desert	B	63	77	85	88	77	0.272	75.15
Green Spring East	GSE-07	Open Space Poor	B	68	79	86	89	79	0.629	75.15
Green Spring East	GSE-08	1/4 ac	B	61	75	83	87	75	18.509	76.03
Green Spring East	GSE-08	Open Space Poor	B	68	79	86	89	79	6.384	76.03
Green Spring East	GSE-09	1/2 ac	B	54	70	80	85	70	0.324	76.53
Green Spring East	GSE-09	1/4 ac	B	61	75	83	87	75	11.191	76.53
Green Spring East	GSE-09	Open Space Poor	B	68	79	86	89	79	7.773	76.53
Green Spring East	GSE-10	1/4 ac	B	61	75	83	87	75	8.204	75.86
Green Spring East	GSE-10	1/8 ac	B	77	85	90	92	85	0.153	75.86
Green Spring East	GSE-10	Open Space Poor	B	68	79	86	89	79	1.807	75.86
Green Spring East	GSE-11	1/4 ac	A	61	75	83	87	61	0.500	77.25
Green Spring East	GSE-11	1/4 ac	B	61	75	83	87	75	10.015	77.25
Green Spring East	GSE-11	1/8 ac	A	77	85	90	92	77	0.521	77.25
Green Spring East	GSE-11	1/8 ac	B	77	85	90	92	85	15.776	77.25
Green Spring East	GSE-11	Commercial	A	89	92	94	95	89	0.166	77.25
Green Spring East	GSE-11	Open Space Fair	A	49	69	79	84	49	2.294	77.25
Green Spring East	GSE-11	Open Space Fair	B	49	69	79	84	69	3.615	77.25
Green Spring East	GSE-11	Open Space Poor	A	68	79	86	89	68	0.220	77.25
Green Spring East	GSE-11	Open Space Poor	A	68	79	86	89	68	0.075	77.25
Green Spring East	GSE-11	Open Space Poor	B	68	79	86	89	79	2.351	77.25
Green Spring East	GSE-12	1/4 ac	A	61	75	83	87	61	19.730	74.24
Green Spring East	GSE-12	1/4 ac	B	61	75	83	87	75	39.749	74.24
Green Spring East	GSE-12	1/8 ac	A	77	85	90	92	77	0.272	74.24
Green Spring East	GSE-12	1/8 ac	B	77	85	90	92	85	18.831	74.24
Green Spring East	GSE-12	Natural Desert	A	63	77	85	88	63	3.632	74.24
Green Spring East	GSE-12	Natural Desert	B	63	77	85	88	77	23.896	74.24
Green Spring East	GSE-12	Newly Graded	B	77	86	91	94	86	0.193	74.24
Green Spring East	GSE-13	1/4 ac	B	61	75	83	87	75	8.237	76.88
Green Spring East	GSE-13	1/8 ac	A	77	85	90	92	77	0.053	76.88
Green Spring East	GSE-13	1/8 ac	B	77	85	90	92	85	0.048	76.88
Green Spring East	GSE-13	Industrial	B	81	88	91	93	88	0.389	76.88
Green Spring East	GSE-13	Newly Graded	A	77	86	91	94	77	0.804	76.88
Green Spring East	GSE-13	Newly Graded	B	77	86	91	94	86	1.232	76.88
Green Spring East	GSE-13	Open Space Poor	A	68	79	86	89	68	0.062	76.88
Green Spring East	GSE-14	Commercial	A	89	92	94	95	89	0.015	80.59
Green Spring East	GSE-14	Industrial	B	81	88	91	93	88	0.376	80.59
Green Spring East	GSE-14	Newly Graded	A	77	86	91	94	77	10.686	80.59
Green Spring East	GSE-14	Newly Graded	B	77	86	91	94	86	6.864	80.59
Green Spring East	GSE-14	Newly Graded	C	77	86	91	94	91	0.016	80.59
Green Spring East	GSE-14	Open Space Poor	A	68	79	86	89	68	3.591	80.59
Green Spring East	GSE-14	Open Space Poor	A	68	79	86	89	68	0.046	80.59
Green Spring East	GSE-14	Open Space Poor	B	68	79	86	89	79	8.242	80.59
Green Spring East	GSE-14	Roads with Ditches	A	83	89	92	93	83	1.788	80.59
Green Spring East	GSE-14	Roads with Ditches	B	83	89	92	93	89	4.332	80.59
Green Spring East	GSE-14	Roads with Ditches	C	83	89	92	93	92	1.415	80.59

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Green Spring East	GSE-15	1/4 ac	A	61	75	83	87	61	0.372	80.30
Green Spring East	GSE-15	1/4 ac	B	61	75	83	87	75	1.830	80.30
Green Spring East	GSE-15	1/8 ac	A	77	85	90	92	77	0.352	80.30
Green Spring East	GSE-15	1/8 ac	B	77	85	90	92	85	1.203	80.30
Green Spring East	GSE-15	1/8 ac	C	77	85	90	92	90	3.906	80.30
Green Spring East	GSE-15	Industrial	B	81	88	91	93	88	0.056	80.30
Green Spring East	GSE-15	Natural Desert	A	63	77	85	88	63	0.083	80.30
Green Spring East	GSE-15	Natural Desert	B	63	77	85	88	77	13.153	80.30
Green Spring East	GSE-15	Natural Desert	C	63	77	85	88	85	3.201	80.30
Green Spring East	GSE-15	Newly Graded	B	77	86	91	94	86	0.021	80.30
Green Spring East	GSE-15	Open Space Poor	B	68	79	86	89	79	0.321	80.30
Green Spring East	GSE-15	Open Space Poor	C	68	79	86	89	86	0.712	80.30
Green Spring East	GSE-16	1/4 ac	A	61	75	83	87	61	0.053	83.12
Green Spring East	GSE-16	1/4 ac	B	61	75	83	87	75	0.000	83.12
Green Spring East	GSE-16	1/4 ac	C	61	75	83	87	83	32.531	83.12
Green Spring East	GSE-16	Natural Desert	A	63	77	85	88	63	0.088	83.12
Green Spring East	GSE-16	Natural Desert	B	63	77	85	88	77	7.838	83.12
Green Spring East	GSE-16	Natural Desert	C	63	77	85	88	85	15.824	83.12
Green Spring East	GSE-16	Open Space Poor	C	68	79	86	89	86	8.709	83.12
Green Spring East	GSE-17	1/4 ac	C	61	75	83	87	83	34.980	83.43
Green Spring East	GSE-17	Natural Desert	C	63	77	85	88	85	9.088	83.43
Green Spring East	GSE-17	Open Space Poor	C	68	79	86	89	86	0.361	83.43
Green Spring East	GSE-18	Natural Desert	C	63	77	85	88	85	54.366	85.13
Green Spring East	GSE-18	Natural Desert	D	63	77	85	88	88	2.492	85.13
Green Spring East	GSE-19	1/4 ac	B	61	75	83	87	75	0.001	89.86
Green Spring East	GSE-19	1/4 ac	C	61	75	83	87	83	0.013	89.86
Green Spring East	GSE-19	1/8 ac	C	77	85	90	92	90	5.319	89.86
Green Spring East	GSE-19	Industrial	B	81	88	91	93	88	1.294	89.86
Green Spring East	GSE-19	Industrial	C	81	88	91	93	91	0.002	89.86
Green Spring East	GSE-19	Natural Desert	C	63	77	85	88	85	0.911	89.86
Green Spring East	GSE-19	Newly Graded	C	77	86	91	94	91	2.588	89.86
Green Spring East	GSE-19	Open Space Poor	B	68	79	86	89	79	0.029	89.86
Green Spring East	GSE-19	Open Space Poor	C	68	79	86	89	86	10.180	89.86
Green Spring East	GSE-19	Roads with Ditches	B	83	89	92	93	89	0.868	89.86
Green Spring East	GSE-19	Roads with Ditches	C	83	89	92	93	92	20.282	89.86
Green Spring East	GSE-20	1/4 ac	B	61	75	83	87	75	0.037	86.68
Green Spring East	GSE-20	1/4 ac	C	61	75	83	87	83	1.115	86.68
Green Spring East	GSE-20	1/8 ac	B	77	85	90	92	85	0.967	86.68
Green Spring East	GSE-20	1/8 ac	C	77	85	90	92	90	4.548	86.68
Green Spring East	GSE-20	Industrial	B	81	88	91	93	88	0.005	86.68
Green Spring East	GSE-20	Open Space Poor	B	68	79	86	89	79	1.156	86.68
Green Spring East	GSE-20	Open Space Poor	C	68	79	86	89	86	0.100	86.68
Green Spring East	GSE-20	Roads with Ditches	B	83	89	92	93	89	0.003	86.68
Green Spring West	GSW-01	1/3 ac	B	57	72	81	86	72	0.917	80.72
Green Spring West	GSW-01	1/4 ac	B	61	75	83	87	75	80.603	80.72
Green Spring West	GSW-01	1/4 ac	D	61	75	83	87	87	23.142	80.72
Green Spring West	GSW-01	Natural Desert	A	63	77	85	88	63	9.116	80.72
Green Spring West	GSW-01	Natural Desert	B	63	77	85	88	77	735.570	80.72

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Green Spring West	GSW-01	Natural Desert	D	63	77	85	88	88	453.410	80.72
Green Spring West	GSW-01	Open Space Good	B	39	61	74	80	61	3.979	80.72
Green Spring West	GSW-02	1/2 ac	B	54	70	80	85	70	26.440	75.13
Green Spring West	GSW-02	1/3 ac	B	57	72	81	86	72	8.088	75.13
Green Spring West	GSW-02	1/4 ac	B	61	75	83	87	75	32.759	75.13
Green Spring West	GSW-02	Natural Desert	A	63	77	85	88	63	18.116	75.13
Green Spring West	GSW-02	Natural Desert	B	63	77	85	88	77	205.107	75.13
Green Spring West	GSW-02	Open Space Good	B	39	61	74	80	61	0.001	75.13
Green Spring West	GSW-03	1/2 ac	A	54	70	80	85	54	1.788	70.86
Green Spring West	GSW-03	1/2 ac	B	54	70	80	85	70	33.714	70.86
Green Spring West	GSW-03	1/2 ac	D	54	70	80	85	85	3.536	70.86
Green Spring West	GSW-03	1/3 ac	A	57	72	81	86	57	5.661	70.86
Green Spring West	GSW-03	1/3 ac	B	57	72	81	86	72	17.211	70.86
Green Spring West	GSW-03	Natural Desert	B	63	77	85	88	77	13.968	70.86
Green Spring West	GSW-03	Natural Desert	D	63	77	85	88	88	1.251	70.86
Green Spring West	GSW-03	Open Space Good	A	39	61	74	80	39	0.384	70.86
Green Spring West	GSW-03	Open Space Good	B	39	61	74	80	61	2.714	70.86
Green Spring West	GSW-04	1/4 ac	B	61	75	83	87	75	18.738	78.97
Green Spring West	GSW-04	1/4 ac	D	61	75	83	87	87	10.039	78.97
Green Spring West	GSW-04	Natural Desert	B	63	77	85	88	77	2.721	78.97
Green Spring West	GSW-04	Open Space Poor	A	68	79	86	89	68	0.080	78.97
Green Spring West	GSW-04	Open Space Poor	B	68	79	86	89	79	2.125	78.97
Green Spring West	GSW-05	1/3 ac	B	57	72	81	86	72	17.336	74.38
Green Spring West	GSW-05	1/3 ac	D	57	72	81	86	86	0.147	74.38
Green Spring West	GSW-05	1/4 ac	B	61	75	83	87	75	13.165	74.38
Green Spring West	GSW-05	1/4 ac	D	61	75	83	87	87	2.544	74.38
Green Spring West	GSW-05	Open Space Good	B	39	61	74	80	61	0.052	74.38
Green Spring West	GSW-06	1/2 ac	B	54	70	80	85	70	3.175	72.53
Green Spring West	GSW-06	1/2 ac	D	54	70	80	85	85	0.949	72.53
Green Spring West	GSW-06	1/3 ac	A	57	72	81	86	57	0.237	72.53
Green Spring West	GSW-06	1/3 ac	B	57	72	81	86	72	3.478	72.53
Green Spring West	GSW-06	1/3 ac	D	57	72	81	86	86	0.005	72.53
Green Spring West	GSW-06	1/4 ac	A	61	75	83	87	61	1.960	72.53
Green Spring West	GSW-06	1/4 ac	B	61	75	83	87	75	36.813	72.53
Green Spring West	GSW-06	1/4 ac	D	61	75	83	87	87	15.542	72.53
Green Spring West	GSW-06	Commercial	B	89	92	94	95	92	0.511	72.53
Green Spring West	GSW-06	Commercial	D	89	92	94	95	95	2.822	72.53
Green Spring West	GSW-06	Natural Desert	A	63	77	85	88	63	21.691	72.53
Green Spring West	GSW-06	Natural Desert	B	63	77	85	88	77	9.065	72.53
Green Spring West	GSW-06	Natural Desert	D	63	77	85	88	88	0.769	72.53
Green Spring West	GSW-06	Open Space Good	A	39	61	74	80	39	5.909	72.53
Green Spring West	GSW-06	Open Space Good	B	39	61	74	80	61	15.175	72.53
Green Spring West	GSW-06	Open Space Good	D	39	61	74	80	80	1.135	72.53
Green Spring West	GSW-06	Open Space Poor	A	68	79	86	89	68	0.047	72.53
Green Spring West	GSW-06	Open Space Poor	B	68	79	86	89	79	10.042	72.53
Green Spring West	GSW-06	Open Space Poor	D	68	79	86	89	89	5.395	72.53
Green Spring West	GSW-07	1/2 ac	A	54	70	80	85	54	0.014	57.83
Green Spring West	GSW-07	1/3 ac	A	57	72	81	86	57	13.684	57.83

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Green Spring West	GSW-07	1/3 ac	B	57	72	81	86	72	0.851	57.83
Green Spring West	GSW-07	Open Space Good	A	39	61	74	80	39	0.040	57.83
Green Spring West	GSW-07	Open Space Good	B	39	61	74	80	61	0.032	57.83
Green Spring West	GSW-08	1/3 ac	A	57	72	81	86	57	28.414	59.48
Green Spring West	GSW-08	1/3 ac	B	57	72	81	86	72	5.978	59.48
Green Spring West	GSW-08	1/3 ac	D	57	72	81	86	86	0.119	59.48
Green Spring West	GSW-08	Open Space Good	A	39	61	74	80	39	0.365	59.48
Green Spring West	GSW-08	Open Space Good	B	39	61	74	80	61	0.034	59.48
Green Spring West	GSW-09	1/2 ac	A	54	70	80	85	54	1.797	69.57
Green Spring West	GSW-09	1/2 ac	D	54	70	80	85	85	1.760	69.57
Green Spring West	GSW-09	1/3 ac	A	57	72	81	86	57	15.852	69.57
Green Spring West	GSW-09	1/3 ac	D	57	72	81	86	86	1.983	69.57
Green Spring West	GSW-09	Natural Desert	A	63	77	85	88	63	0.015	69.57
Green Spring West	GSW-09	Natural Desert	B	63	77	85	88	77	0.447	69.57
Green Spring West	GSW-09	Natural Desert	D	63	77	85	88	88	8.921	69.57
Green Spring West	GSW-10	1/3 ac	A	57	72	81	86	57	15.771	77.39
Green Spring West	GSW-10	1/3 ac	B	57	72	81	86	72	24.842	77.39
Green Spring West	GSW-10	1/3 ac	D	57	72	81	86	86	33.713	77.39
Green Spring West	GSW-10	Natural Desert	A	63	77	85	88	63	0.044	77.39
Green Spring West	GSW-10	Natural Desert	B	63	77	85	88	77	11.808	77.39
Green Spring West	GSW-10	Natural Desert	D	63	77	85	88	88	17.388	77.39
Green Spring West	GSW-10	Open Space Good	B	39	61	74	80	61	0.837	77.39
Green Spring West	GSW-10	Open Space Good	D	39	61	74	80	80	0.070	77.39
Green Spring West	GSW-11	1/3 ac	A	57	72	81	86	57	0.107	67.12
Green Spring West	GSW-11	1/3 ac	D	57	72	81	86	86	0.160	67.12
Green Spring West	GSW-11	1/4 ac	B	61	75	83	87	75	29.154	67.12
Green Spring West	GSW-11	Open Space Good	A	39	61	74	80	39	1.624	67.12
Green Spring West	GSW-11	Open Space Good	B	39	61	74	80	61	30.905	67.12
Green Spring West	GSW-11	Open Space Good	D	39	61	74	80	80	0.242	67.12
Green Spring West	GSW-12	1/2 ac	B	54	70	80	85	70	29.018	73.46
Green Spring West	GSW-12	1/4 ac	B	61	75	83	87	75	28.979	73.46
Green Spring West	GSW-12	Open Space Fair	B	49	69	79	84	69	3.911	73.46
Green Spring West	GSW-12	Open Space Poor	B	68	79	86	89	79	13.157	73.46
Green Spring West	GSW-13	1 ac	B	51	68	79	84	68	0.008	80.46
Green Spring West	GSW-13	1 ac	D	51	68	79	84	84	0.018	80.46
Green Spring West	GSW-13	1/3 ac	B	57	72	81	86	72	12.151	80.46
Green Spring West	GSW-13	1/3 ac	D	57	72	81	86	86	0.397	80.46
Green Spring West	GSW-13	Natural Desert	B	63	77	85	88	77	26.815	80.46
Green Spring West	GSW-13	Natural Desert	D	63	77	85	88	88	25.695	80.46
Green Spring West	GSW-14	1/3 ac	B	57	72	81	86	72	14.164	70.53
Green Spring West	GSW-14	Open Space Good	B	39	61	74	80	61	2.187	70.53
Green Spring West	GSW-15	1 ac	B	51	68	79	84	68	6.009	72.23
Green Spring West	GSW-15	1 ac	D	51	68	79	84	84	0.173	72.23
Green Spring West	GSW-15	1/3 ac	B	57	72	81	86	72	13.097	72.23
Green Spring West	GSW-15	Natural Desert	B	63	77	85	88	77	6.467	72.23
Green Spring West	GSW-15	Natural Desert	D	63	77	85	88	88	0.125	72.23
Green Spring West	GSW-15	Open Space Good	B	39	61	74	80	61	0.565	72.23
Green Spring West	GSW-16	1 ac	B	51	68	79	84	68	4.804	75.70

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Green Spring West	GSW-16	1/2 ac	B	54	70	80	85	70	0.113	75.70
Green Spring West	GSW-16	Natural Desert	B	63	77	85	88	77	28.926	75.70
Green Spring West	GSW-17	1 ac	B	51	68	79	84	68	27.373	69.46
Green Spring West	GSW-17	1/2 ac	A	54	70	80	85	54	0.094	69.46
Green Spring West	GSW-17	1/2 ac	B	54	70	80	85	70	32.396	69.46
Green Spring West	GSW-17	1/2 ac	D	54	70	80	85	85	0.475	69.46
Green Spring West	GSW-17	1/2 ac	D	54	70	80	85	85	1.500	69.46
Green Spring West	GSW-17	1/3 ac	B	57	72	81	86	72	1.773	69.46
Green Spring West	GSW-17	1/4 ac	B	61	75	83	87	75	42.938	69.46
Green Spring West	GSW-17	1/8 ac	A	77	85	90	92	77	0.113	69.46
Green Spring West	GSW-17	1/8 ac	B	77	85	90	92	85	0.301	69.46
Green Spring West	GSW-17	Commercial	A	89	92	94	95	89	1.619	69.46
Green Spring West	GSW-17	Natural Desert	B	63	77	85	88	77	10.499	69.46
Green Spring West	GSW-17	Natural Desert	B	63	77	85	88	77	1.372	69.46
Green Spring West	GSW-17	Natural Desert	D	63	77	85	88	88	0.021	69.46
Green Spring West	GSW-17	Newly Graded	A	77	86	91	94	77	3.808	69.46
Green Spring West	GSW-17	Newly Graded	B	77	86	91	94	86	0.883	69.46
Green Spring West	GSW-17	Newly Graded	D	77	86	91	94	94	2.150	69.46
Green Spring West	GSW-17	Open Space Good	A	39	61	74	80	39	4.020	69.46
Green Spring West	GSW-17	Open Space Good	B	39	61	74	80	61	61.728	69.46
Green Spring West	GSW-17	Open Space Good	D	39	61	74	80	80	10.072	69.46
Green Spring West	GSW-17	Roads with Ditches	A	83	89	92	93	83	2.934	69.46
Green Spring West	GSW-17	Roads with Ditches	D	83	89	92	93	93	1.130	69.46
Green Spring West	GSW-18	1/4 ac	D	61	75	83	87	87	0.012	83.48
Green Spring West	GSW-18	1/4 ac	B	61	75	83	87	75	27.610	83.48
Green Spring West	GSW-18	1/8 ac	D	77	85	90	92	92	0.147	83.48
Green Spring West	GSW-18	1/8 ac	B	77	85	90	92	85	11.713	83.48
Green Spring West	GSW-18	Commercial	D	89	92	94	95	95	1.537	83.48
Green Spring West	GSW-18	Commercial	B	89	92	94	95	92	21.159	83.48
Green Spring West	GSW-18	Newly Graded	B	77	86	91	94	86	0.598	83.48
Green Spring West	GSW-18	Newly Graded	D	77	86	91	94	94	0.039	83.48
Green Spring West	GSW-18	Open Space Fair	D	49	69	79	84	84	2.072	83.48
Green Spring West	GSW-18	Open Space Fair	B	49	69	79	84	69	1.900	83.48
Green Spring West	GSW-18	Open Space Poor	D	68	79	86	89	89	0.314	83.48
Green Spring West	GSW-18	Open Space Poor	B	68	79	86	89	79	0.217	83.48
Green Spring West	GSW-18	Roads with Ditches	D	83	89	92	93	93	1.137	83.48
Green Spring West	GSW-18	Roads with Ditches	B	83	89	92	93	89	4.477	83.48
Green Spring West	GSW-18	Roads with Ditches	D	83	89	92	93	93	0.530	83.48
Green Spring West	GSW-19	1/2 ac	B	54	70	80	85	70	1.709	71.80
Green Spring West	GSW-19	1/3 ac	B	57	72	81	86	72	15.195	71.80
Green Spring West	GSW-19	Natural Desert	B	63	77	85	88	77	0.000	71.80
Green Spring West	GSW-20	1/2 ac	B	54	70	80	85	70	0.493	85.03
Green Spring West	GSW-20	1/2 ac	D	54	70	80	85	85	0.741	85.03
Green Spring West	GSW-20	1/3 ac	B	57	72	81	86	72	5.638	85.03
Green Spring West	GSW-20	1/3 ac	D	57	72	81	86	86	0.334	85.03
Green Spring West	GSW-20	1/8 ac	A	77	85	90	92	77	22.380	85.03
Green Spring West	GSW-20	1/8 ac	B	77	85	90	92	85	5.350	85.03
Green Spring West	GSW-20	1/8 ac	D	77	85	90	92	92	9.627	85.03

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Green Spring West	GSW-20	Commercial	A	89	92	94	95	89	27.354	85.03
Green Spring West	GSW-20	Commercial	D	89	92	94	95	95	14.548	85.03
Green Spring West	GSW-20	Natural Desert	A	63	77	85	88	63	0.121	85.03
Green Spring West	GSW-20	Natural Desert	B	63	77	85	88	77	0.241	85.03
Green Spring West	GSW-20	Natural Desert	D	63	77	85	88	88	9.546	85.03
Green Spring West	GSW-20	Natural Desert	A	63	77	85	88	63	0.121	85.03
Green Spring West	GSW-20	Natural Desert	B	63	77	85	88	77	7.129	85.03
Green Spring West	GSW-20	Natural Desert	D	63	77	85	88	88	5.753	85.03
Green Spring West	GSW-20	Newly Graded	A	77	86	91	94	77	10.764	85.03
Green Spring West	GSW-20	Newly Graded	D	77	86	91	94	94	0.478	85.03
Green Spring West	GSW-20	Open Space Fair	A	49	69	79	84	49	3.921	85.03
Green Spring West	GSW-20	Open Space Fair	D	49	69	79	84	84	0.015	85.03
Green Spring West	GSW-20	Open Space Good	A	39	61	74	80	39	0.039	85.03
Green Spring West	GSW-20	Open Space Good	B	39	61	74	80	61	0.376	85.03
Green Spring West	GSW-20	Open Space Poor	A	68	79	86	89	68	1.959	85.03
Green Spring West	GSW-20	Open Space Poor	B	68	79	86	89	79	2.235	85.03
Green Spring West	GSW-20	Open Space Poor	D	68	79	86	89	89	17.072	85.03
Green Spring West	GSW-20	Pavement	A	98	98	98	98	98	13.842	85.03
Green Spring West	GSW-20	Roads with Ditches	A	83	89	92	93	83	3.604	85.03
Green Spring West	GSW-21	Commercial	A	89	92	94	95	89	9.887	79.36
Green Spring West	GSW-21	Newly Graded	A	77	86	91	94	77	0.779	79.36
Green Spring West	GSW-21	Open Space Good	A	39	61	74	80	39	2.284	79.36
Green Spring West	GSW-21	Open Space Good	C	39	61	74	80	74	0.248	79.36
Gypsum	GYP-01	Natural Desert	B	63	77	85	88	77	198.235	82.41
Gypsum	GYP-01	Natural Desert	C	63	77	85	88	85	300.638	82.41
Gypsum	GYP-01	Natural Desert	D	63	77	85	88	88	52.769	82.41
Gypsum	GYP-02	1/2 ac	B	54	70	80	85	70	10.992	78.92
Gypsum	GYP-02	1/2 ac	C	54	70	80	85	80	5.696	78.92
Gypsum	GYP-02	2 ac	B	46	65	77	82	65	2.116	78.92
Gypsum	GYP-02	2 ac	C	46	65	77	82	77	1.873	78.92
Gypsum	GYP-02	Natural Desert	B	63	77	85	88	77	7.747	78.92
Gypsum	GYP-02	Natural Desert	C	63	77	85	88	85	12.291	78.92
Gypsum	GYP-02	Newly Graded	B	77	86	91	94	86	3.656	78.92
Gypsum	GYP-02	Newly Graded	C	77	86	91	94	91	3.254	78.92
Gypsum	GYP-03	1/4 ac	A	61	75	83	87	61	0.477	84.46
Gypsum	GYP-03	Natural Desert	A	63	77	85	88	63	35.988	84.46
Gypsum	GYP-03	Natural Desert	C	63	77	85	88	85	666.310	84.46
Gypsum	GYP-03	Natural Desert	D	63	77	85	88	88	106.864	84.46
Gypsum	GYP-03	Newly Graded	A	77	86	91	94	77	0.795	84.46
Gypsum	GYP-03	Newly Graded	C	77	86	91	94	91	7.723	84.46
Gypsum	GYP-03	Open Space Poor	C	68	79	86	89	86	0.021	84.46
Gypsum	GYP-04	Natural Desert	A	63	77	85	88	63	15.533	83.75
Gypsum	GYP-04	Natural Desert	C	63	77	85	88	85	177.884	83.75
Gypsum	GYP-04	Natural Desert	D	63	77	85	88	88	22.903	83.75
Gypsum	GYP-04	Newly Graded	A	77	86	91	94	77	1.048	83.75
Gypsum	GYP-04	Newly Graded	C	77	86	91	94	91	1.486	83.75
Gypsum	GYP-05	Natural Desert	A	63	77	85	88	63	18.187	83.71
Gypsum	GYP-05	Natural Desert	B	63	77	85	88	77	23.244	83.71

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Gypsum	GYP-05	Natural Desert	C	63	77	85	88	85	130.534	83.71
Gypsum	GYP-05	Natural Desert	D	63	77	85	88	88	85.248	83.71
Gypsum	GYP-05	Range Land Poor	B	68	79	86	89	79	0.048	83.71
Harrisburg	HRS-01	Industrial	C	81	88	91	93	91	73.495	88.34
Harrisburg	HRS-01	Industrial	D	81	88	91	93	93	39.139	88.34
Harrisburg	HRS-01	Natural Desert	C	63	77	85	88	85	82.416	88.34
Harrisburg	HRS-01	Natural Desert	D	63	77	85	88	88	322.214	88.34
Harrisburg	HRS-01	Newly Graded	D	77	86	91	94	94	0.155	88.34
Harrisburg	HRS-01	Open Space Poor	C	68	79	86	89	86	14.230	88.34
Harrisburg	HRS-01	Open Space Poor	D	68	79	86	89	89	57.832	88.34
Harrisburg	HRS-02	Natural Desert	D	63	77	85	88	88	0.151	93.87
Harrisburg	HRS-02	Newly Graded	C	77	86	91	94	91	4.103	93.87
Harrisburg	HRS-02	Newly Graded	D	77	86	91	94	94	94.703	93.87
Harrisburg	HRS-03	Dirt Road	A	72	82	87	89	72	17.333	82.52
Harrisburg	HRS-03	Dirt Road	B	72	82	87	89	82	12.769	82.52
Harrisburg	HRS-03	Dirt Road	C	72	82	87	89	87	2.005	82.52
Harrisburg	HRS-03	Dirt Road	D	72	82	87	89	89	35.712	82.52
Harrisburg	HRS-03	Industrial	C	81	88	91	93	91	0.531	82.52
Harrisburg	HRS-03	Industrial	D	81	88	91	93	93	0.832	82.52
Harrisburg	HRS-03	Natural Desert	A	63	77	85	88	63	31.693	82.52
Harrisburg	HRS-03	Natural Desert	A	63	77	85	88	63	47.096	82.52
Harrisburg	HRS-03	Natural Desert	B	63	77	85	88	77	26.558	82.52
Harrisburg	HRS-03	Natural Desert	C	63	77	85	88	85	55.123	82.52
Harrisburg	HRS-03	Natural Desert	D	63	77	85	88	88	309.367	82.52
Harrisburg	HRS-03	Newly Graded	A	77	86	91	94	77	22.975	82.52
Harrisburg	HRS-03	Newly Graded	B	77	86	91	94	86	26.465	82.52
Harrisburg	HRS-03	Newly Graded	D	77	86	91	94	94	1.434	82.52
Harrisburg	HRS-03	Open Space Good	A	39	61	74	80	39	1.689	82.52
Harrisburg	HRS-03	Open Space Good	A	39	61	74	80	39	2.690	82.52
Harrisburg	HRS-03	Open Space Good	C	39	61	74	80	74	0.048	82.52
Harrisburg	HRS-03	Open Space Poor	A	68	79	86	89	68	2.310	82.52
Harrisburg	HRS-03	Open Space Poor	A	68	79	86	89	68	1.422	82.52
Harrisburg	HRS-03	Open Space Poor	D	68	79	86	89	89	7.813	82.52
Harrisburg	HRS-04	Industrial	C	81	88	91	93	91	43.447	86.61
Harrisburg	HRS-04	Industrial	D	81	88	91	93	93	53.235	86.61
Harrisburg	HRS-04	Natural Desert	C	63	77	85	88	85	21.912	86.61
Harrisburg	HRS-04	Natural Desert	D	63	77	85	88	88	308.547	86.61
Harrisburg	HRS-04	Open Space Poor	C	68	79	86	89	86	12.277	86.61
Harrisburg	HRS-04	Open Space Poor	D	68	79	86	89	89	154.749	86.61
Harrisburg	HRS-04	Natural Desert	C	63	77	85	88	85	13.851	86.61
Harrisburg	HRS-04	Natural Desert	D	63	77	85	88	88	157.997	86.61
Harrisburg	HRS-04	Newly Graded	A	77	86	91	94	77	74.694	86.61
Harrisburg	HRS-04	Newly Graded	A	77	86	91	94	77	0.483	86.61
Harrisburg	HRS-04	Newly Graded	B	77	86	91	94	86	0.105	86.61
Harrisburg	HRS-04	Newly Graded	C	77	86	91	94	91	34.846	86.61
Harrisburg	HRS-04	Newly Graded	D	77	86	91	94	94	23.631	86.61
Harrisburg	HRS-04	Open Space Poor	A	68	79	86	89	68	62.233	86.61
Harrisburg	HRS-04	Open Space Poor	A	68	79	86	89	68	27.763	86.61

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Harrisburg	HRS-04	Open Space Poor	C	68	79	86	89	86	56.138	86.61
Harrisburg	HRS-04	Open Space Poor	D	68	79	86	89	89	259.858	86.61
Mill Creek	MLC-01	Commercial	A	89	92	94	95	89	13.644	88.90
Mill Creek	MLC-01	Commercial	B	89	92	94	95	92	6.981	88.90
Mill Creek	MLC-01	Pavement	A	98	98	98	98	98	0.164	88.90
Mill Creek	MLC-01	Roads with Ditches	A	83	89	92	93	83	4.151	88.90
Mill Creek	MLC-02	Commercial	A	89	92	94	95	89	4.834	84.63
Mill Creek	MLC-02	Roads with Ditches	A	83	89	92	93	83	12.920	84.63
Mill Creek	MLC-03	Commercial	A	89	92	94	95	89	6.781	88.89
Mill Creek	MLC-03	Roads with Ditches	A	83	89	92	93	83	0.126	88.89
Mill Creek	MLC-04	Commercial	A	89	92	94	95	89	10.046	90.33
Mill Creek	MLC-04	Commercial	B	89	92	94	95	92	8.052	90.33
Mill Creek	MLC-05	1/8 ac	A	77	85	90	92	77	0.180	87.59
Mill Creek	MLC-05	1/8 ac	B	77	85	90	92	85	1.806	87.59
Mill Creek	MLC-05	1/8 ac	C	77	85	90	92	90	0.313	87.59
Mill Creek	MLC-05	Commercial	A	89	92	94	95	89	3.956	87.59
Mill Creek	MLC-05	Commercial	A	89	92	94	95	89	0.010	87.59
Mill Creek	MLC-05	Commercial	B	89	92	94	95	92	4.357	87.59
Mill Creek	MLC-05	Commercial	C	89	92	94	95	94	2.306	87.59
Mill Creek	MLC-05	Industrial	A	81	88	91	93	81	0.137	87.59
Mill Creek	MLC-05	Industrial	B	81	88	91	93	88	0.180	87.59
Mill Creek	MLC-05	Open Space Good	A	39	61	74	80	39	0.611	87.59
Mill Creek	MLC-05	Roads with Ditches	A	83	89	92	93	83	2.348	87.59
Mill Creek	MLC-05	Roads with Ditches	B	83	89	92	93	89	0.096	87.59
Mill Creek	MLC-05	Roads with Ditches	C	83	89	92	93	92	1.658	87.59
Mill Creek	MLC-06	Commercial	A	89	92	94	95	89	9.286	89.14
Mill Creek	MLC-06	Commercial	B	89	92	94	95	92	0.438	89.14
Mill Creek	MLC-07	Commercial	A	89	92	94	95	89	4.528	89.73
Mill Creek	MLC-07	Commercial	B	89	92	94	95	92	1.445	89.73
Mill Creek	MLC-08	1/2 ac	B	54	70	80	85	70	0.698	86.57
Mill Creek	MLC-08	1/8 ac	A	77	85	90	92	77	0.803	86.57
Mill Creek	MLC-08	1/8 ac	B	77	85	90	92	85	9.738	86.57
Mill Creek	MLC-08	1/8 ac	C	77	85	90	92	90	0.482	86.57
Mill Creek	MLC-08	Commercial	B	89	92	94	95	92	2.211	86.57
Mill Creek	MLC-08	Commercial	C	89	92	94	95	94	1.914	86.57
Mill Creek	MLC-08	Open Space Good	A	39	61	74	80	39	0.043	86.57
Mill Creek	MLC-08	Roads with Ditches	A	83	89	92	93	83	0.121	86.57
Mill Creek	MLC-08	Roads with Ditches	B	83	89	92	93	89	3.763	86.57
Mill Creek	MLC-08	Roads with Ditches	C	83	89	92	93	92	0.005	86.57
Mill Creek	MLC-09	Commercial	A	89	92	94	95	89	4.162	89.33
Mill Creek	MLC-09	Commercial	B	89	92	94	95	92	0.511	89.33
Mill Creek	MLC-10	1/8 ac	B	77	85	90	92	85	0.247	88.29
Mill Creek	MLC-10	Commercial	A	89	92	94	95	89	0.592	88.29
Mill Creek	MLC-10	Commercial	B	89	92	94	95	92	1.470	88.29
Mill Creek	MLC-10	Industrial	A	81	88	91	93	81	0.280	88.29
Mill Creek	MLC-10	Industrial	B	81	88	91	93	88	0.529	88.29
Mill Creek	MLC-10	Open Space Good	A	39	61	74	80	39	0.058	88.29
Mill Creek	MLC-11	1/8 ac	B	77	85	90	92	85	5.338	83.34

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Mill Creek	MLC-11	Commercial	A	89	92	94	95	89	0.107	83.34
Mill Creek	MLC-11	Commercial	B	89	92	94	95	92	1.675	83.34
Mill Creek	MLC-11	Industrial	A	81	88	91	93	81	0.236	83.34
Mill Creek	MLC-11	Industrial	B	81	88	91	93	88	4.395	83.34
Mill Creek	MLC-11	Open Space Fair	A	49	69	79	84	49	0.023	83.34
Mill Creek	MLC-11	Open Space Fair	B	49	69	79	84	69	0.023	83.34
Mill Creek	MLC-11	Open Space Good	A	39	61	74	80	39	0.865	83.34
Mill Creek	MLC-11	Open Space Good	B	39	61	74	80	61	0.199	83.34
Mill Creek	MLC-12	1/8 ac	B	77	85	90	92	85	3.586	88.54
Mill Creek	MLC-12	Commercial	A	89	92	94	95	89	0.927	88.54
Mill Creek	MLC-12	Commercial	A	89	92	94	95	89	0.015	88.54
Mill Creek	MLC-12	Commercial	B	89	92	94	95	92	22.526	88.54
Mill Creek	MLC-12	Open Space Fair	A	49	69	79	84	49	0.344	88.54
Mill Creek	MLC-12	Open Space Fair	B	49	69	79	84	69	0.636	88.54
Mill Creek	MLC-12	Range Land Poor	A	68	79	86	89	68	0.015	88.54
Mill Creek	MLC-12	Straight Row Fair	A	58	72	81	85	58	1.273	88.54
Mill Creek	MLC-12	Straight Row Fair	B	58	72	81	85	72	0.018	88.54
Mill Creek	MLC-13	Commercial	B	89	92	94	95	92	2.133	73.73
Mill Creek	MLC-13	Natural Desert	A	63	77	85	88	63	4.677	73.73
Mill Creek	MLC-13	Natural Desert	A	63	77	85	88	63	0.013	73.73
Mill Creek	MLC-13	Natural Desert	B	63	77	85	88	77	0.649	73.73
Mill Creek	MLC-13	Open Space Fair	A	49	69	79	84	49	2.451	73.73
Mill Creek	MLC-13	Open Space Fair	A	49	69	79	84	49	1.925	73.73
Mill Creek	MLC-13	Range Land Poor	A	68	79	86	89	68	2.203	73.73
Mill Creek	MLC-13	Range Land Poor	A	68	79	86	89	68	0.184	73.73
Mill Creek	MLC-13	Range Land Poor	B	68	79	86	89	79	15.401	73.73
Mill Creek	MLC-13	Range Land Poor	D	68	79	86	89	89	3.432	73.73
Mill Creek	MLC-13	Straight Row Fair	A	58	72	81	85	58	0.012	73.73
Mill Creek	MLC-13	Straight Row Fair	A	58	72	81	85	58	0.124	73.73
Mill Creek	MLC-13	Straight Row Fair	B	58	72	81	85	72	0.094	73.73
Mill Creek	MLC-14	1 ac	A	51	68	79	84	51	12.692	73.01
Mill Creek	MLC-14	1 ac	A	51	68	79	84	51	0.231	73.01
Mill Creek	MLC-14	1/8 ac	A	77	85	90	92	77	0.036	73.01
Mill Creek	MLC-14	2 ac	A	46	65	77	82	46	0.966	73.01
Mill Creek	MLC-14	Commercial	B	89	92	94	95	92	0.013	73.01
Mill Creek	MLC-14	Industrial	A	81	88	91	93	81	46.791	73.01
Mill Creek	MLC-14	Industrial	A	81	88	91	93	81	3.842	73.01
Mill Creek	MLC-14	Industrial	B	81	88	91	93	88	45.893	73.01
Mill Creek	MLC-14	Natural Desert	A	63	77	85	88	63	7.378	73.01
Mill Creek	MLC-14	Natural Desert	A	63	77	85	88	63	0.021	73.01
Mill Creek	MLC-14	Natural Desert	B	63	77	85	88	77	4.589	73.01
Mill Creek	MLC-14	Open Space Fair	A	49	69	79	84	49	5.174	73.01
Mill Creek	MLC-14	Open Space Fair	A	49	69	79	84	49	11.685	73.01
Mill Creek	MLC-14	Open Space Fair	C	49	69	79	84	79	0.622	73.01
Mill Creek	MLC-14	Open Space Good	A	39	61	74	80	39	3.017	73.01
Mill Creek	MLC-14	Open Space Poor	A	68	79	86	89	68	0.020	73.01
Mill Creek	MLC-14	Open Space Poor	A	68	79	86	89	68	0.103	73.01
Mill Creek	MLC-14	Range Land Fair	A	49	69	79	84	49	0.001	73.01

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Mill Creek	MLC-14	Range Land Fair	A	49	69	79	84	49	0.594	73.01
Mill Creek	MLC-14	Range Land Poor	A	68	79	86	89	68	21.192	73.01
Mill Creek	MLC-14	Range Land Poor	B	68	79	86	89	79	60.288	73.01
Mill Creek	MLC-14	Straight Row Poor	A	66	77	85	89	66	51.988	73.01
Mill Creek	MLC-14	Straight Row Poor	A	66	77	85	89	66	14.115	73.01
Mill Creek	MLC-15	1/4 ac	A	61	75	83	87	61	6.108	74.77
Mill Creek	MLC-15	1/4 ac	A	61	75	83	87	61	1.863	74.77
Mill Creek	MLC-15	1/4 ac	B	61	75	83	87	75	21.933	74.77
Mill Creek	MLC-15	Commercial	A	89	92	94	95	89	0.507	74.77
Mill Creek	MLC-15	Industrial	A	81	88	91	93	81	0.240	74.77
Mill Creek	MLC-15	Industrial	A	81	88	91	93	81	0.974	74.77
Mill Creek	MLC-15	Industrial	B	81	88	91	93	88	3.803	74.77
Mill Creek	MLC-15	Open Space Good	A	39	61	74	80	39	1.047	74.77
Mill Creek	MLC-15	Roads with Ditches	A	83	89	92	93	83	0.159	74.77
Mill Creek	MLC-15	Roads with Ditches	A	83	89	92	93	83	1.008	74.77
Mill Creek	MLC-15	Roads with Ditches	B	83	89	92	93	89	4.728	74.77
Mill Creek	MLC-16	1/4 ac	A	61	75	83	87	61	13.748	78.59
Mill Creek	MLC-16	1/4 ac	B	61	75	83	87	75	4.465	78.59
Mill Creek	MLC-16	1/4 ac	C	61	75	83	87	83	29.211	78.59
Mill Creek	MLC-16	Commercial	A	89	92	94	95	89	1.774	78.59
Mill Creek	MLC-16	Commercial	C	89	92	94	95	94	4.434	78.59
Mill Creek	MLC-16	Open Space Good	A	39	61	74	80	39	0.003	78.59
Mill Creek	MLC-16	Open Space Poor	B	68	79	86	89	79	0.959	78.59
Mill Creek	MLC-16	Roads with Ditches	A	83	89	92	93	83	1.277	78.59
Mill Creek	MLC-16	Roads with Ditches	B	83	89	92	93	89	1.929	78.59
Mill Creek	MLC-16	Roads with Ditches	C	83	89	92	93	92	1.218	78.59
Mill Creek	MLC-17	1/2 ac	C	54	70	80	85	80	10.781	84.31
Mill Creek	MLC-17	1/4 ac	C	61	75	83	87	83	0.494	84.31
Mill Creek	MLC-17	1/4 ac	C	61	75	83	87	83	49.608	84.31
Mill Creek	MLC-17	Commercial	C	89	92	94	95	94	9.190	84.31
Mill Creek	MLC-17	Open Space Good	C	39	61	74	80	74	1.443	84.31
Mill Creek	MLC-17	Open Space Poor	C	68	79	86	89	86	1.298	84.31
Mill Creek	MLC-17	Roads with Ditches	C	83	89	92	93	92	4.611	84.31
Mill Creek	MLC-18	1/2 ac	C	54	70	80	85	80	0.357	86.23
Mill Creek	MLC-18	1/4 ac	C	61	75	83	87	83	46.756	86.23
Mill Creek	MLC-18	Commercial	C	89	92	94	95	94	4.533	86.23
Mill Creek	MLC-18	Industrial	C	81	88	91	93	91	9.221	86.23
Mill Creek	MLC-18	Roads with Ditches	C	83	89	92	93	92	12.778	86.23
Mill Creek	MLC-19	1/2 ac	C	54	70	80	85	80	0.249	86.33
Mill Creek	MLC-19	1/4 ac	C	61	75	83	87	83	0.385	86.33
Mill Creek	MLC-19	1/4 ac	C	61	75	83	87	83	12.362	86.33
Mill Creek	MLC-19	1/4 ac	D	61	75	83	87	87	1.747	86.33
Mill Creek	MLC-19	Commercial	C	89	92	94	95	94	1.595	86.33
Mill Creek	MLC-19	Commercial	D	89	92	94	95	95	7.567	86.33
Mill Creek	MLC-19	Open Space Good	C	39	61	74	80	74	0.638	86.33
Mill Creek	MLC-19	Open Space Good	D	39	61	74	80	80	4.278	86.33
Mill Creek	MLC-20	1/4 ac	C	61	75	83	87	83	13.313	82.20
Mill Creek	MLC-20	1/4 ac	D	61	75	83	87	87	0.031	82.20

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Mill Creek	MLC-20	Commercial	C	89	92	94	95	94	2.703	82.20
Mill Creek	MLC-20	Open Space Good	C	39	61	74	80	74	5.100	82.20
Mill Creek	MLC-20	Open Space Good	D	39	61	74	80	80	0.397	82.20
Mill Creek	MLC-21	1/4 ac	C	61	75	83	87	83	0.025	90.02
Mill Creek	MLC-21	1/8 ac	C	77	85	90	92	90	4.187	90.02
Mill Creek	MLC-21	Commercial	C	89	92	94	95	94	0.055	90.02
Mill Creek	MLC-21	Industrial	C	81	88	91	93	91	0.043	90.02
Mill Creek	MLC-22	1/2 ac	A	54	70	80	85	54	0.080	81.89
Mill Creek	MLC-22	1/2 ac	C	54	70	80	85	80	54.838	81.89
Mill Creek	MLC-22	1/2 ac	D	54	70	80	85	85	7.980	81.89
Mill Creek	MLC-22	1/4 ac	C	61	75	83	87	83	26.992	81.89
Mill Creek	MLC-22	1/4 ac	C	61	75	83	87	83	5.103	81.89
Mill Creek	MLC-22	Commercial	C	89	92	94	95	94	4.259	81.89
Mill Creek	MLC-22	Commercial	D	89	92	94	95	95	0.241	81.89
Mill Creek	MLC-22	Industrial	C	81	88	91	93	91	0.066	81.89
Mill Creek	MLC-22	Open Space Good	C	39	61	74	80	74	1.191	81.89
Mill Creek	MLC-22	Open Space Good	D	39	61	74	80	80	0.002	81.89
Mill Creek	MLC-23	1/2 ac	A	54	70	80	85	54	0.060	75.02
Mill Creek	MLC-23	1/2 ac	C	54	70	80	85	80	0.506	75.02
Mill Creek	MLC-23	1/4 ac	A	61	75	83	87	61	5.474	75.02
Mill Creek	MLC-23	1/4 ac	C	61	75	83	87	83	16.619	75.02
Mill Creek	MLC-23	1/8 ac	C	77	85	90	92	90	0.355	75.02
Mill Creek	MLC-23	Industrial	A	81	88	91	93	81	0.132	75.02
Mill Creek	MLC-23	Industrial	C	81	88	91	93	91	0.236	75.02
Mill Creek	MLC-23	Open Space Poor	A	68	79	86	89	68	57.110	75.02
Mill Creek	MLC-23	Open Space Poor	C	68	79	86	89	86	30.453	75.02
Mill Creek	MLC-24	1/8 ac	A	77	85	90	92	77	0.447	69.96
Mill Creek	MLC-24	Commercial	A	89	92	94	95	89	1.450	69.96
Mill Creek	MLC-24	Industrial	A	81	88	91	93	81	0.098	69.96
Mill Creek	MLC-24	Industrial	A	81	88	91	93	81	0.184	69.96
Mill Creek	MLC-24	Industrial	B	81	88	91	93	88	0.002	69.96
Mill Creek	MLC-24	Open Space Good	A	39	61	74	80	39	0.690	69.96
Mill Creek	MLC-24	Open Space Good	A	39	61	74	80	39	0.405	69.96
Mill Creek	MLC-25	1/8 ac	A	77	85	90	92	77	3.225	58.06
Mill Creek	MLC-25	1/8 ac	A	77	85	90	92	77	0.082	58.06
Mill Creek	MLC-25	1/8 ac	C	77	85	90	92	90	0.040	58.06
Mill Creek	MLC-25	Commercial	A	89	92	94	95	89	0.646	58.06
Mill Creek	MLC-25	Commercial	C	89	92	94	95	94	0.000	58.06
Mill Creek	MLC-25	Open Space Good	A	39	61	74	80	39	3.235	58.06
Mill Creek	MLC-25	Open Space Good	A	39	61	74	80	39	1.167	58.06
Mill Creek	MLC-26	1/4 ac	A	61	75	83	87	61	17.804	70.58
Mill Creek	MLC-26	1/4 ac	A	61	75	83	87	61	0.691	70.58
Mill Creek	MLC-26	1/4 ac	C	61	75	83	87	83	36.179	70.58
Mill Creek	MLC-26	2 ac	A	46	65	77	82	46	0.046	70.58
Mill Creek	MLC-26	2 ac	C	46	65	77	82	77	3.505	70.58
Mill Creek	MLC-26	Commercial	A	89	92	94	95	89	0.003	70.58
Mill Creek	MLC-26	Commercial	C	89	92	94	95	94	4.740	70.58
Mill Creek	MLC-26	Newly Graded	C	77	86	91	94	91	0.618	70.58

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Mill Creek	MLC-26	Open Space Fair	A	49	69	79	84	49	6.580	70.58
Mill Creek	MLC-26	Open Space Fair	A	49	69	79	84	49	6.190	70.58
Mill Creek	MLC-26	Open Space Fair	C	49	69	79	84	79	0.502	70.58
Mill Creek	MLC-26	Open Space Good	A	39	61	74	80	39	1.409	70.58
Mill Creek	MLC-26	Range Land Fair	A	49	69	79	84	49	1.983	70.58
Mill Creek	MLC-26	Range Land Fair	C	49	69	79	84	79	2.883	70.58
Mill Creek	MLC-26	Range Land Poor	A	68	79	86	89	68	0.016	70.58
Mill Creek	MLC-26	Straight Row Fair	A	58	72	81	85	58	7.700	70.58
Mill Creek	MLC-26	Straight Row Fair	A	58	72	81	85	58	3.531	70.58
Mill Creek	MLC-26	Straight Row Fair	C	58	72	81	85	81	5.618	70.58
Mill Creek	MLC-27	1/4 ac	C	61	75	83	87	83	5.281	86.84
Mill Creek	MLC-27	Commercial	C	89	92	94	95	94	2.713	86.84
Mill Creek	MLC-27	Newly Graded	C	77	86	91	94	91	0.205	86.84
Mill Creek	MLC-28	1/4 ac	C	61	75	83	87	83	24.365	83.70
Mill Creek	MLC-28	Commercial	C	89	92	94	95	94	1.663	83.70
Mill Creek	MLC-29	1/8 ac	C	77	85	90	92	90	33.154	89.70
Mill Creek	MLC-29	1/8 ac	D	77	85	90	92	92	0.359	89.70
Mill Creek	MLC-29	2 ac	C	46	65	77	82	77	1.378	89.70
Mill Creek	MLC-29	Commercial	C	89	92	94	95	94	3.566	89.70
Mill Creek	MLC-29	Natural Desert	C	63	77	85	88	85	0.728	89.70
Mill Creek	MLC-29	Natural Desert	D	63	77	85	88	88	0.000	89.70
Mill Creek	MLC-29	Open Space Fair	C	49	69	79	84	79	0.026	89.70
Mill Creek	MLC-29	Open Space Fair	D	49	69	79	84	84	0.254	89.70
Mill Creek	MLC-29	Straight Row Poor	C	66	77	85	89	85	0.699	89.70
Mill Creek	MLC-30	1/2 ac	C	54	70	80	85	80	0.903	87.04
Mill Creek	MLC-30	1/4 ac	D	61	75	83	87	87	10.968	87.04
Mill Creek	MLC-30	1/8 ac	A	77	85	90	92	77	0.009	87.04
Mill Creek	MLC-30	1/8 ac	C	77	85	90	92	90	5.322	87.04
Mill Creek	MLC-30	1/4 ac	D	61	75	83	87	87	6.970	87.04
Mill Creek	MLC-30	2 ac	C	46	65	77	82	77	0.815	87.04
Mill Creek	MLC-30	Commercial	C	89	92	94	95	94	0.037	87.04
Mill Creek	MLC-30	Industrial	A	81	88	91	93	81	0.020	87.04
Mill Creek	MLC-30	Industrial	C	81	88	91	93	91	0.495	87.04
Mill Creek	MLC-30	Natural Desert	C	63	77	85	88	85	0.143	87.04
Mill Creek	MLC-30	Natural Desert	D	63	77	85	88	88	13.750	87.04
Mill Creek	MLC-30	Open Space Fair	C	49	69	79	84	79	0.002	87.04
Mill Creek	MLC-30	Open Space Fair	D	49	69	79	84	84	1.717	87.04
Mill Creek	MLC-30	Open Space Poor	A	68	79	86	89	68	1.493	87.04
Mill Creek	MLC-30	Open Space Poor	C	68	79	86	89	86	16.951	87.04
Mill Creek	MLC-30	Open Space Poor	D	68	79	86	89	89	25.440	87.04
Mill Creek	MLC-30	Straight Row Poor	C	66	77	85	89	85	6.832	87.04
Mill Creek	MLC-31	1/8 ac	A	77	85	90	92	77	0.437	84.52
Mill Creek	MLC-31	Industrial	A	81	88	91	93	81	14.864	84.52
Mill Creek	MLC-31	Industrial	C	81	88	91	93	91	8.665	84.52
Mill Creek	MLC-31	Open Space Poor	A	68	79	86	89	68	0.033	84.52
Mill Creek	MLC-31	Open Space Poor	C	68	79	86	89	86	0.001	84.52
Mill Creek	MLC-32	1/4 ac	A	61	75	83	87	61	0.148	82.33
Mill Creek	MLC-32	1/4 ac	C	61	75	83	87	83	29.334	82.33

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Mill Creek	MLC-32	2 ac	C	46	65	77	82	77	1.336	82.33
Mill Creek	MLC-32	Newly Graded	C	77	86	91	94	91	0.564	82.33
Mill Creek	MLC-32	Open Space Fair	A	49	69	79	84	49	0.008	82.33
Mill Creek	MLC-32	Open Space Fair	C	49	69	79	84	79	0.029	82.33
Mill Creek	MLC-32	Range Land Fair	A	49	69	79	84	49	0.304	82.33
Mill Creek	MLC-32	Range Land Fair	C	49	69	79	84	79	1.016	82.33
Mill Creek	MLC-32	Straight Row Poor	A	66	77	85	89	66	0.029	82.33
Mill Creek	MLC-33	1/3 ac	B	57	72	81	86	72	2.601	85.18
Mill Creek	MLC-33	1/3 ac	C	57	72	81	86	81	1.459	85.18
Mill Creek	MLC-33	1/3 ac	D	57	72	81	86	86	3.607	85.18
Mill Creek	MLC-33	1/4 ac	B	61	75	83	87	75	0.911	85.18
Mill Creek	MLC-33	1/4 ac	C	61	75	83	87	83	0.237	85.18
Mill Creek	MLC-33	1/4 ac	D	61	75	83	87	87	2.154	85.18
Mill Creek	MLC-33	1/8 ac	C	77	85	90	92	90	7.376	85.18
Mill Creek	MLC-33	Commercial	C	89	92	94	95	94	0.481	85.18
Mill Creek	MLC-33	Natural Desert	C	63	77	85	88	85	1.306	85.18
Mill Creek	MLC-33	Natural Desert	D	63	77	85	88	88	6.081	85.18
Mill Creek	MLC-33	Newly Graded	C	77	86	91	94	91	1.084	85.18
Mill Creek	MLC-33	Open Space Fair	C	49	69	79	84	79	2.875	85.18
Mill Creek	MLC-33	Open Space Fair	D	49	69	79	84	84	1.719	85.18
Mill Creek	MLC-34	1/4 ac	D	61	75	83	87	87	5.811	87.33
Mill Creek	MLC-34	1/8 ac	C	77	85	90	92	90	0.020	87.33
Mill Creek	MLC-34	1/8 ac	D	77	85	90	92	92	0.015	87.33
Mill Creek	MLC-34	Natural Desert	C	63	77	85	88	85	0.753	87.33
Mill Creek	MLC-34	Natural Desert	D	63	77	85	88	88	5.247	87.33
Mill Creek	MLC-35	1/3 ac	B	57	72	81	86	72	3.709	83.36
Mill Creek	MLC-35	1/3 ac	D	57	72	81	86	86	0.914	83.36
Mill Creek	MLC-35	1/4 ac	B	61	75	83	87	75	0.750	83.36
Mill Creek	MLC-35	1/4 ac	D	61	75	83	87	87	21.285	83.36
Mill Creek	MLC-35	Natural Desert	B	63	77	85	88	77	2.808	83.36
Mill Creek	MLC-35	Natural Desert	D	63	77	85	88	88	11.309	83.36
Mill Creek	MLC-35	Open Space Fair	A	49	69	79	84	49	0.017	83.36
Mill Creek	MLC-35	Open Space Poor	A	68	79	86	89	68	0.744	83.36
Mill Creek	MLC-35	Open Space Poor	A	68	79	86	89	68	3.491	83.36
Mill Creek	MLC-35	Open Space Poor	B	68	79	86	89	79	6.930	83.36
Mill Creek	MLC-35	Open Space Poor	C	68	79	86	89	86	11.104	83.36
Mill Creek	MLC-35	Open Space Poor	D	68	79	86	89	89	0.064	83.36
Mill Creek	MLC-36	1/2 ac	A	54	70	80	85	54	0.387	81.41
Mill Creek	MLC-36	1/2 ac	A	54	70	80	85	54	0.303	81.41
Mill Creek	MLC-36	1/4 ac	D	61	75	83	87	87	1.654	81.41
Mill Creek	MLC-36	1/8 ac	D	77	85	90	92	92	0.857	81.41
Mill Creek	MLC-36	Natural Desert	B	63	77	85	88	77	0.571	81.41
Mill Creek	MLC-36	Natural Desert	D	63	77	85	88	88	36.410	81.41
Mill Creek	MLC-36	Open Space Good	A	39	61	74	80	39	0.052	81.41
Mill Creek	MLC-36	Open Space Good	A	39	61	74	80	39	6.181	81.41
Mill Creek	MLC-36	Open Space Good	B	39	61	74	80	61	1.038	81.41
Mill Creek	MLC-36	Open Space Good	C	39	61	74	80	74	0.127	81.41
Mill Creek	MLC-36	Open Space Good	D	39	61	74	80	80	6.499	81.41

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Mill Creek	MLC-36	Open Space Poor	A	68	79	86	89	68	0.122	81.41
Mill Creek	MLC-36	Open Space Poor	A	68	79	86	89	68	1.858	81.41
Mill Creek	MLC-36	Open Space Poor	B	68	79	86	89	79	0.594	81.41
Mill Creek	MLC-36	Open Space Poor	C	68	79	86	89	86	3.262	81.41
Mill Creek	MLC-36	Open Space Poor	D	68	79	86	89	89	9.453	81.41
Mill Creek	MLC-37	1/4 ac	A	61	75	83	87	61	1.047	81.05
Mill Creek	MLC-37	1/4 ac	C	61	75	83	87	83	11.574	81.05
Mill Creek	MLC-37	Straight Row Poor	A	66	77	85	89	66	0.105	81.05
Mill Creek	MLC-38	1/4 ac	A	61	75	83	87	61	0.543	79.68
Mill Creek	MLC-38	1/4 ac	C	61	75	83	87	83	9.815	79.68
Mill Creek	MLC-38	Open Space Poor	A	68	79	86	89	68	0.049	79.68
Mill Creek	MLC-38	Open Space Poor	A	68	79	86	89	68	1.255	79.68
Mill Creek	MLC-38	Open Space Poor	C	68	79	86	89	86	0.092	79.68
Mill Creek	MLC-38	Straight Row Poor	A	66	77	85	89	66	0.008	79.68
Mill Creek	MLC-38	Straight Row Poor	A	66	77	85	89	66	0.564	79.68
Mill Creek	MLC-38	Straight Row Poor	C	66	77	85	89	85	0.001	79.68
Mill Creek	MLC-39	1/4 ac	A	61	75	83	87	61	0.021	76.58
Mill Creek	MLC-39	1/4 ac	B	61	75	83	87	75	14.704	76.58
Mill Creek	MLC-39	1/4 ac	C	61	75	83	87	83	2.298	76.58
Mill Creek	MLC-39	1/4 ac	C	61	75	83	87	83	2.225	76.58
Mill Creek	MLC-39	Open Space Fair	A	49	69	79	84	49	0.025	76.58
Mill Creek	MLC-39	Open Space Poor	A	68	79	86	89	68	3.116	76.58
Mill Creek	MLC-39	Open Space Poor	A	68	79	86	89	68	2.657	76.58
Mill Creek	MLC-39	Open Space Poor	B	68	79	86	89	79	2.810	76.58
Mill Creek	MLC-39	Open Space Poor	C	68	79	86	89	86	4.155	76.58
Mill Creek	MLC-39	Straight Row Poor	A	66	77	85	89	66	0.124	76.58
Mill Creek	MLC-40	1/2 ac	C	54	70	80	85	80	0.148	84.45
Mill Creek	MLC-40	1/8 ac	C	77	85	90	92	90	22.664	84.45
Mill Creek	MLC-40	Commercial	C	89	92	94	95	94	0.373	84.45
Mill Creek	MLC-40	Commercial	D	89	92	94	95	95	0.103	84.45
Mill Creek	MLC-40	Open Space Good	C	39	61	74	80	74	10.953	84.45
Mill Creek	MLC-40	Open Space Good	D	39	61	74	80	80	3.425	84.45
Mill Creek	MLC-41	1/8 ac	C	77	85	90	92	90	1.942	92.93
Mill Creek	MLC-41	Commercial	C	89	92	94	95	94	3.532	92.93
Mill Creek	MLC-41	Commercial	D	89	92	94	95	95	6.015	92.93
Mill Creek	MLC-41	Open Space Good	C	39	61	74	80	74	0.011	92.93
Mill Creek	MLC-41	Open Space Good	D	39	61	74	80	80	0.796	92.93
Stucki Farms	STF-01	1/2 ac	D	54	70	80	85	85	2.798	77.43
Stucki Farms	STF-01	1/4 ac	A	61	75	83	87	61	79.020	77.43
Stucki Farms	STF-01	1/4 ac	D	61	75	83	87	87	9.775	77.43
Stucki Farms	STF-01	Industrial	A	81	88	91	93	81	0.048	77.43
Stucki Farms	STF-01	Natural Desert	A	63	77	85	88	63	89.786	77.43
Stucki Farms	STF-01	Natural Desert	B	63	77	85	88	77	76.082	77.43
Stucki Farms	STF-01	Natural Desert	C	63	77	85	88	85	88.104	77.43
Stucki Farms	STF-01	Natural Desert	D	63	77	85	88	88	70.746	77.43
Stucki Farms	STF-01	Newly Graded	A	77	86	91	94	77	367.953	77.43
Stucki Farms	STF-01	Newly Graded	B	77	86	91	94	86	45.534	77.43
Stucki Farms	STF-01	Newly Graded	C	77	86	91	94	91	60.957	77.43

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Stucki Farms	STF-01	Newly Graded	D	77	86	91	94	94	67.527	77.43
Stucki Farms	STF-01	Open Space Good	A	39	61	74	80	39	27.109	77.43
Stucki Farms	STF-01	Range Land Poor	A	68	79	86	89	68	0.613	77.43
Stucki Farms	STF-01	Range Land Poor	B	68	79	86	89	79	3.805	77.43
Stucki Farms	STF-01	Roads with Ditches	A	83	89	92	93	83	5.169	77.43
Stucki Farms	STF-01	Straight Row Poor	A	66	77	85	89	66	6.411	77.43
Stucki	STU-01	Natural Desert	A	63	77	85	88	63	35.555	79.00
Stucki	STU-01	Natural Desert	B	63	77	85	88	77	105.842	79.00
Stucki	STU-01	Natural Desert	C	63	77	85	88	85	109.316	79.00
Stucki	STU-01	Natural Desert	D	63	77	85	88	88	51.757	79.00
Stucki	STU-01	Range Land Poor	A	68	79	86	89	68	31.424	79.00
Stucki	STU-01	Range Land Poor	B	68	79	86	89	79	16.112	79.00
Stucki	STU-01	Range Land Poor	C	68	79	86	89	86	0.603	79.00
Stucki	STU-02	Natural Desert	B	63	77	85	88	77	270.282	77.84
Stucki	STU-02	Natural Desert	C	63	77	85	88	85	3.081	77.84
Stucki	STU-02	Newly Graded	B	77	86	91	94	86	25.177	77.84
Stucki	STU-03	Natural Desert	A	63	77	85	88	63	162.240	77.46
Stucki	STU-03	Natural Desert	B	63	77	85	88	77	131.180	77.46
Stucki	STU-03	Natural Desert	C	63	77	85	88	85	198.367	77.46
Stucki	STU-03	Natural Desert	D	63	77	85	88	88	86.509	77.46
Washington Dam	WAD-01	1/2 ac	C	54	70	80	85	80	0.450	80.59
Washington Dam	WAD-01	1/4 ac	A	61	75	83	87	61	0.076	80.59
Washington Dam	WAD-01	1/4 ac	C	61	75	83	87	83	37.669	80.59
Washington Dam	WAD-01	Open Space Fair	A	49	69	79	84	49	1.292	80.59
Washington Dam	WAD-01	Open Space Fair	A	49	69	79	84	49	1.415	80.59
Washington Dam	WAD-01	Open Space Fair	C	49	69	79	84	79	1.087	80.59
Washington Dam	WAD-01	Open Space Poor	A	68	79	86	89	68	0.434	80.59
Washington Dam	WAD-01	Open Space Poor	A	68	79	86	89	68	2.432	80.59
Washington Dam	WAD-01	Open Space Poor	C	68	79	86	89	86	6.366	80.59
Washington Dam	WAD-01	Straight Row Poor	A	66	77	85	89	66	0.572	80.59
Washington Dam	WAD-01	Straight Row Poor	A	66	77	85	89	66	0.299	80.59
Washington Dam	WAD-01	Straight Row Poor	C	66	77	85	89	85	2.909	80.59
Washington Dam	WAD-02	1/2 ac	A	54	70	80	85	54	0.580	64.43
Washington Dam	WAD-02	1/2 ac	A	54	70	80	85	54	2.119	64.43
Washington Dam	WAD-02	1/2 ac	B	54	70	80	85	70	15.094	64.43
Washington Dam	WAD-02	1/2 ac	C	54	70	80	85	80	3.932	64.43
Washington Dam	WAD-02	1/4 ac	A	61	75	83	87	61	0.003	64.43
Washington Dam	WAD-02	1/4 ac	B	61	75	83	87	75	0.267	64.43
Washington Dam	WAD-02	1/4 ac	C	61	75	83	87	83	4.119	64.43
Washington Dam	WAD-02	Open Space Fair	A	49	69	79	84	49	3.901	64.43
Washington Dam	WAD-02	Open Space Fair	A	49	69	79	84	49	5.631	64.43
Washington Dam	WAD-02	Open Space Fair	B	49	69	79	84	69	0.236	64.43
Washington Dam	WAD-02	Open Space Good	A	39	61	74	80	39	0.533	64.43
Washington Dam	WAD-02	Open Space Good	A	39	61	74	80	39	1.699	64.43
Washington Dam	WAD-02	Open Space Poor	A	68	79	86	89	68	0.552	64.43
Washington Dam	WAD-02	Open Space Poor	A	68	79	86	89	68	1.227	64.43
Washington Dam	WAD-03	1/2 ac	A	54	70	80	85	54	1.388	77.80
Washington Dam	WAD-03	1/2 ac	A	54	70	80	85	54	5.671	77.80

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Dam	WAD-03	1/2 ac	B	54	70	80	85	70	21.323	77.80
Washington Dam	WAD-03	1/2 ac	C	54	70	80	85	80	10.119	77.80
Washington Dam	WAD-03	1/2 ac	D	54	70	80	85	85	3.411	77.80
Washington Dam	WAD-03	Natural Desert	B	63	77	85	88	77	3.475	77.80
Washington Dam	WAD-03	Natural Desert	C	63	77	85	88	85	0.294	77.80
Washington Dam	WAD-03	Natural Desert	D	63	77	85	88	88	83.768	77.80
Washington Dam	WAD-03	Open Space Good	A	39	61	74	80	39	5.910	77.80
Washington Dam	WAD-03	Open Space Good	A	39	61	74	80	39	8.700	77.80
Washington Dam	WAD-03	Open Space Good	B	39	61	74	80	61	0.491	77.80
Washington Dam	WAD-03	Open Space Good	D	39	61	74	80	80	4.268	77.80
Washington Dam	WAD-04	1/2 ac	C	54	70	80	85	80	25.972	84.62
Washington Dam	WAD-04	1/2 ac	D	54	70	80	85	85	0.689	84.62
Washington Dam	WAD-04	1/4 ac	C	61	75	83	87	83	0.414	84.62
Washington Dam	WAD-04	Natural Desert	C	63	77	85	88	85	15.503	84.62
Washington Dam	WAD-04	Natural Desert	D	63	77	85	88	88	33.867	84.62
Washington Dam	WAD-04	Straight Row Poor	C	66	77	85	89	85	0.009	84.62
Washington Dam	WAD-05	1/2 ac	C	54	70	80	85	80	0.057	87.60
Washington Dam	WAD-05	Industrial	C	81	88	91	93	91	13.322	87.60
Washington Dam	WAD-05	Natural Desert	C	63	77	85	88	85	17.952	87.60
Washington Dam	WAD-05	Natural Desert	D	63	77	85	88	88	4.274	87.60
Washington Dam	WAD-06	Industrial	C	81	88	91	93	91	22.937	89.85
Washington Dam	WAD-06	Natural Desert	C	63	77	85	88	85	3.568	89.85
Washington Dam	WAD-06	Natural Desert	D	63	77	85	88	88	7.093	89.85
Washington Dam	WAD-06	Newly Graded	C	77	86	91	94	91	7.648	89.85
Washington Dam	WAD-06	Open Space Poor	C	68	79	86	89	86	1.201	89.85
Washington Dam	WAD-07	1 ac	C	51	68	79	84	79	0.036	71.53
Washington Dam	WAD-07	2 ac	A	46	65	77	82	46	5.709	71.53
Washington Dam	WAD-07	2 ac	C	46	65	77	82	77	4.286	71.53
Washington Dam	WAD-07	Industrial	A	81	88	91	93	81	12.976	71.53
Washington Dam	WAD-07	Industrial	C	81	88	91	93	91	36.780	71.53
Washington Dam	WAD-07	Natural Desert	A	63	77	85	88	63	0.456	71.53
Washington Dam	WAD-07	Natural Desert	C	63	77	85	88	85	22.484	71.53
Washington Dam	WAD-07	Natural Desert	D	63	77	85	88	88	36.828	71.53
Washington Dam	WAD-07	Newly Graded	C	77	86	91	94	91	0.224	71.53
Washington Dam	WAD-07	Open Space Good	A	39	61	74	80	39	13.796	71.53
Washington Dam	WAD-07	Open Space Good	A	39	61	74	80	39	37.292	71.53
Washington Dam	WAD-07	Open Space Good	C	39	61	74	80	74	4.657	71.53
Washington Dam	WAD-07	Open Space Good	D	39	61	74	80	80	0.740	71.53
Washington Dam	WAD-07	Straight Row Fair	A	58	72	81	85	58	1.319	71.53
Washington Dam	WAD-07	Straight Row Fair	A	58	72	81	85	58	0.863	71.53
Washington Dam	WAD-07	Straight Row Fair	C	58	72	81	85	81	4.875	71.53
Washington Dam	WAD-08	1 ac	A	51	68	79	84	51	0.158	52.96
Washington Dam	WAD-08	1 ac	B	51	68	79	84	68	0.123	52.96
Washington Dam	WAD-08	1 ac	C	51	68	79	84	79	0.111	52.96
Washington Dam	WAD-08	2 ac	A	46	65	77	82	46	19.627	52.96
Washington Dam	WAD-08	2 ac	B	46	65	77	82	65	0.256	52.96
Washington Dam	WAD-08	2 ac	C	46	65	77	82	77	0.584	52.96
Washington Dam	WAD-08	Industrial	A	81	88	91	93	81	1.795	52.96

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Dam	WAD-08	Industrial	C	81	88	91	93	91	0.757	52.96
Washington Dam	WAD-08	Natural Desert	A	63	77	85	88	63	0.004	52.96
Washington Dam	WAD-08	Natural Desert	A	63	77	85	88	63	0.193	52.96
Washington Dam	WAD-08	Natural Desert	D	63	77	85	88	88	0.034	52.96
Washington Dam	WAD-08	Open Space Good	A	39	61	74	80	39	13.264	52.96
Washington Dam	WAD-08	Open Space Good	A	39	61	74	80	39	9.430	52.96
Washington Dam	WAD-08	Open Space Good	B	39	61	74	80	61	0.705	52.96
Washington Dam	WAD-08	Open Space Good	C	39	61	74	80	74	0.289	52.96
Washington Dam	WAD-08	Open Space Good	D	39	61	74	80	80	0.003	52.96
Washington Dam	WAD-08	Straight Row Fair	A	58	72	81	85	58	1.925	52.96
Washington Dam	WAD-08	Straight Row Fair	A	58	72	81	85	58	4.863	52.96
Washington Dam	WAD-08	Straight Row Fair	C	58	72	81	85	81	10.825	52.96
Washington Dam	WAD-09	1 ac	A	51	68	79	84	51	21.070	55.07
Washington Dam	WAD-09	1 ac	B	51	68	79	84	68	1.936	55.07
Washington Dam	WAD-09	2 ac	A	46	65	77	82	46	21.484	55.07
Washington Dam	WAD-09	2 ac	A	46	65	77	82	46	4.016	55.07
Washington Dam	WAD-09	2 ac	B	46	65	77	82	65	1.847	55.07
Washington Dam	WAD-09	2 ac	C	46	65	77	82	77	0.044	55.07
Washington Dam	WAD-09	Natural Desert	A	63	77	85	88	63	0.228	55.07
Washington Dam	WAD-09	Natural Desert	A	63	77	85	88	63	5.632	55.07
Washington Dam	WAD-09	Natural Desert	C	63	77	85	88	85	0.270	55.07
Washington Dam	WAD-09	Open Space Good	A	39	61	74	80	39	9.250	55.07
Washington Dam	WAD-09	Open Space Good	A	39	61	74	80	39	11.993	55.07
Washington Dam	WAD-09	Open Space Good	C	39	61	74	80	74	0.217	55.07
Washington Dam	WAD-09	Straight Row Fair	A	58	72	81	85	58	4.777	55.07
Washington Dam	WAD-09	Straight Row Fair	A	58	72	81	85	58	9.004	55.07
Washington Dam	WAD-09	Straight Row Fair	C	58	72	81	85	81	19.879	55.07
Washington Dam	WAD-10	1/4 ac	C	61	75	83	87	83	4.891	89.84
Washington Dam	WAD-10	Industrial	C	81	88	91	93	91	29.207	89.84
Washington Dam	WAD-10	Natural Desert	C	63	77	85	88	85	0.068	89.84
Washington Dam	WAD-11	1/4 ac	C	61	75	83	87	83	0.048	88.35
Washington Dam	WAD-11	Industrial	C	81	88	91	93	91	21.338	88.35
Washington Dam	WAD-11	Natural Desert	C	63	77	85	88	85	16.815	88.35
Washington Dam	WAD-12	Industrial	C	81	88	91	93	91	5.781	91.00
Washington Dam	WAD-13	1 ac	A	51	68	79	84	51	0.052	84.77
Washington Dam	WAD-13	1 ac	C	51	68	79	84	79	2.900	84.77
Washington Dam	WAD-13	2 ac	A	46	65	77	82	46	0.097	84.77
Washington Dam	WAD-13	2 ac	C	46	65	77	82	77	4.435	84.77
Washington Dam	WAD-13	Industrial	C	81	88	91	93	91	7.778	84.77
Washington Dam	WAD-13	Natural Desert	C	63	77	85	88	85	36.635	84.77
Washington Dam	WAD-14	1 ac	A	51	68	79	84	51	9.739	70.41
Washington Dam	WAD-14	1 ac	B	51	68	79	84	68	13.028	70.41
Washington Dam	WAD-14	1 ac	C	51	68	79	84	79	2.309	70.41
Washington Dam	WAD-14	2 ac	A	46	65	77	82	46	1.508	70.41
Washington Dam	WAD-14	2 ac	B	46	65	77	82	65	2.922	70.41
Washington Dam	WAD-14	2 ac	C	46	65	77	82	77	0.002	70.41
Washington Dam	WAD-14	Natural Desert	A	63	77	85	88	63	1.316	70.41
Washington Dam	WAD-14	Natural Desert	B	63	77	85	88	77	0.088	70.41

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Dam	WAD-14	Natural Desert	C	63	77	85	88	85	17.993	70.41
Washington Dam	WAD-15	1 ac	A	51	68	79	84	51	1.065	81.73
Washington Dam	WAD-15	1 ac	B	51	68	79	84	68	10.608	81.73
Washington Dam	WAD-15	1 ac	C	51	68	79	84	79	1.106	81.73
Washington Dam	WAD-15	2 ac	A	46	65	77	82	46	0.022	81.73
Washington Dam	WAD-15	2 ac	C	46	65	77	82	77	0.000	81.73
Washington Dam	WAD-15	Natural Desert	B	63	77	85	88	77	16.200	81.73
Washington Dam	WAD-15	Natural Desert	C	63	77	85	88	85	79.220	81.73
Washington Dam	WAD-16	1 ac	A	51	68	79	84	51	0.017	80.10
Washington Dam	WAD-16	1 ac	A	51	68	79	84	51	0.946	80.10
Washington Dam	WAD-16	1 ac	C	51	68	79	84	79	5.630	80.10
Washington Dam	WAD-16	2 ac	A	46	65	77	82	46	2.968	80.10
Washington Dam	WAD-16	2 ac	A	46	65	77	82	46	2.088	80.10
Washington Dam	WAD-16	2 ac	C	46	65	77	82	77	29.287	80.10
Washington Dam	WAD-16	Natural Desert	A	63	77	85	88	63	1.818	80.10
Washington Dam	WAD-16	Natural Desert	C	63	77	85	88	85	131.773	80.10
Washington Dam	WAD-16	Open Space Good	A	39	61	74	80	39	3.672	80.10
Washington Dam	WAD-16	Open Space Good	A	39	61	74	80	39	2.980	80.10
Washington Dam	WAD-16	Open Space Good	C	39	61	74	80	74	5.949	80.10
Washington Dam	WAD-16	Open Space Poor	A	68	79	86	89	68	0.100	80.10
Washington Dam	WAD-16	Open Space Poor	A	68	79	86	89	68	0.576	80.10
Washington Dam	WAD-17	2 ac	A	46	65	77	82	46	2.892	76.23
Washington Dam	WAD-17	2 ac	A	46	65	77	82	46	0.087	76.23
Washington Dam	WAD-17	2 ac	C	46	65	77	82	77	13.348	76.23
Washington Dam	WAD-17	Natural Desert	A	63	77	85	88	63	358.131	76.23
Washington Dam	WAD-17	Natural Desert	B	63	77	85	88	77	116.878	76.23
Washington Dam	WAD-17	Natural Desert	C	63	77	85	88	85	182.279	76.23
Washington Dam	WAD-17	Natural Desert	D	63	77	85	88	88	200.803	76.23
Washington Dam	WAD-17	Open Space Poor	A	68	79	86	89	68	9.099	76.23
Washington Dam	WAD-17	Open Space Poor	A	68	79	86	89	68	6.615	76.23
Washington Dam	WAD-17	Open Space Poor	C	68	79	86	89	86	32.500	76.23
Washington Dam	WAD-17	Open Space Poor	D	68	79	86	89	89	5.179	76.23
Washington Dam	WAD-17	Straight Row Fair	A	58	72	81	85	58	0.465	76.23
Washington Dam	WAD-17	Straight Row Fair	A	58	72	81	85	58	1.409	76.23
Washington Dam	WAD-17	Straight Row Fair	C	58	72	81	85	81	114.087	76.23
Washington Dam	WAD-18	Open Space Fair	A	49	69	79	84	49	1.427	79.17
Washington Dam	WAD-18	Open Space Fair	A	49	69	79	84	49	0.165	79.17
Washington Dam	WAD-18	Open Space Fair	C	49	69	79	84	79	0.863	79.17
Washington Dam	WAD-18	Open Space Poor	A	68	79	86	89	68	0.212	79.17
Washington Dam	WAD-18	Open Space Poor	C	68	79	86	89	86	7.793	79.17
Washington Dam	WAD-18	Straight Row Poor	A	66	77	85	89	66	0.208	79.17
Washington Dam	WAD-19	1/2 ac	C	54	70	80	85	80	0.089	84.27
Washington Dam	WAD-19	Open Space Fair	A	49	69	79	84	49	0.116	84.27
Washington Dam	WAD-19	Open Space Fair	A	49	69	79	84	49	0.286	84.27
Washington Dam	WAD-19	Open Space Fair	C	49	69	79	84	79	0.002	84.27
Washington Dam	WAD-19	Open Space Poor	A	68	79	86	89	68	0.001	84.27
Washington Dam	WAD-19	Open Space Poor	C	68	79	86	89	86	0.744	84.27
Washington Dam	WAD-19	Straight Row Poor	A	66	77	85	89	66	0.258	84.27

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Dam	WAD-19	Straight Row Poor	A	66	77	85	89	66	1.304	84.27
Washington Dam	WAD-19	Straight Row Poor	C	66	77	85	89	85	57.221	84.27
Washington Dam	WAD-20	1 ac	C	51	68	79	84	79	9.229	78.86
Washington Dam	WAD-20	1/2 ac	C	54	70	80	85	80	1.177	78.86
Washington Dam	WAD-20	1/3 ac	C	57	72	81	86	81	0.495	78.86
Washington Dam	WAD-20	1/4 ac	A	61	75	83	87	61	0.304	78.86
Washington Dam	WAD-20	1/4 ac	C	61	75	83	87	83	2.606	78.86
Washington Dam	WAD-20	2 ac	C	46	65	77	82	77	2.300	78.86
Washington Dam	WAD-20	Industrial	C	81	88	91	93	91	0.004	78.86
Washington Dam	WAD-20	Newly Graded	C	77	86	91	94	91	0.026	78.86
Washington Dam	WAD-20	Open Space Fair	A	49	69	79	84	49	0.703	78.86
Washington Dam	WAD-20	Straight Row Poor	A	66	77	85	89	66	0.269	78.86
Washington Dam	WAD-20	Straight Row Poor	C	66	77	85	89	85	3.145	78.86
Washington Dam	WAD-21	1/4 ac	A	61	75	83	87	61	0.028	82.62
Washington Dam	WAD-21	1/4 ac	C	61	75	83	87	83	22.969	82.62
Washington Dam	WAD-21	Open Space Fair	C	49	69	79	84	79	2.184	82.62
Washington Dam	WAD-21	Straight Row Fair	C	58	72	81	85	81	0.071	82.62
Washington Dam	WAD-22	1/2 ac	C	54	70	80	85	80	18.219	82.43
Washington Dam	WAD-22	1/3 ac	C	57	72	81	86	81	0.846	82.43
Washington Dam	WAD-22	1/3 ac	D	57	72	81	86	86	0.215	82.43
Washington Dam	WAD-22	1/4 ac	C	61	75	83	87	83	0.937	82.43
Washington Dam	WAD-22	1/4 ac	D	61	75	83	87	87	0.834	82.43
Washington Dam	WAD-22	Natural Desert	D	63	77	85	88	88	0.321	82.43
Washington Dam	WAD-22	Straight Row Poor	C	66	77	85	89	85	14.951	82.43
Washington Dam	WAD-23	1 ac	C	51	68	79	84	79	0.376	83.04
Washington Dam	WAD-23	1/2 ac	C	54	70	80	85	80	26.282	83.04
Washington Dam	WAD-23	2 ac	C	46	65	77	82	77	0.188	83.04
Washington Dam	WAD-23	Industrial	C	81	88	91	93	91	5.140	83.04
Washington Dam	WAD-23	Natural Desert	C	63	77	85	88	85	5.185	83.04
Washington Dam	WAD-23	Newly Graded	C	77	86	91	94	91	3.834	83.04
Washington Dam	WAD-23	Straight Row Poor	C	66	77	85	89	85	0.541	83.04
Washington Dam	WAD-24	1/3 ac	A	57	72	81	86	57	0.028	78.57
Washington Dam	WAD-24	1/3 ac	C	57	72	81	86	81	0.060	78.57
Washington Dam	WAD-24	1/4 ac	A	61	75	83	87	61	3.040	78.57
Washington Dam	WAD-24	1/4 ac	C	61	75	83	87	83	12.164	78.57
Washington Dam	WAD-25	1/3 ac	C	57	72	81	86	81	2.866	84.39
Washington Dam	WAD-25	1/4 ac	C	61	75	83	87	83	8.217	84.39
Washington Dam	WAD-25	Commercial	C	89	92	94	95	94	0.663	84.39
Washington Dam	WAD-25	Industrial	C	81	88	91	93	91	3.058	84.39
Washington Dam	WAD-25	Open Space Good	C	39	61	74	80	74	0.518	84.39
Washington Dam	WAD-26	1/2 ac	C	54	70	80	85	80	0.111	90.73
Washington Dam	WAD-26	2 ac	C	46	65	77	82	77	0.077	90.73
Washington Dam	WAD-26	Industrial	C	81	88	91	93	91	6.777	90.73
Washington Dam	WAD-26	Newly Graded	C	77	86	91	94	91	1.529	90.73
Washington Dam	WAD-27	Industrial	C	81	88	91	93	91	1.856	91.00
Washington Dam	WAD-28	Industrial	C	81	88	91	93	91	4.152	91.00
Washington Dam	WAD-29	1 ac	C	51	68	79	84	79	2.483	87.40
Washington Dam	WAD-29	1/4 ac	C	61	75	83	87	83	29.007	87.40

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Dam	WAD-29	2 ac	C	46	65	77	82	77	4.421	87.40
Washington Dam	WAD-29	Industrial	C	81	88	91	93	91	53.909	87.40
Washington Dam	WAD-30	1/4 ac	C	61	75	83	87	83	6.305	82.02
Washington Dam	WAD-30	2 ac	C	46	65	77	82	77	0.198	82.02
Washington Dam	WAD-30	Industrial	C	81	88	91	93	91	0.202	82.02
Washington Dam	WAD-30	Open Space Good	C	39	61	74	80	74	0.874	82.02
Washington Dam	WAD-31	1/4 ac	C	61	75	83	87	83	22.909	84.69
Washington Dam	WAD-31	Natural Desert	C	63	77	85	88	85	130.162	84.69
Washington Dam	WAD-31	Open Space Good	C	39	61	74	80	74	0.153	84.69
Washington Dam	WAD-32	1/4 ac	C	61	75	83	87	83	3.716	83.20
Washington Dam	WAD-32	Natural Desert	C	63	77	85	88	85	0.419	83.20
Washington Dam	WAD-33	Natural Desert	C	63	77	85	88	85	7.022	85.00
Washington Dam	WAD-34	1/4 ac	C	61	75	83	87	83	0.018	85.00
Washington Dam	WAD-34	Natural Desert	C	63	77	85	88	85	11.449	85.00
Washington Dam	WAD-35	1/4 ac	C	61	75	83	87	83	4.839	84.36
Washington Dam	WAD-35	Industrial	C	81	88	91	93	91	0.018	84.36
Washington Dam	WAD-35	Natural Desert	C	63	77	85	88	85	10.130	84.36
Washington Fields	WAF-01	1/2 ac	A	54	70	80	85	54	0.896	74.42
Washington Fields	WAF-01	1/2 ac	C	54	70	80	85	80	60.826	74.42
Washington Fields	WAF-01	1/2 ac	C	54	70	80	85	80	4.994	74.42
Washington Fields	WAF-01	1/4 ac	A	61	75	83	87	61	8.575	74.42
Washington Fields	WAF-01	1/4 ac	C	61	75	83	87	83	35.488	74.42
Washington Fields	WAF-01	Open Space Fair	A	49	69	79	84	49	5.552	74.42
Washington Fields	WAF-01	Open Space Good	A	39	61	74	80	39	7.171	74.42
Washington Fields	WAF-01	Open Space Poor	A	68	79	86	89	68	0.002	74.42
Washington Fields	WAF-01	Open Space Poor	A	68	79	86	89	68	28.803	74.42
Washington Fields	WAF-01	Open Space Poor	C	68	79	86	89	86	4.881	74.42
Washington Fields	WAF-01	Straight Row Poor	A	66	77	85	89	66	10.941	74.42
Washington Fields	WAF-01	Straight Row Poor	C	66	77	85	89	85	7.307	74.42
Washington Fields	WAF-02	1/2 ac	C	54	70	80	85	80	0.026	79.76
Washington Fields	WAF-02	1/2 ac	C	54	70	80	85	80	0.020	79.76
Washington Fields	WAF-02	1/4 ac	A	61	75	83	87	61	0.069	79.76
Washington Fields	WAF-02	1/4 ac	A	61	75	83	87	61	1.411	79.76
Washington Fields	WAF-02	1/4 ac	C	61	75	83	87	83	7.864	79.76
Washington Fields	WAF-02	1/4 ac	C	61	75	83	87	83	1.797	79.76
Washington Fields	WAF-02	Open Space Fair	A	49	69	79	84	49	0.055	79.76
Washington Fields	WAF-02	Open Space Fair	A	49	69	79	84	49	0.059	79.76
Washington Fields	WAF-02	Open Space Poor	C	68	79	86	89	86	0.001	79.76
Washington Fields	WAF-03	1/4 ac	A	61	75	83	87	61	0.527	81.13
Washington Fields	WAF-03	1/4 ac	C	61	75	83	87	83	21.069	81.13
Washington Fields	WAF-03	1/4 ac	C	61	75	83	87	83	8.333	81.13
Washington Fields	WAF-03	Open Space Fair	A	49	69	79	84	49	1.352	81.13
Washington Fields	WAF-03	Open Space Fair	C	49	69	79	84	79	0.383	81.13
Washington Fields	WAF-04	1/4 ac	C	61	75	83	87	83	4.116	80.96
Washington Fields	WAF-04	Open Space Fair	A	49	69	79	84	49	0.157	80.96
Washington Fields	WAF-04	Open Space Fair	C	49	69	79	84	79	2.096	80.96
Washington Fields	WAF-04	Straight Row Fair	C	58	72	81	85	81	17.118	80.96
Washington Fields	WAF-05	1/3 ac	D	57	72	81	86	86	0.007	84.85

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Fields	WAF-05	1/4 ac	C	61	75	83	87	83	11.934	84.85
Washington Fields	WAF-05	1/4 ac	D	61	75	83	87	87	0.599	84.85
Washington Fields	WAF-05	Natural Desert	C	63	77	85	88	85	1.126	84.85
Washington Fields	WAF-05	Natural Desert	D	63	77	85	88	88	7.102	84.85
Washington Fields	WAF-05	Straight Row Fair	C	58	72	81	85	81	0.466	84.85
Washington Fields	WAF-06	1/3 ac	C	57	72	81	86	81	0.794	81.74
Washington Fields	WAF-06	1/3 ac	D	57	72	81	86	86	0.213	81.74
Washington Fields	WAF-06	1/4 ac	C	61	75	83	87	83	0.292	81.74
Washington Fields	WAF-06	1/4 ac	D	61	75	83	87	87	0.000	81.74
Washington Fields	WAF-06	Natural Desert	C	63	77	85	88	85	0.523	81.74
Washington Fields	WAF-06	Natural Desert	D	63	77	85	88	88	3.425	81.74
Washington Fields	WAF-06	Range Land Poor	C	68	79	86	89	86	0.059	81.74
Washington Fields	WAF-06	Straight Row Fair	C	58	72	81	85	81	33.941	81.74
Washington Fields	WAF-06	Straight Row Fair	D	58	72	81	85	85	0.357	81.74
Washington Fields	WAF-07	1/3 ac	A	57	72	81	86	57	0.010	86.40
Washington Fields	WAF-07	1/3 ac	C	57	72	81	86	81	6.115	86.40
Washington Fields	WAF-07	1/4 ac	A	61	75	83	87	61	0.109	86.40
Washington Fields	WAF-07	1/4 ac	C	61	75	83	87	83	0.015	86.40
Washington Fields	WAF-07	Commercial	C	89	92	94	95	94	9.023	86.40
Washington Fields	WAF-07	Straight Row Fair	C	58	72	81	85	81	0.940	86.40
Washington Fields	WAF-07	Straight Row Poor	A	66	77	85	89	66	0.197	86.40
Washington Fields	WAF-07	Straight Row Poor	C	66	77	85	89	85	16.654	86.40
Washington Fields	WAF-08	1/3 ac	A	57	72	81	86	57	0.167	81.51
Washington Fields	WAF-08	1/3 ac	C	57	72	81	86	81	20.819	81.51
Washington Fields	WAF-08	1/3 ac	D	57	72	81	86	86	0.002	81.51
Washington Fields	WAF-08	1/4 ac	C	61	75	83	87	83	9.530	81.51
Washington Fields	WAF-08	Straight Row Fair	C	58	72	81	85	81	0.144	81.51
Washington Fields	WAF-08	Straight Row Poor	C	66	77	85	89	85	0.170	81.51
Washington Fields	WAF-09	1/3 ac	A	57	72	81	86	57	23.193	66.82
Washington Fields	WAF-09	1/3 ac	C	57	72	81	86	81	16.093	66.82
Washington Fields	WAF-09	1/4 ac	A	61	75	83	87	61	0.048	66.82
Washington Fields	WAF-10	1/3 ac	C	57	72	81	86	81	21.760	83.11
Washington Fields	WAF-10	Commercial	C	89	92	94	95	94	6.119	83.11
Washington Fields	WAF-10	Natural Desert	C	63	77	85	88	85	22.044	83.11
Washington Fields	WAF-10	Open Space Good	C	39	61	74	80	74	6.850	83.11
Washington Fields	WAF-11	1/2 ac	C	54	70	80	85	80	8.628	81.44
Washington Fields	WAF-11	1/2 ac	C	54	70	80	85	80	24.129	81.44
Washington Fields	WAF-11	1/3 ac	C	57	72	81	86	81	0.014	81.44
Washington Fields	WAF-11	1/3 ac	C	57	72	81	86	81	0.004	81.44
Washington Fields	WAF-11	1/4 ac	C	61	75	83	87	83	1.034	81.44
Washington Fields	WAF-11	1/4 ac	C	61	75	83	87	83	4.823	81.44
Washington Fields	WAF-11	Commercial	C	89	92	94	95	94	3.033	81.44
Washington Fields	WAF-11	Straight Row Fair	C	58	72	81	85	81	0.014	81.44
Washington Fields	WAF-12	1/4 ac	C	61	75	83	87	83	29.249	82.58
Washington Fields	WAF-12	1/4 ac	C	61	75	83	87	83	0.000	82.58
Washington Fields	WAF-12	Natural Desert	C	63	77	85	88	85	0.000	82.58
Washington Fields	WAF-12	Straight Row Fair	C	58	72	81	85	81	7.787	82.58
Washington Fields	WAF-13	1 ac	C	51	68	79	84	79	0.002	83.12

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Fields	WAF-13	1 ac	D	51	68	79	84	84	0.005	83.12
Washington Fields	WAF-13	1/2 ac	C	54	70	80	85	80	0.049	83.12
Washington Fields	WAF-13	1/3 ac	C	57	72	81	86	81	0.595	83.12
Washington Fields	WAF-13	1/3 ac	D	57	72	81	86	86	1.047	83.12
Washington Fields	WAF-13	1/4 ac	C	61	75	83	87	83	0.247	83.12
Washington Fields	WAF-13	Natural Desert	D	63	77	85	88	88	26.681	83.12
Washington Fields	WAF-13	Range Land Poor	C	68	79	86	89	86	2.817	83.12
Washington Fields	WAF-13	Range Land Poor	D	68	79	86	89	89	6.545	83.12
Washington Fields	WAF-13	Straight Row Fair	C	58	72	81	85	81	87.908	83.12
Washington Fields	WAF-13	Straight Row Fair	D	58	72	81	85	85	4.180	83.12
Washington Fields	WAF-14	1/3 ac	C	57	72	81	86	81	7.170	86.47
Washington Fields	WAF-14	1/3 ac	D	57	72	81	86	86	8.936	86.47
Washington Fields	WAF-14	1/4 ac	C	61	75	83	87	83	0.799	86.47
Washington Fields	WAF-14	1/4 ac	D	61	75	83	87	87	0.115	86.47
Washington Fields	WAF-14	Natural Desert	D	63	77	85	88	88	10.832	86.47
Washington Fields	WAF-14	Newly Graded	C	77	86	91	94	91	0.320	86.47
Washington Fields	WAF-14	Newly Graded	D	77	86	91	94	94	3.891	86.47
Washington Fields	WAF-14	Range Land Poor	C	68	79	86	89	86	0.067	86.47
Washington Fields	WAF-14	Straight Row Fair	C	58	72	81	85	81	0.198	86.47
Washington Fields	WAF-15	1/3 ac	A	57	72	81	86	57	28.158	60.70
Washington Fields	WAF-15	1/3 ac	C	57	72	81	86	81	4.997	60.70
Washington Fields	WAF-15	1/4 ac	A	61	75	83	87	61	0.673	60.70
Washington Fields	WAF-15	1/4 ac	C	61	75	83	87	83	0.291	60.70
Washington Fields	WAF-15	2 ac	A	46	65	77	82	46	0.273	60.70
Washington Fields	WAF-16	1/3 ac	A	57	72	81	86	57	0.179	83.36
Washington Fields	WAF-16	1/3 ac	C	57	72	81	86	81	30.046	83.36
Washington Fields	WAF-16	1/4 ac	C	61	75	83	87	83	1.408	83.36
Washington Fields	WAF-16	Natural Desert	C	63	77	85	88	85	46.618	83.36
Washington Fields	WAF-17	1 ac	C	51	68	79	84	79	0.001	83.88
Washington Fields	WAF-17	1/2 ac	C	54	70	80	85	80	0.393	83.88
Washington Fields	WAF-17	1/3 ac	D	57	72	81	86	86	0.016	83.88
Washington Fields	WAF-17	2 ac	A	46	65	77	82	46	0.582	83.88
Washington Fields	WAF-17	2 ac	C	46	65	77	82	77	9.079	83.88
Washington Fields	WAF-17	2 ac	D	46	65	77	82	82	4.996	83.88
Washington Fields	WAF-17	Natural Desert	C	63	77	85	88	85	0.480	83.88
Washington Fields	WAF-17	Natural Desert	D	63	77	85	88	88	25.773	83.88
Washington Fields	WAF-17	Open Space Poor	C	68	79	86	89	86	0.717	83.88
Washington Fields	WAF-17	Range Land Poor	C	68	79	86	89	86	7.194	83.88
Washington Fields	WAF-17	Straight Row Fair	C	58	72	81	85	81	9.873	83.88
Washington Fields	WAF-17	Straight Row Fair	D	58	72	81	85	85	0.053	83.88
Washington Fields	WAF-18	1 ac	A	51	68	79	84	51	0.002	76.58
Washington Fields	WAF-18	1/2 ac	A	54	70	80	85	54	0.886	76.58
Washington Fields	WAF-18	1/2 ac	C	54	70	80	85	80	11.114	76.58
Washington Fields	WAF-18	1/3 ac	A	57	72	81	86	57	0.072	76.58
Washington Fields	WAF-18	1/3 ac	C	57	72	81	86	81	1.042	76.58
Washington Fields	WAF-18	1/3 ac	D	57	72	81	86	86	0.010	76.58
Washington Fields	WAF-18	1/4 ac	A	61	75	83	87	61	1.121	76.58
Washington Fields	WAF-18	2 ac	A	46	65	77	82	46	5.090	76.58

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Fields	WAF-18	2 ac	C	46	65	77	82	77	7.260	76.58
Washington Fields	WAF-18	2 ac	D	46	65	77	82	82	0.038	76.58
Washington Fields	WAF-18	Open Space Poor	C	68	79	86	89	86	0.056	76.58
Washington Fields	WAF-18	Range Land Poor	C	68	79	86	89	86	0.045	76.58
Washington Fields	WAF-18	Straight Row Fair	A	58	72	81	85	58	3.783	76.58
Washington Fields	WAF-18	Straight Row Fair	C	58	72	81	85	81	49.377	76.58
Washington Fields	WAF-19	1/3 ac	A	57	72	81	86	57	2.538	73.46
Washington Fields	WAF-19	1/3 ac	C	57	72	81	86	81	0.099	73.46
Washington Fields	WAF-19	1/4 ac	A	61	75	83	87	61	27.758	73.46
Washington Fields	WAF-19	1/4 ac	C	61	75	83	87	83	23.445	73.46
Washington Fields	WAF-19	Natural Desert	C	63	77	85	88	85	14.251	73.46
Washington Fields	WAF-19	Straight Row Fair	A	58	72	81	85	58	0.084	73.46
Washington Fields	WAF-20	1/2 ac	C	54	70	80	85	80	0.001	82.73
Washington Fields	WAF-20	1/4 ac	C	61	75	83	87	83	23.324	82.73
Washington Fields	WAF-20	1/4 ac	C	61	75	83	87	83	2.090	82.73
Washington Fields	WAF-20	1/4 ac	C	61	75	83	87	83	0.781	82.73
Washington Fields	WAF-20	1/4 ac	C	61	75	83	87	83	0.121	82.73
Washington Fields	WAF-20	Commercial	C	89	92	94	95	94	0.215	82.73
Washington Fields	WAF-20	Newly Graded	C	77	86	91	94	91	0.068	82.73
Washington Fields	WAF-20	Open Space Good	C	39	61	74	80	74	1.169	82.73
Washington Fields	WAF-21	1/2 ac	C	54	70	80	85	80	0.006	82.39
Washington Fields	WAF-21	1/2 ac	C	54	70	80	85	80	5.193	82.39
Washington Fields	WAF-21	1/4 ac	C	61	75	83	87	83	0.261	82.39
Washington Fields	WAF-21	1/4 ac	C	61	75	83	87	83	15.922	82.39
Washington Fields	WAF-21	1/4 ac	C	61	75	83	87	83	0.393	82.39
Washington Fields	WAF-21	1/4 ac	C	61	75	83	87	83	3.754	82.39
Washington Fields	WAF-22	1/4 ac	C	61	75	83	87	83	0.170	88.19
Washington Fields	WAF-22	Commercial	C	89	92	94	95	94	7.873	88.19
Washington Fields	WAF-22	Newly Graded	C	77	86	91	94	91	2.775	88.19
Washington Fields	WAF-22	Open Space Good	C	39	61	74	80	74	3.714	88.19
Washington Fields	WAF-23	1/4 ac	C	61	75	83	87	83	7.039	83.00
Washington Fields	WAF-23	1/4 ac	C	61	75	83	87	83	0.428	83.00
Washington Fields	WAF-24	1/4 ac	C	61	75	83	87	83	6.464	83.00
Washington Fields	WAF-25	1/4 ac	C	61	75	83	87	83	16.324	83.00
Washington Fields	WAF-25	1/4 ac	C	61	75	83	87	83	1.291	83.00
Washington Fields	WAF-26	1/2 ac	C	54	70	80	85	80	0.011	81.01
Washington Fields	WAF-26	1/3 ac	C	57	72	81	86	81	7.545	81.01
Washington Fields	WAF-26	1/3 ac	C	57	72	81	86	81	2.781	81.01
Washington Fields	WAF-26	1/4 ac	C	61	75	83	87	83	0.026	81.01
Washington Fields	WAF-26	1/4 ac	C	61	75	83	87	83	0.000	81.01
Washington Fields	WAF-26	1/4 ac	C	61	75	83	87	83	0.008	81.01
Washington Fields	WAF-27	1/3 ac	C	57	72	81	86	81	0.001	83.00
Washington Fields	WAF-27	1/3 ac	C	57	72	81	86	81	0.003	83.00
Washington Fields	WAF-27	1/4 ac	C	61	75	83	87	83	29.735	83.00
Washington Fields	WAF-27	1/4 ac	C	61	75	83	87	83	0.541	83.00
Washington Fields	WAF-27	1/4 ac	C	61	75	83	87	83	0.122	83.00
Washington Fields	WAF-27	1/4 ac	C	61	75	83	87	83	0.022	83.00
Washington Fields	WAF-28	1/3 ac	C	57	72	81	86	81	18.815	81.02

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Fields	WAF-28	1/4 ac	C	61	75	83	87	83	0.137	81.02
Washington Fields	WAF-28	1/4 ac	C	61	75	83	87	83	0.037	81.02
Washington Fields	WAF-29	1/3 ac	C	57	72	81	86	81	0.004	82.89
Washington Fields	WAF-29	1/8 ac	C	77	85	90	92	90	0.612	82.89
Washington Fields	WAF-29	Commercial	C	89	92	94	95	94	12.949	82.89
Washington Fields	WAF-29	Dirt Road	C	72	82	87	89	87	1.697	82.89
Washington Fields	WAF-29	Open Space Good	C	39	61	74	80	74	4.859	82.89
Washington Fields	WAF-29	Straight Row Fair	C	58	72	81	85	81	59.079	82.89
Washington Fields	WAF-30	1 ac	C	51	68	79	84	79	0.002	80.58
Washington Fields	WAF-30	1/3 ac	C	57	72	81	86	81	0.668	80.58
Washington Fields	WAF-30	1/4 ac	C	61	75	83	87	83	0.532	80.58
Washington Fields	WAF-30	2 ac	C	46	65	77	82	77	7.492	80.58
Washington Fields	WAF-30	Commercial	C	89	92	94	95	94	0.005	80.58
Washington Fields	WAF-30	Straight Row Fair	C	58	72	81	85	81	60.688	80.58
Washington Fields	WAF-31	1 ac	C	51	68	79	84	79	24.507	79.82
Washington Fields	WAF-31	1 ac	D	51	68	79	84	84	0.001	79.82
Washington Fields	WAF-31	1/2 ac	C	54	70	80	85	80	0.135	79.82
Washington Fields	WAF-31	1/3 ac	C	57	72	81	86	81	0.010	79.82
Washington Fields	WAF-31	2 ac	C	46	65	77	82	77	0.054	79.82
Washington Fields	WAF-31	Straight Row Fair	C	58	72	81	85	81	17.284	79.82
Washington Fields	WAF-31	Straight Row Fair	D	58	72	81	85	85	0.001	79.82
Washington Fields	WAF-32	1 ac	C	51	68	79	84	79	0.001	80.02
Washington Fields	WAF-32	1/2 ac	C	54	70	80	85	80	9.823	80.02
Washington Fields	WAF-32	Straight Row Fair	C	58	72	81	85	81	0.157	80.02
Washington Fields	WAF-33	1/2 ac	C	54	70	80	85	80	4.950	82.78
Washington Fields	WAF-33	Open Space Poor	C	68	79	86	89	86	4.282	82.78
Washington Fields	WAF-33	Straight Row Fair	C	58	72	81	85	81	0.001	82.78
Washington Fields	WAF-34	1/2 ac	C	54	70	80	85	80	0.142	72.22
Washington Fields	WAF-34	1/4 ac	A	61	75	83	87	61	29.706	72.22
Washington Fields	WAF-34	1/4 ac	C	61	75	83	87	83	2.949	72.22
Washington Fields	WAF-34	Natural Desert	C	63	77	85	88	85	11.838	72.22
Washington Fields	WAF-34	Newly Graded	A	77	86	91	94	77	3.038	72.22
Washington Fields	WAF-34	Newly Graded	C	77	86	91	94	91	7.268	72.22
Washington Fields	WAF-34	Straight Row Fair	A	58	72	81	85	58	0.118	72.22
Washington Fields	WAF-35	1/4 ac	C	61	75	83	87	83	0.714	84.92
Washington Fields	WAF-35	Natural Desert	C	63	77	85	88	85	17.075	84.92
Washington Fields	WAF-36	1/2 ac	B	54	70	80	85	70	0.029	83.62
Washington Fields	WAF-36	1/2 ac	C	54	70	80	85	80	7.379	83.62
Washington Fields	WAF-36	Natural Desert	B	63	77	85	88	77	11.065	83.62
Washington Fields	WAF-36	Natural Desert	C	63	77	85	88	85	72.779	83.62
Washington Fields	WAF-37	1/2 ac	C	54	70	80	85	80	1.337	84.63
Washington Fields	WAF-37	Natural Desert	C	63	77	85	88	85	16.492	84.63
Washington Fields	WAF-38	1/2 ac	C	54	70	80	85	80	18.863	80.23
Washington Fields	WAF-38	Natural Desert	C	63	77	85	88	85	0.437	80.23
Washington Fields	WAF-38	Newly Graded	C	77	86	91	94	91	0.211	80.23
Washington Fields	WAF-39	1 ac	A	51	68	79	84	51	4.566	62.16
Washington Fields	WAF-39	1/2 ac	A	54	70	80	85	54	11.921	62.16
Washington Fields	WAF-39	1/2 ac	C	54	70	80	85	80	6.289	62.16

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Fields	WAF-39	1/3 ac	A	57	72	81	86	57	0.287	62.16
Washington Fields	WAF-39	1/4 ac	A	61	75	83	87	61	0.106	62.16
Washington Fields	WAF-39	1/4 ac	C	61	75	83	87	83	0.000	62.16
Washington Fields	WAF-39	Natural Desert	A	63	77	85	88	63	4.408	62.16
Washington Fields	WAF-39	Natural Desert	C	63	77	85	88	85	1.525	62.16
Washington Fields	WAF-39	Straight Row Fair	A	58	72	81	85	58	0.211	62.16
Washington Fields	WAF-40	1/2 ac	C	54	70	80	85	80	0.123	78.32
Washington Fields	WAF-40	1/3 ac	A	57	72	81	86	57	1.015	78.32
Washington Fields	WAF-40	1/3 ac	C	57	72	81	86	81	7.928	78.32
Washington Fields	WAF-40	Commercial	A	89	92	94	95	89	0.011	78.32
Washington Fields	WAF-40	Commercial	C	89	92	94	95	94	0.004	78.32
Washington Fields	WAF-41	1/2 ac	C	54	70	80	85	80	3.494	80.78
Washington Fields	WAF-41	1/3 ac	C	57	72	81	86	81	0.064	80.78
Washington Fields	WAF-41	2 ac	C	46	65	77	82	77	0.257	80.78
Washington Fields	WAF-41	Commercial	C	89	92	94	95	94	0.277	80.78
Washington Fields	WAF-41	Straight Row Fair	C	58	72	81	85	81	0.121	80.78
Washington Fields	WAF-42	1/3 ac	A	57	72	81	86	57	0.336	91.54
Washington Fields	WAF-42	1/3 ac	C	57	72	81	86	81	0.072	91.54
Washington Fields	WAF-42	Commercial	A	89	92	94	95	89	1.752	91.54
Washington Fields	WAF-42	Commercial	C	89	92	94	95	94	8.449	91.54
Washington Fields	WAF-42	Range Land Poor	A	68	79	86	89	68	0.015	91.54
Washington Fields	WAF-42	Straight Row Fair	A	58	72	81	85	58	0.038	91.54
Washington Fields	WAF-42	Straight Row Fair	C	58	72	81	85	81	0.228	91.54
Washington Fields	WAF-43	1 ac	C	51	68	79	84	79	9.298	79.45
Washington Fields	WAF-43	1/2 ac	C	54	70	80	85	80	19.867	79.45
Washington Fields	WAF-43	2 ac	C	46	65	77	82	77	4.286	79.45
Washington Fields	WAF-43	Commercial	C	89	92	94	95	94	0.266	79.45
Washington Fields	WAF-44	1 ac	C	51	68	79	84	79	0.038	77.25
Washington Fields	WAF-44	2 ac	C	46	65	77	82	77	4.820	77.25
Washington Fields	WAF-44	Commercial	C	89	92	94	95	94	0.002	77.25
Washington Fields	WAF-44	Straight Row Fair	C	58	72	81	85	81	0.293	77.25
Washington Fields	WAF-45	1 ac	C	51	68	79	84	79	0.093	80.00
Washington Fields	WAF-45	1/2 ac	C	54	70	80	85	80	19.749	80.00
Washington Fields	WAF-45	Commercial	C	89	92	94	95	94	0.003	80.00
Washington Fields	WAF-46	1 ac	C	51	68	79	84	79	9.612	82.00
Washington Fields	WAF-46	1/2 ac	C	54	70	80	85	80	0.400	82.00
Washington Fields	WAF-46	2 ac	C	46	65	77	82	77	0.025	82.00
Washington Fields	WAF-46	Straight Row Poor	C	66	77	85	89	85	9.907	82.00
Washington Fields	WAF-47	1 ac	C	51	68	79	84	79	10.194	79.22
Washington Fields	WAF-47	1/2 ac	C	54	70	80	85	80	0.005	79.22
Washington Fields	WAF-47	1/4 ac	C	61	75	83	87	83	0.265	79.22
Washington Fields	WAF-47	2 ac	C	46	65	77	82	77	0.039	79.22
Washington Fields	WAF-47	Straight Row Fair	C	58	72	81	85	81	0.155	79.22
Washington Fields	WAF-47	Straight Row Poor	C	66	77	85	89	85	0.186	79.22
Washington Fields	WAF-48	1/2 ac	C	54	70	80	85	80	0.020	80.99
Washington Fields	WAF-48	1/4 ac	C	61	75	83	87	83	0.000	80.99
Washington Fields	WAF-48	2 ac	C	46	65	77	82	77	0.000	80.99
Washington Fields	WAF-48	Commercial	C	89	92	94	95	94	0.069	80.99

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Fields	WAF-48	Dirt Road	B	72	82	87	89	82	0.000	80.99
Washington Fields	WAF-48	Dirt Road	C	72	82	87	89	87	0.015	80.99
Washington Fields	WAF-48	Open Space Good	C	39	61	74	80	74	0.116	80.99
Washington Fields	WAF-48	Straight Row Fair	B	58	72	81	85	72	0.049	80.99
Washington Fields	WAF-48	Straight Row Fair	C	58	72	81	85	81	50.080	80.99
Washington Fields	WAF-49	1/4 ac	C	61	75	83	87	83	19.005	83.00
Washington Fields	WAF-49	Commercial	C	89	92	94	95	94	0.060	83.00
Washington Fields	WAF-49	Open Space Good	C	39	61	74	80	74	0.005	83.00
Washington Fields	WAF-49	Straight Row Fair	C	58	72	81	85	81	0.299	83.00
Washington Fields	WAF-50	1/4 ac	C	61	75	83	87	83	5.274	82.95
Washington Fields	WAF-50	Straight Row Fair	C	58	72	81	85	81	0.130	82.95
Washington Fields	WAF-51	1/2 ac	C	54	70	80	85	80	0.120	82.98
Washington Fields	WAF-51	1/3 ac	C	57	72	81	86	81	0.000	82.98
Washington Fields	WAF-51	1/4 ac	C	61	75	83	87	83	50.247	82.98
Washington Fields	WAF-51	2 ac	C	46	65	77	82	77	0.051	82.98
Washington Fields	WAF-51	Commercial	C	89	92	94	95	94	0.000	82.98
Washington Fields	WAF-51	Straight Row Fair	C	58	72	81	85	81	0.185	82.98
Washington Fields	WAF-52	1/2 ac	C	54	70	80	85	80	19.199	80.03
Washington Fields	WAF-52	1/4 ac	C	61	75	83	87	83	0.173	80.03
Washington Fields	WAF-53	1/2 ac	C	54	70	80	85	80	0.354	80.96
Washington Fields	WAF-53	1/3 ac	C	57	72	81	86	81	0.115	80.96
Washington Fields	WAF-53	1/4 ac	C	61	75	83	87	83	0.001	80.96
Washington Fields	WAF-53	Straight Row Fair	C	58	72	81	85	81	9.405	80.96
Washington Fields	WAF-54	1/2 ac	C	54	70	80	85	80	31.403	80.26
Washington Fields	WAF-54	1/4 ac	C	61	75	83	87	83	0.004	80.26
Washington Fields	WAF-54	Commercial	C	89	92	94	95	94	0.596	80.26
Washington Fields	WAF-54	Straight Row Fair	C	58	72	81	85	81	0.037	80.26
Washington Fields	WAF-55	1/2 ac	C	54	70	80	85	80	0.602	81.00
Washington Fields	WAF-55	1/3 ac	C	57	72	81	86	81	0.001	81.00
Washington Fields	WAF-55	Commercial	C	89	92	94	95	94	0.052	81.00
Washington Fields	WAF-55	Straight Row Fair	C	58	72	81	85	81	50.462	81.00
Washington Fields	WAF-56	Commercial	C	89	92	94	95	94	10.280	94.00
Washington Fields	WAF-56	Straight Row Fair	C	58	72	81	85	81	0.002	94.00
Washington Fields	WAF-57	Commercial	C	89	92	94	95	94	0.441	81.58
Washington Fields	WAF-57	Straight Row Fair	C	58	72	81	85	81	9.528	81.58
Washington Fields	WAF-58	1/2 ac	A	54	70	80	85	54	0.083	70.41
Washington Fields	WAF-58	1/2 ac	C	54	70	80	85	80	0.067	70.41
Washington Fields	WAF-58	Range Land Poor	A	68	79	86	89	68	10.379	70.41
Washington Fields	WAF-58	Straight Row Fair	A	58	72	81	85	58	12.610	70.41
Washington Fields	WAF-58	Straight Row Fair	C	58	72	81	85	81	17.207	70.41
Washington Fields	WAF-59	Commercial	C	89	92	94	95	94	0.033	79.54
Washington Fields	WAF-59	Straight Row Fair	A	58	72	81	85	58	1.288	79.54
Washington Fields	WAF-59	Straight Row Fair	C	58	72	81	85	81	18.626	79.54
Washington Fields	WAF-60	1/2 ac	A	54	70	80	85	54	2.564	65.35
Washington Fields	WAF-60	1/3 ac	A	57	72	81	86	57	0.005	65.35
Washington Fields	WAF-60	1/4 ac	A	61	75	83	87	61	1.722	65.35
Washington Fields	WAF-60	Commercial	A	89	92	94	95	89	0.000	65.35
Washington Fields	WAF-60	Dirt Road	A	72	82	87	89	72	5.310	65.35

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Fields	WAF-60	Dirt Road	C	72	82	87	89	87	0.483	65.35
Washington Fields	WAF-60	Range Land Poor	A	68	79	86	89	68	18.306	65.35
Washington Fields	WAF-60	Range Land Poor	C	68	79	86	89	86	0.005	65.35
Washington Fields	WAF-60	Straight Row Fair	A	58	72	81	85	58	36.187	65.35
Washington Fields	WAF-60	Straight Row Fair	C	58	72	81	85	81	13.282	65.35
Washington Fields	WAF-61	1/2 ac	A	54	70	80	85	54	11.271	64.73
Washington Fields	WAF-61	1/2 ac	B	54	70	80	85	70	2.508	64.73
Washington Fields	WAF-61	1/2 ac	C	54	70	80	85	80	5.749	64.73
Washington Fields	WAF-61	1/4 ac	A	61	75	83	87	61	3.750	64.73
Washington Fields	WAF-61	1/4 ac	C	61	75	83	87	83	1.861	64.73
Washington Fields	WAF-62	1/2 ac	B	54	70	80	85	70	11.283	73.97
Washington Fields	WAF-62	1/2 ac	C	54	70	80	85	80	7.219	73.97
Washington Fields	WAF-62	Natural Desert	B	63	77	85	88	77	0.132	73.97
Washington Fields	WAF-62	Natural Desert	C	63	77	85	88	85	0.078	73.97
Washington Fields	WAF-63	1/2 ac	B	54	70	80	85	70	2.079	73.06
Washington Fields	WAF-63	1/2 ac	C	54	70	80	85	80	0.738	73.06
Washington Fields	WAF-63	1/4 ac	A	61	75	83	87	61	4.958	73.06
Washington Fields	WAF-63	1/4 ac	B	61	75	83	87	75	1.392	73.06
Washington Fields	WAF-63	1/4 ac	C	61	75	83	87	83	6.038	73.06
Washington Fields	WAF-63	Straight Row Fair	A	58	72	81	85	58	0.107	73.06
Washington Fields	WAF-64	1/2 ac	B	54	70	80	85	70	8.720	75.95
Washington Fields	WAF-64	1/2 ac	C	54	70	80	85	80	12.803	75.95
Washington Fields	WAF-64	1/4 ac	B	61	75	83	87	75	0.003	75.95
Washington Fields	WAF-65	1/2 ac	A	54	70	80	85	54	4.584	75.48
Washington Fields	WAF-65	1/2 ac	B	54	70	80	85	70	0.960	75.48
Washington Fields	WAF-65	1/2 ac	C	54	70	80	85	80	17.164	75.48
Washington Fields	WAF-65	1/4 ac	A	61	75	83	87	61	11.177	75.48
Washington Fields	WAF-65	1/4 ac	B	61	75	83	87	75	0.859	75.48
Washington Fields	WAF-65	1/4 ac	C	61	75	83	87	83	11.094	75.48
Washington Fields	WAF-65	Natural Desert	C	63	77	85	88	85	8.982	75.48
Washington Fields	WAF-65	Newly Graded	C	77	86	91	94	91	1.321	75.48
Washington Fields	WAF-65	Open Space Poor	A	68	79	86	89	68	4.187	75.48
Washington Fields	WAF-65	Open Space Poor	C	68	79	86	89	86	4.723	75.48
Washington Fields	WAF-65	Range Land Poor	A	68	79	86	89	68	0.002	75.48
Washington Fields	WAF-65	Straight Row Fair	A	58	72	81	85	58	1.112	75.48
Washington Fields	WAF-66	1/2 ac	C	54	70	80	85	80	0.014	93.94
Washington Fields	WAF-66	Commercial	C	89	92	94	95	94	5.306	93.94
Washington Fields	WAF-66	Straight Row Fair	C	58	72	81	85	81	0.011	93.94
Washington Fields	WAF-67	1/2 ac	C	54	70	80	85	80	21.302	80.00
Washington Fields	WAF-67	1/4 ac	C	61	75	83	87	83	0.000	80.00
Washington Fields	WAF-67	2 ac	C	46	65	77	82	77	0.012	80.00
Washington Fields	WAF-67	Straight Row Fair	C	58	72	81	85	81	0.020	80.00
Washington Fields	WAF-68	1/2 ac	C	54	70	80	85	80	10.000	82.50
Washington Fields	WAF-68	1/4 ac	C	61	75	83	87	83	0.098	82.50
Washington Fields	WAF-68	Straight Row Poor	C	66	77	85	89	85	9.978	82.50
Washington Fields	WAF-69	1/3 ac	C	57	72	81	86	81	0.030	79.56
Washington Fields	WAF-69	1/4 ac	C	61	75	83	87	83	0.039	79.56
Washington Fields	WAF-69	2 ac	C	46	65	77	82	77	5.479	79.56

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Fields	WAF-69	Straight Row Fair	C	58	72	81	85	81	9.664	79.56
Washington Fields	WAF-70	1/4 ac	C	61	75	83	87	83	4.734	83.00
Washington Fields	WAF-70	Straight Row Fair	C	58	72	81	85	81	0.002	83.00
Washington Fields	WAF-71	1/3 ac	C	57	72	81	86	81	9.497	81.00
Washington Fields	WAF-71	Straight Row Fair	C	58	72	81	85	81	0.001	81.00
Washington Fields	WAF-72	1/2 ac	C	54	70	80	85	80	0.055	80.99
Washington Fields	WAF-72	1/3 ac	C	57	72	81	86	81	10.337	80.99
Washington Fields	WAF-73	1/2 ac	A	54	70	80	85	54	10.114	74.93
Washington Fields	WAF-73	1/2 ac	C	54	70	80	85	80	40.654	74.93
Washington Fields	WAF-73	1/3 ac	C	57	72	81	86	81	0.007	74.93
Washington Fields	WAF-73	1/4 ac	A	61	75	83	87	61	0.009	74.93
Washington Fields	WAF-73	Range Land Poor	A	68	79	86	89	68	0.011	74.93
Washington Fields	WAF-73	Straight Row Fair	C	58	72	81	85	81	0.959	74.93
Washington Fields	WAF-74	1/2 ac	A	54	70	80	85	54	0.151	71.28
Washington Fields	WAF-74	1/4 ac	A	61	75	83	87	61	0.000	71.28
Washington Fields	WAF-74	Newly Graded	A	77	86	91	94	77	8.412	71.28
Washington Fields	WAF-74	Range Land Poor	A	68	79	86	89	68	13.864	71.28
Washington Fields	WAF-75	1/4 ac	A	61	75	83	87	61	1.250	65.67
Washington Fields	WAF-75	2 ac	A	46	65	77	82	46	3.873	65.67
Washington Fields	WAF-75	Range Land Poor	A	68	79	86	89	68	35.135	65.67
Washington Fields	WAF-75	Straight Row Poor	A	66	77	85	89	66	0.140	65.67
Washington Fields	WAF-76	1/4 ac	A	61	75	83	87	61	18.147	63.05
Washington Fields	WAF-76	1/4 ac	C	61	75	83	87	83	1.348	63.05
Washington Fields	WAF-76	Natural Desert	A	63	77	85	88	63	0.684	63.05
Washington Fields	WAF-76	Natural Desert	C	63	77	85	88	85	0.191	63.05
Washington Fields	WAF-76	Open Space Poor	A	68	79	86	89	68	0.048	63.05
Washington Fields	WAF-76	Open Space Poor	C	68	79	86	89	86	0.258	63.05
Washington Fields	WAF-77	1/2 ac	A	54	70	80	85	54	0.100	61.00
Washington Fields	WAF-77	1/4 ac	A	61	75	83	87	61	0.028	61.00
Washington Fields	WAF-77	1/4 ac	A	61	75	83	87	61	20.454	61.00
Washington Fields	WAF-77	Newly Graded	A	77	86	91	94	77	0.040	61.00
Washington Fields	WAF-77	Range Land Poor	A	68	79	86	89	68	0.009	61.00
Washington Fields	WAF-78	1/8 ac	A	77	85	90	92	77	11.988	76.56
Washington Fields	WAF-78	Newly Graded	A	77	86	91	94	77	0.174	76.56
Washington Fields	WAF-78	Range Land Poor	A	68	79	86	89	68	0.621	76.56
Washington Fields	WAF-79	1/4 ac	A	61	75	83	87	61	48.756	61.69
Washington Fields	WAF-79	Natural Desert	A	63	77	85	88	63	13.069	61.69
Washington Fields	WAF-79	Natural Desert	C	63	77	85	88	85	0.708	61.69
Washington Fields	WAF-80	1/2 ac	A	54	70	80	85	54	0.102	75.88
Washington Fields	WAF-80	1/2 ac	C	54	70	80	85	80	0.209	75.88
Washington Fields	WAF-80	1/3 ac	C	57	72	81	86	81	0.173	75.88
Washington Fields	WAF-80	1/4 ac	A	61	75	83	87	61	17.834	75.88
Washington Fields	WAF-80	1/4 ac	C	61	75	83	87	83	38.368	75.88
Washington Fields	WAF-80	1/4 ac	A	61	75	83	87	61	0.000	75.88
Washington Fields	WAF-80	Newly Graded	A	77	86	91	94	77	0.002	75.88
Washington Fields	WAF-80	Open Space Good	C	39	61	74	80	74	4.005	75.88
Washington Fields	WAF-81	1/4 ac	A	61	75	83	87	61	0.046	72.89
Washington Fields	WAF-81	1/8 ac	A	77	85	90	92	77	0.580	72.89

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Washington Fields	WAF-81	Newly Graded	A	77	86	91	94	77	32.748	72.89
Washington Fields	WAF-81	Range Land Poor	A	68	79	86	89	68	5.098	72.89
Washington Fields	WAF-81	Straight Row Poor	A	66	77	85	89	66	16.220	72.89
Washington Fields	WAF-82	1/2 ac	D	54	70	80	85	85	0.005	67.00
Washington Fields	WAF-82	1/4 ac	A	61	75	83	87	61	19.274	67.00
Washington Fields	WAF-82	1/4 ac	D	61	75	83	87	87	2.671	67.00
Washington Fields	WAF-82	Natural Desert	A	63	77	85	88	63	0.015	67.00
Washington Fields	WAF-82	Natural Desert	D	63	77	85	88	88	0.893	67.00
Washington Fields	WAF-82	Newly Graded	A	77	86	91	94	77	3.062	67.00
Washington Fields	WAF-82	Newly Graded	D	77	86	91	94	94	0.473	67.00
Washington Fields	WAF-83	1/4 ac	A	61	75	83	87	61	0.013	66.77
Washington Fields	WAF-83	Natural Desert	A	63	77	85	88	63	25.623	66.77
Washington Fields	WAF-83	Natural Desert	C	63	77	85	88	85	5.297	66.77
Washington Fields	WAF-84	1/2 ac	D	54	70	80	85	85	0.002	64.29
Washington Fields	WAF-84	1/4 ac	A	61	75	83	87	61	8.313	64.29
Washington Fields	WAF-84	1/4 ac	D	61	75	83	87	87	2.521	64.29
Washington Fields	WAF-84	Natural Desert	A	63	77	85	88	63	23.311	64.29
Washington Fields	WAF-85	1/4 ac	A	61	75	83	87	61	0.002	93.89
Washington Fields	WAF-85	1/4 ac	C	61	75	83	87	83	0.132	93.89
Washington Fields	WAF-85	Commercial	A	89	92	94	95	89	1.172	93.89
Washington Fields	WAF-85	Commercial	C	89	92	94	95	94	62.927	93.89
Washington Fields	WAF-86	1/4 ac	A	61	75	83	87	61	0.045	84.25
Washington Fields	WAF-86	Commercial	A	89	92	94	95	89	19.465	84.25
Washington Fields	WAF-86	Commercial	C	89	92	94	95	94	0.618	84.25
Washington Fields	WAF-86	Newly Graded	A	77	86	91	94	77	0.000	84.25
Washington Fields	WAF-86	Straight Row Fair	A	58	72	81	85	58	3.703	84.25
Washington Fields	WAF-86	Straight Row Fair	C	58	72	81	85	81	0.086	84.25
Washington Fields	WAF-87	1/4 ac	A	61	75	83	87	61	0.000	70.67
Washington Fields	WAF-87	Commercial	A	89	92	94	95	89	2.518	70.67
Washington Fields	WAF-87	Natural Desert	A	63	77	85	88	63	0.514	70.67
Washington Fields	WAF-87	Natural Desert	D	63	77	85	88	88	12.405	70.67
Washington Fields	WAF-87	Newly Graded	A	77	86	91	94	77	15.190	70.67
Washington Fields	WAF-87	Newly Graded	D	77	86	91	94	94	0.004	70.67
Washington Fields	WAF-87	Straight Row Fair	A	58	72	81	85	58	0.471	70.67
Washington Fields	WAF-87	Straight Row Poor	A	66	77	85	89	66	76.135	70.67
Washington Fields	WAF-87	Straight Row Poor	D	66	77	85	89	89	0.415	70.67
Washington Fields	WAF-88	Natural Desert	A	63	77	85	88	63	0.994	82.78
Washington Fields	WAF-88	Natural Desert	D	63	77	85	88	88	7.898	82.78
Washington Fields	WAF-88	Newly Graded	A	77	86	91	94	77	10.526	82.78
Washington Fields	WAF-88	Newly Graded	D	77	86	91	94	94	6.221	82.78
Washington Fields	WAF-88	Newly Graded	A	77	86	91	94	77	3.047	82.78
Washington Fields	WAF-88	Newly Graded	D	77	86	91	94	94	17.008	82.78
Washington Fields	WAF-88	Straight Row Poor	A	66	77	85	89	66	12.139	82.78
Washington Fields	WAF-88	Straight Row Poor	D	66	77	85	89	89	0.004	82.78
Washington Fields	WAF-89	1/3 ac	C	57	72	81	86	81	0.020	82.99
Washington Fields	WAF-89	1/4 ac	C	61	75	83	87	83	5.236	82.99
Warner Valley North	WVN-01	Natural Desert	A	63	77	85	88	63	112.221	81.29
Warner Valley North	WVN-01	Natural Desert	C	63	77	85	88	85	485.310	81.29

Watershed Area	Basin Name	Land Use	Soil Group	A	B	C	D	CN	Area [ac]	CCN
Warner Valley North	WVN-01	Natural Desert	D	63	77	85	88	88	76.886	81.29
Warner Valley North	WVN-01	Open Space Poor	A	68	79	86	89	68	23.123	81.29
Warner Valley North	WVN-01	Open Space Poor	C	68	79	86	89	86	1.275	81.29
Warner Valley North	WVN-01	Open Space Poor	D	68	79	86	89	89	4.878	81.29
Warner Valley North	WVN-02	Natural Desert	A	63	77	85	88	63	247.517	80.96
Warner Valley North	WVN-02	Natural Desert	C	63	77	85	88	85	1026.362	80.96
Warner Valley North	WVN-02	Natural Desert	D	63	77	85	88	88	43.173	80.96
Warner Valley North	WVN-03	Natural Desert	A	63	77	85	88	63	421.138	75.56
Warner Valley North	WVN-03	Natural Desert	C	63	77	85	88	85	558.196	75.56
Warner Valley North	WVN-03	Natural Desert	D	63	77	85	88	88	1.538	75.56
Warner Valley South	WVS-01	Natural Desert	A	63	77	85	88	63	834.939	70.61
Warner Valley South	WVS-01	Natural Desert	C	63	77	85	88	85	440.113	70.61
Warner Valley South	WVS-01	Natural Desert	D	63	77	85	88	88	0.944	70.61
Warner Valley South	WVS-02	Natural Desert	A	63	77	85	88	63	464.267	74.27
Warner Valley South	WVS-02	Natural Desert	C	63	77	85	88	85	467.821	74.27
Warner Valley South	WVS-02	Natural Desert	D	63	77	85	88	88	15.312	74.27
Warner Valley South	WVS-03	Natural Desert	A	63	77	85	88	63	1013.230	67.44
Warner Valley South	WVS-03	Natural Desert	C	63	77	85	88	85	255.852	67.44
Warner Valley South	WVS-04	Natural Desert	A	63	77	85	88	63	870.948	66.32
Warner Valley South	WVS-04	Natural Desert	C	63	77	85	88	85	154.771	66.32
Warner Valley South	WVS-05	Natural Desert	A	63	77	85	88	63	165.417	75.54
Warner Valley South	WVS-05	Natural Desert	C	63	77	85	88	85	215.225	75.54
Warner Valley South	WVS-05	Natural Desert	D	63	77	85	88	88	3.221	75.54
Warner Valley South	WVS-06	Natural Desert	A	63	77	85	88	63	394.260	76.64
Warner Valley South	WVS-06	Natural Desert	C	63	77	85	88	85	448.031	76.64
Warner Valley South	WVS-06	Natural Desert	D	63	77	85	88	88	143.500	76.64