CHAPTER 8
IRRIGATION SYSTEM IMPLEMENTATION PLAN

To this point, the proposed irrigation system has been evaluated for two major scenarios: providing service to all existing users and providing service to the system at full buildout. Because building the entire system all at once is not financially viable, the system will need to be built in phases. This chapter presents the recommended implementation plan for the City's secondary irrigation system. It should be noted that the information provided in this implementation plan should be used as a guideline; changes can and should be made to the plan if development patterns support the need to do so. All future development should continue to construct irrigation lines to allow for easy connection in the future.

Phase 1 (2019-2021)
Source: Existing Ivins City Irrigation Shares (Ivins Irrigation Company, St. George Clara Irrigation Company, Santa Clara Irrigation Company
Irrigated Acres: 79
Supply Capacity: 347 AF
Required Storage: 393,000 gallons
Annual Demand: 326 AF
Peak Day Demand: 394 gpm
Peak Hour Demand: 788 gpm

The first phase of the implementation plan utilizes the City's existing irrigation shares to provide irrigation water to a select number of non-residential and residential units. The recommended Phase 1 improvement projects are shown in Figure 8-1. The initial construction phase will bring irrigation water to the majority of the City's parks, schools, and large non-residential locations with high outdoor water demands. The system will also provide service to 415 residential units. Table 8-1 summarizes the areas and demands included in the initial construction phase. The recommended Phase 1 improvement projects are shown in Table 8-2. Note that Phase 1 of the irrigation system assumes that Ivins will consolidate its existing irrigation shares from various irrigation companies into a single point of diversion in the Gunlock pipeline.

Tie into existing 30" raw water line from Gunlock Reservoir with new 18" line

P1-01 (2019)
Install approxiamtely 12,000 feet of new 18" pipe from tie in point to proposed storage tank site (new pipe runs along existing IIC pipe alignment).

P1-02 (2019)
Construct new 2 MG storage reservoir with a base elevation of approximately 3,250 feet (at lower elevation than culinary water tanks)

P1-03 (2019)
Install 1,100 feet of 24" pipe from storage tank to 450 N & 200 W

P1-04 (2019)
Install new PRV at connection point to Gunlock pipeline

P1-05 (2020)
Install 2,720 feet of 20" pipe along 200 W from 450 N to Center St.

P1-10 (2020)
Install 2,900 feet of 16" pipe along Center Street from 200 W to 200 E

P1-06 (2020)
Install 225 feet of 6" pipe to connect existing pipes bewteen subdivisions

P1-07 (2020)
Install 550 feet of 8" pipe along Center St. from 200 W to 270 W

P1-13 (2021)
Install 2,100 feet of 8" pipe along 400 E from Center St. to 300 S. Connect to existing piping with 250 feet of 4" pipe

P1-08 (2020)
Install 1,350 feet of 8" pipe along 400 W from 200 S to 400 S

P1-14 (2021)
Install PRV on Puerto Dr.

P1-09 (2020)
Install 840 feet of 6" pipe along 400 S from 400 W to 300 W

P1-12 (2021)
Install 1,450 feet of 6" pipe along 200 S from 200 E to 400 E

P1-11 (2021)
Install 1,250 feet of 6" pipe along 200 E from Center Street to 200 S

Ivins Reservoir

Kwavasa Dr.

Old Highway 91

200 W

Main St.

400 E

Center St.

200 S

400 S

800 S

Tuachan Dr.

Snow Canyon Dr.

Snow Canyon Pkwy

LEGEND

- Phase 1 PRV
- Phase 1 Storage Facilities
- Phase 1 Improvements Projects
- Existing Ivins City Irrigation Lines
- City Boundary
- Phase 1 Service Areas

NORTH:

SCALE: 0 750 1,500 Feet

PHASE 1 OF IMPLEMENTATION PLAN

IVINS CITY

SECONDARY IRRIGATION MASTER PLAN

BOWEN COLLINS & ASSOCIATES

FIGURE NO. 8-1

S:\Ivins\235-16-01 Sewer, Irr, and Rate Study\4.0 GIS\4.4 Figures\Irrigation MP Figures\Figure 8-1 - Phase 1 Improvements_Final_1.mxd aanderson 1/31/2019

Table 8-1
Phase 1 Demand Summary

Location	# of Connections	Irrigated Acres	Annual Demand (acre-feet)	Peak Day Demand (gpm)
UNITY Park	1	9	47.7	45
Ivins Cemetery	1	2.5	13.25	12.5
City Office/	1	4	21.2	20
Red Mountain Elem	1	5	26.5	25
LDS Church Main Street	1	0.5	2.65	2.5
Rocky Vista University	1	2	10.6	10
Veterans Home	1	2	10.6	10
Vista School	1	2	10.6	10
LDS Church Center St.	1	0.5	2.65	2.5
Red Mountain Resort	1	4	21.2	20
Snow Canyon Medical	1	0.5	2.65	2.5
Residential Service Connections (see Fig. 8-1)	415	46.7*	156.45	234
Total	**426**	**78.7**	**326**	**394**

*Composite irrigated acreage which includes turf grass, shrubs, trees, etc. See Chapter 3. Demand on non-residential connections assumes all irrigation is turf grass.

Table 8-2
Phase 1 Recommended Project Schedule

Project ID	Project Year	Project Description	Unit Cost	Quantity	Total Estimated Cost (2017 Dollars)
P1-01	2019	Install approximately 12,000 feet of 18-inch pipe from Gunlock Pipeline to proposed storage tank site	$150.00	12,000	$1,800,000
P1-02	2019	Construct new 2 MG irrigation water storage facility	$1.00	2,000,000	$2,000,000
P1-03	2019	Install 1,100 feet of 24-inch pipe from new storage facility to 450 N	$175.00	1,100	$192,500
P1-04	2019	Install PRV at connection to Gunlock Pipeline	$60,000	1	60,000
P1-05	2020	Install 2,720 feet of 20-inch pipe along 200 W from 450 N to Center Street	$170.00	2,720	$462,400
P1-06	2020	Install 225 feet of 6-inch near intersection of 400 W and 200 N	$100.00	225	$22,500
P1-07	2020	Install 550 feet of 8-inch pipe along Center St. from 200 W to 270 W	$110.00	550	$60,500
P1-08	2020	Install 1,350 feet of 8-inch pipe along 400 W from 200 S to 400 S	$110.00	1,350	$148,500
P1-09	2020	Install 840 feet of 6-inch pipe along 400 S from 400 W to 300 W	$100.00	840	$84,000
P1-10	2020	Install 2,900 feet of 16-inch along Center St. from 200 W to 200 E	$165.00	2,900	$478,500
P1-11	2021	Install 1,250 feet of 6-inch pipe along 200 E from Center St. to 200 S	$100.00	1,250	$125,000
P1-12	2021	Install 1,450 feet of 6-inch pipe along 200 S from 200 E to 400 E	$100.00	1,450	$145,000
P1-13	2021	Install 2,100 feet of 8-inch pipe along 400 E from Center St. to 300 S and 250 feet of 4-inch pipe to connect to existing piping	$110.00	2,100	$231,000
P1-14	2021	Install PRV on Puerto Drive	$60,000	1	$60,000
M1-1	2019-2021	Meter Installation/Connection Cost	$1,500.00	426	$639,000
				Total	**$6,508,900**

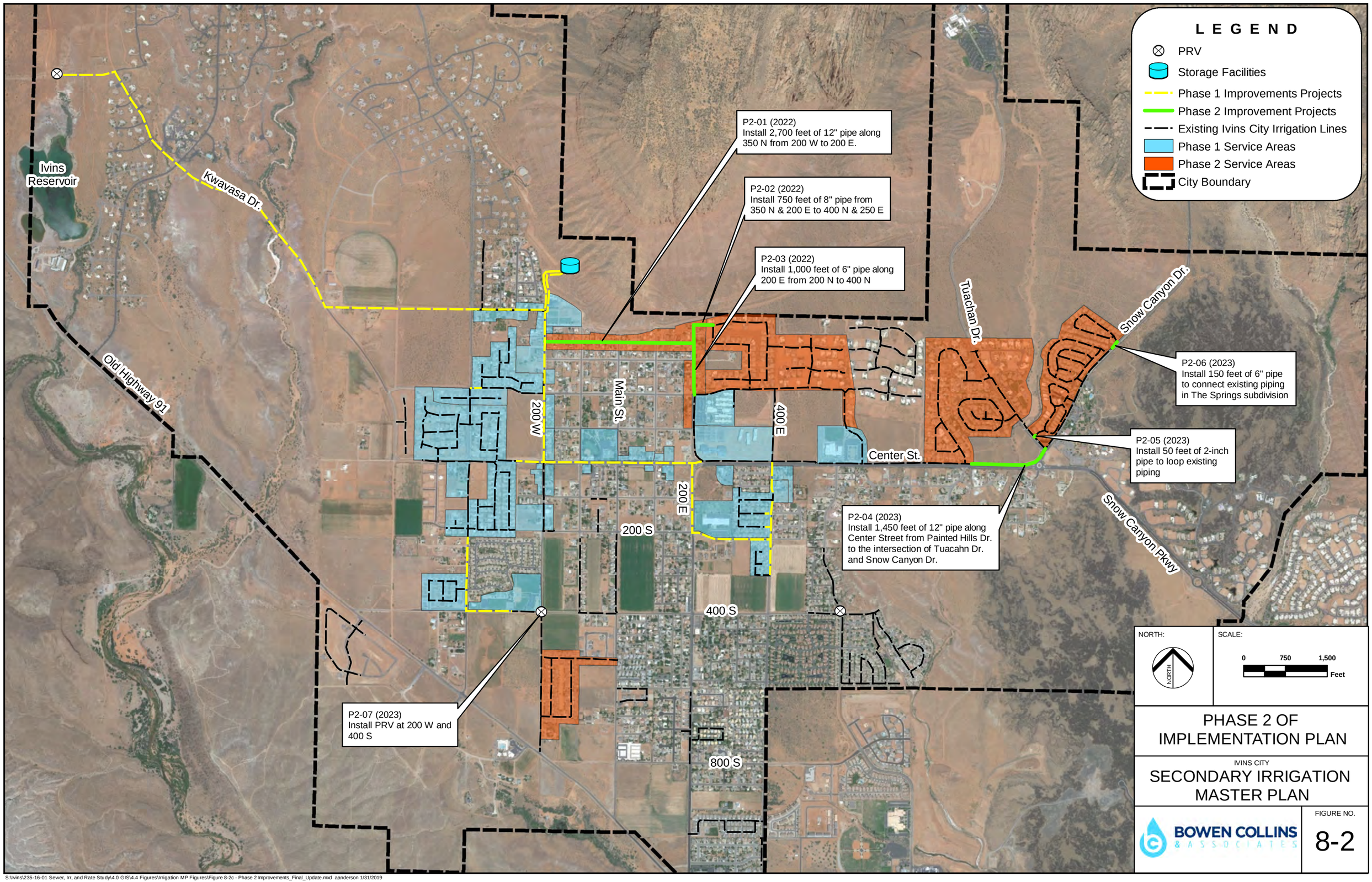
The improvement projects included in Phase 1 will connect the piping network to an extent beyond which water supply is available, but as additional water become available, these areas will be able to be put into service immediately.

Phase 2 (2023 – 2027)
Source: Remaining shares in irrigation companies, irrigation shares/well water from WCWCD
Irrigated Acres: 71 (150 total)
Supply Capacity: 217 AF
Required Storage: 353,000 gallons (746,000 gallons total)
Annual Demand: 238 AF (564 AF total)
Peak Day Demand: 355 gpm (749 gpm total)
Peak Hour Demand: 710 gpm (1,498 gpm total)

Phase 2 of the implementation plan, as shown in Figure 8-2, extends irrigation service to additional locations in the City. This phase extends secondary irrigation service to approximately 570 residential units. The source of water for this phase will come through a combination of the City's remaining irrigation shares and water provided by WCWCD from Gunlock. Phase 2 improvement projects and cost estimates are shown in Table 8-3.

Table 8-3
Phase 2 Recommended Project Schedule

Project ID	Project Year	Project Description	Unit Cost	Quantity	Total Estimated Cost (2017 Dollars)
P2-01	2022	Install 2,700 feet of 12-inch pipe along 350 N from 200 W to 200 E	$130.00	2,700	$351,000
P2-02	2022	Install 700 feet of 8-inch pipe from 350 N & 200 E to 400 N & 250 E	$110.00	750	$82,500
P2-03	2022	Install 1,000 feet of 6-inch pipe along 200 E from 200 N to 400 N	$100.00	1,000	$100,000
P2-04	2023	Install 1,450 feet of 12-inch pipe along Center St. from Painted Hills Dr. to the intersection of Tuachan Dr. and Snow Canyon Dr.	$150.00	1,450	$217,500
P2-05	2023	Install 50 feet of 2-inch pipe to loop existing piping	$60.00	50	$3,000
P2-06	2023	Install 150 feet of 6-inch pipe to connect existing piping in The Springs subdivision	$100.00	150	$15,000
P2-07	2023	Install PRV at 200 W and 400 S	$60,000	1	$60,000
M-2	2022-2023	Meter Installation/Connection Cost	$1,500	570	$855,000
				Total	**$1,684,000**



S:\Ivins\235-16-01 Sewer, Irr, and Rate Study\4.0 GIS\4.4 Figures\Irrigation MP Figures\Figure 8-2c - Phase 2 Improvements_Final_Update.mxd aanderson 1/31/2019

Phase 3 (2027+)
Source: St. George Reuse Water Facility/Dry Creek Reservoir or IIC Water Shares
Irrigated Acres: 44 (194 total)
Supply Capacity: Up to 2,700 AF from reservoir and/or 984 AF from IIC shares
Required Storage: 219,000 gallons **(**965,000 gallons total)
Annual Demand: 148 AF (712 AF total)
Peak Day Demand: 221 gpm (970 gpm total)
Peak Hour Demand: 442 gpm (1,940 gpm total)

Phase 3 continues the expansion of the system to additional areas of the City, providing water to approximately 500 residences in the City. The timing of Phase 3 will be driven by the availability of irrigation water to the City. The construction of Dry Creek Reservoir has the potential to provide Ivins City with enough irrigation water to meet its needs through full build-out. Based on current projections, Ivins could use as much as 2,700 acre-feet of reservoir storage at buildout. This quantity is based on the following assumptions:

- Secondary irrigation service is extended to the entirety of the proposed service area, which includes extending service into existing areas of the City that do not currently have dry irrigation lines in place.
- The reuse pipeline is currently at capacity during the irrigation season, meaning that the City needs to rely on reservoir capacity to meet irrigation demands (i.e. the reservoir is filled during the winter and drained during the irrigation season).

It is uncertain at this point how the reservoir will be funded. Ideally, the reservoir would be funded and managed by WCWCD, who could then sell allotments or "shares" of the reservoir capacity to Ivins and other users. If this option is not viable, the City could explore the option of going in on the project together with the City of St. George and/or City of Santa Clara. At an estimated cost of $17 million, it may not be feasible for Ivins to fund the project alone.

If the reservoir project is delayed or ultimately not constructed, the City will need to seek other sources of future irrigation water (which at this point in time are very limited, if not non-existent). The estimated construction cost for this phase is shown in Table 8-4.

In addition to the capital facilities projects shown in Table 8-4, the City will also need to budget for the purchase of water from the reuse facility. At a minimum, Ivins will need to pay for the operational costs for water treatment and conveyance (there are three pumps stations between the Reuse Facility and Ivins). The exact water purchase price will ultimately need to be negotiated with the City of St. George, but for planning purposes, it has been assumed that the purchase price for reuse water will be $1.30/1,000 gallons. **Based on this estimate, the annual water purchase price for Phase 3 for reuse water is $63,000/year (148 AF of reuse water).**

In order to provide water for Phase 3 of the irrigation system, Ivins will need to either have access to additional source capacity via Dry Wash Reservoir or acquire additonal water shares from Ivins Irrigation Company or other local irrigation companies. The total source volume needed to satisfy all of Phase 2 is 282 acre-feet, but the phase could be scaled back to match the amount the City is able to obtain.

The graphic shown is a conceptual layout of the future reservoir. As shown, this layout covers the existing Kwavasa Drive road. Ultimately, this road will need to stay in service, so the reservoir will need to be designed to accomodate the road.

Note #1
The optimal and ideal scenario for Dry Wash Reservoir would be to service users in Santa Clara and St. George (users at a lower elevatin than Ivins) in exchange for water in Gunlock Reservoir for use in Ivins. This kind of operation would best utilize the natural topography of the area. However, such an agreement would involve cooperation from several users and may ultimately not be accepted. For this reason, Ivins City should plan to utilize Dry Wash reservoir for its system. Since the elevation of the proposed reservoir will not provide the necessary pressure for the system, a booster pump facility will be needed on the reservoir to deliver water to the City's elevated storage tank (or pumped directly into the distribution system).

Ivins Reservoir

P3-12 (2027+)
Construct Dry Wash Reservoir (Potential joint venture with WCWCD and/or St. George City)

Proposed Dry Wash Reservoir

Old Highway 91

Kwavasa Dr.

P3-14 (2027+)
Install 3,700 feet of 18" pipe from Dry Wash Reservoir to Phase 1 tank feed line

Tuachan Dr.

Snow Canyon Dr.

P

P3-13 (2027+)
Construct 1,000 gpm booster pump station on Dry Wash Reservoir outlet line with space to expand to up to 4,000 gpm. See note #1.

200 W

400 E

Main St.

Center St.

P3-09 (2027+)
Install 1,600 feet of 6" pipe along S. Puerto Dr. from Center St. to 200 S

Snow Canyon Pkwy

200 S

P3-01 (2027+)
Install 780 feet of 8" pipe along Center Street from 495 W to 600 W

P3-10 (2027+)
Install 700 feet of 6" pipe along 400 E from 300 S to 400 S

P3-02 (2027+)
Install 3,050 feet of 8" pipe along 600 W from Center St. to Hwy 91

400 S

P3-03 (2027+)
Install 1,200 feet of 6" pipe along 200 S from Main St. to 190 W

P3-11 (2027+)
Install 700 feet of 8" pipe along 400 S from 400 E to 500 E

P3-15 (2027+)
Install new PRV on 400 E & 400 S

P3-04 (2027+)
Install 800 feet of 6" pipe along Main St. from 520 S to 650 S

800 S

P3-07 (2027+)
Install 350 feet of 8" pipe along 400 E from Desert Rose Ln to Tuscany Drive to connect existing piping

P3-05 (2027+)
Install 800 feet of 6" pipe along 600 S from 75 E to 200 E

P3-08 (2027+)
Intall 230 feet of 4" pipe along 400 E near 1100 S to connect existing piping

P3-06 (2027+)
Install 1,260 feet of 6" pipe along 200 E from 800 S to 1000 S

LEGEND

- PRV
- Booster Pump Station
- Phase 1 Storage Facilities
- Phase 1 Improvements Projects
- Phase 2 Improvement Projects
- Phase 3 Improvement Projects
- Existing Ivins City Irrigation Lines
- Dry Wash High Water Level
- Phase 1 Service Areas
- Phase 2 Service Areas
- Phase 3 Service Areas

NORTH:

SCALE: 0 750 1,500 Feet

PHASE 3 OF IMPLEMENTATION PLAN

IVINS CITY

SECONDARY IRRIGATION MASTER PLAN

BOWEN COLLINS & ASSOCIATES

FIGURE NO. 8-3

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Table 8-4
Phase 3 Recommended Project Schedule

Project ID	Project Year	Project Description	Unit Cost	Quantity	Total Estimated Cost (2017 Dollars)
P3-01	2027+	Install 780 feet of 8-inch pipe along Center St. from 495 W to 600 W	$110.00	780	$85,800
P3-02	2027+	Install 3,050 feet of 8-inch pipe along 600 W from Center St. to Highway 91	$110.00	3,050	$335,500
P3-03	2027+	Install 1,200 feet of 6-inch pipe along 200 S from Main St. to 190 W	$100.00	1,200	$120,000
P3-04	2027+	Install 800 feet of 6-inch pipe along Main St. from 520 S to 650 S	$100.00	800	$80,000
P3-05	2027+	Install 800 feet of 6-inch pipe along 600 S from 75 E to 200 E	$100.00	800	$80,000
P3-06	2027+	Install 1,260 feet of 6-inch pipe along 200 E from 800 S to 1000 S	$100.00	1,260	$126,000
P3-07	2027+	Install 350 feet of 8-inch pie along 400 E from Desert Rose Ln. to Tuscany Dr. to connect existing piping	$110.00	350	$38,500
P3-08	2027+	Install 230 feet of 4-inch pipe along 400 E near 1100 S to connect existing piping	$90.00	230	$20,700
P3-09	2027+	Install 1,600 feet of 6-inch piping along S. Pierto Dr. from Center St. to 200 S	$100.00	1,600	$160,000
P3-10	2027+	Install 700 feet of 6-inch along 400 E from 300 S to 400 S	$100.00	700	$70,000
P3-11	2027+	Install 700 feet of 8-inch pipe along 400 S fom 400 E to 500 E	$110.00	700	$77,000
P3-12	2027+	*Construct Dry Wash Storage Reservoir**	*$17,000,000.00*	*1*	*$17,000,000*
P3-13	2027+	Construct 1,000 gpm Booster Pump Station on Dry Wash Reservoir	$1,500,000.00	1	$1,500,000
P3-14	2027+	Install 3,700 feet of 18” pipe from Dry Wash Reservoir to Phase 1 tank feed line	$150.00	3,700	$555,000
P3-15	2027+	Install PRV on 400 E & 400 S	$60,000	1	$60,000
M-3	2027+	Meter Installation/Connection Cost	$1,500	500	750,000
				Total	**$4,058,500**

*It is uncertain at this time how Dry Creek Reservoir will be funded. It will likely be a multi-agency project including multiple cities and/or WCWCD

Phase 4 (2027+)
Source: St. George Reuse Water Facility/Dry Creek Reservoir or IIC Water Shares
Irrigated Acres: 143 (337 total)
Supply Capacity: Up to 2,700 AF from reservoir and/or 984 AF from IIC shares
Required Storage: 710,000 gallons (1,675,000 gallons total)
Annual Demand: 480 AF (1,192 AF total)
Peak Day Demand: 716 gpm (1,686 gpm total)
Peak Hour Demand: 1,433 gpm (3,373 gpm total)

Phase 4 encompasses the improvements required to extend service to the remainder of currently developed lots of the City. Figure 8-4 displays the location and size of the recommended system improvements, and Table 8-5 provides the estimated construction cost for capital projects. **The estimated annual purchase price for reuse water added with this phase is $204,000/year ($267,000/ year total).**

Table 8-5
Phase 4 Recommended Projects

Transmission and Distribution Improvements			
Diameter (in.)	**Length (ft)**	**Unit Cost**	**Total Estimated Cost (2017 Dollars)**
2	7,560	$70.00	$529,200
4	77,980	$90.00	$7,018,200
6	26,080	$100.00	$2,608,000
8	6,475	$110.00	$712,250
10	2,810	$120.00	$337,200
12	1,440	$130.00	$187,200
14	4,750	$160.00	$760,000
		Subtotal	**$12,152,050**
PRVs			
	Quantity	Unit Cost	Total Estimated Cost (2017 Dollars)
	2	$60,000	$120,000
Meter Installation			
	# Meters	Unit Price	Total Estimated Cost (2017 Dollars)
	1,420	$1,500.00	$2,130,000
		Total	**$14,402,050**

Area at too high of an elevation to meet pressure standards and is recommended to be excluded from service area

14" line parallel to existing 8" line needed to service future demands (2027+)

Install PRV on Snow Canyon Parkway

Irrigation PRVs set to 5-10 psi lower than the culinary water PRVs to maintain slightly lower pressure in secondary system

Install PRV at 200 E and 400 S

Ivins Reservoir

Proposed Dry Wash Reservoir

Old Highway 91

Kwavasa Dr.

Main St.

200 W

400 E

Tuachan Dr.

Snow Canyon Dr.

Center St.

Snow Canyon Pkwy

200 S

400 S

800 S

LEGEND

- PRV
- Storage

Pipe Diameter

- 2
- 3
- 4
- 6
- 8
- 10
- 12
- 14
- 16

- Booster Pump Station
- Previously Constructed Lines
- Dry Wash High Water Level
- Areas not serviced

NORTH:

SCALE: 0 850 1,700 Feet

PHASE 4 OF IMPLEMENTATION PLAN

IVINS CITY

SECONDARY IRRIGATION MASTER PLAN

BOWEN COLLINS & ASSOCIATES

FIGURE NO. 8-4

S:\Ivins\235-16-01 Sewer, Irr, and Rate Study\4.0 GIS\4.4 Figures\Irrigation MP Figures\Figure 8-4 - Phase 4 Improvements_Final_1.mxd aanderson 1/31/2019

Phase 5 (2018-Buildout)
Source: St. George Reuse Water Facility/Dry Creek Reservoir or IIC Water Shares
Irrigated Acres: 960 acres (total)
Supply Capacity: Up to 2,700 AF from reservoir and/or 984 AF from IIC shares
Required Storage: 4,800,000 gallons (total storage)
Annual Demand: 3,216 AF (total demand)
Peak Day Demand: 4,810 gpm (total demand)
Peak Hour Demand: 9,620 gpm (total demand)

Phase 5 outlines the infrastructure needed to service the full build-out secondary irrigation system, and includes all projects needed to extend service to currently undeveloped parts of the City as well as infill areas in partially developed areas of Phases 1-4. **All Phase 5 pipelines under 6-inch diameter will be considered "project level" improvements (paid for by the developer), while all pipelines 8-inch and greater are "system level" improvements paid for by the City**. Phase 5 is open-ended in the sense that many of these projects will likely be completed prior to the completion of projects from previous phases. As the City continues to grow, so will the areas in which irrigation water can be used. Whether the irrigation water is used to service an existing or future user has the same demand-reducing effect on the culinary water system. In the end, the City has some flexibility as to how they expand the system, and as previously stated, many of the projects outlined in Phase 5 may be completed during Phases 1-4. Figure 8-5 displays the location and size of future irrigation pipes, and the summary of the cost of these projects is shown in Table 8-6. **Assuming that the water for the Ivins irrigation system will come from the St. George Reuse Facility, the estimated annual reuse water purchase price at buildout is $1.12 million/year.**

Table 8-6
Recommended Phase 5 Improvement Projects

Transmission and Distribution Projects			
Diameter (in)	**Length (ft)**	**Unit Cost**	**Total Construction Cost (2017 Dollars)**
2	146	$70.00	$10,205
4	20,193	$90.00	$1,817,361
6	33,105	$100.00	$3,310,512
8	5,555	$110.00	$611,021
10	2,410	$120.00	$289,252
12	1,285	$130.00	$167,073
		Subtotal	**$6,205,425**
Storage Facilities			
	Volume	Unit Cost	**Total Construction Cost (2017 Dollars)**
	2,800,000	$1.00	$2,800,000
		Total	**$9,005,425**

*Meters for new homes installed at the cost of developer

Ivins Reservoir

Area at too high of an elevation to meet pressure standards and is recommended to be excluded from service area

Additional Storage Capacity Added to Tank Site (up to 2.8 MG depending on extent of irrigation system)

Proposed Dry Wash Reservoir

Old Highway 91

Kwavasa Dr.

Main St.

200 W

400 E

Tuachan Dr.

Snow Canyon Dr.

Center St.

Snow Canyon Pkwy

200 S

400 S

800 S

P

Higher elevation areas of the Commanche Cliffs area may not be serviceable by the secondary irrigation system

L E G E N D

- Booster Pump Station
- Storage Facility
- PRV

Pipe Diameter

- 2
- 3
- 4
- 6
- 8
- 10
- 12
- 16
- Improvements_thru_phase_4
- Previously Constructed Lines
- Phase 1 Service Areas
- Phase 2 Service Areas
- Phase 3 Service Areas
- Phase 4 Service Areas
- Phase 5 Service Areas
- Dry Wash High Water Level
- Areas not serviced

NORTH:

SCALE: 0 850 1,700 Feet

PHASE 5 OF IMPLEMENTATION PLAN

IVINS CITY

SECONDARY IRRIGATION MASTER PLAN

BOWEN COLLINS & ASSOCIATES

FIGURE NO. 8-5

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Reservoir shown in from a preliminary study carried out by the City of St. George. Ultimately, the reservoir will need to be designed in a manner which allows the existing Kwavasa Drive to remain in place.

Additional storage capacity will be needed (at the location of the first tank constructed) as growth continues

Note that a parallel 14" pipeline will be needed to increase distribution capacity at buildout

Kwavasa Dr.

Main St.

400 E

Tuachan Dr.

Snow Canyon Dr.

Old Highway 91

200 W

Center St.

Snow Canyon Pkwy

400 S

800 S

P

LEGEND

- P — Booster Pump Station
- Buildout Storage Tanks
- PRV

Diameter

- 2-inch
- 3-inch
- 4-inch
- 6-inch
- 8-inch
- 10-inch
- 12-inch
- 16-inch
- 18-inch
- 24-inch
- Dry Wash High Water Level
- City Boundary

NORTH:

NORTH

SCALE:

0 800 1,600 Feet

BUILDOUT IRRIGATION SYSTEM LAYOUT

IVINS CITY

SECONDARY IRRIGATION MASTER PLAN

BOWEN COLLINS & ASSOCIATES

FIGURE NO.

7-6

S:\Ivins\235-16-01 Sewer, Irr, and Rate Study\4.0 GIS\4.4 Figures\Irrigation MP Figures\Figure 7-6 - Layout of Buildout System_update.mxd aanderson 1/31/2019