NEW APPLICATION

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SW-01428A-18-0077

Arizona Corporation Commission
DOCKETED

MAR 30 2018

DOCKETED BY

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Attorneys for Liberty Utilities (Litchfield Park Water & Sewer) Corp.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE APPLICATION OF LIBERTY UTILITIES (LITCHFIELD PARK WATER & SEWER) CORP. FOR A CERTIFICATE OF CONVENIENCE AND NECESSITY TO PROVIDE WASTEWATER UTILITY SERVICE IN MARICOPA COUNTY, ARIZONA.	DOCKET NO: SW-01428A-18- **APPLICATION FOR EXTENSION OF CERTIFICATE OF CONVENIENCE AND NECESSITY**

In accordance with A.A.C. R14-2-402 and R14-2-602, Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty Litchfield Park" or "Company"), an Arizona public service corporation, applies to the Arizona Corporation Commission ("Commission") for an order approving the extension of Liberty Litchfield Park's existing Certificates of Convenience and Necessity ("CC&Ns") for water and wastewater utility service to include the Luke Landing and Luke Land 58 developments (together, the "Properties" or "Extension Area") located in certain defined portions of Maricopa County, Arizona.

THE PROPERTIES

1. Luke Landing is an approximately 36-acre residential project estimated to contain 168 single family homes. Luke Land 58 is an approximately 19 acre mixed commercial and residential development estimated to contain 21 single family homes and a self-storage facility. The Properties are being planned for development together and are

adjacent to one another. They are located on the north side of Glendale Avenue, and are about midway between El Mirage Road and Dysart Road. The plan is for the Properties to tie their respective water and wastewater onsite infrastructure onto the adjacent Marbella development's onsite infrastructure. The Properties are located within Section 2 of Township 2 North, Range 1 West of the Gila and Salt River Meridian.

2. The Properties are owned by MPC Luke Land, LLC and Luke Land 58, LLC (collectively, "developers" or "owners"). The developers are working on obtaining their Assured Water Supply Certificates with Arizona Department of Water Resources ("ADWR"). To date, their analysis of assured water supplies has been approved by ADWR. The actual filing for the Assured Water Certificate will occur after this request for a CC&N extension is formally approved.

3. Luke Landing (168 residential lots) is anticipating submitting its Final Plat by end of summer 2018. The commercial property site of Luke Land 58 is currently being rezoned. Luke Land 58 (21 single family homes and one commercial site) will not start its platting process until after the rezoning of the commercial property is complete. Currently, there are no estimations for when the plat process of the Luke Land 58 property will commence. The developers have retained Westland Resources, Inc. to engineer development.

4. The owners have requested that water and wastewater utility service be provided by Liberty Litchfield Park. All wastewater flows generated by the Properties will be delivered to Liberty Litchfield Park's existing Palm Valley Water Reclamation Facility. The effluent generated from the Properties will be routed to the Company's Aquifer Replenishment Facility to be recharged back into the aquifer.

5. The Properties will be developed separately. Retention basins that collect and infiltrate storm water into the ground will be constructed. Each basin shall be designed to hold storm water associated with a 100-year storm event. The developers are

planning to utilize drought tolerant low water use vegetation within the common areas. All single-family homes are planned to incorporate low flow fixtures. Liberty Litchfield Park will provide all water to the Properties from its potable water system. The Company strongly encourages water conservation throughout its water utilities, and its current tariff structure encourages such water conservation. The Properties will not have a golf course, ornamental lakes or other aesthetic water features.

6. Luke Landing will most likely be developed first and is estimated to be constructed in two phases. Phase 1 is estimated to contain 83 lots with home closings beginning in 2019. Currently, Luke Landing is expected to be sold out of its 168 lots by the end of its fifth year following the start of construction. Construction activities are estimated to commence in year one, with all construction completed by end of year two. Luke Land 58 is estimated to have its sole commercial piece of property selling by the end of year three, and all of its associated homes occupied by the end of year four. Luke Land 58 is estimating that it will start making some water and sewer capital expenditures in years one and two with a small amount going into year three. Notably, these are current estimates that are subject to change based upon real estate market conditions.

CC&N EXTENSION APPLICATION

7. Liberty Litchfield Park's legal name, mailing address and telephone number are: Liberty Utilities (Litchfield Park Water & Sewer) Corp., 12725 W. Indian School Road, Suite D-101, Avondale, Arizona, (623) 935-9367. Liberty Litchfield Park is a public service corporation formed for the purpose of providing water and wastewater utility service in Maricopa County, Arizona. Liberty Litchfield Park is a private water and wastewater utility company in the Phoenix Active Management Area, and holds CC&Ns issued by the Commission authorizing Liberty Litchfield Park to provide public water and wastewater utility service within its certificated service areas. The Company's CC&Ns generally encompass an approximately 20 square mile area west of the Agua Fria River

between Luke Air Force Base and interstate highway I-10.

8. The name, address and corporate structure for Liberty Litchfield Park are set forth in the attached **Exhibit 1**, including the amount of stock authorized and subsequently issued. The names, titles and mailing addresses for Liberty Litchfield Park's officers and directors are also set forth on the attached **Exhibit 1**. The Company does not own an interest in any other utility companies. Its parent company owns five other public service corporations providing water and wastewater utility service in Arizona.

9. Liberty Litchfield Park's Certificate of Good Standing from the Commission is attached hereto as **Exhibit 2.**

10. Liberty Litchfield Park's management contact is Matthew Garlick, President, 12725 W. Indian School Road, Suite D-101, Avondale, AZ 85392. Mr. Garlick's telephone number is (623) 298-3763 and his email address is Matthew.Garlick@LibertyUtilities.com.

11. The Company's operator certified by the Arizona Department of Environmental Quality ("ADEQ") is Rick Rhoads, Senior Operations Manager, whose business address is 12725 W. Indian School Road, Suite D-101, Avondale, AZ 85392. Mr. Rhoads telephone number is (623) 298-4824. Mr. Rhoads also is the on-site manager for Liberty Litchfield Park.

12. Liberty Litchfield Park's attorneys for this application are as follows:

Jay L. Shapiro
SHAPIRO LAW FIRM
1819 E. Morten Avenue, Suite 280
Phoenix, Arizona 85020
Telephone: (602) 559-9575
Email: Jay@shapslawaz.com

Todd C. Wiley
General Counsel (West Region) – Liberty Utilities
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
Telephone: (623) 240-2087
Email: Todd.Wiley@LibertyUtilities.com

All case filings, correspondence, data requests and/or other requests for information should be directed to both Mr. Shapiro and Mr. Wiley, as well as to Whitney Birk at whitney@shapslawaz.com.

13. The area covered by this Application are the Properties, located in Maricopa County, Arizona. The legal description for the Properties is attached as **Exhibit 3**.

14. There are no landowners within the Extension Area that did not request an extension of water and wastewater utility service by Liberty Litchfield Park.

15. The City of Glendale is the closest municipality. The City of Surprise, the City of Litchfield Park and the City of Avondale are also located within five miles of the Extension Area.

16. The City of Surprise currently operates a wastewater system within one mile of the Extension Area. Valley Utilities and the City of Surprise operate water systems within one mile of the Extension Area. The Marbella development is adjacent to the Properties and already located in Liberty Litchfield Park's water and wastewater CC&Ns.

17. The Properties' Preliminary Engineering Report for Water (labeled Water Master Plan), dated January 2018, along with the Properties' Preliminary Engineering Report for Wastewater (labeled Wastewater Master Plan), dated January 2018, by Westland Resources, Inc. are attached as **Exhibit 4**.

18. The facilities proposed to be constructed are necessary on-site water and wastewater facilities to be connected to the Marbella Phase 1 water and wastewater facilities that are currently under development. There are no offsite water and wastewater lines that are part of this CC&N Extension Request. The developers are estimating that

460 lineal feet of 6-inch water main and 5,610 lineal feet of 8-inch water mains and 2,560 lineal feet of 12" water mains will be constructed. In addition, the developers estimate that 6,360 lineal feet of 8-inch wastewater mains along with 30 manholes will be constructed. This information is contained in Attachment D of the Water Preliminary Engineering Report and Attachment E of the Wastewater Preliminary Engineering Report, both reports located within **Exhibit 4**.

19. The estimated total cost for construction of facilities required to provide water service to the Extension Area is shown in Appendix D of the Water Preliminary Engineering Report (**Exhibit 4**) and is also shown in **Exhibit 5**. The estimated total cost for construction of facilities required to provide wastewater service to the Extension Area is shown in Appendix E of the Wastewater Preliminary Engineering Report (**Exhibit 4**) and is also shown in **Exhibit 5**. Construction of the required water and wastewater on-site facilities will be financed through advances in aid of construction pursuant to line extension agreements. Construction of any required water and wastewater off-site facilities will be financed using either contributions in aid of construction from hook-up fees or debt or equity provided by Liberty Litchfield Park. Also included in **Exhibit 5** are schedules showing the estimated construction costs by year.

20. A general Statement of Financial Condition for Liberty Litchfield Park is attached as **Exhibit 6**.

21. For service to the Extension Area, Liberty Litchfield Park will be charging its existing rates and charges as approved by the Commission. A copy of the Company's existing tariff schedule is attached as **Exhibit 7**.

22. The Company's estimated annual operating revenue and operating expenses, projected income statements, projected balance sheets and plant expenditures for the first five years of operation in the Extension Area are attached as **Exhibit 8**.

23. The written request for extension of water and wastewater utility service to the Extension Area by the owners is attached as **Exhibit 9**.

24. Detailed maps of Liberty Litchfield Park's existing wastewater CC&N area and the Extension Area are attached as **Exhibit 10**. Exhibit 10 includes four separate maps, including (1) combined water and wastewater CC&N extensions and nearby water and wastewater providers within one mile radius, showing CC&N property land owners and APN's, (2) combined water and wastewater CC&N extensions and nearby municipalities within five miles, (3) water facilities map, and (4) wastewater facilities map. These maps show the Extension Area and municipal corporate limits that overlap with or are within five miles of the Extension Area; and the Extension Area and its relationship to the service areas of other public service corporations, municipalities and/or districts currently providing water or wastewater service within one mile of the Extension Area, with identification of the entity providing service and each type of service being provided. These maps also include:

- The boundaries of the Extension Area, with the total acreage noted.
- The land ownership boundaries within the Extension Area, with the acreage of each separately owned parcel within the Extension Area noted.
- The owner of each parcel within the Extension Area.
- Evidence that there are not any known water and wastewater service connections that are already being provided service by the Applicants within the Extension Area.
- The location of all parcels for which a copy of a request for service has been submitted.

These maps further show the proposed location of the principal components of the water and wastewater system planned for the Extension Area.

25. A copy of the form of notice to be sent to municipal managers/administrators for municipalities within a five-mile radius of the Extension Area is attached as **Exhibit 11**.

26. The Extension Area is already included within Liberty Litchfield Park's Maricopa Association of Governments 208 Water Quality Management Plan.

27. The estimated numbers of customers to be served during the first five years of water and wastewater utility service to the Extension Area are shown in **Exhibit 12**.

28. Liberty Litchfield Park will be submitting a water and wastewater franchise application to the Maricopa County Board of Supervisors if this Application is approved.

29. ADEQ Approvals to Construct and/or Approval of Construction issued for facilities to be constructed in the Extension Area will be provided to the Commission as soon as the Company receives them.

30. Maricopa County Environmental Services Department's ("MCESD") compliance report is attached as **Exhibit 13**. ADEQ no longer issues compliance status reports directly to wastewater providers. Applicant will send a written request to ADEQ asking that the agency send the most current compliance status report for Liberty Litchfield Park directly to the Commission.

31. Liberty's Aquifer Protection Permit issued by ADEQ is attached as **Exhibit 14**.

32. Liberty's Water and Wastewater Use Data Sheets for the period from March 2017 to February 2018 are attached as **Exhibit 15**.

33. A notarized signature on behalf of Liberty Litchfield Park is attached as **Exhibit 16**.

34. For the reasons stated herein, the Company maintains that this Application is in the public interest and should be granted. There is a need for regulated water and wastewater utility service to the Extension Area in Maricopa County to ensure the public

health, and foster orderly growth.

WHEREFORE, Liberty Utilities (Litchfield Park Water & Sewer) Corp. respectfully requests the following:

A. That the Commission consider and act upon this Application as timely as possible and to schedule a hearing, if necessary, on this matter;

B. That upon completion of said hearing, the Commission enter an Order approving this Application and extending Liberty Litchfield Park's Water and Wastewater CC&Ns to include the Extension Area as shown on **Exhibit 3**; and,

C. That the Commission grant such other and further relief as may be appropriate under the circumstances herein.

RESPECTFULLY SUBMITTED this 30th day of March, 2018.

SHAPIRO LAW FIRM, P.C.

By: _____
Jay L. Shapiro
1819 E. Morten Avenue, Suite 280
Phoenix, Arizona 85020

and

LIBERTY UTILITIES

Todd C. Wiley
General Counsel (West Region)
12725 W. Indian School Road, Suite D-101
Avondale, Arizona 85392

Attorneys for Liberty Utilities (Litchfield Park Water & Sewer) Corp.

ORIGINAL and fifteen (15) copies of the foregoing were filed this 30th day of March, 2018, with:

Docket Control
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

By: Whitney Bird

EXHIBITS

1. **Corporate Information for Liberty Utilities (Litchfield Park Water & Sewer) Corp.**
2. **Liberty Litchfield Park's Certificate of Good Standing from the Arizona Corporation Commission.**
3. **Legal Description of Extension Area.**
4. **Preliminary Engineering Report (Water & Wastewater).**
5. **Estimated Total Construction Costs (Water & Wastewater).**
6. **General Statement of Financial Condition (Water & Wastewater).**
7. **Liberty Litchfield Park's Schedule of Rates and Charges (Water & Wastewater).**
8. **Annual Operating Revenue and Expenses, Income Statements, Balance Sheets and Plant Expenditures – First Five Years (Water & Wastewater).**
9. **Written Requests for Service.**
10. **Maps of Existing CC&Ns and Extension Area.**
11. **Form of Notice to be Sent to Municipalities within 5-mile of Extension Area.**
12. **Estimated Number of Customers – First Five Years (Water & Wastewater).**
13. **MCESD water system compliance report.**
14. **ADEQ Aquifer Protection Permit.**
15. **Liberty Litchfield Park's Water & Wastewater Use Data Sheets.**
16. **Notarized Signature on Behalf of Liberty Litchfield Park.**

EXHIBIT 1

CORPORATE INFORMATION

Applicant Proper Name:	Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Applicant Address:	12725 W. Indian School Road, Suite D-101 Avondale, AZ 85392
Corporate Structure:	For-profit Chapter "C" Corporation 500,000 Shares authorized 7,820 shares issued on February 24, 2003
Officers:	Matthew Garlick, President 12725 W. Indian School Road, Suite D-101 Avondale, AZ 85392
	Todd Wiley, Treasurer and Secretary 12725 W. Indian School Road, Suite D-101 Avondale, AZ 85392
Directors:	Ian E. Robertson, Class I Director 354 Davis Road Oakville, ON L6J 2X1
	David Pasieka, Class I Director 354 Davis Road Oakville, ON L6J 2X1
	Dr. Brian J. Brady, Class II Director 354 Davis Road Oakville, ON L6J 2X1
	Virginia L. Grebbien, Class II Director 354 Davis Road Oakville, ON L6J 2X1
	Clifford A. Neal, Class II Director 354 Davis Road Oakville, ON L6J 2X1

EXHIBIT 2

ARIZONA CORPORATION COMMISSION

CERTIFICATE OF GOOD STANDING

FOR

LIBERTY UTILITIES (LITCHFIELD PARK WATER & SEWER) CORP.

STATE OF ARIZONA

Office of the
CORPORATION COMMISSION

CERTIFICATE OF GOOD STANDING

To all to whom these presents shall come, greeting:

I, Ted Vogt, Executive Director of the Arizona Corporation Commission, do hereby certify that

****LIBERTY UTILITIES (LITCHFIELD PARK WATER & SEWER) CORP.****

a domestic corporation organized under the laws of the State of Arizona, did incorporate on September 21 1954.

I further certify that according to the records of the Arizona Corporation Commission, as of the date set forth hereunder, the said corporation is not administratively dissolved for failure to comply with the provisions of the Arizona Business Corporation Act; and that its most recent Annual Report, subject to the provisions of A.R.S. sections 10-122, 10-123, 10-125 & 10-1622, has been delivered to the Arizona Corporation Commission for filing; and that the said corporation has not filed Articles of Dissolution as of the date of this certificate.

This certificate relates only to the legal existence of the above named entity as of the date issued. This certificate is not to be construed as an endorsement, recommendation, or notice of approval of the entity's condition or business activities and practices.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Arizona Corporation Commission. Done at Phoenix, the Capital, this 29th day of March, 2018, A. D.

Ted Vogt, Executive Director

By: 1861529

EXHIBIT 3

LEGAL DESCRIPTION OF EXTENSION AREA

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Legal Description

Luke Landing

WHPacific

NOVEMBER 29, 2016
PROJECT # 005987

LEGAL DESCRIPTION FOR
LUKE LANDING
APN 501-53-004F

A PORTION OF MARICOPA COUNTY ASSESSOR PARCEL NUMBERS 501-53-004D & 501-53-005E LOCATED WITHIN THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 2 NORTH, RANGE 1 WEST, OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTH QUARTER CORNER OF SAID SECTION 2, BEING A MARICOPA COUNTY SURVEY DEPARTMENT BRASS CAP FLUSH, FROM WHICH THE SOUTHWEST CORNER THEREOF, BEING A MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE, BEARS NORTH 89° 13' 29" WEST, A DISTANCE OF 2607.43 FEET(MEASURED) NORTH 89°02'19" WEST(RECORD);

THENCE NORTH 89° 13' 29" WEST, ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 2, A DISTANCE OF 828.42 FEET;

THENCE DEPARTING SAID SOUTH LINE, NORTH 00° 46' 30" EAST, A DISTANCE OF 510.95 FEET;

THENCE NORTH 02°04'01" WEST, A DISTANCE OF 982.98 FEET;

THENCE NORTH 38°02'54" EAST, A DISTANCE OF 514.92 FEET;

THENCE NORTH 07°01'57" EAST, A DISTANCE OF 320.10 FEET;

THENCE NORTH 14°17'10" EAST, A DISTANCE OF 18.87 FEET;

THENCE NORTH 90°00'00" EAST, A DISTANCE OF 235.07 FEET;

THENCE SOUTH 0°43'03" WEST, A DISTANCE OF 250.90 FEET;

THENCE SOUTH 89°16'57" EAST, A DISTANCE OF 54.07 FEET TO A POINT OF CURVATURE OF A

TANGENT CURVE TO THE LEFT;

THENCE ALONG SAID CURVE TO THE LEFT AN ARC DISTANCE OF 15.88 FEET, SAID CURVE HAVING RADIUS OF 50.00 FEET, A DELTA ANGLE OF 18°11'42", AND A CHORD WHICH BEARS SOUTH 81°37'32" EAST, A DISTANCE OF 15.81 FEET TO A POINT OF REVERSE CURVATURE;

THENCE ALONG SAID CURVE TO THE RIGHT AN ARC DISTANCE OF 74.15 FEET, SAID CURVE HAVING A RADIUS OF 50.00 FEET, A DELTA ANGLE OF 84°58'14" AND A CHORD WHICH BEARS SOUTH 64°59'13" EAST, A DISTANCE OF 67.54 FEET TO A POINT OF NON-TANGENCY;

THENCE NORTH 67°29'35" EAST, A DISTANCE OF 25.39 FEET;

THENCE NORTH 89°17'03" EAST, A DISTANCE OF 95.00 FEET TO A POINT ON A LINE COMMON WITH THE PARCEL OF LAND DESCRIBED IN DOCUMENT 2014-0646030, RECORDS OF MARICOPA COUNTY, ARIZONA;

THENCE ALONG SAID COMMON LINE SOUTH 00°43'01" EAST, A DISTANCE OF 1,579.31 FEET;

THENCE CONTINUING ALONG SAID COMMON LINE SOUTH 00°46'08" WEST, A DISTANCE OF 399.87 FEET TO **THE POINT OF BEGINNING**.

SAID PARCEL CONTAINS 1,633,484 SQUARE FEET OR 37.50 ACRES, MORE OR LESS.

EXHIBIT

CURVE TABLE					
CURVE	RADIUS	DELTA	ARCH LENGTH	CHORD LENGTH	CHORD BEARING
C1	50.00'	18°11'42"	15.88'	15.81'	N81°37'13"E
C2	50.00'	84°58'14"	74.15'	67.54'	S64°59'32"E

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N14°17'10"E	18.87'
L2	N90°00'00"E	235.07'
L3	S0°43'03"W	250.90'
L4	S89°16'57"E	54.07'
L5	N67°29'35"E	25.39'
L6	N89°17'03"E	95.00'

APN 501-53-005B
USA BUREAU OF RECLAMATION
DOCKET 3084, PAGE 191 M.C.R.

S89°16'32"E 982.41'

FOUND REBAR ½" STAMPED "33315"

FOUND REBAR 9.81' NORTH & 0.44' WEST OF CORNER

L1

L2

L3

C1

C2

L4

L6

L5

N7°01'57"E 320.10'

400.00' S0°43'33"W

FOUND REBAR ½" STAMPED "33315"

REGISTERED LAND SURVEYOR
34405
JOHN H.
ROSS JR.
Date Signed 11/29/16
ARIZONA, U.S.A.
Expires 12/31/16

N38°02'54"E 514.82'

APN 501-53-006A
MARBELLA RANCH LIMITED PARTNERSHIP
DOC. NO. 2014-0646030 M.C.R.

VACANT DESERT LAND

N2°04'01"W 1988.50'

1693.62'

FOUND REBAR ½" STAMPED "EPS GROUP RLS 42937"

1,579.31' S0°43'01"E

SUBJECT PROPERTY
LUKE LAND 58, L.L.C.
DOC. NO. 2012-1124945, M.C.R.
CONTAINS: 2,528,419 SQ.FT. OR 58.045 ACRES MORE OR LESS

APN 501-53-006A
MARBELLA RANCH LIMITED PARTNERSHIP
DOC. NO. 2014-0646030 M.C.R.

APN 501-53-005C
GLENDALE SALT DEVELOPMENT, L.L.C.P
DOC. NO. 2005-0393587 M.C.R.

N2°04'01"W 982.98'

SUBJECT PARCEL
CONTAINS: 1,633,484 SQ.FT. OR 37.501 ACRES MORE OR LESS

- FOUND BRASS CAP FLUSH
- FOUND BRASS CAP IN HAND HOLE
- FOUND REBAR
- EASEMENT LINE
- SECTION LINE
- PARCEL BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- RIGHT OF WAY LINE

N89°00'19"E 350.06'

S89°13'30"E 50.06'

N2°04'01"W 55.07'

FOUND BRASS CAP FLUSH W 1/16 SEC. 2

N2°04'01"W 440.72'

N0°46'30"E 510.95'

8' ELECTRICAL UTILITY EASEMENT PER DOCKET 6943, PAGE 454 SCHEDULE "B" ITEM NO. 2

22' HIGHWAY EASEMENT PER DOCKET 8259 PAGE 80 SCHEDULE "B" ITEM NO. 3

FOUND REBAR ½" STAMPED "33315"

399.87' S0°46'08"W

828.42'

SW COR. SEC 2 FOUND BRASS CAP IN HAND HOLE

S89°13'29"E 1303.67'

S. 1/4 COR. SEC. 2 FOUND BRASS CAP FLUSH

GLENDALE AVE. 110' R.O.W. 55' EACH SIDE OF SECTION LINE PER ASSESSORS TAX MAP

N89°13'29"W 2,607.43' (M)
N89°02'19"W (R)
BASIS OF BEARING

NORTH

SHEET NUMBER		DRAWING INFO		SHEET INFO	
3 of 3	LUKE LANDING PARCEL SPLIT BOUNDARY EXHIBIT WESTLAND RESOURCES	EXHIBIT		DRAWN	J.A.G.
		13607_MLD_LEGAL B		CHECKED	J.H.R.
		1" = 400'		LAST EDIT	11/29/2016
				PLOT DATE	11/29/2016

WHPacific
7310 N. 16th Street, Ste 315
Phoenix, AZ 85020
602-345-7800
www.whpacific.com

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Legal Description

Luke Land 58

WHPacific

DECEMBER 1, 2016
PROJECT # 005987

LEGAL DESCRIPTION FOR
LUKE LAND 58
APN 501-53-004G

A PORTION OF MARICOPA COUNTY ASSESSOR PARCEL NUMBERS 501-53-004D & 501-53-005E LOCATED WITHIN THE SOUTHWEST QUARTER OF SECTION 2, TOWNSHIP 2 NORTH, RANGE 1 WEST, OF THE GILA AND SALT RIVER MERIDIAN, MARICOPA COUNTY, ARIZONA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTH QUARTER CORNER OF SAID SECTION 2, BEING A MARICOPA COUNTY SURVEY DEPARTMENT BRASS CAP FLUSH, FROM WHICH THE SOUTHWEST CORNER THEREOF, BEING A MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION BRASS CAP IN HANDHOLE, BEARS NORTH 89° 13' 29" WEST, A DISTANCE OF 2607.43 FEET(MEASURED) NORTH 89°02'19" WEST(RECORD);

THENCE NORTH 89° 13' 29" WEST, ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 2, A DISTANCE OF 1303.67 FEET TO THE SOUTH EAST CORNER OF THE SOUTH WEST QUARTER OF THE SOUTH WEST QUARTER OF SAID SECTION 2, BEING A MARICOPA SURVEY DEPARTMENT BRASS CAP FLUSH AND THE **POINT OF TRUE BEGINNING**;

THENCE DEPARTING SAID SOUTH LINE, NORTH 02° 04' 01" WEST, A DISTANCE OF 55.07 FEET, ALONG A LINE COMMON WITH THE PARCEL OF LAND DESCRIBED IN DOCUMENT 2014-0393587, RECORDS OF MARICOPA COUNTY, ARIZONA;

THENCE CONTINUING ALONG SAID COMMON LINE, SOUTH 89° 13' 30" EAST, A DISTANCE OF 50.06 FEET;

THENCE CONTINUING ALONG SAID COMMON LINE, NORTH 02° 04' 01" WEST, A DISTANCE OF 440.72 FEET;

THENCE CONTINUING ALONG SAID COMMON LINE, NORTH 89° 00' 19" EAST, A DISTANCE OF 350.06 FEET;

THENCE CONTINUING ALONG SAID COMMON LINE, NORTH 02° 04' 01" WEST, A DISTANCE OF 1988.50 FEET, TO A POINT ON A LINE COMMON WITH THE PARCEL OF LAND DESCRIBED IN DOCKET 3084 PAGE 191, RECORDS OF MARICOPA COUNTY, ARIZONA;

THENCE CONTINUING ALONG SAID COMMON LINE, SOUTH 89°16'32" EAST, A DISTANCE OF 982.41 FEET TO A POINT ON A LINE COMMON WITH THE PARCEL OF LAND DESCRIBED IN DOCUMENT 2014-0646030, RECORDS OF MARICOPA COUNTY, ARIZONA;

THENCE CONTINUING ALONG SAID COMMON LINE SOUTH 0°43'33" WEST, A DISTANCE OF 400.00 FEET;

THENCE CONTINUING ALONG SAID COMMON LINE SOUTH 00° 43' 01" EAST, A DISTANCE OF 114.31 FEET;

THENCE DEPARTING SAID COMMON LINE SOUTH 89° 17' 03" WEST, A DISTANCE OF 95.00 FEET;

THENCE SOUTH 67° 29' 35" WEST, A DISTANCE OF 25.39 FEET TO A POINT OF CURVATURE OF A NON-TANGENT CURVE TO THE LEFT;

THENCE ALONG SAID CURVE TO THE LEFT AN ARC DISTANCE OF 74.15 FEET , SAID CURVE HAVING A RADIUS OF 50.00 FEET, A DELTA ANGLE OF 84°58'14" AND A CHORD WHICH BEARS NORTH 64°59'32" WEST, A DISTANCE OF 67.54 FEET TO A POINT OF REVERSE CURVATURE;

THENCE ALONG SAID CURVE TO THE RIGHT AN ARC DISTANCE OF 15.88 FEET, SAID CURVE HAVING RADIUS OF 50.00 FEET, A DELTA ANGLE OF 18°11'42", AND A CHORD WHICH BEARS SOUTH 81°37'13" WEST, A DISTANCE OF 15.81 FEET TO A POINT OF TANGENCY;

THENCE NORTH 89°16'57" WEST, A DISTANCE OF 54.07 FEET;

THENCE NORTH 00°43'03" EAST, A DISTANCE OF 250.90 FEET;

THENCE SOUTH 90°00'00" WEST, A DISTANCE OF 235.07 FEET;

THENCE SOUTH 14°17'10" WEST, A DISTANCE OF 18.87 FEET;

THENCE SOUTH 07°01'57" WEST, A DISTANCE OF 320.10 FEET;

THENCE SOUTH 38°02'54" WEST, A DISTANCE OF 514.92 FEET;

THENCE SOUTH 02°04'01" EAST, A DISTANCE OF 982.98 FEET;

THENCE SOUTH 00°46'30" WEST, A DISTANCE OF 510.95 FEET TO A POINT ON THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 2;

THENCE NORTH 89° 13' 29" WEST, ALONG THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 2, A DISTANCE OF 475.26 FEET TO THE SOUTH EAST CORNER OF THE SOUTH WEST QUARTER OF THE SOUTH WEST QUARTER OF SAID SECTION 2, BEING A MARICOPA SURVEY DEPARTMENT BRASS CAP FLUSH AND THE **POINT OF TRUE BEGINNING;**

SAID PARCEL CONTAINS 894,935 SQUARE FEET OR 20.545 ACRES, MORE OR LESS.

EXHIBIT

CURVE TABLE					
CURVE	RADIUS	DELTA	ARCH LENGTH	CHORD LENGTH	CHORD BEARING
C1	50.00'	18°11'42"	15.88'	15.81'	S81°37'13"W
C2	50.00'	84°58'14"	74.15'	67.54'	N64°59'32"W

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S14°17'10"W	18.87'
L2	S90°00'00"W	235.07'
L3	N0°43'03"E	250.90'
L4	N89°16'57"W	54.07'
L5	S67°29'35"W	25.39'
L6	S89°17'03"W	95.00'
L7	S0°43'01"E	114.31'

APN 501-53-005B
USA BUREAU OF RECLAMATION
DOCKET 3084, PAGE 191 M.C.R.

S89°16'32"E 982.41'

FOUND REBAR ½" STAMPED "33315"

FOUND REBAR 9.81' NORTH & 0.44' WEST OF CORNER

REMAINDER PARCEL
CONTAINS: 894,935 SQ.FT. OR 20.545 ACRES MORE OR LESS

400.00' S0°43'33"W

L1 L2 L3 C1 C2 L4 L5 L6 L7

320.10' S7°01'57"W

FOUND REBAR ½" STAMPED "33315"

514.92' S38°02'54"W

APN 501-53-006A
MARBELLA RANCH LIMITED PARTNERSHIP
DOC. NO. 2014-0646030 M.C.R.

1988.50' N2°04'01"W

VACANT DESERT LAND

1693.62'

FOUND REBAR ½" STAMPED "EPS GROUP RLS 42937"

SUBJECT PROPERTY
LUKE LAND 58, L.L.C.
DOC. NO. 2012-1124945, M.C.R.
CONTAINS: 2,528,419 SQ.FT. OR 58.045 ACRES MORE OR LESS

S0°43'01"E

APN 501-53-006A
MARBELLA RANCH LIMITED PARTNERSHIP
DOC. NO. 2014-0646030 M.C.R.

APN 501-53-005C
GLENDALE SALT DEVELOPMENT, L.L.C.P
DOC. NO. 2006-0393587 M.C.R.

982.98' S2°04'01"E

- FOUND BRASS CAP FLUSH
- FOUND BRASS CAP IN HAND HOLE
- FOUND REBAR
- EASEMENT LINE
- SECTION LINE
- PARCEL BOUNDARY LINE
- PROPERTY BOUNDARY LINE
- RIGHT OF WAY LINE

N89°00'19"E 350.06'

S89°13'30"E 50.06'

N2°04'01"W 55.07'

FOUND BRASS CAP FLUSH W 1/16 SEC. 2

N2°04'01"W 440.72'

S0°46'30"W 510.95'

8' ELECTRICAL UTILITY EASEMENT PER DOCKET 6943, PAGE 454 SCHEDULE "B" ITEM NO. 2

22' HIGHWAY EASEMENT PER DOCKET 8259 PAGE 80 SCHEDULE "B" ITEM NO. 3

FOUND REBAR ½" STAMPED "33315"

S0°46'08"W 399.87'

475.25'

SW COR. SEC 2 FOUND BRASS CAP IN HAND HOLE

N89°13'29"W 1303.67'

S. 1/4 COR. SEC. 2 FOUND BRASS CAP FLUSH

GLENDALE AVE. 110' R.O.W. 55' EACH SIDE OF SECTION LINE PER ASSESSORS TAX MAP

POINT OF TRUE BEGINNING

POINT OF BEGINNING

N89°13'29"W 2,607.43' (M)
N89°02'19"W (R)
BASIS OF BEARING

NORTH

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
34405
JOHN H. ROSS JR.
Date Signed 12/01/16
ARIZONA, U.S.A.
Expires 12/31/16

SHEET NUMBER		DRAWING INFO		SHEET INFO	
4 of 4	LUKE LAND 58 PARCEL SPLIT REMAINDER BOUNDARY EXHIBIT WESTLAND RESOURCES	EXHIBIT		DRAWN	J.A.G.
		13607_MLD_LEGAL B		CHECKED	J.H.R.
		1" = 400'		LAST EDIT	11/30/2016
				PLOT DATE	12/1/2016

WHPacific
7310 N. 16th Street Ste 315
Phoenix, AZ 85020
602-343-7600
www.whpacific.com

EXHIBIT 4

ENGINEERING REPORTS

WATER & WASTEWATER

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Water Preliminary Engineering Report

Combined Luke Landing & Luke Land 58

LUKE LANDING AND LUKE LAND 58 WATER MASTER PLAN

APN 501-53-004F AND 501-53-004G

Prepared for:

Mike Nuessle
MPC Development
6501 E. Greenway Parkway, Phoenix, Arizona, 85254

And

Luke Lewis
Luke Land 58, LLC
320 W. Lone Cactus Drive #12, Phoenix, Arizona, 85023

Prepared by:

Erik Christenson, PE
WestLand Resources, Inc.
4001 E. Paradise Falls Dr., Tucson, Arizona, 85712

Project Number: 1952.01

January 2018

EXPIRES 6/30/2020

WestLand Resources

WestLand Resources, Inc. • 4001 E. Paradise Falls Drive • Tucson, Arizona 85712 • 520•206•9585

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EXECUTIVE SUMMARY

WestLand Resources, Inc. (WestLand), has prepared this water master plan for the Luke Landing and Luke Land 58 projects (the Projects). Luke Landing is a residential development project owned by MPC Development (MPC), consists of 168 single-family homes, is located on 36.45 gross acres of land (Maricopa County assessor parcel number (APN) 501-53-004F). Luke Land 58 is a commercial and residential project owned by Luke Land 58 LLC, consists of a self-storage facility and 21 single-family homes, and is located on 19.94 gross acres of land (APN 501-53-004G). The proposed Projects are located in the southwest quarter of Section 2, Township 2 North, Range 1 West, Gila and Salt River Meridian, Maricopa County. Water service will be provided by Liberty Utilities' Litchfield Park Water & Sewer Corporation (Liberty). Currently, Liberty does not own any water lines near the Projects, however, Liberty will be extending its infrastructure to serve a neighboring project to the east called Marbella Ranch (Marbella). The proposed Projects will include approximately 460 linear feet (lf) of 6-inch water main, 5,610 lf of 8-inch water main, and 2,560 lf of 12-inch water main. Carollo Engineers, Inc. (Carollo) is the water and wastewater engineer for Liberty. Carollo produced a project memorandum, *Luke Landing and Luke Land 58 Water and Wastewater Systems Evaluations*, dated September 28, 2017, describing the Projects and determined that the Liberty water system has adequate capacity to serve them. Offsite improvements are not required to serve the Luke Landing project beyond those which are already planned for the Liberty water system by Marbella.

1. INTRODUCTION

WestLand Resources, Inc. (WestLand), has prepared this water master plan for the Luke Landing and Luke Land 58 projects (the Projects) to describe the infrastructure that will be serving water to the Projects and to describe the design criteria used to size this infrastructure. Luke Landing is a residential development project owned by MPC Development (MPC) consisting of 168 single-family homes, and is located on 36.45 gross acres of land (Maricopa County assessor parcel number (APN) 501-53-004F). Luke Land 58 is a commercial and residential project owned by Luke Land 58 LLC, consisting of a self-storage facility and 21 single-family homes, and is located on 19.94 gross acres of land (APN 501-53-004G). The Projects are located in the southwest quarter of Section 2, Township 2 North, Range 1 West, Gila and Salt River Meridian, in Maricopa County.

The Projects are part of unincorporated Maricopa County, but are also surrounded by strip annexes belonging to the City of Glendale and may one day become incorporated with the City. Water service will be provided by Liberty Utilities' Litchfield Park Water & Sewer Corporation (Liberty). Currently, Liberty does not own any water lines near the Projects; however, Liberty will be extending its infrastructure to serve a neighboring project to the east called Marbella Ranch (Marbella). The Projects cannot connect to Liberty's system until Marbella's Phase I water lines are installed. WestLand, MPC, Luke Land 58 LLC, and Liberty will be filing an application to extend the Certificate of Convenience and Necessity (CC&N) area to expand Liberty's service area to include the proposed Projects. This report has been written to support the CC&N application as well as to support line extension agreements with Liberty.

A layout of the Luke Landing project is provided as **Attachment A** and includes its water mains. A layout of the Luke Land 58 project is provided as **Attachment B**. **Figure 1** below shows a vicinity map with the project location.

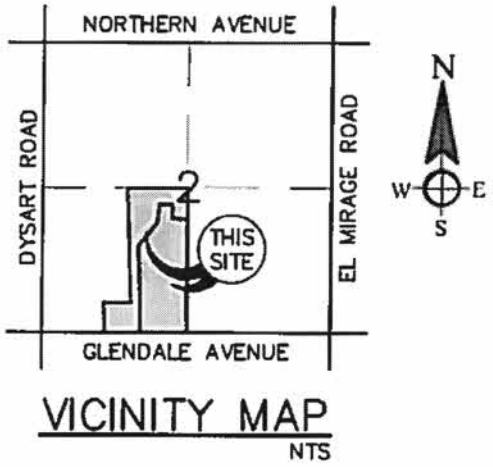


Figure 1. Luke Landing Vicinity Map

Carollo Engineers, Inc. (Carollo), is the water and wastewater engineer for Liberty. Carollo maintains Liberty's water and wastewater models and must be contracted to perform hydraulic modeling and verify the capacity of the Liberty water system for any new developments. Carollo produced a project memorandum, *Luke Landing and Luke Land 58 Water and Wastewater Systems Evaluations*, dated September 28, 2017, describing the proposed Projects and the ability of the Liberty water system to serve the Projects. Carollo's memorandum is included as **Attachment C.**

2. DESIGN CRITERIA

The design criteria used for these Projects follows the Liberty Utilities Maricopa County Development Guide (Development Guide), dated January 1, 2014. Demand criteria for the average day demand (ADD), maximum day demand (MDD), and peak hour demand (PHD) follows the Development Guide as shown in **Table 1** below.

Table 1. Demand Criteria

Land Use	ADD (gallons per capita per day (gpcd))	Capita/DU	Max Day Peaking Factor	Peak Hour Peaking Factor
Active-Adult	160	1.9	1.8	3.0
Single-Family	150	3.2	1.8	3.0
Multi-Family	110	2.0	1.8	3.0
Commercial	1,700 gpd/acre	N/A	1.8	3.0
Developed Open Space	1,800 gpd/acre	N/A	N/A	N/A

General distribution system requirements from the Development Guide are summarized below in **Table 2.**

Table 2. General Criteria

Topic	Criteria
Pressures	• Minimum 40 pounds per square inch (psi) during peak hour • Minimum 20 psi during max day + fire flow • Maximum of 80 psi at customer side unless a PRV is added. • System pressure above 90 psi requires Liberty's written approval.
Velocity and Head loss	• 8 feet per second (fps) max for distribution piping. • 2 fps min and 6 fps max for well transmission piping. • 5 ft/1000 ft max head loss for well transmission piping.
Hazen-Williams Coefficient	130
Fire Flows	• 1,000 gallons per minute (gpm) for residential and 1,500 gpm for commercial following emails with Dennis Rohrman of Rural Metro. • Fire hydrant flow test required.*
Fire Hydrant Spacing	As dictated by the local Fire Department or applicable code.

Topic	Criteria
Minor Losses	To be included for PRVs and PSVs. To be ignored for long pipe runs.
Storage Requirements	• Equalization = 30% of max day • Emergency reserve = 10% of max day • Fire flow storage = Fire flow x duration
Booster Pump Station Capacity	To be greater than or equal to the larger of peak hour or max day + fire flow, when the largest booster pump is out of service.
Water Piping	6-inch minimum
Water Valves	• Number required at an intersection = N-1, where N=the number of radiating mains • Spacing per ADEQ Bulletin #10 • Minimum possible in well transmission mains
Well Field Capacity	Greater than or equal to the maximum day demand with the largest well out of service.
Air Release/Combination Valves	To be located at high points, vertical realignments, or as approved by Liberty.
Pressure Reducing Valves	• To be located on "trunk" distribution mains where required to maintain design pressures with approval from Liberty. • To be sized based on anticipated flow ranges.
Wash Crossings	• To be encased following Liberty specifications. • Minimum cover of 2 feet below 100-year scour depth or 4 feet below wash bottom for minor washes. • Minimum cover of 4 feet below 100-year scour depth or 8 feet below wash bottom for major washes.
Service Lines	• Separate connections and meters required for single-family homes. • Minimum size of 1-inch for residential homes. • Minimum size of 2-inch for commercial or multi-family. • Minimum size of 1 ½ -inch for irrigation service. • Shut off valves required on customer side of meter.
Residential Potable Water Meter Criteria	Per the Uniform Plumbing Code.
Meter Location	• To be doubled up on lot lines where possible. • Avoid locating at road intersection corners. • Avoid locating adjacent to fire hydrants.

*No fire hydrants currently exist near the development, as such a fire hydrant test is not possible.

3. DEMANDS AND CALCULATIONS

3.1. AVERAGE DAILY DEMAND

The following factors were used to calculate the ADD for this project:

1) The ADD per person for single-family residential is 150 gallons per day per capita (gpcd). The ADD per acre of commercial land is 1,700 gpd/acre.
2) The people per dwelling unit (ppdu) for single-family residential is 3.2. Because the commercial portions of Luke Land 58 are intended as storage space and parking, WestLand assumes that only the southern 4.4 acres will have any commercial demands.
3) The ADD for the Projects is therefore:
(189 du) x (150 gpcd) x (3.2 ppdu) + (4.4 acres) x (1,700 gallons per day (gpd)/acre) = 98,200 gpd or 68.2 gallons per minute (gpm)

3.2. MAXIMUM DAILY DEMAND

The following factors were used to calculate the maximum daily demand (MDD) for this project:

1) For single-family residential and commercial, the MDD is equal to 1.8 times the ADD.
2) The MDD for the Projects is therefore:
(98,200 gpd) x (1.8) = 176,760 gpd or 123 gpm

3.3. PEAK HOUR DEMAND

The following factors were used to calculate the PHD for this project:

1) The PHD is equal to 3.0 times the ADD.
2) The PHD for the Projects is therefore:
(68.2 gpm) x (3.0) = 205 gpm

3.4. STORAGE REQUIREMENTS

The following factors were used to calculate the equalization storage requirement for this project:

1) Equalization is equal to 30 percent (30%) of the MDD.
2) The equalization for the Projects is therefore:
(176,760 gpd) x (30%) = 53,028 gallons

The following factors were used to calculate the emergency reserve storage requirement for this project:

1) Emergency reserve is equal to ten percent (10%) of the MDD.
2) The emergency reserve for the Projects is therefore:
(176,760 gpd) x (10%) = 17,676 gallons

The following factors were used to calculate the fire flow storage requirement for the Projects:

1) Fire flow storage is the fire flow requirement times the fire flow duration.
2) The fire flow storage for the Projects is therefore:
   (1,500 gpm) x (2 hours) x (60 min/hour) = 180,000 gallons

Based on the demands calculated above, and the requirements of the Development Guide, the following system capacity requirements were calculated (**Table 3**).

Table 3. Capacity Requirements based on Luke Landing Demands

Category	Required Capacity
Booster Pump Station Capacity	Minimum flow = 1,623 gpm when the largest booster pump is out of service.
Well Field Capacity	Minimum supply = 123 gpm when the largest well is out of service.

3.5. ESTIMATED PRESSURE

The elevations for the Projects range between 1,074- and 1,088 feet. The Airline Pump Station is intended to discharge at a pressure of 80 psi in the future, and has an approximate elevation 1,047 feet above mean sea level (amsl) based on Google Earth. Based on those factors, a high-water elevation of 1,232 feet amsl would be expected for the zone, and the static system pressure experienced by the Projects would range from approximately 62 to 68 pounds per square inch (psi).

4. EXISTING FACILITIES/CONDITIONS

Liberty's existing service area consists of approximately 21 square miles located south of Glendale Avenue, north of Interstate Highway 10, west of El Mirage Road, and east of Cotton Lane. Communities within the City of Litchfield Park, the City of Goodyear, the City of Avondale, and unincorporated areas of Maricopa County are served by Liberty's water system.

According to Carollo's memorandum, Liberty's water system consists of 12 existing wells, two storage reservoirs, and two booster stations. The water system is currently operated as a single pressure zone; however, Liberty plans to divide the water system into two zones in the future. The Projects will be located in the upper pressure zone and served by the Airline Booster Station. The wells have a combined capacity in excess of 13,000 gallons per minute (gpm) with the largest well out of service (this number includes a 13th well that is intended to be constructed in the future). The storage reservoirs provide a total of 10.1 million gallons (MG) of storage, with 3.8 MG serving the upper zone. The Airline Booster Station has a pumping capacity of 12,000 gpm.

5. PROPOSED FACILITIES

The Projects are located adjacent to Phase I of the proposed Marbella project and relies on that project to bring water and sewer lines through the Marbella property to Luke Landing and Luke Land 58. To serve Marbella, Liberty must extend a 16-inch water line up El Mirage Road for three-quarters of a mile from the Airline Reservoir booster station to the intersection of Glendale Avenue and El Mirage Road. Until the 16-inch line is extended and the Phase I water lines of Marbella are installed, the Projects will not have water service.

Proposed water lines within the Projects include approximately 460 linear feet (lf) of 6-inch water main, 5,610 lf of 8-inch water main, and 2,560 lf of 12-inch water main. See **Attachment A** and **Attachment B** for layouts of the proposed facilities within the Projects.

Approximately 1,000 feet of the pipeline within Luke Landing needs to be 12-inch in order to provide a 3,000 gpm fire flow to the Marbella commercial facility. It is recommended that the 3,000 gpm fire flow requirement be confirmed with Rural Metro Fire prior to finalizing the pipe sizing.

Carollo's memorandum determined that the Liberty water system has adequate storage and pumping capacity to serve the Projects. With the addition of the already planned well 6AL, the system will have adequate source capacity to supply the Projects.

6. WATER MODEL

Carollo's memorandum determined that the Liberty water system has adequate capacity to serve the Projects while maintaining minimum pressures during the peak hour scenario and the maximum day plus fire flow scenario.

7. OPINION OF PROBABLE CONSTRUCTION COSTS

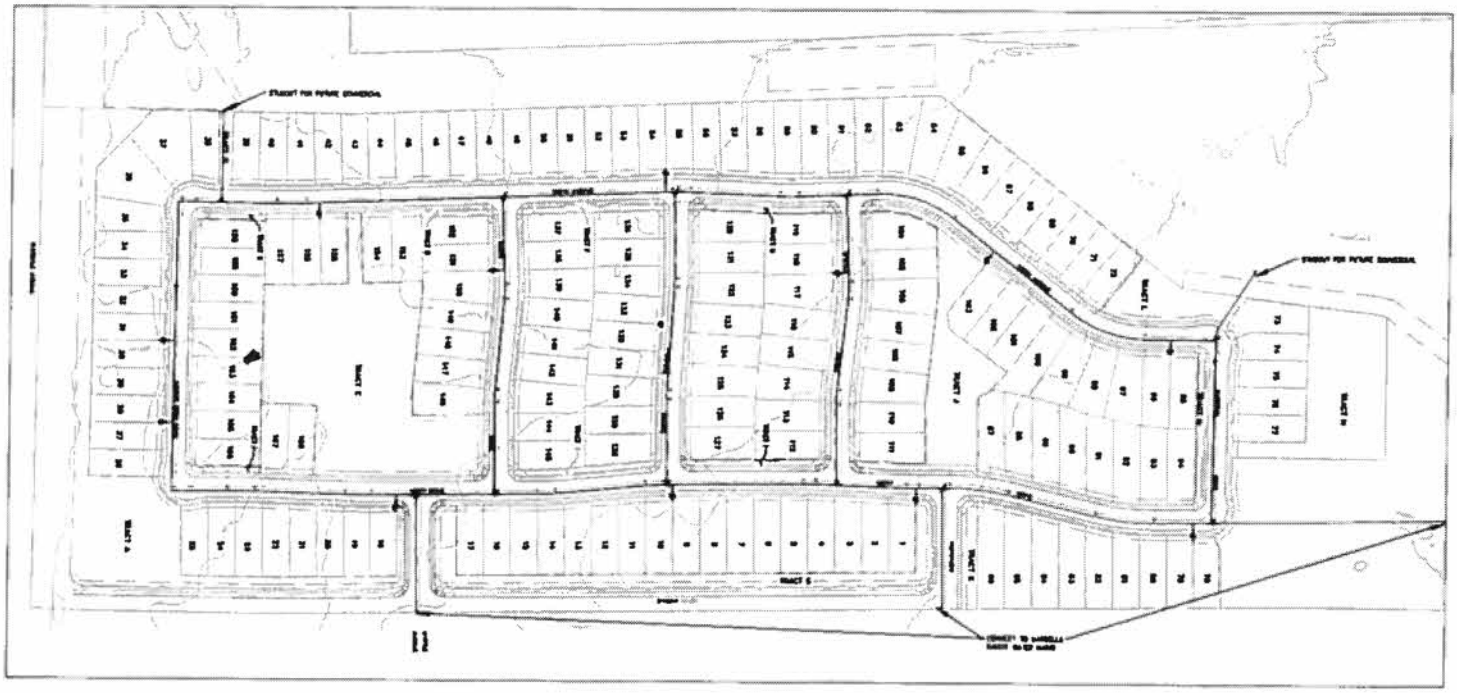
WestLand has attached two opinions of probable construction costs (OPCCs) for the onsite water mains and appurtenances that will be owned by Liberty for these projects. The OPCCs are located in **Attachment D**.

8. SUMMARY AND CONCLUSIONS

Luke Landing is a residential development project consisting of 168 single-family homes and Luke Land 58 is a commercial and residential project consisting of a self-storage facility and 21 single-family homes. Both will be served by the Liberty Utilities' Litchfield Park Water & Sewer Corporation. The Projects will include approximately 460 lf of 6-inch water main, 5,610 lf of 8-inch water main, and 2,560 lf of 12-inch water main. Offsite improvements are not required to serve the Projects beyond those which are already planned for the Liberty water system.

ATTACHMENT A

LUKE LANDING
WATER LAYOUT



LEGEND
- 12-INCH
- 8-INCH
- 6-INCH
- FIRE HYDRANT
- VALVE

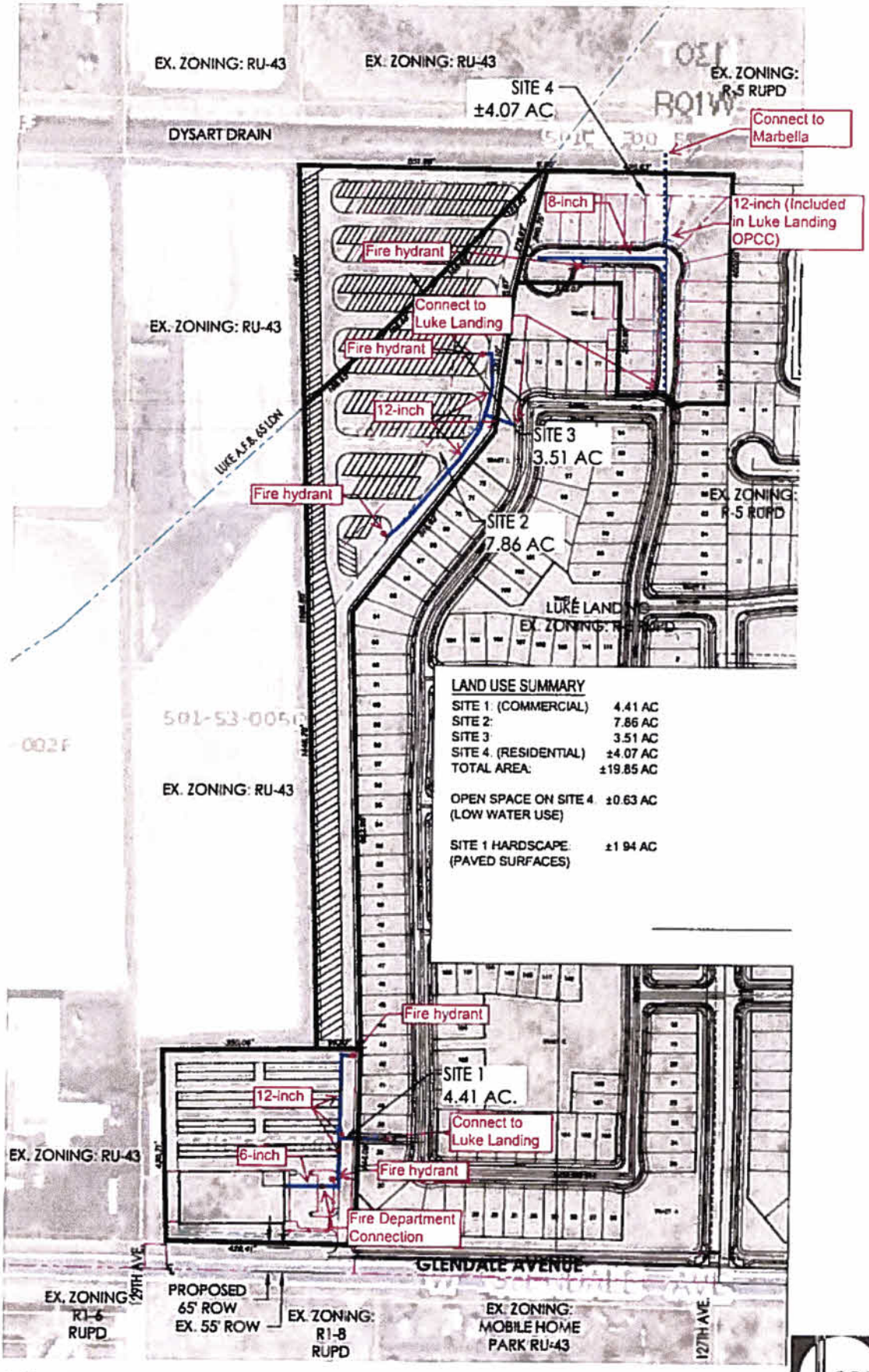
150 75 0 150
SCALE 1"=150'

LUKE LANDING
WATER MASTER PLAN
ATTACHMENT C

Westland Resources
2020 N. Central Avenue
Suite 695
Phoenix, Arizona 85004
(602) 666-7000

ATTACHMENT B

LUKE LAND 58
WATER LAYOUT



LUKE LAND 58

CONCEPTUAL SITE PLAN

GLENDALE, AZ

PREPARED FOR: LUKE LAND 58 LLC

SCALE: 1" = 200'
DATE: 8.10.17
GPLA JOB # 14036

GILMORE
PLANNING & LANDSCAPE ARCHITECTURE

ATTACHMENT C

LUKE LANDING WATER AND WASTEWATER SYSTEMS EVALUATIONS (Carollo 2017)

PROJECT MEMORANDUM

LUKE LANDING AND LUKE LAND 58 WATER AND WASTEWATER SYSTEMS EVALUATIONS

Date: September 28, 2017
Project No.: 10606B00

Luke Lewis, Luke Land 58, LLC

Prepared By: Richard Humpherys, PE

Subject: Liberty Utilities Water and Wastewater Hydraulic Evaluation with Luke Landing and Luke Land 58

1.0 Background

The proposed Luke Landing and Luke Land 58 developments (developments) are located on Glendale Avenue between Dysart Road and El Mirage Road in unincorporated Maricopa County, Arizona. The two developments combined are approximately 56.3 acres and will receive water and wastewater services from Liberty Utilities. The developments will have 189 single-family residential dwellings. MPC Development (MPC) is developing Luke Landing and Luke Land 58 is developing an additional 21 residential parcels and the two developers have authorized Carollo Engineers, Inc. (Carollo) to provide a water and wastewater system capacity analysis for the developments.

The purpose of this study is to determine if the Liberty Utilities water system can deliver the peak hour and maximum day plus fire flow demands to the developments. The study also includes an evaluation of the capability of the Liberty Utilities wastewater collection system to convey the peak dry weather flows from the developments to the Palm Valley Water Reclamation Plant (WRP). Liberty Utilities will provide water and wastewater services to a planned development east of Luke Landing called Marbella Ranch (Marbella). The developments will use the infrastructure planned for the Marbella development, which is expected to be constructed prior to Luke Landing.

This project memorandum summarizes the water and wastewater system evaluations for the developments and identifies system improvements needed to meet Liberty Utilities design and performance criteria. The Liberty Utilities water and wastewater models updated in the 2012 Integrated Water and Sewer Master Plan Project (2012 IWSMP) were used in the hydraulic evaluations.

2.0 Hydraulic Evaluation

2.1 Evaluation Criteria

Liberty Utilities has design criteria that are used to determine the acceptability of proposed developments and infrastructure. These criteria are listed in the Liberty Water Development Guide (Development Guide). The water system design criteria from the Development Guide that apply to this study include:

1. The maximum day to average day (MD/AD) peaking factor for the entire water system is 1.6. (Source: 2016 data). The design criteria for new development is 1.8.
2. The peak hour to average day (PH/AD) peaking factor is 3.0.
3. The minimum pressure during maximum day plus fire flow demand conditions is 20 pounds per square inch (psi).
4. The minimum pressure for maximum day and peak hour demand conditions is 40 psi.
5. The fire flow requirement for one- and two-family dwellings is 1,500 gallons per minute (gpm) for 2 hours. The fire flow requirement for commercial development is 3,000 gpm for 3 hours.
6. The maximum water velocity for pipes in the distribution system for fire conditions is 8 feet per second (ft/s).
7. Water storage requirements include 30 percent of maximum day demand for equalization, 10 percent of maximum day demand for emergency reserve, and a fire flow volume based on population served from the American Insurance Association (Source: 2012 IWSMP Table 3.8).
8. Firm booster pumping capacity is required to meet or exceed the greater of peak hour flow or maximum day plus fire flow with the largest pump out of service for the pressure zone that the booster station serves.
9. Firm well capacity (largest well out of service) is required to meet maximum day demand.

The wastewater system design criteria that apply to this study include:

1. The peak hour to average annual daily flow factor is 3.0.
2. The minimum water velocity for peak hour conditions is 2 ft/s and the maximum velocity for peak hour conditions is 10 ft/s.
3. The maximum flow depth to pipe diameter (d/D) ratio for peak hour conditions is 0.75 for new pipes.
4. The maximum d/D ratio for peak hour conditions is 0.90 for existing pipes. This criterion for existing pipes will allow full use of the existing sewer capacities prior to upsizing to avoid unnecessary pipe replacements.

2.2 Water Demands and Wastewater Loads

Table 1 shows the projected average day, maximum day and peak hour water demands and annual average daily and peak hour wastewater flows for the developments. Table 2 shows the estimated water demands that were used to evaluate the Liberty water system. Average day and maximum day demands in 2016 are based on actual production. The peak hour demand is not measured, but was estimated by applying Liberty's peak hour demand factor of 3.0 to the average day demand. In addition to the demands in Table 2, Liberty is working to serve additional customers that will increase water demands on the system.

Table 1 Luke Landing Water Demand and Wastewater Flow Projections

Land Use	Water Demands			Wastewater Flow	
	Average Day (gpm)	Maximum Day (gpm)	Peak Hour (gpm)	Average Annual Daily Flow (gpm)	Peak Hour (gpm)
Medium Density Residential	**63.0**	**113.4**	**189.0**	**42.0**	**126.0**
Commercial	5.2	9.4	15.6	4.6	13.8
Total	**68.2**	**122.8**	**204.6**	**46.6**	**139.8**
Total (mgd)	**0.1**	**0.18**	**0.29**	**0.07**	**0.20**

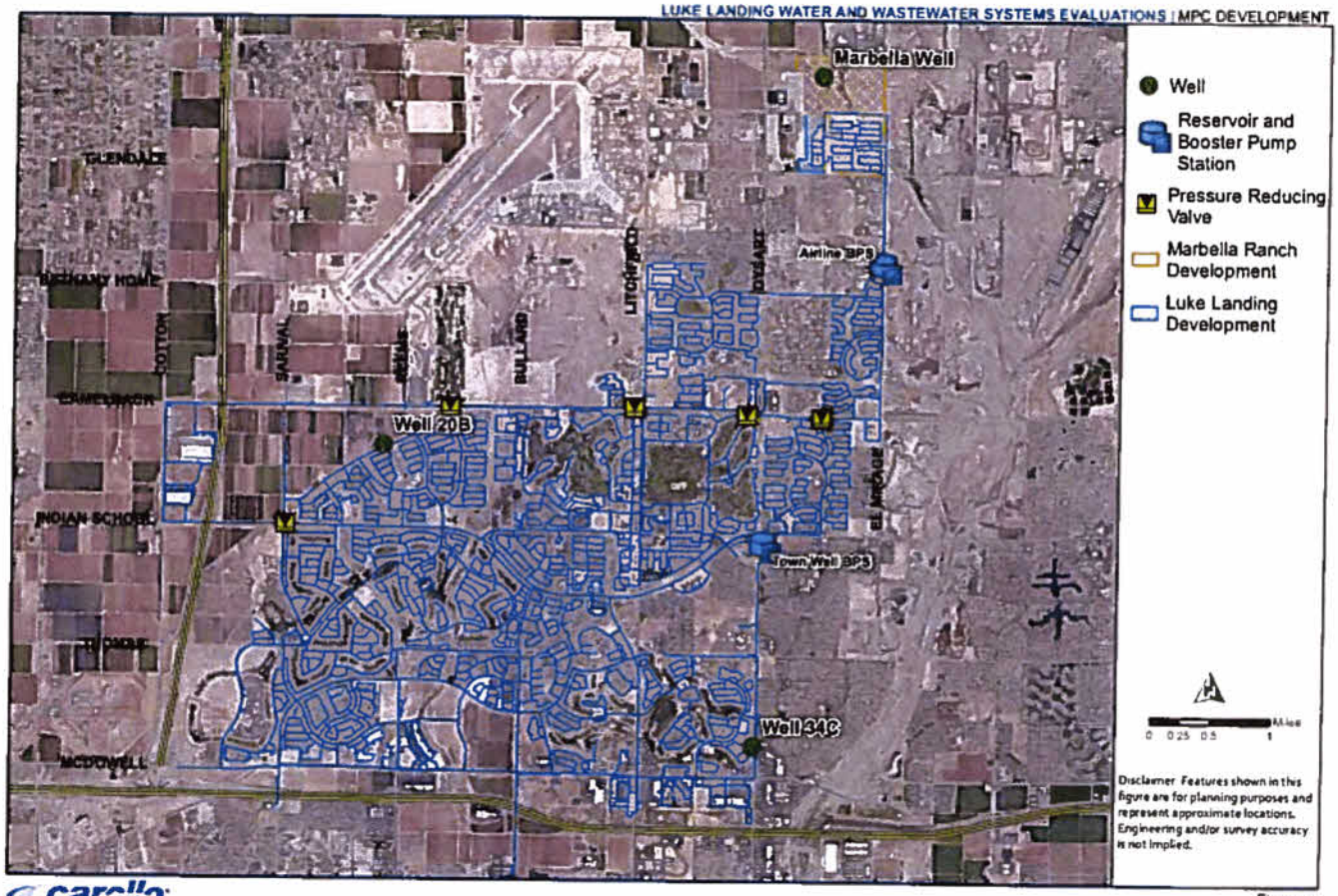
Table 2 Liberty Water System Demands

	Average Day (mgd)	Maximum Day (mgd)	Peak Hour (mgd)
2016 Liberty Demands	**10.3**	**16.4**	**30.8**
Marbella Ranch	0.7	1.1	2.0
Luke Landing	**0.1**	**0.2**	**0.3**
Total	**11.1**	**17.7**	**33.1**
Total (gpm)	**7,690**	**12,294**	**23,000**

2.3 Water System Capacity Evaluation

A map of the Liberty water distribution system is shown in Figure 1. The hydraulic model was updated to included pipes for Marbella's current layout and for the developments, based on line drawings (Appendix A) provided by Westland Resources, Inc. (Westland), on behalf of both developers.

The water supplies to the developments would come from the Airline wells as well as a well in the Marbella development. Liberty is currently implementing a pressure zone boundary along Camelback Road that will enable the Airline pump station to provide adequate pressures to the service area north of Camelback Road. Approximately 25 percent of the demand is located in the upper pressure zone (north of Camelback Road) and 75 percent of the demands are in the lower pressure zone.



Carollo

Last Revised: April 10, 2017
File Path: M:\Client\Liberty Water\Luke Landing\GIS\mxd\Deliverables\Fig 01 Water Distribution System.mxd

Figure 1
Liberty Water Distribution System

2.3.1 Water Supply

The wells that currently supply the Liberty Utilities system are shown in Table 3. Liberty is planning to bring 3 other wells online in the near future including Well 6AL, which is shown in Table 3. A second new well is located in the Marbella development with an expected capacity of 500 gpm. The third well is located farther to the south, and its capacity is not known. With the pressure zone split in place, the Airline wells deliver approximately 3,500 gpm to meet maximum day demands in the upper pressure zone and the remaining flow goes to the lower pressure zone through the pressure reducing valves (PRVs) at the pressure zone boundary. As shown in Table 3, the production capacity of the Airline wells is sufficient to meet the maximum day demands in the upper pressure zone. Liberty's well production capacity will need to increase to serve additional customers as these customers come online. Liberty should verify that the well capacities in Table 3 represent the current well production capacity.

Table 3 Liberty Utilities Well Production Capacity

Well Name	Capacity (gpm)
Upper Pressure Zone	
Airline Well No. 2AL	1,100
Airline Well No. 4AL	1,000
Airline Well No. 5AL	1,500
Airline Well No. 6AL	1,000
Airline Well No. 9AL	1,950
Airline Well No. 10AL	1,200
Subtotal	**7,750**
Lower Pressure Zone	
Town Well No. 1	700
Town Well No. 2	635
Town Well No. 4	1,250
Town Well No. 5	1,200
Town Well No. 6	1,200
Well 20B	1,400
Well 34C	900
Subtotal	**7,285**
Total Supply	**15,035**
Total Production Capacity (mgd)	**21.6**
Firm Production Capacity[1]	**13,085**
Firm Production Capacity (mgd)	**18.8**
Maximum Day Demand	**12,294**
Surplus/(Deficit)	**791**

2.3.2 Booster Pumping Capacity

The Liberty Utilities water system has two pump stations, as shown in Table 4. The Town Well pump station is currently operating at its maximum pressure of 65 psi. The Airline Reservoir pump station will operate at 80 psi when the zone boundary split along Camelback Road is completed. In addition, Wells 2AL, 10AL, 20B, and 34C pump directly into the distribution system; so, the system has a firm pumping capacity of 25,100 gpm. Based on the estimated peak hour demand of 23,000 gpm, the pumping capacity is sufficient to meet peak hour demands.

Table 4 Liberty Utilities Booster Pump Station Firm Capacity

Pump Station Name	Firm Capacity (gpm)
Town Well PS	8,500
Airline Reservoir PS	12,000
Well 2AL	1,100
Well 10AL	1,200
Well 20B	1,400
Well 34C	900
Firm Pumping Capacity	**25,100**
Peak Hour Demand	**23,000**
Surplus/(Deficit)	**2,100**

2.3.3 Storage Reservoirs

The Liberty Utilities water system has two reservoirs. The Town Reservoir has a storage volume of 6.3 million gallons (MG) and serves the lower pressure zone. The Airline Reservoir has a storage volume of 3.8 MG and serves the upper pressure zone.

The upper zone storage requirement is shown in Table 5. The equalization and emergency storage volumes were calculated based on Liberty Utilities design criteria. The fire flow storage criteria as defined in the 2012 Master Plan is not completely met with the currently available storage, but Table 5 shows that fire flows can be supplied in the upper zone.

Table 5 Liberty Utilities Storage Requirements in the Upper Zone with Luke Landing Demands

Criteria	Required Storage (MG)
Equalization Storage (30% of MDD)	1.62
Emergency Storage (10% of MDD)	0.54
Fire Flow (minimum, 3000 gpm for 3 hours)	0.54
Minimum Storage Required	**2.7**
Storage Available	**3.8**
Storage Available for the Lower Zone	**1.1**

Abbreviation:
MDD = maximum day demand

2.3.4 Distribution System

Water supply to the Marbella development will come through a new 16-inch main from the Airline Reservoir pump station to the El Mirage Road and Glendale Avenue intersection. Liberty Utilities is currently implementing a zone split project. When this project is complete, the pump station discharge pressure will be increased to 80 psi.

The model predicts that the maximum day plus fire flow and peak hour demand conditions for the developments can be met while meeting the Liberty Utilities design criteria. Figure 2 shows the predicted peak hour pressures in the area of the developments. There is one area south of Camelback Road and east of Bullard Road where peak hour pressures are just under 40 psi in the peak hour.

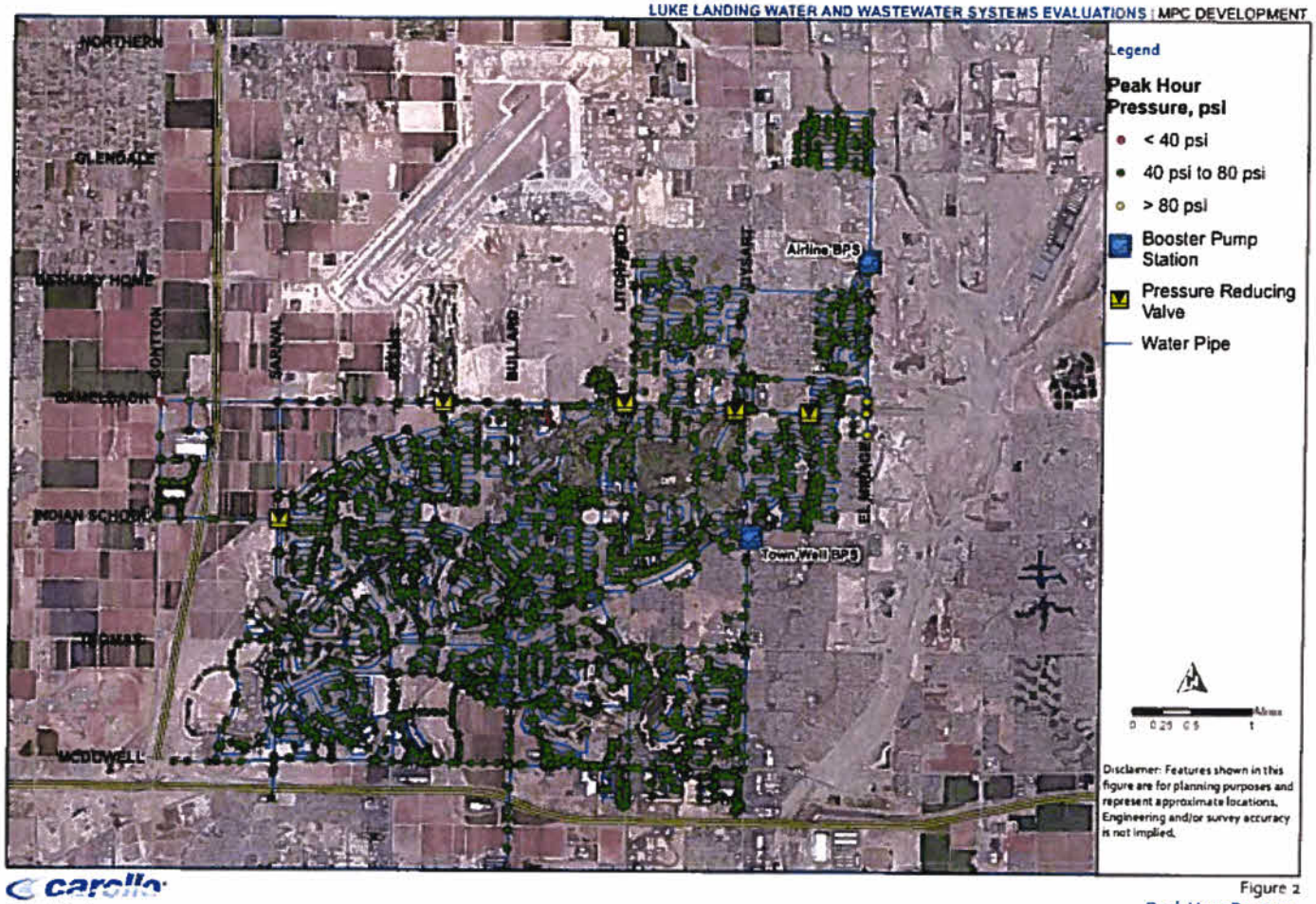
2.4 Wastewater System Evaluation

A map of the Liberty wastewater collection system is shown in Figure 3. The Liberty Utilities wastewater collection system model was used in this evaluation. The model was updated to include 8-, 12-, and 15-inch sewers located in potential future streets through Marbella and the developments based on the sewer layout in the line drawings (Appendix A) provided by Westland Resources. This capacity analysis is based on the assumption that the 3.5 mile sewer pipe that serves the Marbella development will be in place along El Mirage Road from Glendale Avenue south to Indian School Road, then 1/2 mile west on Indian School Road.

The layout for Luke Landing is configured to convey all generated flow through the Marbella development to the proposed sewer pipe in El Mirage Road. The peak flow for the existing collection system flows is based on the peaking factors in the Arizona Administrative Code applied to estimated population (R18-9-E301). To evaluate the impact of the developments, the estimated peak flow of 126 gpm from Table 1 was added to the peak flow in the model.

Figure 4 presents a map of the Liberty Utilities wastewater collection system capacity. The interceptors that convey flow from Luke Landing to the Palm Valley WRP are out of capacity from east of Indian School and Dysart Roads to Thomas and Litchfield Roads. An increase in sewer capacity is recommended, but the size of parallel or upsized mains will depend on an evaluation of all the flows that need to pass through these pipes and not just flows from the developments.

The Palm Valley Water Reclamation Plant has recently been expanded to 5.1 mgd and has the capacity to treat wastewater from the developments.



carollo

Last Revised: April 10, 2013
File Path: M:\Client\Liberty Water\Luke Landing\GIS\mxd\Deliverables\Fig 02 PH Pressure.mxd

Figure 2
Peak Hour Pressure

3.0 Observations and Conclusions

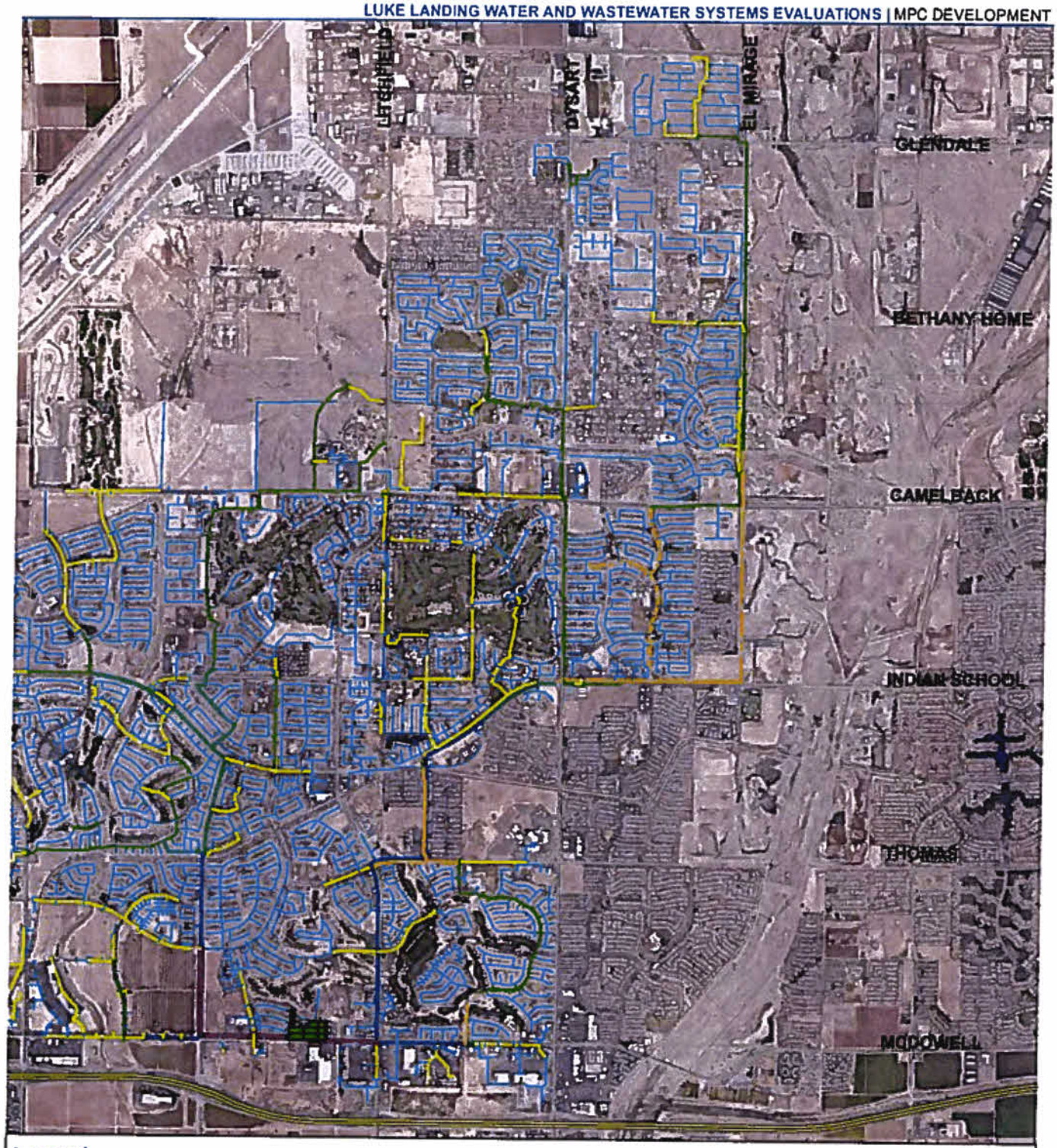
The following observations are made from these evaluations:

1. The Liberty water system has sufficient water supply to meet the demands of the developments when Well 6AL is brought online. The new 500-gpm well in the Marbella development will also supply the development.
2. The Liberty water system has sufficient firm pumping capacity. The new Marbella well will also provide additional pumping capacity.
3. Minimum pressures can be provided in the developments.
4. The upper pressure zone has sufficient storage to supply fire flow in addition to diurnal and emergency storage, but the Liberty system overall does not fully meet Liberty's storage criteria.
5. There are pipe sections that are operating at capacity in the existing collection system from Indian School Road east of Dysart Road down to Litchfield Road and Thomas Road. Liberty Utilities is currently monitoring flows in these pipes to develop a strategy to expand the sewer capacity in this area. The size of parallel or upsized sewer interceptors will depend on the total flows from current and future developments that will be served by this pipe. Liberty is addressing these concerns independently from the Luke Landing project.
6. The Palm Valley water reclamation plant has sufficient capacity to treat wastewater flows from both developments.

EXPIRES 09-30-2019

Prepared by:

Richard Humpherys



Legend

Palm Valley WRP

Sewer Pipe Diameters, in.

- 8 and smaller
- 10 -12
- 15
- 18
- 21
- 24
- 27
- 30 and larger

N

Miles

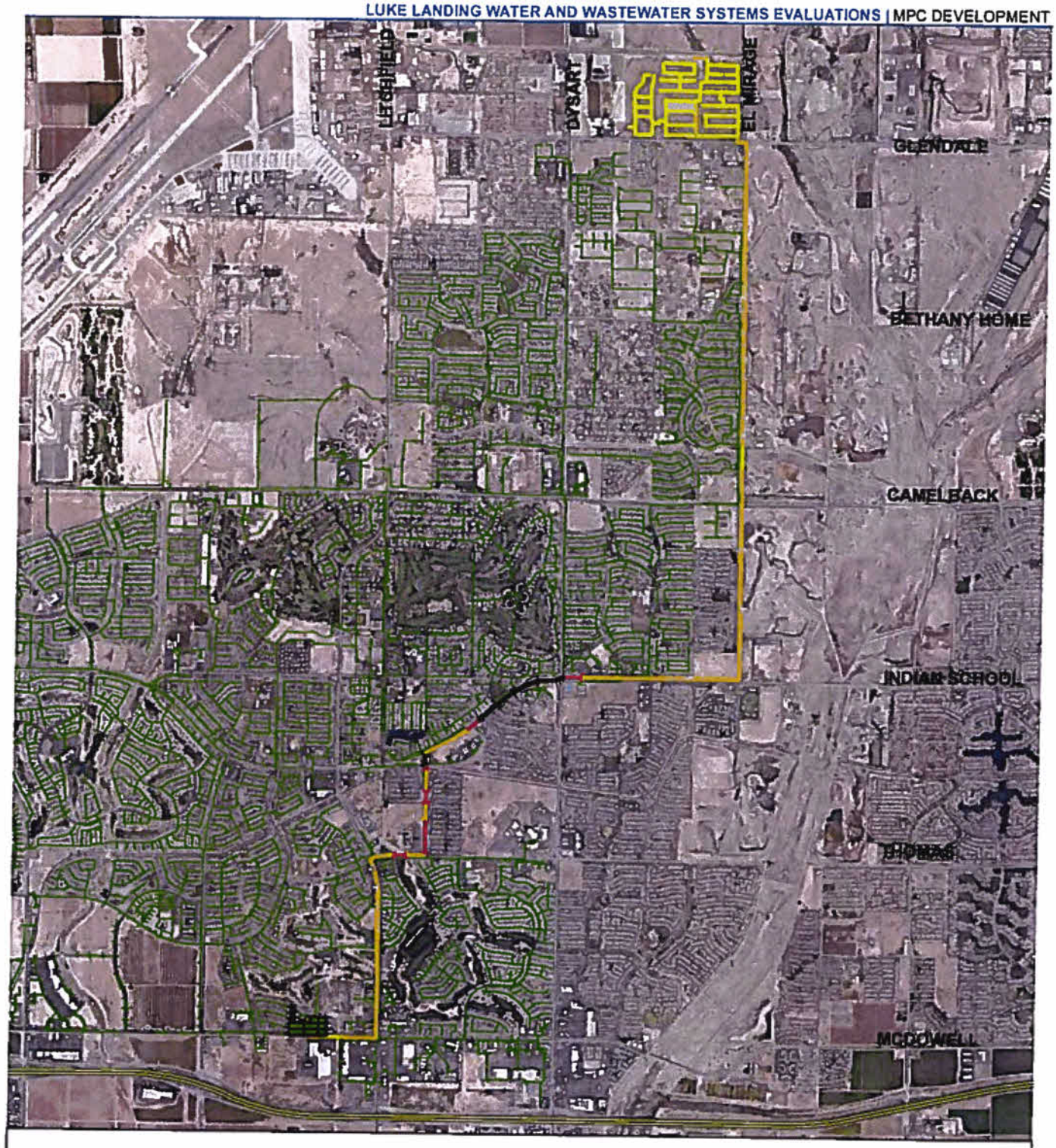
0 0.25 0.5 1

Disclaimer: Features shown in this figure are for planning purposes and represent approximate locations. Engineering and/or survey accuracy is not implied.

Carollo

Last Revised: April 10 2017
[ENTER PROJECT WISE PATH NAME TO MXD] For Example:
pw://Carollo/Documents/Client/CA/Clovis/10265A00/Data/GIS/Figure 6.4 mxd

Figure 3
Liberty Wastewater Collection System



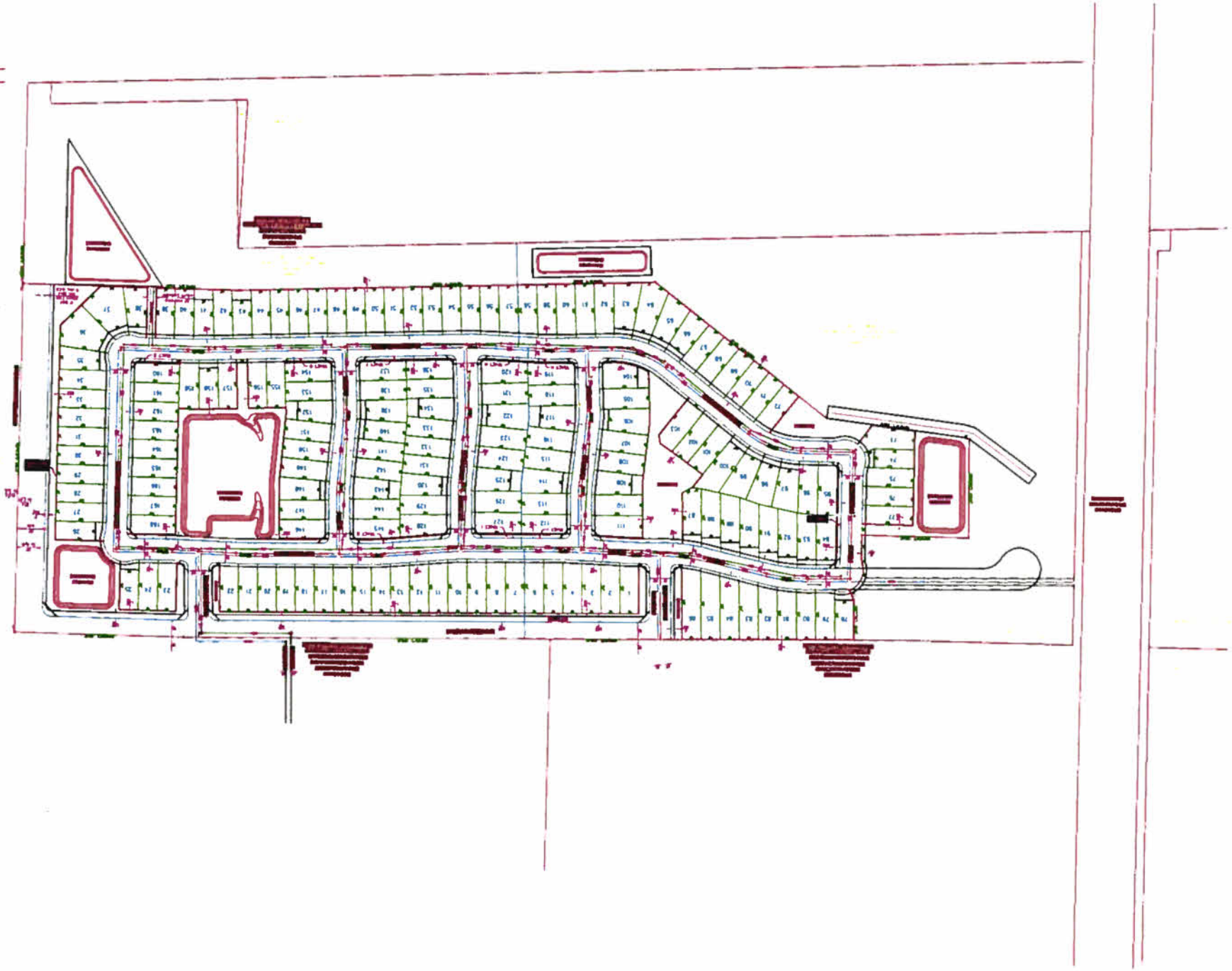
Carollo

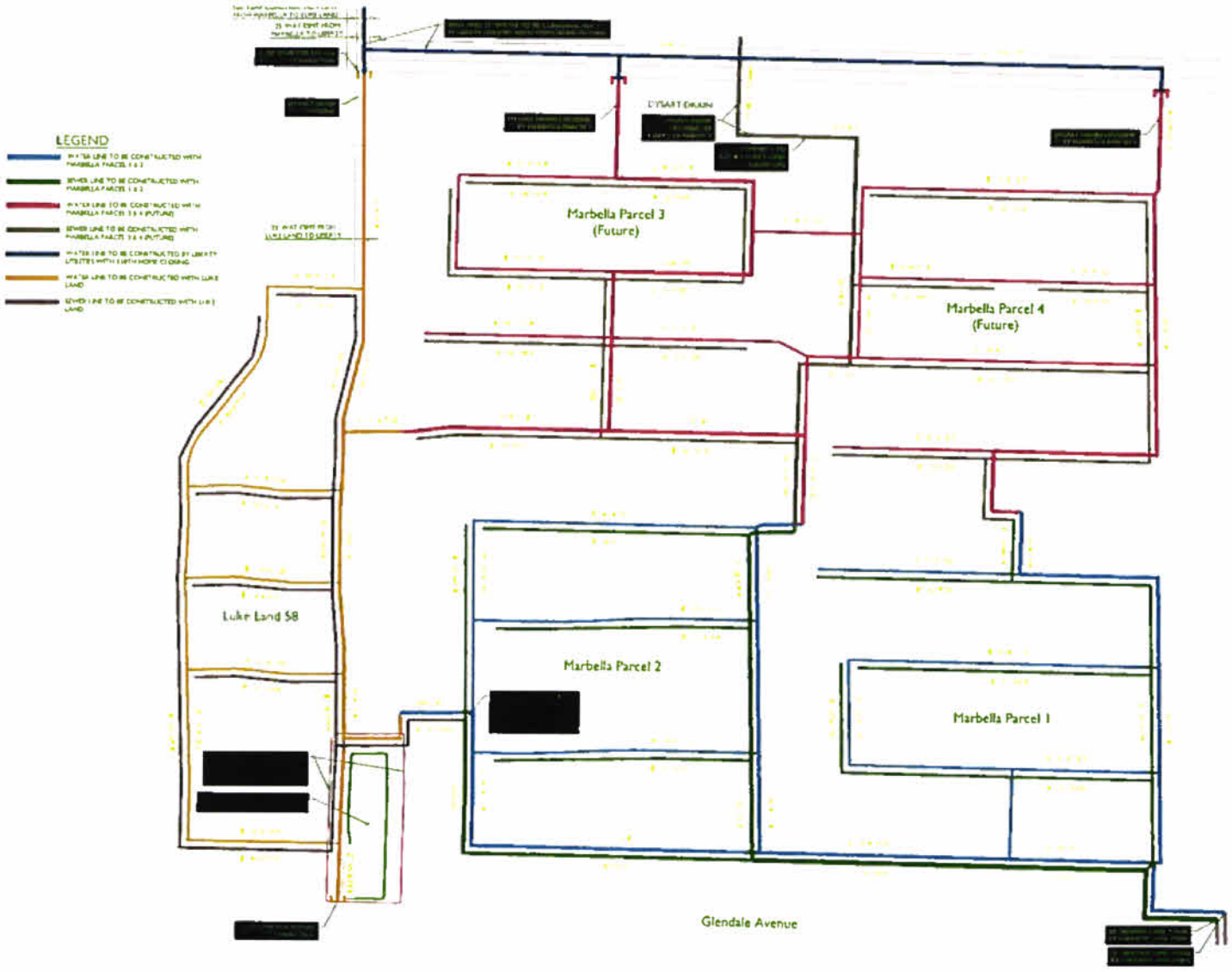
Last Revised April 10, 2017
[ENTER PROJECT WISE PATH NAME TO MXD] For Example:
pw://Carollo/Documents/Client/CA/Clovis\10265A00\Data\GIS\Figure 6 4.mxd

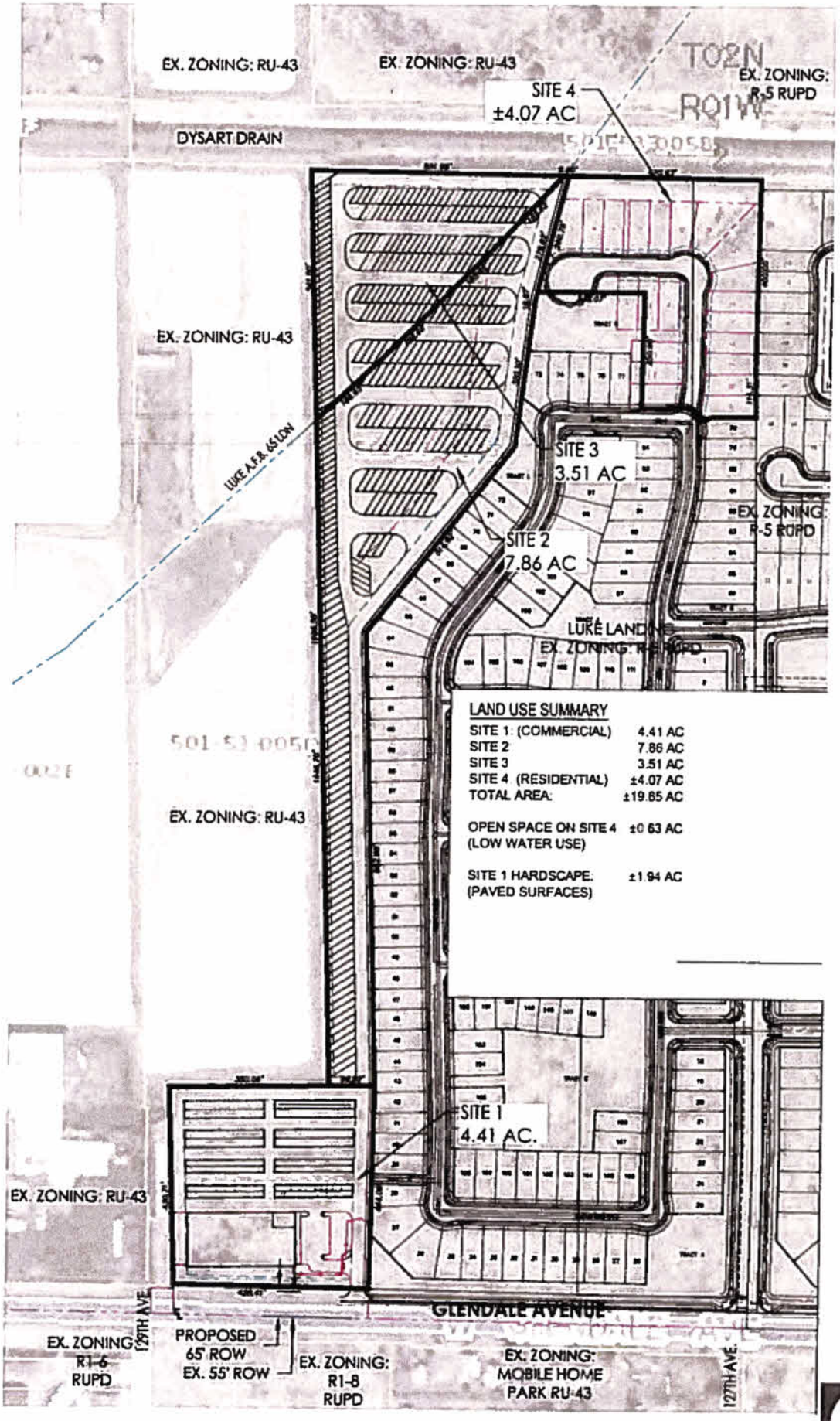
Figure 4
Predicted Capacity of Pipes Between Luke Landing and Palm Valley WRP

Appendix A

WATER AND SEWER PIPE LAYOUT FOR MARBELLA, LUKE LANDING, AND LUKE LAND 58 DEVELOPMENTS




LEGEND
Marbella Parcel 3
(Future)
Marbella Parcel 4
(Future)
Luke Land 58
Marbella Parcel 2
Marbella Parcel 1
Glendale Avenue
El Mirage Rd



LAND USE SUMMARY

SITE 1 (COMMERCIAL)	4.41 AC
SITE 2	7.86 AC
SITE 3	3.51 AC
SITE 4 (RESIDENTIAL)	±4.07 AC
TOTAL AREA:	±19.85 AC
OPEN SPACE ON SITE 4 (LOW WATER USE)	±0.63 AC
SITE 1 HARDSCAPE: (PAVED SURFACES)	±1.94 AC

LUKE LAND 58

CONCEPTUAL SITE PLAN

GLENDALE, AZ

PREPARED FOR: LUKE LAND 58 LLC

SCALE: 1" = 200'
DATE: 8.10.17
GPLA JOB # 14036

0 100 200 400

NORTH

GILMORE
PLANNING & LANDSCAPE ARCHITECTS

ATTACHMENT D

Opinion of Probable Construction Costs

WestLand Resources, Inc.

Engineering and Environmental Consultants

Project Name: Luke Landing Water Master Plan
Project No.: 1952.01
Location: Maricopa County
Description: 168 unit single family residential

Prepared by: PAM **Date:** 5/19/2017
Checked by: MDO **Date:** 5/19/2017
Client: MPC Development

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	12-inch DIP Waterline	LF	1,670	$105	$175,350	
2	8-inch DIP Waterline	LF	5,320	$75	$399,000	
3	6-inch DIP Waterline	LF	261	$60	$15,660	
4	1-inch type K copper service line	EA	168	$450	$75,600	
5	Fire hydrants and valves	EA	13	$4,200	$54,600	
6	DVA	EA	2	$1,200	$2,400	
7	12-inch Gate Valve, B&C	EA	6	$2,200	$13,200	
8	8-inch Gate Valve, B&C	EA	19	$950	$18,050	
9	1-inch ARV	EA	5	$1,200	$6,000	
	Subtotal				**$759,860**	
	Contingencies (20%)				$151,972	
	TOTAL PROJECT COSTS				**$911,832**	

WestLand Resources, Inc.

Engineering and Environmental Consultants

Project Name: Luke Land 58 Water Master Plan
Project No.: 1952 01
Location: Maricopa County
Description: Self storage commercial development, 21 single family residential units

Prepared by: PAM **Date:** 9/21/2017
Checked by: PAM **Date:** 9/21/2017
Client: MPC Development

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	12-inch DIP Waterline	LF	890	$105	$93,450	
2	8-inch DIP Waterline	LF	290	$75	$21,750	
3	6-inch DIP Waterline	LF	200	$60	$12,000	
4	2-inch type K copper service line	EA	1	$1,800	$1,800	
5	1-inch type K copper service line	EA	21	$450	$9,450	
6	Fire hydrants and valves	EA	5	$4,200	$21,000	
7	DVA	EA	3	$1,200	$3,600	
8	12-inch Gate Valve, B&C	EA	4	$2,200	$8,800	
9	8-inch Gate Valve, B&C	EA	1	$950	$950	
10	1-inch ARV	EA	1	$1,200	$1,200	
	Subtotal				**$174,000**	
	Contingencies (20%)				$34,800	
	TOTAL PROJECT COSTS				**$208,800**	

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Wastewater Preliminary Engineering Report

Combined Luke Landing & Luke Land 58

LUKE LANDING AND LUKE LAND 58 WASTEWATER MASTER PLAN

APN 501-53-004F AND 501-53-004G

Prepared for:

Mike Nuessle
MPC Development
6501 E. Greenway Parkway, Phoenix, Arizona, 85254

And

Luke Lewis
Luke Land 58, LLC
320 W. Lone Cactus Drive #12, Phoenix, Arizona, 85023

Prepared by:

Erik Christenson, PE
WestLand Resources, Inc.
4001 E. Paradise Falls Dr., Tucson, Arizona, 85712

Project Number: 1952.01

January 2018

EXPIRES 6/30/2020

WestLand Resources

WestLand Resources, Inc. • 4001 E. Paradise Falls Drive • Tucson, Arizona 85712 • 520•206•9585

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

EXECUTIVE SUMMARY

WestLand Resources, Inc. (WestLand), has prepared this wastewater master plan for the Luke Landing and Luke Land 58 projects (the Projects). Luke Landing is a residential development project owned by MPC Development (MPC) consisting of 168 single-family homes, and is located on 36.45 gross acres of land (Maricopa County assessor parcel number (APN) 501-53-004F). Luke Land 58 is a commercial and residential project owned by Luke Land 58 LLC consisting of a self-storage facility and 21 single-family homes, and is located on 19.94 gross acres of land (APN 501-53-004G). The proposed Projects are located in the southwest quarter of Section 2, Township 2 North, Range 1 West, Gila and Salt River Meridian, in Maricopa County. Wastewater service will be provided by Liberty Utilities' Litchfield Park Water & Sewer Corporation (Liberty). Currently, Liberty does not own any sewer lines near the Projects; however, Liberty will be extending its infrastructure to serve a neighboring project to the east called Marbella Ranch (Marbella). The Projects will connect to a sewer main in the proposed Marbella development. The Projects will include approximately 6,360 lf of 8-inch sewer main and 30 manholes. Carollo Engineers, Inc. (Carollo), is the water and wastewater engineer for Liberty. Carollo produced a project memorandum, *Luke Landing and Luke Land 58 Water and Wastewater Systems Evaluations*, dated September 28, 2017, describing the Projects and determined that the Liberty wastewater system has adequate treatment capacity to serve them. Liberty is researching options to increase flow capacity in some of the existing sewer mains downstream of these projects. Offsite improvements are not required to serve the Projects beyond those which are already planned for the Liberty wastewater system by Marbella.

1. INTRODUCTION

WestLand Resources, Inc. (WestLand), has prepared this wastewater master plan for Luke Landing and Luke Land 58 projects (the Projects) to describe the infrastructure that will be collecting wastewater from the Projects and to describe the design criteria used to size this infrastructure. Luke Landing is a residential development project owned by MPC Development (MPC) consisting of 168 single-family homes, and is located on 36.45 gross acres of land (Maricopa County assessor parcel number (APN) 501-53-004F). Luke Land 58 is a commercial and residential project owned by Luke Land 58 LLC, consisting of a self-storage facility and 21 single-family homes and is located on 19.94 gross acres of land (APN 501-53-004G). The Projects are located in the southwest quarter of Section 2, Township 2 North, Range 1 West, Gila and Salt River Meridian, Maricopa County.

The Projects are part of unincorporated Maricopa County, but are also surrounded by strip annexes belonging to the City of Glendale and may one day become incorporated with the City. Wastewater service will be provided by Liberty Utilities' Litchfield Park Water & Sewer Corporation (Liberty). Currently, Liberty does not own any sewer lines near the Projects; however, it will be extending its infrastructure to serve a neighboring proposed project to the east called Marbella Ranch (Marbella). The Projects cannot connect to Liberty's system until Marbella's Phase I sewer lines are installed. WestLand, MPC, Luke Land 58 LLC, and Liberty will be filing an application to extend the Certificate of Convenience and Necessity (CC&N) area to expand Liberty's service area to include the Projects. This report has been written to support the CC&N application as well as to support line extension agreements with Liberty.

A layout of the Luke Landing project is provided as **Attachment A** and includes the sewer lines, manholes, and sizes for the project. A layout of the Luke Land 58 project is included as **Attachment B. Figure 1** below shows a vicinity map with the project location.

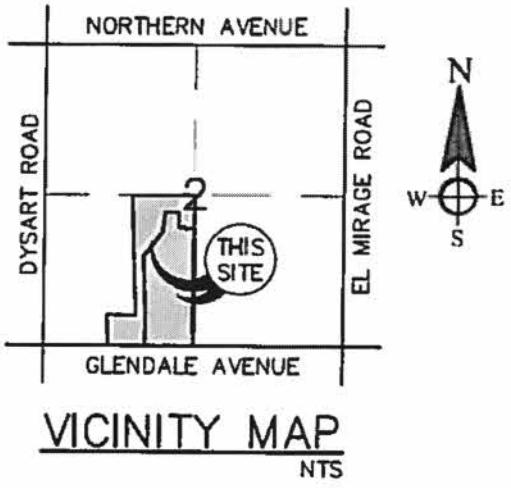


Figure 1. Luke Landing Vicinity Map

Carollo Engineers, Inc. (Carollo), is the water and wastewater engineer for Liberty. Carollo maintains Liberty's water and wastewater models and must be contracted to perform hydraulic modeling and verify the capacity of the Liberty system for any new developments. Carollo produced a project memorandum, *Luke Landing and Luke Land 58 Water and Wastewater Systems Evaluations*, dated September 28, 2017, describing the Projects and the ability of the Liberty wastewater system to serve this project. Carollo's memorandum is included as **Attachment C**.

2. DESIGN CRITERIA

The design criteria used for this project follows the Liberty Utilities Maricopa County Development Guide, dated January 1, 2014 (Development Guide). Flow generation criteria follows the Development Guide as shown in **Table 1** below.

Table 1. Sewer Flow Criteria

Criteria	Value
Residential Average Daily Flow	100 gallons per capita per day
Single Family Population Density	3.2 persons per dwelling unit
Multi-Family Population Density	2.0 persons per dwelling unit
Commercial Average Daily Flow	1,500 gal/acre/day
Industrial Average Daily Flow	750 gal/acre/day
Peak Hour Factor	3.0

General sewer system requirements from the Development Guide are summarized below in **Table 2**.

Table 2. General Criteria

Topic	Criteria
Sewer Depth of Cover	• 7.5 ft minimum for trunk-lines. • 5.0 ft minimum for all others provided that service lines have 4.5 ft minimum cover at property line.
Manning's Roughness Coefficient	n=0.013
Sewer Pipe Material	• PVC SDR 35 at most locations. • Epoxy lined DIP or concrete encased PVC SDR 35 at wash crossings.
Velocities	• 2.0 feet per second (fps) minimum at peak hour. • 2.0 fps minimum at average daily flow for trunk lines. • 10.0 fps maximum
Cleanouts	At end of lines less than 200 ft.
Sewer Capacity Ratio	d/D = 0.75 maximum at peak hour
Minimum Pipe Diameter	• 8- or 12-inch along section lines. • 6-inch for force mains.
Minimum Manhole Diameter	5 ft with 30-inch ring and cover. No steps.

Topic	Criteria
Force Main Velocities	• 3.0 fps minimum • 7.0 fps maximum
Force Main Air Release Valves	Sized and located per manufacturer's recommendations at high points.
Wash Crossings	• Materials as listed previously. • 2 ft below the 100-year storm scour depth and a minimum of 5 ft below the wash bottom for minor washes. • 4 ft below the 100-year storm scour depth and a minimum of 8 ft below the wash bottom for major wash crossings.
Manhole Invert Drops	• For < 45° direction changes, 0.1 ft drop across manhole. • For > 45 ° direction changes, 0.2 ft drop across manhole.
Manhole & Lift Station Wet Well Linings	• Sewer Shield 100, Sauereisen 210, Raven 405/A10, Con Shield, Q or T Loc, or approved equal for: o All force main connection manholes. o All lift station wet wells. o All manholes on sewer lines 15-inches or larger. o All manholes on sewer lines with 1.44 MGD or more.
Drop Manhole Type	• Following MAG Standard Detail 426 Type A for sewer lines serving more than 200 homes. • Following MAG Standard Detail 426 Type B for sewer lines serving 50 to 200 homes.

3. FLOWS AND CALCULATIONS

3.1. AVERAGE DAILY FLOW

The following factors were used to calculate the average daily flow for this project:

1) The average daily flow per person is 100 gallons per capita per day (gpcd). The average daily flow per acre of commercial land is 1,500 gpd/acre.
2) The population density for a single-family residential development is 3.2 people per dwelling unit (ppdu). Because the commercial portions of Luke Land 58 are intended as storage space and parking, WestLand assumes that only the southern 4.4 acres will have any commercial flow generation.
3) The average daily flow for the Projects is therefore:
(189 du) x (3.2 ppdu) x (100 gpcd) + (4.41 acres) x (1,500 gpd/acre) = 67,095 gallons per day (gpd) or 46.6 gallons per minute (gpm)

3.2. PEAK FLOW

The following factors were used to calculate the peak flow for this project:

1) The peak hour factor is 3.0.

2) The peak flow for the Projects is therefore:
(67,095 gpd) x (3.0) = 201,285 gpd or 139.8 gpm

The flow capacity of an 8-inch pipe with a minimum allowable design slope of 0.33 percent (0.33%) is 285 gpm at a depth over diameter ratio of 75 percent (75%). Based on this capacity, and a peak hour flow of 139.8 gpm for the proposed Projects, none of the Projects' onsite sewers need to be greater than 8-inches in size.

4. EXISTING FACILITIES/CONDITIONS

Liberty's existing service area consists of approximately 21 square miles located south of Glendale Avenue, north of Interstate Highway 10, west of El Mirage Road, and east of Cotton Lane. Communities within the City of Litchfield Park, the City of Goodyear, the City of Avondale, and unincorporated areas of Maricopa County are served by Liberty's wastewater system.

According to Carollo's project memorandum, Liberty's wastewater system is served by the Palm Valley Water Reclamation Facility (PVWRF), located at 14222 W. McDowell Road, and has a permitted capacity of 5.1 MGD. The Liberty's wastewater collection system extends north, past the intersection of El Mirage Road and Camelback Road by approximately 1,000 feet and terminates at that point as a 15-inch diameter sewer main. Approximately 9,600 feet of new sewer pipe is being planned to extend from that point north to serve the proposed Marbella project.

Carollo's project memorandum noted that Liberty is monitoring flows within portions of its wastewater collection system and may add additional capacity in those areas.

5. PROPOSED FACILITIES

Liberty's wastewater collection system extends north, past the intersection of El Mirage and Camelback roads by 1,000 feet and terminates at that point as a 15-inch diameter sewer main. Beyond that point the sewer main will need to be extended approximately 9,620 feet to the intersection of Glendale Avenue and El Mirage Road, as described in the Marbella Ranch Master Plan. The proposed Marbella Ranch onsite sewer system will connect to that sewer main in El Mirage Road. The Projects will connect to a sewer branch line in the Marbella Ranch development at the intersection of 127th and Myrtle avenues. Wastewater from the Projects will report to the Marbella Ranch collection system and eventually to the PVWRF.

Proposed sewer lines and manholes within the Projects include approximately 6,360 lf of 8-inch sewer mains and 30 manholes. See **Attachment A** for a layout of the proposed facilities within the Luke Landing project and **Attachment B** for a layout of the Luke Land 58 project. **Attachment D** contains preliminary calculations on the peak hour flows, peak hour velocities, minimum slopes, and depth/diameter ratio that the Projects' sewer pipes will be expected to operate at once the project is

constructed. The manhole numbers and pipe numbers listed in **Attachment D** are also labeled in **Attachment A.**

6. WASTEWATER MODEL

Carollo's memorandum determined that the Liberty wastewater system has adequate capacity to treat flows from the Projects. Currently some portions of Liberty's system do not have capacity to convey the additional flows that will be produced by the proposed Projects and other future projects; however, Liberty is monitoring the flows in these locations and developing strategies to increase capacity independent of the Projects. Liberty intends to serve the proposed Projects.

7. OPINION OF PROBABLE CONSTRUCTION COSTS

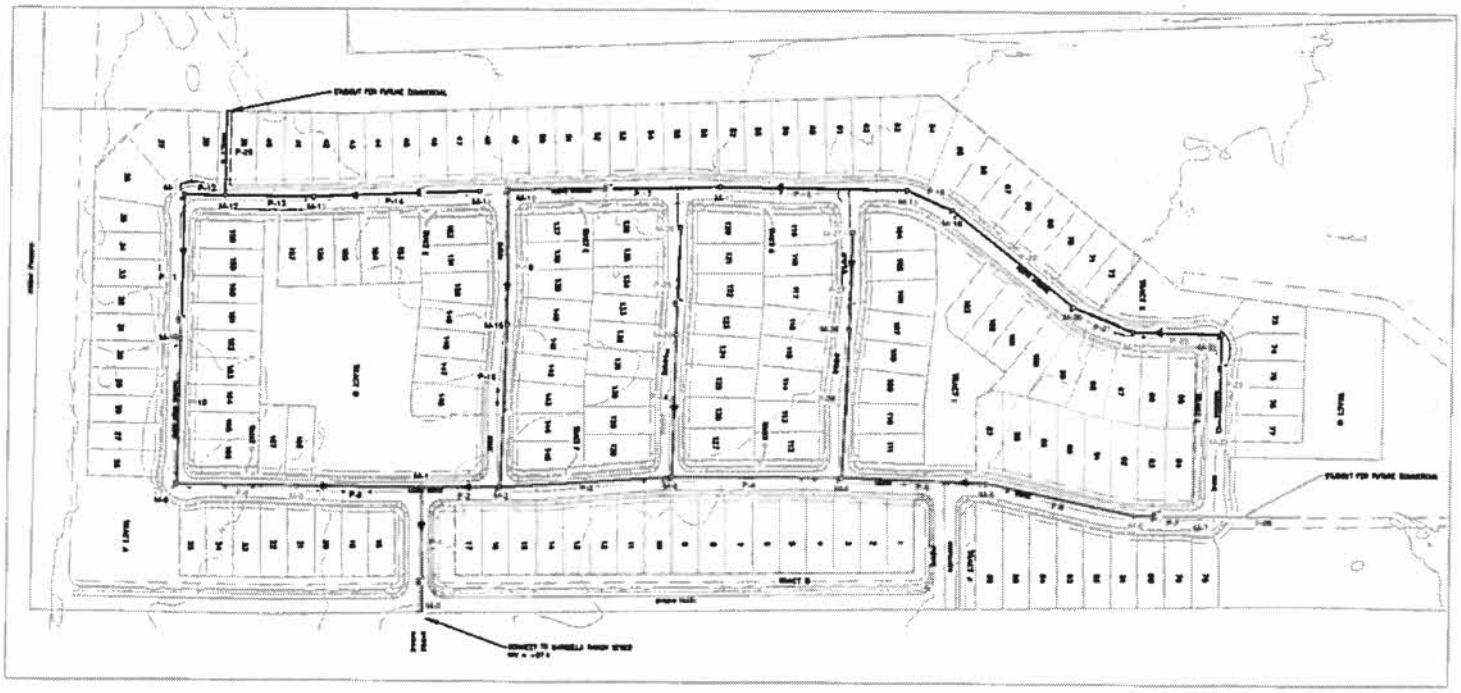
WestLand has attached an opinion of probable construction costs (OPCC) for the onsite sewer mains and manholes that will be owned by Liberty for these Projects. The OPCC is located in **Attachment E.**

8. SUMMARY AND CONCLUSIONS

Luke Landing is a residential development project consisting of 168 single-family homes and Land 58 is a commercial and residential project consisting of a self-storage facility and 21 single-family homes. The Projects will be served by the Liberty. The Projects will include approximately 6,360 lf of 8-inch sewer main and 30 manholes. Offsite improvements are not required to serve the Projects beyond those which are already planned for the Liberty wastewater system.

ATTACHMENT A

LUKE LANDING SEWER LAYOUT



LEGEND

150 75 0 150

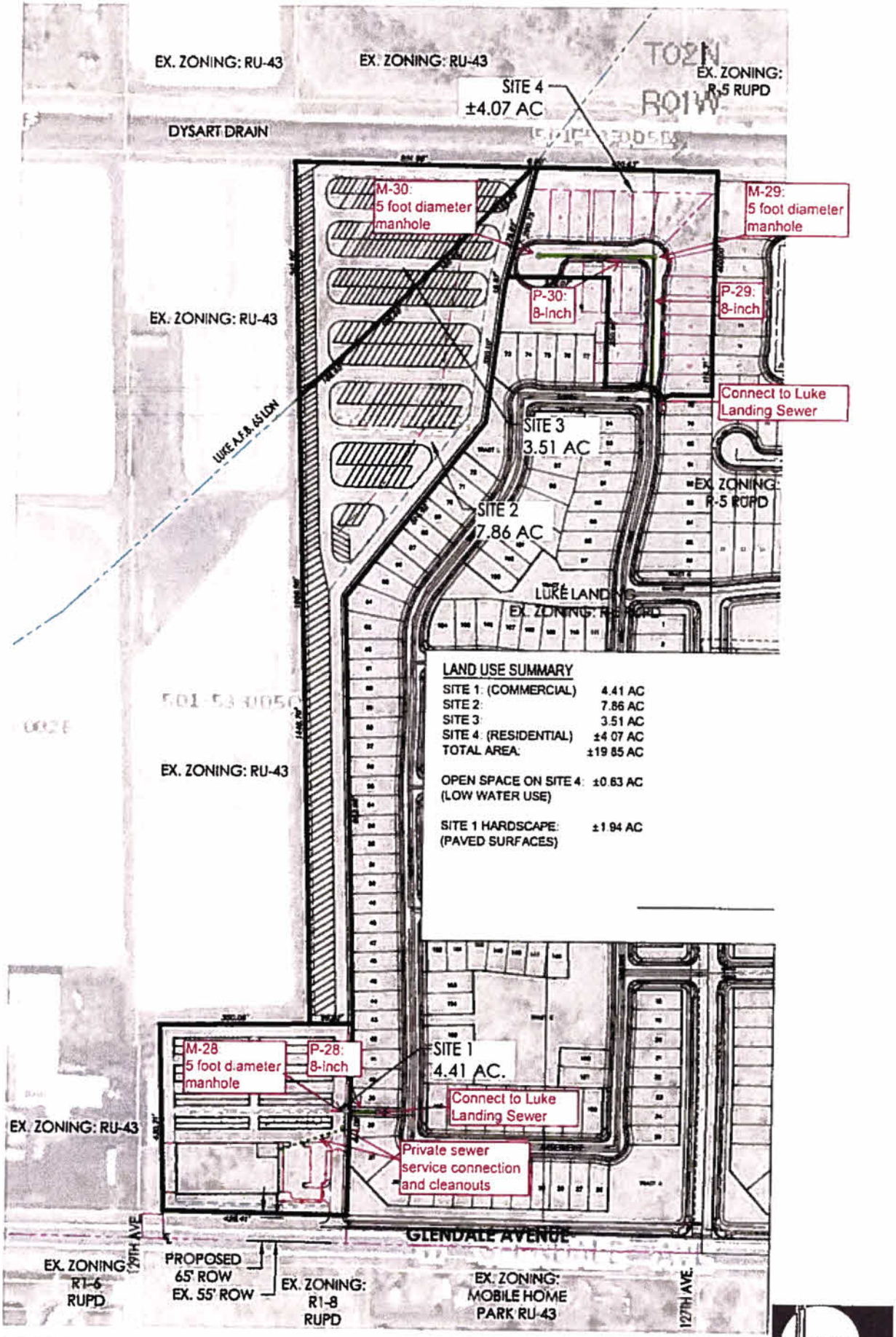
SCALE 1"=150'

LUKE LANDING
WASTEWATER MASTER PLAN
ATTACHMENT B

WestLand Resources
2020 N. Central Avenue
Suite 695
Phoenix, Arizona 85004
(602) 644-7000

ATTACHMENT B

LUKE LAND 58 SEWER LAYOUT



LAND USE SUMMARY

SITE 1: (COMMERCIAL)	4.41 AC
SITE 2:	7.86 AC
SITE 3:	3.51 AC
SITE 4: (RESIDENTIAL)	±4.07 AC
TOTAL AREA:	±19.85 AC
OPEN SPACE ON SITE 4: (LOW WATER USE)	±0.63 AC
SITE 1 HARDSCAPE: (PAVED SURFACES)	±1.94 AC

LUKE LAND 58

CONCEPTUAL SITE PLAN

GLENDALE, AZ

PREPARED FOR: LUKE LAND 58 LLC

SCALE: 1" = 200'
DATE: 8.10.17
GPLA JOB # 14036

NORTH

GILMORE
PLANNING & LANDSCAPE ARCHITECTURE

ATTACHMENT C

LUKE LANDING AND LUKE LAND 58 WATER AND WASTEWATER SYSTEMS EVALUATIONS (Carollo 2017)

PROJECT MEMORANDUM

LUKE LANDING AND LUKE LAND 58 WATER AND WASTEWATER SYSTEMS EVALUATIONS

Date: September 28, 2017
Project No.: 10606B00

Luke Lewis, Luke Land 58, LLC

Prepared By: Richard Humpherys, PE
Subject: Liberty Utilities Water and Wastewater Hydraulic Evaluation with Luke Landing and Luke Land 58

1.0 Background

The proposed Luke Landing and Luke Land 58 developments (developments) are located on Glendale Avenue between Dysart Road and El Mirage Road in unincorporated Maricopa County, Arizona. The two developments combined are approximately 56.3 acres and will receive water and wastewater services from Liberty Utilities. The developments will have 189 single-family residential dwellings. MPC Development (MPC) is developing Luke Landing and Luke Land 58 is developing an additional 21 residential parcels and the two developers have authorized Carollo Engineers, Inc. (Carollo) to provide a water and wastewater system capacity analysis for the developments.

The purpose of this study is to determine if the Liberty Utilities water system can deliver the peak hour and maximum day plus fire flow demands to the developments. The study also includes an evaluation of the capability of the Liberty Utilities wastewater collection system to convey the peak dry weather flows from the developments to the Palm Valley Water Reclamation Plant (WRP). Liberty Utilities will provide water and wastewater services to a planned development east of Luke Landing called Marbella Ranch (Marbella). The developments will use the infrastructure planned for the Marbella development, which is expected to be constructed prior to Luke Landing.

This project memorandum summarizes the water and wastewater system evaluations for the developments and identifies system improvements needed to meet Liberty Utilities design and performance criteria. The Liberty Utilities water and wastewater models updated in the 2012 Integrated Water and Sewer Master Plan Project (2012 IWSMP) were used in the hydraulic evaluations.

2.0 Hydraulic Evaluation

2.1 Evaluation Criteria

Liberty Utilities has design criteria that are used to determine the acceptability of proposed developments and infrastructure. These criteria are listed in the Liberty Water Development Guide (Development Guide). The water system design criteria from the Development Guide that apply to this study include:

1. The maximum day to average day (MD/AD) peaking factor for the entire water system is 1.6. (Source: 2016 data). The design criteria for new development is 1.8.
2. The peak hour to average day (PH/AD) peaking factor is 3.0.
3. The minimum pressure during maximum day plus fire flow demand conditions is 20 pounds per square inch (psi).
4. The minimum pressure for maximum day and peak hour demand conditions is 40 psi.
5. The fire flow requirement for one- and two-family dwellings is 1,500 gallons per minute (gpm) for 2 hours. The fire flow requirement for commercial development is 3,000 gpm for 3 hours.
6. The maximum water velocity for pipes in the distribution system for fire conditions is 8 feet per second (ft/s).
7. Water storage requirements include 30 percent of maximum day demand for equalization, 10 percent of maximum day demand for emergency reserve, and a fire flow volume based on population served from the American Insurance Association (Source: 2012 IWSMP Table 3.8).
8. Firm booster pumping capacity is required to meet or exceed the greater of peak hour flow or maximum day plus fire flow with the largest pump out of service for the pressure zone that the booster station serves.
9. Firm well capacity (largest well out of service) is required to meet maximum day demand.

The wastewater system design criteria that apply to this study include:

1. The peak hour to average annual daily flow factor is 3.0.
2. The minimum water velocity for peak hour conditions is 2 ft/s and the maximum velocity for peak hour conditions is 10 ft/s.
3. The maximum flow depth to pipe diameter (d/D) ratio for peak hour conditions is 0.75 for new pipes.
4. The maximum d/D ratio for peak hour conditions is 0.90 for existing pipes. This criterion for existing pipes will allow full use of the existing sewer capacities prior to upsizing to avoid unnecessary pipe replacements.

2.2 Water Demands and Wastewater Loads

Table 1 shows the projected average day, maximum day and peak hour water demands and annual average daily and peak hour wastewater flows for the developments. Table 2 shows the estimated water demands that were used to evaluate the Liberty water system. Average day and maximum day demands in 2016 are based on actual production. The peak hour demand is not measured, but was estimated by applying Liberty's peak hour demand factor of 3.0 to the average day demand. In addition to the demands in Table 2, Liberty is working to serve additional customers that will increase water demands on the system.

Table 1 Luke Landing Water Demand and Wastewater Flow Projections

Land Use	Water Demands			Wastewater Flow	
	Average Day (gpm)	Maximum Day (gpm)	Peak Hour (gpm)	Average Annual Daily Flow (gpm)	Peak Hour (gpm)
Medium Density Residential	**63.0**	**113.4**	**189.0**	**42.0**	**126.0**
Commercial	5.2	9.4	15.6	4.6	13.8
Total	**68.2**	**122.8**	**204.6**	**46.6**	**139.8**
Total (mgd)	**0.1**	**0.18**	**0.29**	**0.07**	**0.20**

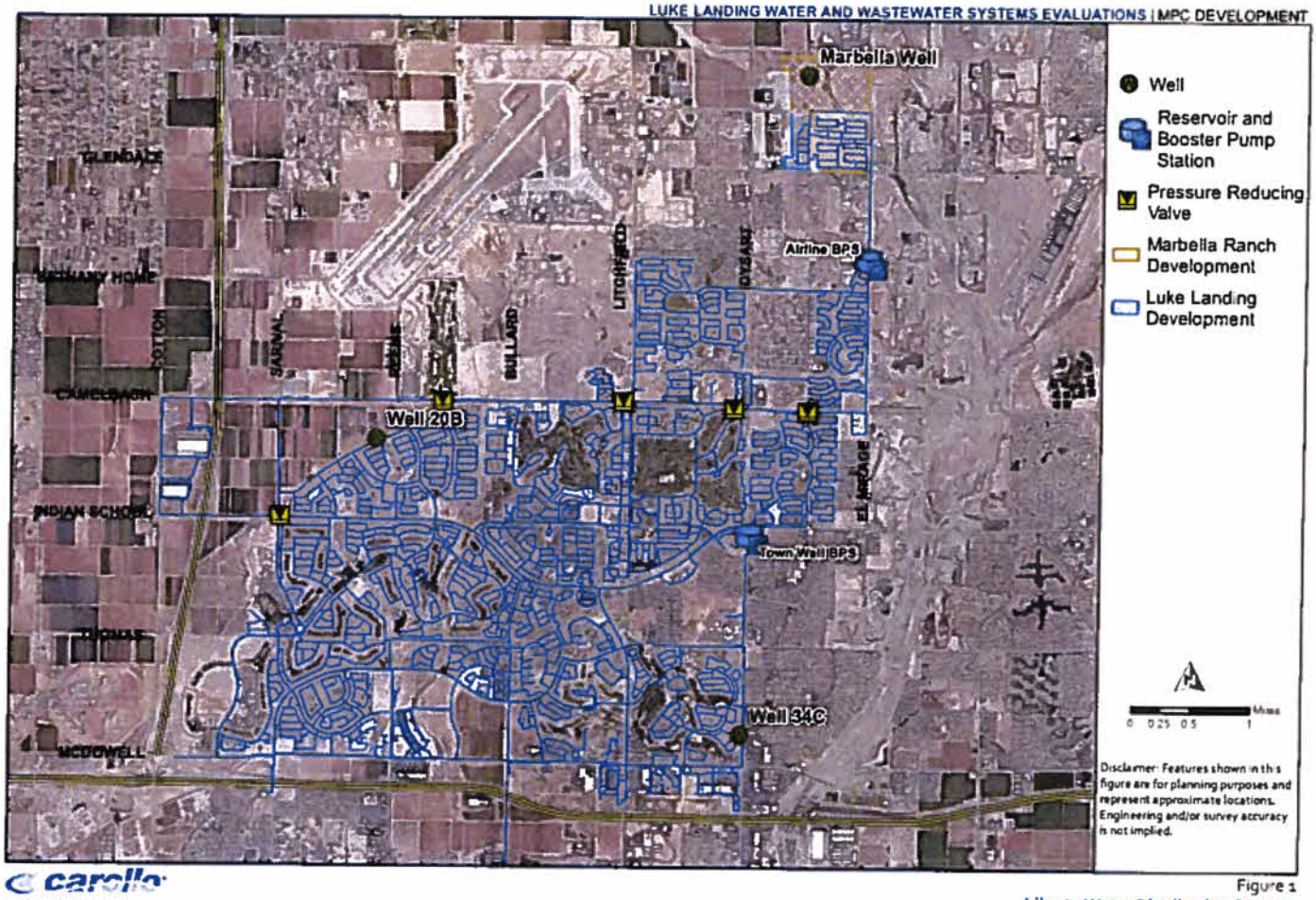
Table 2 Liberty Water System Demands

	Average Day (mgd)	Maximum Day (mgd)	Peak Hour (mgd)
2016 Liberty Demands	**10.3**	**16.4**	**30.8**
Marbella Ranch	0.7	1.1	2.0
Luke Landing	**0.1**	**0.2**	**0.3**
Total	**11.1**	**17.7**	**33.1**
Total (gpm)	**7,690**	**12,294**	**23,000**

2.3 Water System Capacity Evaluation

A map of the Liberty water distribution system is shown in Figure 1. The hydraulic model was updated to included pipes for Marbella's current layout and for the developments, based on line drawings (Appendix A) provided by Westland Resources, Inc. (Westland), on behalf of both developers.

The water supplies to the developments would come from the Airline wells as well as a well in the Marbella development. Liberty is currently implementing a pressure zone boundary along Camelback Road that will enable the Airline pump station to provide adequate pressures to the service area north of Camelback Road. Approximately 25 percent of the demand is located in the upper pressure zone (north of Camelback Road) and 75 percent of the demands are in the lower pressure zone.



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Last Revised: April 10, 2017
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Figure 1
Liberty Water Distribution System

2.3.1 Water Supply

The wells that currently supply the Liberty Utilities system are shown in Table 3. Liberty is planning to bring 3 other wells online in the near future including Well 6AL, which is shown in Table 3. A second new well is located in the Marbella development with an expected capacity of 500 gpm. The third well is located farther to the south, and its capacity is not known. With the pressure zone split in place, the Airline wells deliver approximately 3,500 gpm to meet maximum day demands in the upper pressure zone and the remaining flow goes to the lower pressure zone through the pressure reducing valves (PRVs) at the pressure zone boundary. As shown in Table 3, the production capacity of the Airline wells is sufficient to meet the maximum day demands in the upper pressure zone. Liberty's well production capacity will need to increase to serve additional customers as these customers come online. Liberty should verify that the well capacities in Table 3 represent the current well production capacity.

Table 3 Liberty Utilities Well Production Capacity

Well Name	Capacity (gpm)
Upper Pressure Zone	
Airline Well No. 2AL	1,100
Airline Well No. 4AL	1,000
Airline Well No. 5AL	1,500
Airline Well No. 6AL	1,000
Airline Well No. 9AL	1,950
Airline Well No. 10AL	1,200
Subtotal	**7,750**
Lower Pressure Zone	
Town Well No. 1	700
Town Well No. 2	635
Town Well No. 4	1,250
Town Well No. 5	1,200
Town Well No. 6	1,200
Well 20B	1,400
Well 34C	900
Subtotal	**7,285**
Total Supply	**15,035**
Total Production Capacity (mgd)	**21.6**
Firm Production Capacity[1]	**13,085**
Firm Production Capacity (mgd)	**18.8**
Maximum Day Demand	**12,294**
Surplus/(Deficit)	**791**

2.3.2 Booster Pumping Capacity

The Liberty Utilities water system has two pump stations, as shown in Table 4. The Town Well pump station is currently operating at its maximum pressure of 65 psi. The Airline Reservoir pump station will operate at 80 psi when the zone boundary split along Camelback Road is completed. In addition, Wells 2AL, 10AL, 20B, and 34C pump directly into the distribution system; so, the system has a firm pumping capacity of 25,100 gpm. Based on the estimated peak hour demand of 23,000 gpm, the pumping capacity is sufficient to meet peak hour demands.

Table 4 Liberty Utilities Booster Pump Station Firm Capacity

Pump Station Name	Firm Capacity (gpm)
Town Well PS	8,500
Airline Reservoir PS	12,000
Well 2AL	1,100
Well 10AL	1,200
Well 20B	1,400
Well 34C	900
Firm Pumping Capacity	**25,100**
Peak Hour Demand	**23,000**
Surplus/(Deficit)	**2,100**

2.3.3 Storage Reservoirs

The Liberty Utilities water system has two reservoirs. The Town Reservoir has a storage volume of 6.3 million gallons (MG) and serves the lower pressure zone. The Airline Reservoir has a storage volume of 3.8 MG and serves the upper pressure zone.

The upper zone storage requirement is shown in Table 5. The equalization and emergency storage volumes were calculated based on Liberty Utilities design criteria. The fire flow storage criteria as defined in the 2012 Master Plan is not completely met with the currently available storage, but Table 5 shows that fire flows can be supplied in the upper zone.

Table 5 Liberty Utilities Storage Requirements in the Upper Zone with Luke Landing Demands

Criteria	Required Storage (MG)
Equalization Storage (30% of MDD)	1.62
Emergency Storage (10% of MDD)	0.54
Fire Flow (minimum, 3000 gpm for 3 hours)	0.54
Minimum Storage Required	**2.7**
Storage Available	**3.8**
Storage Available for the Lower Zone	**1.1**

Abbreviation:
MDD = maximum day demand

2.3.4 Distribution System

Water supply to the Marbella development will come through a new 16-inch main from the Airline Reservoir pump station to the El Mirage Road and Glendale Avenue intersection. Liberty Utilities is currently implementing a zone split project. When this project is complete, the pump station discharge pressure will be increased to 80 psi.

The model predicts that the maximum day plus fire flow and peak hour demand conditions for the developments can be met while meeting the Liberty Utilities design criteria. Figure 2 shows the predicted peak hour pressures in the area of the developments. There is one area south of Camelback Road and east of Bullard Road where peak hour pressures are just under 40 psi in the peak hour.

2.4 Wastewater System Evaluation

A map of the Liberty wastewater collection system is shown in Figure 3. The Liberty Utilities wastewater collection system model was used in this evaluation. The model was updated to include 8-, 12-, and 15-inch sewers located in potential future streets through Marbella and the developments based on the sewer layout in the line drawings (Appendix A) provided by Westland Resources. This capacity analysis is based on the assumption that the 3.5 mile sewer pipe that serves the Marbella development will be in place along El Mirage Road from Glendale Avenue south to Indian School Road, then 1/2 mile west on Indian School Road.

The layout for Luke Landing is configured to convey all generated flow through the Marbella development to the proposed sewer pipe in El Mirage Road. The peak flow for the existing collection system flows is based on the peaking factors in the Arizona Administrative Code applied to estimated population (R18-9-E301). To evaluate the impact of the developments, the estimated peak flow of 126 gpm from Table 1 was added to the peak flow in the model.

Figure 4 presents a map of the Liberty Utilities wastewater collection system capacity. The interceptors that convey flow from Luke Landing to the Palm Valley WRP are out of capacity from east of Indian School and Dysart Roads to Thomas and Litchfield Roads. An increase in sewer capacity is recommended, but the size of parallel or upsized mains will depend on an evaluation of all the flows that need to pass through these pipes and not just flows from the developments.

The Palm Valley Water Reclamation Plant has recently been expanded to 5.1 mgd and has the capacity to treat wastewater from the developments.

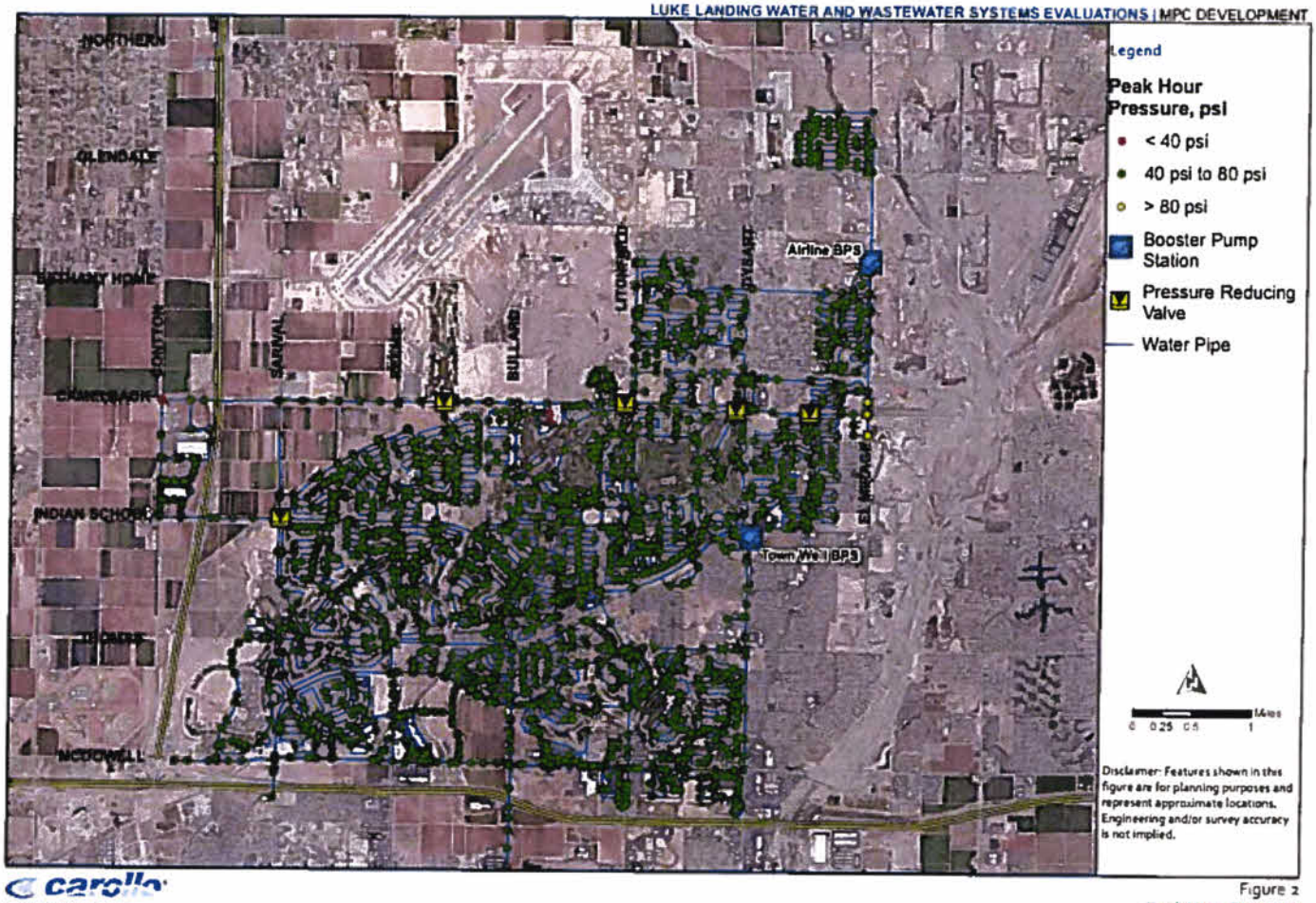

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Figure 2
Peak Hour Pressure

3.0 Observations and Conclusions

The following observations are made from these evaluations:

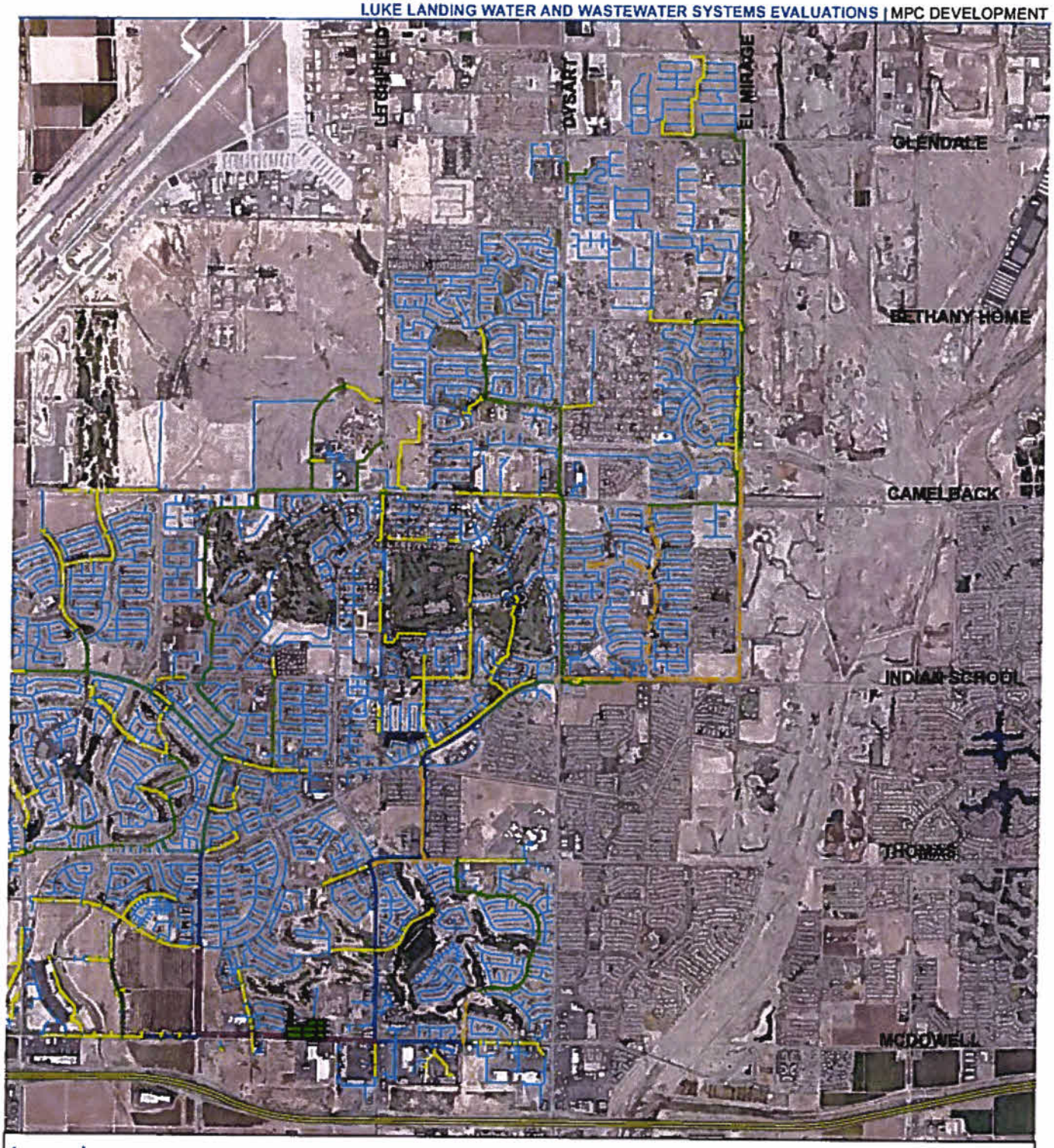
1. The Liberty water system has sufficient water supply to meet the demands of the developments when Well 6AL is brought online. The new 500-gpm well in the Marbella development will also supply the development.
2. The Liberty water system has sufficient firm pumping capacity. The new Marbella well will also provide additional pumping capacity.
3. Minimum pressures can be provided in the developments.
4. The upper pressure zone has sufficient storage to supply fire flow in addition to diurnal and emergency storage, but the Liberty system overall does not fully meet Liberty's storage criteria.
5. There are pipe sections that are operating at capacity in the existing collection system from Indian School Road east of Dysart Road down to Litchfield Road and Thomas Road. Liberty Utilities is currently monitoring flows in these pipes to develop a strategy to expand the sewer capacity in this area. The size of parallel or upsized sewer interceptors will depend on the total flows from current and future developments that will be served by this pipe. Liberty is addressing these concerns independently from the Luke Landing project.
6. The Palm Valley water reclamation plant has sufficient capacity to treat wastewater flows from both developments.

Registered Professional Engineer (Civil) CERTIFICATE NO. 36578 RICHARD A. HUMPHERYS DATE SIGNED 9-28-17 ARIZONA, U.S.A.

EXPIRES 09-30-2019

Prepared by:

Richard Humpherys



Legend

Palm Valley WRP

Sewer Pipe Diameters, in.

- 8 and smaller
- 10 -12
- 15
- 18
- 21
- 24
- 27
- 30 and larger

N

Miles

0 0.25 0.5 1

Disclaimer. Features shown in this figure are for planning purposes and represent approximate locations. Engineering and/or survey accuracy is not implied.

Carollo

Figure 3

Liberty Wastewater Collection System

Last Revised: April 10, 2017
[ENTER PROJECT WISE PATH NAME TO MXD] For Example:
pw:\Carollo\Documents\Client\CA\Clovis\10265A00\Data\GIS\Figure 6 4 mxd

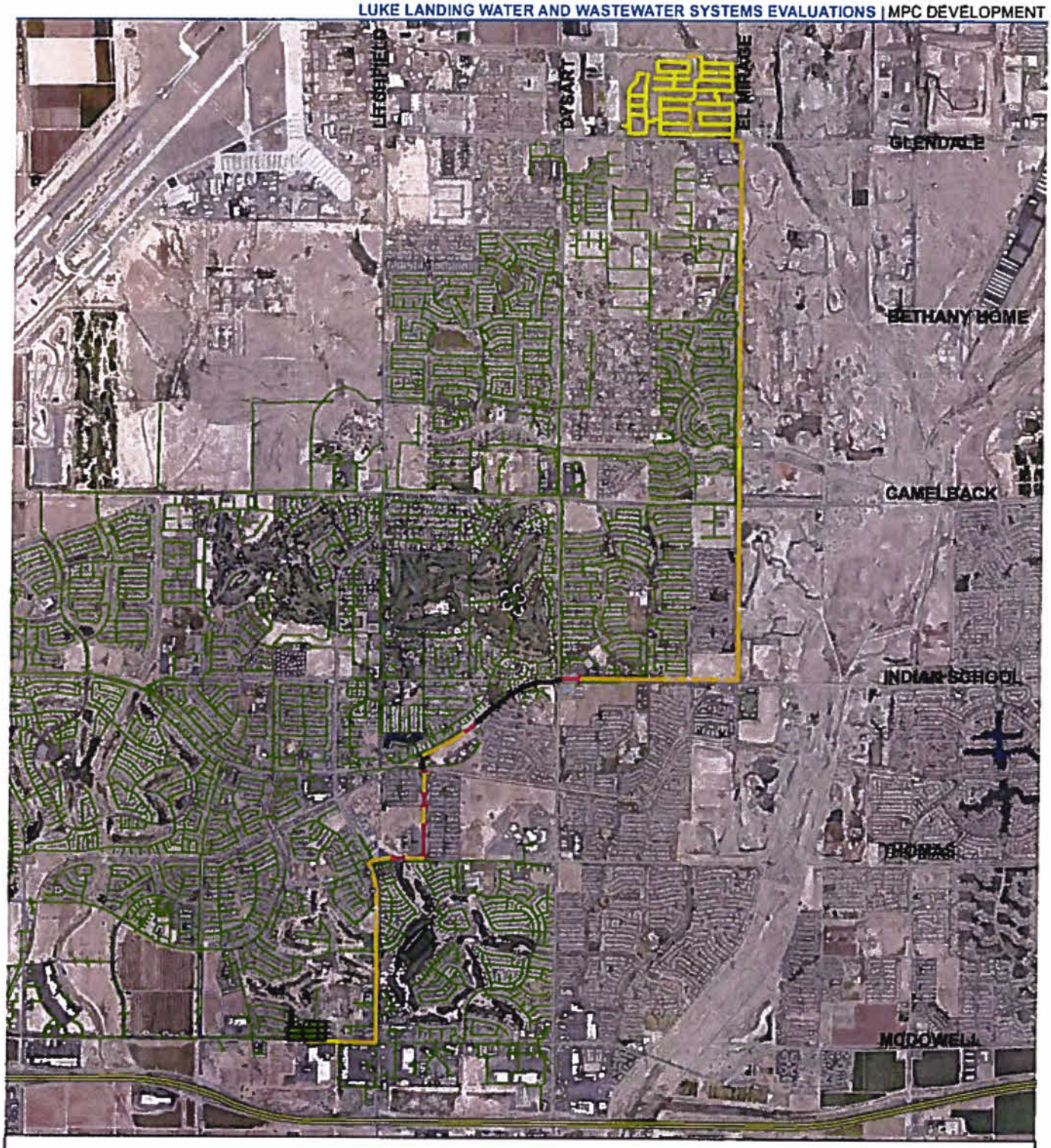


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Figure 4

Predicted Capacity of Pipes Between Luke Landing and Palm Valley WRP

Last Revised: April 10, 2017
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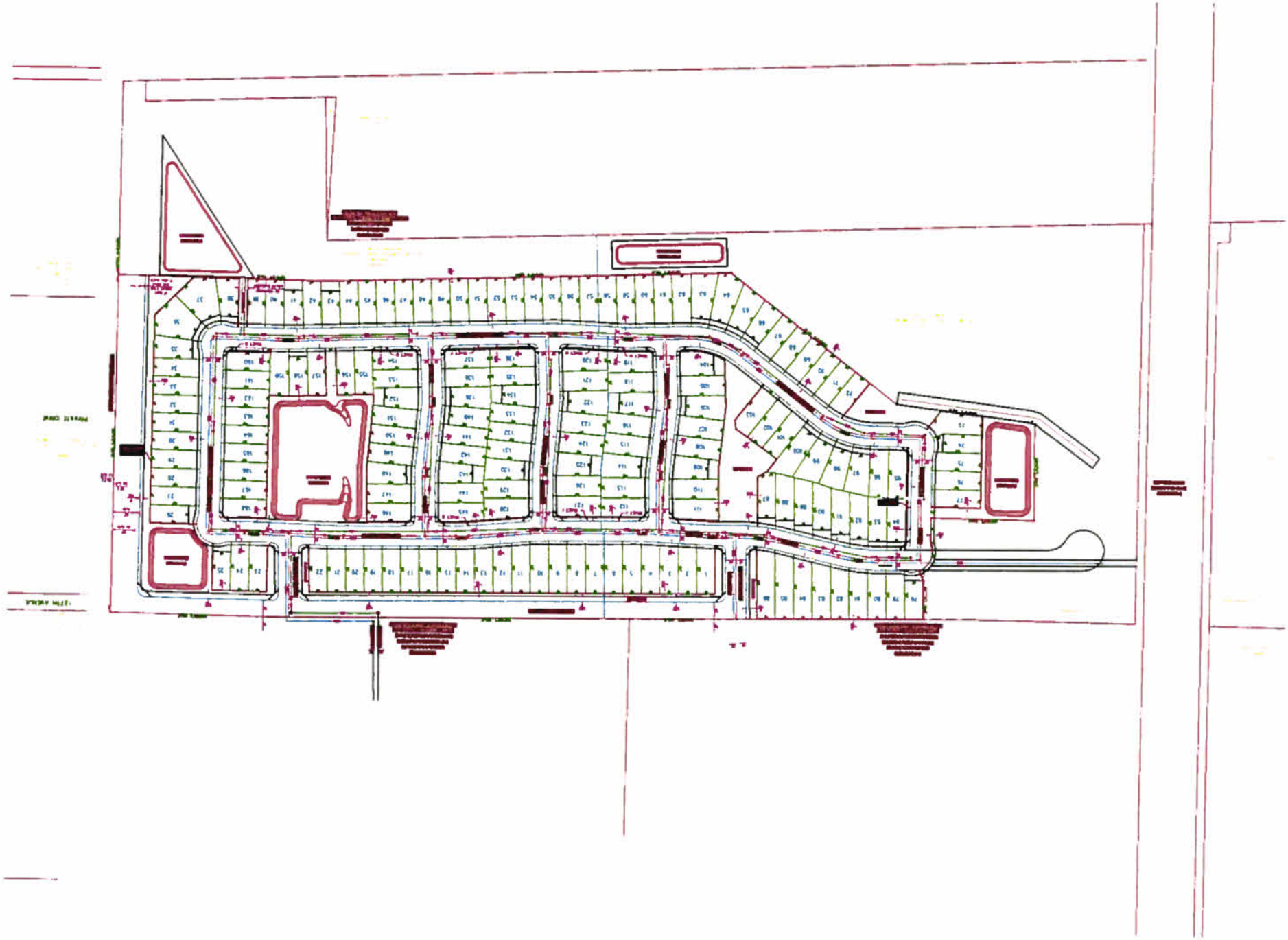
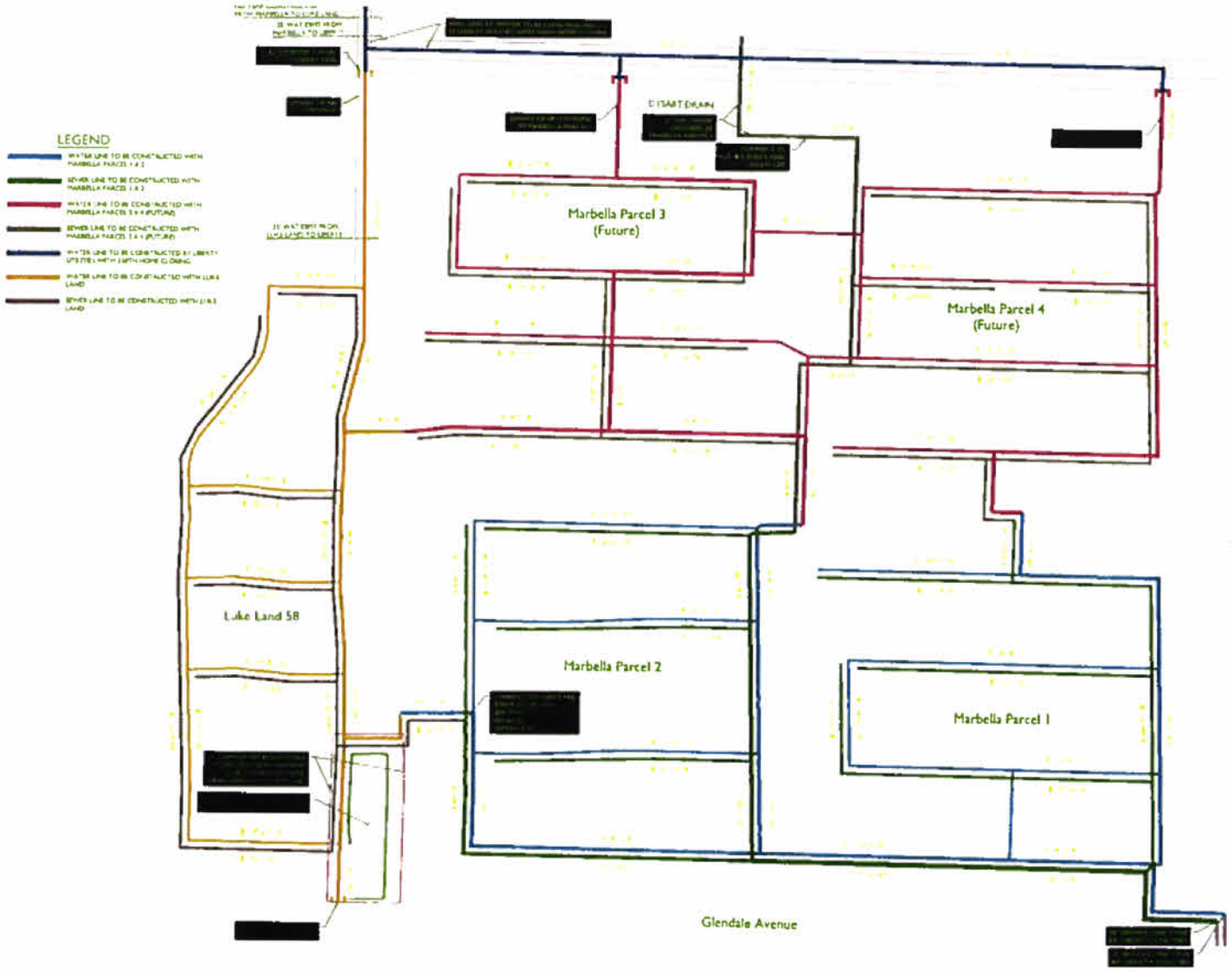
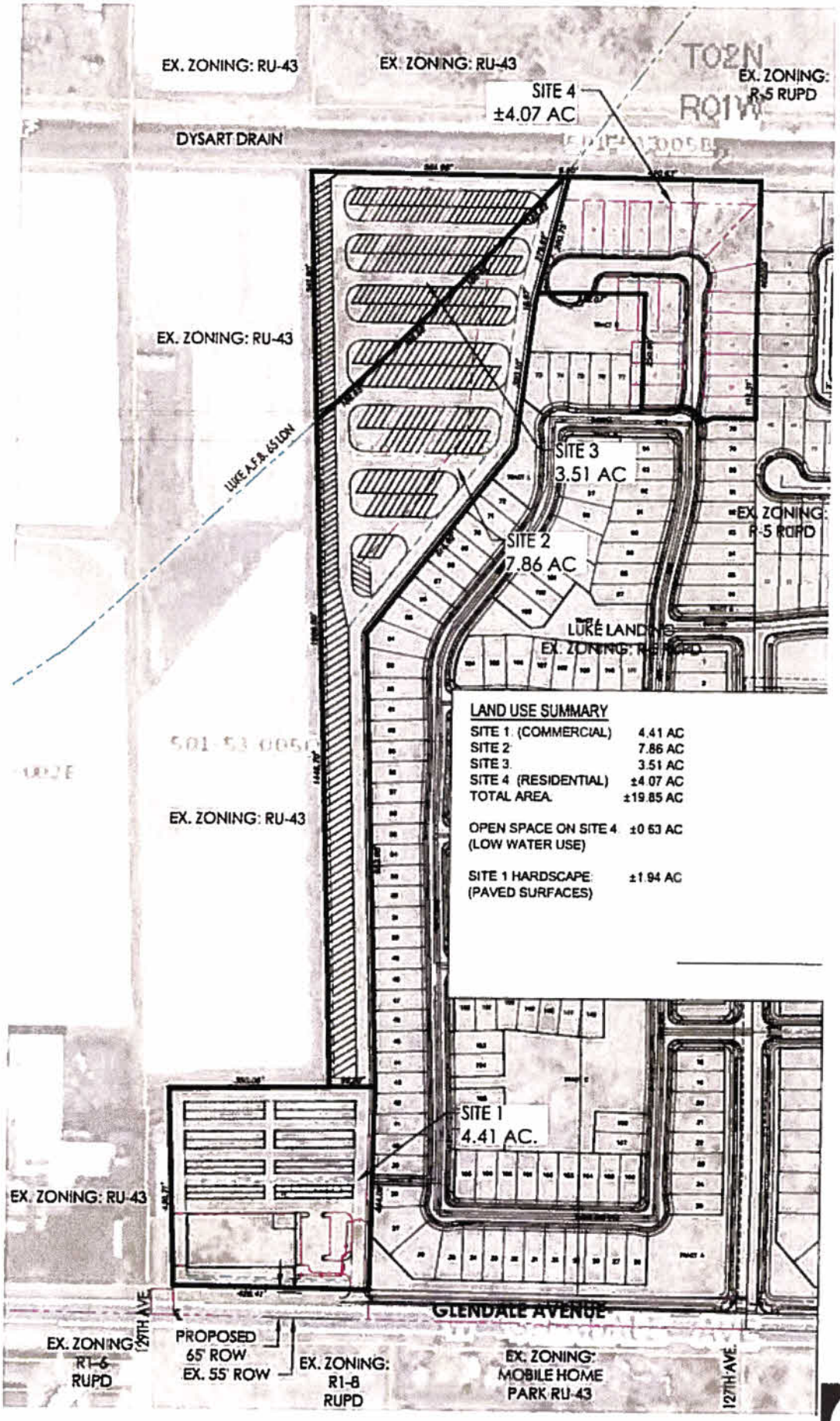
Appendix A

WATER AND SEWER PIPE LAYOUT FOR MARBELLA, LUKE LANDING, AND LUKE LAND 58 DEVELOPMENTS




LEGEND
Marbella Parcel 3
(Future)
Marbella Parcel 4
(Future)
Marbella Parcel 2
Marbella Parcel 1
Luke Land 58
Glendale Avenue
El Mirage Rd



LAND USE SUMMARY

SITE 1 (COMMERCIAL)	4.41 AC
SITE 2	7.86 AC
SITE 3	3.51 AC
SITE 4 (RESIDENTIAL)	±4.07 AC
TOTAL AREA	±19.85 AC
OPEN SPACE ON SITE 4 (LOW WATER USE)	±0.63 AC
SITE 1 HARDSCAPE (PAVED SURFACES)	±1.94 AC

LUKE LAND 58

CONCEPTUAL SITE PLAN

GLENDALE, AZ

PREPARED FOR: LUKE LAND 58 LLC

SCALE: 1" = 200'
DATE: 6.10.17
GPLA JOB # 14036

0 100 200 400

NORTH

GILMORE
PLANNING & LANDSCAPE ARCHITECTURE

ATTACHMENT D

TABULATED PIPE FLOW CALCULATIONS

ATTACHMENT D - TABULATED PIPE FLOW CALCULATIONS

Pipe Number	From Manhole	To Manhole	Pipe Size (in)	Pipe slope (%)	Average Daily Flow (gpd)	Peak Hour Flow (gpd)	d/D ratio at peak hour	Peak hour velocity (fps)	Upstream Units	Upstream Commercial (acres)
1	1	0	8	0.33	67,095	201,285	0.469	1.94	189	4.41
2	2	1	8	0.33	45,440	136,320	0.378	1.75	142	0
3	3	2	8	0.33	27,840	83,520	0.292	1.52	87	0
4	4	3	8	0.33	20,160	60,480	0.248	1.39	63	0
5	5	4	8	0.33	13,120	39,360	0.200	1.23	41	0
6	6	5	8	0.33	12,160	36,480	0.193	1.20	38	0
7	7	6	8	0.33	8,320	24,960	0.160	1.07	26	0
						-				
8	8	1	8	0.33	21,655	64,965	0.257	1.42	47	4.41
9	9	8	8	0.33	20,695	62,085	0.251	1.40	44	4.41
10	10	9	8	0.33	18,455	55,365	0.237	1.35	37	4.41
11	11	10	8	0.33	15,575	46,725	0.218	1.29	28	4.41
12	12	11	8	0.33	12,055	36,165	0.192	1.20	17	4.41
13	13	12	8	0.33	4,800	14,400	0.123	0.91	15	0
14	14	13	8	0.33	3,200	9,600	0.102	0.80	10	0
15	15	2	8	0.33	17,280	51,840	0.230	1.33	54	0
16	16	15	8	0.33	14,720	44,160	0.212	1.27	46	0
17	17	16	8	0.33	12,160	36,480	0.193	1.20	38	0
18	18	17	8	0.33	9,600	28,800	0.172	1.12	30	0
19	19	18	8	0.33	7,360	22,080	0.151	1.03	23	0
20	20	19	8	0.33	6,720	20,160	0.145	1.01	21	0
21	21	20	8	0.33	3,840	11,520	0.111	0.85	12	0
22	22	21	8	0.33	2,560	7,680	0.092	0.75	8	0
23	23	22	8	0.33	1,600	4,800	0.074	0.65	5	0
24	24	3	8	0.33	5,440	16,320	0.131	0.94	17	0
25	25	24	8	0.33	2,880	8,640	0.097	0.78	9	0
										0
26	26	4	8	0.33	5,120	15,360	0.127	0.93	16	0
27	27	26	8	0.33	2,560	7,680	0.092	0.75	8	0
28	28	12	8	0.33	6,615	19,845	0.144	1.00	0	4.41
29	29	7	8	0.33	6,720	20,160	0.145	1.01	21	0
30	30	29	8	0.33	3,200	9,600	0.102	0.80	10	0

REFER TO ATTACHMENTS A AND B FOR PIPE NUMBERS AND MANHOLE NUMBERS THAT CORRESPOND THE TO LIST ABOVE.

ATTACHMENT E

OPINION OF PROBABLE CONSTRUCTION COSTS

WestLand Resources, Inc.
Engineering and Environmental Consultants

Project Name: Luke Landing Wastewater Master Plan
Project No.: 1952.01
Location: Maricopa County
Description: 168 single family residential development

Prepared by: PAM **Date:** 5/19/2017
Checked by: MDO **Date:** 5/19/2017
Client: MPC Development

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	8-inch PVC SDR 35 sewer line	LF	5,750	$35	$201,250	5-7 ft depth
2	5' Diameter Manholes	EA	27	$3,700	$99,900	
3				$0	$0	
4				$0	$0	
5				$0	$0	
6				$0	$0	
7				$0	$0	
8				$0	$0	
9				$0	$0	
10				$0	$0	
11				$0	$0	
12				$0	$0	
	Subtotal				**$301,150**	
	Contingencies (20%)				$60,230	
	TOTAL PROJECT COSTS				**$361,380**	

WestLand Resources, Inc.

Engineering and Environmental Consultants

Project Name: Luke Land 58 Wastewater Master Plan
Project No.: 1952.01
Location: Maricopa County
Description: Commercial self storage units and 21 single family homes

Prepared by: PAM **Date:** 9/29/2017
Checked by: PAM **Date:** 9/29/2017
Client: Luke Land 58, LLC

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	8-inch PVC SDR 35 sewer line	LF	610	$35	$21,350	5-7 ft depth
2	5' Diameter Manholes	EA	3	$3,700	$11,100	Does not include mobilization or miscelaneous construction costs.
3				$0	$0	
4				$0	$0	
5				$0	$0	
6				$0	$0	
7				$0	$0	
8				$0	$0	
9				$0	$0	
10				$0	$0	
11				$0	$0	
12				$0	$0	
	Subtotal				**$32,450**	
	Contingencies (20%)				$6,490	
	TOTAL PROJECT COSTS				**$38,940**	

EXHIBIT 5

ESTIMATED TOTAL CONSTRUCTION COSTS AND

PLANT COST PROJECTIONS

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Estimated Water Construction Costs

For

Luke Landing & Luke Land 58

WestLand Resources, Inc.

Engineering and Environmental Consultants

Project Name: Luke Landing Water Master Plan
Project No.: 1952.01
Location: Maricopa County
Description: 168 unit single family residential

Prepared by: PAM **Date:** 5/19/2017
Checked by: MDO **Date:** 5/19/2017
Client: MPC Development

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	12-inch DIP Waterline	LF	1,670	$105	$175,350	
2	8-inch DIP Waterline	LF	5,320	$75	$399,000	
3	6-inch DIP Waterline	LF	261	$60	$15,660	
4	1-inch type K copper service line	EA	168	$450	$75,600	
5	Fire hydrants and valves	EA	13	$4,200	$54,600	
6	DVA	EA	2	$1,200	$2,400	
7	12-inch Gate Valve, B&C	EA	6	$2,200	$13,200	
8	8-inch Gate Valve, B&C	EA	19	$950	$18,050	
9	1-inch ARV	EA	5	$1,200	$6,000	
	Subtotal				$759,860	
	Contingencies (20%)				$151,972	
	TOTAL PROJECT COSTS				$911,832	

WestLand Resources, Inc.

Engineering and Environmental Consultants

Project Name: Luke Land 58 Water Master Plan — **Prepared by:** PAM — **Date:** 9/21/2017

Project No.: 1952 01 — **Checked by:** PAM — **Date:** 9/21/2017

Location: Maricopa County — **Client:** MPC Development

Description: Self storage commercial development, 21 single family residential units

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	12-inch DIP Waterline	LF	890	$105	$93,450	
2	8-inch DIP Waterline	LF	290	$75	$21,750	
3	6-inch DIP Waterline	LF	200	$60	$12,000	
4	2-inch type K copper service line	EA	1	$1,800	$1,800	
5	1-inch type K copper service line	EA	21	$450	$9,450	
6	Fire hydrants and valves	EA	5	$4,200	$21,000	
7	DVA	EA	3	$1,200	$3,600	
8	12-inch Gate Valve, B&C	EA	4	$2,200	$8,800	
9	8-inch Gate Valve, B&C	EA	1	$950	$950	
10	1-inch ARV	EA	1	$1,200	$1,200	
	Subtotal				$174,000	
	Contingencies (20%)				$34,800	
	TOTAL PROJECT COSTS				$208,800	

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Estimated Wastewater Construction Costs

For

Luke Landing & Luke Land 58

WestLand Resources, Inc.

Engineering and Environmental Consultants

Project Name: Luke Landing Wastewater Master Plan
Project No.: 1952.01
Location: Maricopa County
Description: 168 single family residential development

Prepared by: PAM **Date:** 5/19/2017
Checked by: MDO **Date:** 5/19/2017
Client: MPC Development

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	8-inch PVC SDR 35 sewer line	LF	5,750	$35	$201,250	5-7 ft depth
2	5' Diameter Manholes	EA	27	$3,700	$99,900	
3				$0	$0	
4				$0	$0	
5				$0	$0	
6				$0	$0	
7				$0	$0	
8				$0	$0	
9				$0	$0	
10				$0	$0	
11				$0	$0	
12				$0	$0	
	Subtotal				$301,150	
	Contingencies (20%)				$60,230	
	TOTAL PROJECT COSTS				$361,380	

WestLand Resources, Inc.

Engineering and Environmental Consultants

Project Name: Luke Land 58 Wastewater Master Plan
Project No.: 1952.01
Location: Maricopa County
Description: Commercial self storage units and 21 single family homes

Prepared by: PAM **Date:** 9/29/2017
Checked by: PAM **Date:** 9/29/2017
Client: Luke Land 58, LLC

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	8-inch PVC SDR 35 sewer line	LF	610	$35	$21,350	5-7 ft depth
2	5' Diameter Manholes	EA	3	$3,700	$11,100	Does not include mobilization or miscelaneous construction costs
3				$0	$0	
4				$0	$0	
5				$0	$0	
6				$0	$0	
7				$0	$0	
8				$0	$0	
9				$0	$0	
10				$0	$0	
11				$0	$0	
12				$0	$0	
	Subtotal				$32,450	
	Contingencies (20%)				$6,490	
	TOTAL PROJECT COSTS				$38,940	

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Estimated Combined Water & Wastewater Construction Costs per year

For

Luke Landing & Luke Land 58

Luke Landing and Luke Land 58 - Estimated Capital Expenditures per Year

Water Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ 620,804	$ 451,928	$ 47,900	$ -	$ -

Wastewater Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ 201,936	$ 164,744	$ 33,640	$ -	$ -

Luke Landing and Luke Land 58 - Estimated Capital Expenditures - Cumulative

Water Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ 620,804	$ 1,072,732	$ 1,120,632	$ 1,120,632	$ 1,120,632

Wastewater Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ 201,936	$ 366,680	$ 400,320	$ 400,320	$ 400,320

Capital expenditures timeline is an estimate only and may be impacted by external events.

Luke Landing - Estimated Capital Expenditures per Year

Water Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ 620,804	$ 291,028	$ -	$ -	$ -

Wastewater Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ 201,936	$ 159,444	$ -	$ -	$ -

Luke Landing - Estimated Capital Expenditures - Cumulative

Water Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ 620,804	$ 911,832	$ 911,832	$ 911,832	$ 911,832

Wastewater Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ 201,936	$ 361,380	$ 361,380	$ 361,380	$ 361,380

Capital expenditures timeline is an estimate and may be impacted by external events.

Luke Land 58 - Estimated Capital Expenditures per Year

Water Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ -	$ 160,900	$ 47,900	$ -	$ -

Wastewater Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ -	$ 5,300	$ 33,640	$ -	$ -

Luke Land 58 - Estimated Capital Expenditures - Cumulative

Water Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ -	$ 160,900	$ 208,800	$ 208,800	$ 208,800

Wastewater Capital	Year 1	Year 2	Year 3	Year 4	Year 5
	$ -	$ 5,300	$ 38,940	$ 38,940	$ 38,940

Capital expenditures timeline is an estimate and may be impacted by external events.

EXHIBIT 6

GENERAL STATEMENT OF FINANCIAL CONDITION

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Water Utility Financials

Liberty Utilities (Litchfield Park Water and Sewer) Corp
Annual Report
Balance Sheet Assets
12/31/16

Balance Sheet Assets				
	Assets		Balance at Beginning of Year (2016)	Balance at End of Year (2016)
Account No.	**Current and Accrued Assets**			
131	Cash		$64,495	$121,395
134	Working Funds		4,047,029	4,591,927
135	Temporary Cash Investments		0	0
141	Customer Accounts Receivable		2,641,188	2,172,061
146	Notes Receivable from Associated Companies		2,189,370	4,147,805
151	Plant Material and Supplies		0	0
162	Prepayments		306,826	95,059
174	Miscellaneous Current and Accrued Assets		428,428	319,639
	Total Current and Accrued Assets		$9,677,337	$11,447,886
Account No.	**Fixed Assets**			
101	Utility Plant in Service*		$96,438,886	$98,881,658
103	Property Held for Future Use		6,000	6,000
105	Construction Work in Progress		2,321,151	8,088,868
108	Accumulated Depreciation (enter as negative)*		(26,452,001)	(28,971,111)
121	Non-Utility Property		0	0
122	Accumulated Depreciation - Non Utility		0	0
	Total Fixed Assets		$72,314,036	$78,005,415
	Total Assets		$81,991,372	$89,453,301

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

*Note these items feed automatically from AR3 UPIS Page 3

Liberty Utilities (Litchfield Park Water and Sewer) Corp
Annual Report
Balance Sheet Liabilities and Owners Equity

Balance Sheet Liabilities and Owners Equity				
	Liabilities		Balance at Beginning of Year (2016)	Balance at End of Year (2016)
Account No.	**Current Liabilities**			
231	Accounts Payable		($220)	$1,113
232	Notes Payable (Current Portion)		0	0
234	Notes Payable to Associated Companies		0	0
235	Customer Deposits		0	492,166
236	Accrued Taxes		69,139	0
237	Accrued Interest		0	0
242	Miscellaneous Current and Accrued Liabilities		967,945	2,130,075
	Total Current Liabilities		**$1,036,864**	**$2,623,354**
	Long Term Debt			
224	Long Term Debt (Notes and Bonds)		$0	$0
	Deferred Credits			
251	Unamortized Premium on Debt		$0	$0
252	Advances in Aid of Construction		24,971,088	17,490,774
253	Other Deferred Credits		4,055,844	4,587,085
255	Accumulated Deferred Investment Tax Credits		0	0
271	Contributions in Aid of Construction		12,880,671	20,274,567
272	Less: Amortization of Contributions		(1,788,589)	(2,426,478)
281	Accumulated Deferred Income Tax		3,160,628	2,622,025
	Total Deferred Credits		**$43,279,642**	**$42,547,973**
	Total Liabilites		**$44,316,506**	**$45,171,327**
	Capital Accounts			
201	Common Stock Issued		$44,574	$40,222
211	Other Paid-In Capital		15,787,923	26,467,685
215	Retained Earnings		21,842,369	17,774,067
218	Proprietary Capital (Sole Props and Partnerships)		0	0
	Total Capital		**$37,674,866**	**$44,281,974**
	Total Liabilities and Capital		**$81,991,372**	**$89,453,301**

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Note: Total liabilities and Capital must match total assets for the beginning and end of the year!

Liberty Utilities (Litchfield Park Water and Sewer) Corp
Annual Report
Water Comparative Income Statement
12/31/16

Water Comparative Income Statement			
Account No.	Calendar Year	Current Year 01/01/2016 - 12/31/2016	Last Year 01/01/2015 - 12/31/2015
	Operating Revenue		
461	Metered Water Revenue	$12,846,655	$12,260,426
460	Unmetered Water Revenue	0	0
462	Fire Protection Revenue	206,579	0
469	Guaranteed Revenues (Surcharges)	0	0
471	Miscellaneous Service Revenues	0	0
474	Other Water Revenue	271,589	225,868
420	AFUDC Revenue	30,157	348
	Total Revenues	**$13,354,980**	**$12,486,642**
	Operating Expenses		
601	Salaries and Wages	$0	$0
604	Employee Pensions and Benefits	0	0
610	Purchased Water	13,324	1,193
615	Purchased Power	1,019,779	952,403
616	Fuel for Power Production	118	3,538
618	Chemicals	195,873	148,774
620	Materials and Supplies	62,448	47,928
620.1	Repairs and Maintenance	0	0
620.2	Office Supplies and Expense	25,687	19,838
630	Contractual Services	0	0
631	Contractual Services -Engineering	(5,950)	0
632	Contractual Services - Accounting	9,968	0
633	Contractual Services - Legal	7,780	0
634	Contractual Services - Management Fees	2,109,891	2,074,238
635	Contractual Services - Water Testing	85,445	34,995
636	Contractual Services - Other	1,340,580	1,336,664
635	Water Testing	0	0
640	Rents	0	0
641	Rental of Building/Real Property	0	3,084
642	Rental of Equipment	2,270	0
650	Transportation Expenses	69,155	57,183
657	Insurance - General Liability	52,296	59,719
657.1	Insurance - Health and Life	0	0
665	Regulatory Commission Expense - Rate	115,827	115,827
675	Miscellaneous Expense	344,029	290,497
403	Depreciation Expense (From Schedule AR4)	2,298,736	2,708,276
408	Taxes Other Than Income	0	0
408.11	Property Taxes	558,016	130,979
409	Income Taxes	0	0
	Total Operating Expenses	**$8,305,272**	**$7,985,136**
	Operating Income / (Loss)	**$5,049,709**	**$4,501,506**
	Other Income / (Expense)		
419	Interest and Dividend Income	$0	$21,792
421	Non-Utility Income	0	0
426	Miscellaneous Non-Utility (Expense)	0	0
427	Interest (Expense)	(2,326)	(465,782)
	Total Other Income / (Expense)	**($2,326)**	**($443,990)**
	Net Income / (Loss)	**$5,047,383**	**$4,057,516**

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Wastewater Utility Financials

Liberty Utilities (Litchfield Park Water and Sewer) Corp
Annual Report
Balance Sheet Assets
12/31/16

Balance Sheet Assets				
	Assets		Balance at Beginning of Year (2016)	Balance at End of Year (2016)
Account No.	Current and Accrued Assets			
131	Cash		$37,844	$114,623
132	Special Deposits		3,683,451	3,923,844
135	Temporary Cash Investments		0	0
141	Customer Accounts Receivable		1,618,793	660,050
142	Other Accounts Receivable		0	7,793
143	Accumulated Provision for Uncollectable Accounts		0	(258)
146	Notes Receivable from Associated Companies		1,341,872	3,916,430
151	Plant Material and Supplies		0	0
162	Prepayments		27,669	89,756
173	Accrued Utility Revenue		0	1,374,283
174	Miscellaneous Current and Accrued Assets		225,287	68,330
	Total Current and Accrued Assets		**$6,934,916**	**$10,154,851**
	Deferred Debits			
186.1	Deferred Rate Case Expense		$0	$14,113
186.2	Other Deferred Debits		0	166,563
	Total Deferred Debits		**$0**	**$180,676**
	Fixed Assets			
101	Utility Plant in Service*		$77,627,331	$79,003,441
103	Property Held for Future Use		3,547,445	11,217
105	Construction Work in Progress		3,589,804	26,788,028
108	Accumulated Depreciation (enter as negative)*		(20,113,092)	(22,440,396)
121	Non-Utility Property		0	0
122	Accumulated Depreciation - Non Utility		0	0
	Total Fixed Assets		**$64,651,488**	**$83,362,289**
	Total Assets		**$71,586,404**	**$93,697,815**

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Note these items feed automatically from the adjusted end of year balance from AR4.

Liberty Utilities (Litchfield Park Water and Sewer) Corp
Annual Report
Balance Sheet Liabilities and Owners Equity

Balance Sheet Liabilities and Owners Equity				
	Liabilities		Balance at Beginning of Year (2016)	Balance at End of Year (2016)
Account No.	Current Liabilities			
231	Accounts Payable		($135)	$1,051
232	Notes Payable (Current Portion)		0	
234	Notes Payable to Associated Companies		0	
235	Customer Deposits		0	
236	Accrued Taxes		42,376	
237	Accrued Interest		0	
241	Miscellaneous Current and Accrued Liabilities		292,840	17,691,556
253	Other Deferred Credits		3,066,999	3,366,516
	Total Current Liabilities		**$3,402,080**	**$21,059,123**
	Long Term Debt			
224	Long Term Debt (Notes and Bonds)		$0	
	Total Long Term Debt		**$0**	**$0**
	Deferred Credits			
252	Advances in Aid of Construction		11,045,756	3,433,377
255	Accumulated Deferred Investment Tax Credits		0	
271	Contributions in Aid of Construction		35,210,323	44,475,053
272	Less: Amortization of Contributions		(5,890,812)	(8,162,969)
281	Accumulated Deferred Income Tax		1,937,159	2,475,762
	Total Deferred Credits		**$42,302,426**	**$42,221,223**
	Total Liabilites		**$45,704,506**	**$63,280,346**
	Capital Accounts			
201	Common Stock Issued		$33,626	$37,978
211	Other Paid-In Capital		11,078,568	24,991,247
215	Retained Earnings		14,769,704	5,388,244
218	Proprietary Capital (Sole Props and Partnerships)		0	
	Total Capital		**$25,881,898**	**$30,417,469**
	Total Liabilities and Capital		**$71,586,404**	**$93,697,815**

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

Note: Total liabilities and Capital must match total assets for the beginning and end of the year!

Liberty Utilities (Litchfield Park Water and Sewer) Corp
Annual Report
Wastewater Comparative Income Statement
12/31/16

Wastewater Comparative Income Statement			
Account No.	Calendar Year	Current Year 01/01/2016 - 12/31/2016	Last Year 01/01/2015 - 12/31/2015
	Operating Revenue		
521	Flat Rate Revenues	$11,185,850	$10,904,230
522	Measured Revenues	660,006	609,772
534	Rents from Wastewater Property	0	0
539	Other Wastewater Revenues	185,212	137
420	AFUDC Income	320,466	139,597
	Total Revenues	**$12,351,534**	**$11,653,736**
	Operating Expenses		
701	Salaries and Wages	$0	$0
704	Employee Pensions and Benefits	0	0
710	Purchased Wastewater Treatment	22,433	20,204
711	Sludge Removal Expense	265,063	266,284
715	Purchased Power	678,209	609,697
716	Fuel for Power Production	261	1,713
718	Chemicals	319,237	327,311
720	Materials and Supplies	187,784	97,635
721	Office Expense	39,436	0
731	Contractual Services -Engineering	0	0
732	Contractual Services - Accounting	2,000	0
733	Contractual Services - Legal	0	0
734	Contractual Services - Management Fees	2,317,517	2,099,560
735	Contractual Services - Testing	42,616	32,462
736	Contractual Services - Other	1,370,293	1,456,807
740	Rents - Building	0	9,262
742	Rents - Equipment	4,683	0
750	Transportation Expenses	26,197	17,423
757	Insurance - General Liability	52,838	63,490
758	Insurance - Worker's Compensation	0	0
759	Insurance - Other	0	0
760	Advertising Expense	0	0
766	Regulatory Commission Expense - Rate Case	0	0
767	Regulatory Commission Expense - Other	0	0
770	Bad Debt Expense	(7,257)	0
775	Miscellaneous Expense	147,103	140,557
403	Depreciation Expense (From Schedule AR4)	259,054	1,953,044
408	Taxes Other Than Income	0	0
408.11	Property Taxes	552,501	858,817
408.12	Payroll Taxes	0	0
409	Income Taxes	0	0
	Total Operating Expenses	**$6,279,968**	**$7,954,266**
	Operating Income / (Loss)	**$6,071,566**	**$3,699,470**
	Other Income / (Expense)		
414	Gain (Loss) on Dispositions	$0	$0
419	Interest and Dividend Income	0	0
421	Non-Utility Income	0	0
426	Miscellaneous Non-Utility (Expense)	0	0
427	Interest (Expense)	23,730	(296,670)
	Total Other Income / (Expense)	**$23,730**	**($296,670)**
	Net Income / (Loss)	**$6,095,296**	**$3,402,800**

Instructions: Fill out the Grey Cells with the relevent information. Input 0 or none if there is nothing recorded in that account or there is no applicable information to report.

EXHIBIT 7

LIBERTY LITCHFIELD PARK'S SCHEDULE OF RATES AND CHARGES

TABLE OF CONTENTS

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all WATER service areas
PART ONE
STATEMENT OF CHARGES FOR WATER SERVICE

I. RATES – General Residential, Commercial, Industrial, and Irrigation Service

In Decision No. 74437, dated April 18, 2014, the Commission authorized the following rates and charges to become effective May 1, 2014:

A. Monthly Usage Charge

Meter Size (All Classes)	Minimum Charge Per Month
5/8" x 3/4" Meter	$ 13.26
3/4" Meter	13.26
1" Meter – Residential	29.84
1" Meter	33.15
1 1/2" Meter	66.30
2" Meter	106.08
3" Meter	212.16
4" Meter	331.50
6" Meter	663.00
8" Meter (Bulk Resale Only)	575.00
8" Meter	1,060.80
10" Meter	1,524.90
12" Meter	2,850.90

Applies to all WATER service areas
PART ONE
STATEMENT OF CHARGES FOR WATER SERVICE

B. Commodity Rates

The rate for use in addition to the minimum stated above shall be at the following rates per 1,000 gallons:

Meter Size	Consumption	Rate
5/8" x 3/4" Meter and 3/4" Meter (Residential)	0 to 3,000	$0.750
	3,001 to 10,000	1.950
	10,001 to 20,000	2.950
	Over 20,000	3.456
1" Meter (Residential)	0 to 5,000	0.750
	5,001 to 19,000	1.950
	19,001 to 30,000	2.950
	Over 30,000	3.456
5/8" x 3/4" and 3/4" Meter (Commercial and Irrigation)	0 to 9,000	1.950
	Over 9,000	3.456
1" Meter (All Classes except Residential)	0 to 20,000	1.950
	Over 20,000	3.456
1 1/2" Meter (All Classes)	0 to 40,000	1.950
	Over 40,000	3.456
2" Meter (All Classes)	0 to 60,000	1.950
	Over 60,000	3.456

Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES FOR WATER SERVICE

Section I.B continued

Meter Size	Consumption	Rate
3" Meter (All Classes)	0 to 120,000	$1.950
	Over 120,000	3.456
4" Meter (All Classes)	0 to 180,000	1.950
	Over 180,000	3.456
6" Meter (All Classes)	0 to 360,000	1.950
	Over 360,000	3.456
8" Meter (All Classes)	0 to 650,000	1.950
	Over 650,000	3.456
8" Meter (Bulk Resale Only)	All Gallons	1.650
10" Meter (All Classes)	0 to 940,000	1.950
	Over 940,000	3.456
12" Meter (All Classes)	0 to 1,248,000	1.950
	Over 1,248,000	3.456
Construction Water – Hydrants*	All Gallons	3.456

*There is no monthly minimum for hydrant meters.

Applies to all WATER service areas

PART ONE

STATEMENT OF CHARGES FOR WATER SERVICE

C. Service Line and Meter Installation Charges

(Refundable Pursuant to A.A.C. R14-2-405)

Meter Size	Line	Meter	Total
5/8 x 3/4" Meter	$445.00	$155.00	$600.00
3/4" Meter	445.00	255.00	700.00
1" Meter	495.00	315.00	810.00
1 1/2" Meter	550.00	525.00	1,075.00
2" Turbine Meter	830.00	1,045.00	1,875.00
2" Compound Meter	830.00	1,890.00	2,720.00
3" Turbine Meter	At Cost	At Cost	At Cost
3" Compound Meter	At Cost	At Cost	At Cost
4" Turbine Meter	At Cost	At Cost	At Cost
4"Compound Meter	At Cost	At Cost	At Cost
6" Turbine Meter	At Cost	At Cost	At Cost
6"Compound Meter	At Cost	At Cost	At Cost
8" Meter & Larger Meters	At Cost	At Cost	At Cost

Applies to all WATER service areas
PART ONE
STATEMENT OF CHARGES FOR WATER SERVICE

D. Miscellaneous Service Charges

Service	Charge
Establishment	$20.00
Re-Establishment (Within 12 Months)	(a)
Reconnection	$20.00
Meter Test (if correct)	25.00
Meter Re-Read (if correct)	5.00
Fire Hydrant Meter Relocation	50.00
Fire Hydrant Meter Repair	At Cost
Deposit	(b)
Deposit Interest	6.00%
NSF Check	$25.00
Deferred Payment, Per Month	1.50%
Late Charge	(c)
After Hours Service Calls*	$40.00

(a) Number of full months off the system times the monthly minimum, per A.A.C. R14-2-403(D).
(b) Per Rule R14-2-403(B). Residential – two times the average monthly bill. Non-residential – Two and one half times the average monthly bill.
(c) Greater of $5.00 or 1.50% of unpaid balance.
* For After Hours Service Calls for work performed on the customer's property after hours, at customer's request. In addition to the charge for any utility service provided.

Applies to all **WATER** service areas

PART ONE

STATEMENT OF CHARGES FOR WATER SERVICE

Section I.D continued

*Hydrant Meter Deposit	
5/8 x 3/4" Meter	$ 135.00
3/4" Meter	215.00
1" Meter	255.00
1 1/2" Meter	465.00
2" Turbine Meter	965.00
2" Compound Meter	1,690.00
3" Turbine Meter	1,470.00
3" Compound Meter	2,265.00
4" Turbine Meter	2,350.00
4" Compound Meter	3,245.00
6" Turbine Meter	4,545.00
6" Compound Meter	6,280.00
8" Meter & Larger	At Cost

* Shall have a non-interest bearing deposit of the amount indicated, refundable in its entirety upon return of the meter in good condition and payment of final bill.

Applies to all **WATER** service areas

PART ONE

STATEMENT OF CHARGES FOR WATER SERVICE

II. TAXES AND ASSESSMENTS

In addition to all other rates and charges authorized herein, the Company shall collect from its customers all applicable sales, transaction, privilege, regulatory or other taxes and assessments as may apply now or in the future, per Rule R14-2-409(D)(5).

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all **WATER** service areas
PART ONE
STATEMENT OF CHARGES FOR WATER SERVICE

III. PERMITTED COSTS

A. Costs shall be verified by invoice.

B. For services that are provided by the Company at cost, costs shall include labor, materials, other charges incurred, and overhead not to exceed 10%. However, prior to any such service being provided, the estimated cost of such service will be provided by the Company to the customer. After review of the cost estimate, the customer will pay the amount of the estimated cost to the Company.

C. In the event that the actual cost is less than the estimated cost, the Company will refund the excess to the customer within 30 days after completion of the provision of the service or after Company's receipt of invoices, timesheets or other related documents, whichever is later.

D. In the event the actual cost is more than the estimated cost, the Company will bill the customer for the amount due within 30 days after completion of the provision of the service or after the Company's receipt of invoices, timesheets or other related documents, whichever is later. The amount so billed will be due and payable 30 days after the invoice date. However, if the actual cost is more than five percent (5%) greater than the total amount paid, the customer will only be required to pay five percent (5%) more than the total amount paid, unless the Company can demonstrate that the increased costs were beyond its control and could not be foreseen at the time the estimate for the total amount paid was made.

E. At the customer's request, the Company shall make available to the customer all invoices, timesheets or related documents that support the cost for providing such service.

F. Permitted costs shall include any Federal, State or local taxes that are or may be payable by the Company as a result of any tariff or contract for water facilities under which the Customer advances or contributes funds or facilities to the Company.

Applies to all **WATER** service areas

PART TWO

STATEMENT OF TERMS AND CONDITIONS FOR WATER SERVICE

CROSS-CONNECTION OR BACKFLOW TARIFF

PURPOSE:

The purpose of this tariff is to protect Liberty Utilities (Litchfield Park Water & Sewer) Corp. (the "Company") water from the possibility of contamination caused by backflow of contaminants that may be present on the customer's premises by requiring the installation and periodic testing of backflow-prevention assemblies pursuant to the provisions of the Arizona Administrative Code ("A.A.C.") R14-2-405.B.6. and A.A.C. R18-4-215.

REQUIREMENTS:

In compliance with the Rules and Regulations of the Arizona Corporation Commission ("Commission") and the Arizona Department of Environmental Quality ("ADEQ"), specifically A.A.C. R14-2-405.B.6 and A.A.C. R18-4-215 relating to backflow prevention:

1. The Company may require a customer to pay for and have installed, and to maintain, test and repair a backflow-prevention assembly if A.A.C. R18-4-215.B or C applies.

2. A backflow-prevention assembly required to be installed by the customer under Paragraph 1 of this tariff shall comply with the requirements set forth in A.A.C. R18-4-215.D and E.

3. Subject to the provisions of A.A.C. R14-2-407 and 410, and in accordance with Paragraphs 1 and 7 of this tariff, the Company may terminate service or deny service to a customer who fails to install a backflow-prevention assembly as required by this tariff.

4. The Company shall give any existing customer who is required to install a backflow-prevention assembly written notice of said requirement. If A.A.C. R14-2-410.B.1.a is not applicable, the customer shall be given thirty (30) days from the time such written notice is received in which to comply with this notice. If the customer can show good cause as to why he cannot install the backflow-prevention assembly within thirty (30) days, the Company or Commission Staff may suspend this requirement for a reasonable period of time.

Applies to all **WATER** service areas

PART TWO

STATEMENT OF TERMS AND CONDITIONS FOR WATER SERVICE

5. Testing shall be in conformance with the requirements of A.A.C. R18-4-215.F. The Company may require the customer to pay to have the backflow-prevention assembly tested as long as the Company does not require an unreasonable number of tests.

6. The customer shall provide the Company with records of installation and testing. For each backflow-prevention assembly, these records shall include:

    a. assembly identification number and description;
    b. location;
    c. date(s) of test(s);
    d. description of repairs and recommendations for repairs made by tester;
    e. tester's name and certificate number; and
    f. tester's field test kit certification documentation.

7. In the event the backflow-prevention assembly does not function properly or fails any test, and an obvious hazard as contemplated under A.A.C. R14-2-410.B.1.a. exists, the Company may terminate service immediately and without notice. The backflow-prevention assembly shall be repaired or replaced by the customer and retested.

8. In the event the backflow-prevention assembly does not function properly or fails any test, or in the event that a customer fails to comply with the testing requirement, and A.A.C. R14-2-410.B.1.a. is not applicable, the backflow-prevention assembly shall be repaired or replaced within fourteen (14) days of the initial discovery of the deficiency in the assembly or its function. Failure to remedy the deficiency of dysfunction of the assembly, or failure to retest, shall be grounds for termination of water service in accordance with A.A.C. R14-2-410.

Applies to all **WATER** service areas

PART TWO

STATEMENT OF TERMS AND CONDITIONS FOR WATER SERVICE

I. INTERRUPTIBLE SERVICE; COMPANY'S LIABILITY LIMITATIONS

The Company will supply only such water at such pressures as may be available from time to time as a result of the normal operation of its water system. The Company will maintain a minimum water pressure of 20 p.s.i. and will not guarantee a specific gallons per minute flow rate at any public fire hydrants or fire sprinkler service. In the event service is interrupted, irregular or defective, or fails from causes beyond the Company's control or through ordinary negligence of its employees or agents, the Company will not be liable for any injuries or damages arising therefrom.

Applies to all WATER service areas

PART TWO

STATEMENT OF TERMS AND CONDITIONS FOR WATER SERVICE

II. RULES AND REGULATIONS

The Company has adopted the Rules and Regulations established by the Commission as the basis for its operating procedures. A.A.C. R14-2-401 through A.A.C. R14-2-411 will be controlling of Company procedures, unless specific Commission Order(s) provide otherwise.

Applies to all **WATER** service areas

PART TWO

STATEMENT OF TERMS AND CONDITIONS FOR WATER SERVICE

III. CURTAILMENT PLAN

ADEQ Public Water System Number: 07-046

Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Company") is authorized to curtail water service to all customers, residential and commercial, within its certified area under the following terms and conditions:

Stage 1 Exists When:

Company is able to maintain water storage in the system at 100 percent of demand and there are no known problems with its well production or water storage in the system.

Restrictions: Under Stage 1, Company is deemed to be operating normally and no curtailment is necessary.

Notice Requirements: Under Stage 1, no notice is necessary.

Stage 2 Exists When:

a. Company's water storage or well production has been less than 80 percent of demand for at least 48 consecutive hours, and

b. Company has identified issues such as steadily declining water table, an increased draw-down threatening pump operations, poor water production, or electrical/ mechanical equipment failures, etc., creating a reasonable belief the Company will be unable to meet anticipated water demands in the system.

Restrictions: Under Stage 2, the Company may request the customers to voluntarily employ water conservation measures to reduce water consumption by approximately 50 percent. Outside watering should be limited to essential water, dividing outside watering on some uniform basis (such as even and odd days) and eliminating outside watering on weekends and holidays.

Notice Requirements: Under Stage 2, the Company is required to notify customers by delivering written notice door to door at each service address, or by United States first class mail to the billing address or, at the Company's option both. Such notice shall notify the customers of the general nature of the problem and the need to conserve water.

Applies to all **WATER** service areas
PART TWO
STATEMENT OF TERMS AND CONDITIONS FOR WATER SERVICE

Stage 3 Exists When:

a. Company's total water storage or well production has been less than 50 percent of demand for at least 24 consecutive hours, and

b. Company has identified issues such as a steadily declining water table, increased draw down threatening pump operations, poor water production, or electrical/ mechanical equipment failure, etc., creating a reasonable belief the Company will be unable to meet anticipated water demand on a sustained basis.

Restrictions: Under Stage 3, the Company shall request the customer to voluntarily employ water conservation measures to reduce daily consumption by approximately 50 percent. All outside watering should be eliminated, except livestock and indoor water conservation techniques should be employed whenever possible.

Notice Requirements:

1. Company is required to notify customers by delivering written notice to each service address, or by United States first class mail to the billing address or, at the Company's option both. Such notice shall notify the customers of the general nature of the problem and the need to conserve water.

2. Beginning with Stage 3, Company shall post at least two (2) signs showing the curtailment stage. Signs shall be posted at noticeable locations, like at the well sites and at the entrance to the major subdivision served by the Company.

3. Company shall notify the Consumer Services Section of the Utilities Division of the Corporation Commission at least 12 hours prior to entering Stage 3.

Once Stage 3 has been reached, the Company must begin to augment the supply of water by either hauling or through an emergency interconnect with an approved water supply in an attempt to maintain the curtailment at a level no higher than stage three until a permanent solution has been implemented.

Applies to all **WATER** service areas
PART TWO
STATEMENT OF TERMS AND CONDITIONS FOR WATER SERVICE

Stage 4 Exists When:

a. Company's total water storage or well production has been less than 25 percent of demand for at least 12 consecutive hours, and

b. Company has identified issues such as a steadily declining water table, increased draw down threatening pump operations, poor water production, or electrical/ mechanical equipment failure, etc., creating a reasonable belief the Company will be unable to meet anticipated water demand on a sustained basis.

Restrictions: Under Stage 4, Company shall inform the customers of a mandatory restriction to employee water conservation measures to reduce daily consumption. Failure to comply will result in customer disconnection. The following uses of water shall be prohibited:

- Irrigation of outdoor lawns, trees, shrubs, or any plant life is prohibited
- Washing of any vehicle is prohibited
- The use of water for dust control or any outdoor cleaning uses is prohibited
- The use of drip or misting systems of any kind is prohibited
- The filling of any swimming pool, spas, fountains or ornamental pools is prohibited
- Restaurant patrons shall be served water only upon request
- Any other water intensive activity is prohibited

Notice Requirements:

1. Company is required to notify customers by delivering written notice to each service address, or by United States first class mail to the billing address or, at the Company's option both. Such notice shall notify the customers of the general nature of the problem and the need to conserve water.

2. Company shall post at least two (2) signs showing curtailment stage. Signs shall be posted at noticeable locations like at the well sites and at the entrance to the major subdivision served by the Company.

3. Company shall notify the Consumer Services Section of the Utilities Division of the Corporation Commission at least 12 hours prior to entering Stage 4.

Applies to all **WATER** service areas

PART TWO

STATEMENT OF TERMS AND CONDITIONS FOR WATER SERVICE

Customers who fail to comply with cessation of the above Restrictions will be given a written notice to end all outdoor use. Failure to comply within two (2) working days of receipt of the notice will result in temporary loss of service until an agreement can be made to end unauthorized use of outdoor water. To restore service, the customer shall be required to pay all authorized reconnection fees. If a customer believes he/she has been disconnected in error, the customer may contact the Commission's Consumer Services Section at 1-800-222-7000 to initiate an investigation.

Once Stage 4 has been reached, the Company must augment the supply of water by hauling or through an emergency interconnect from an approved supply in an attempt to maintain the supply until a permanent solution has been implemented.

Note: If the Company loses all production and has no storage facilities, the Company must rely on emergency hauling or must otherwise provide emergency drinking water for its customers.

Applies to all **WASTEWATER** service areas

PART THREE

STATEMENT OF CHARGES FOR WASTEWATER SERVICE

I. RATES

In Decision No. 74437, dated April 18, 2014, the Commission authorized the following rates and charges to become effective May 1, 2014:

A. Monthly Usage Charge

Meter Size	Minimum Charge Per Month
Residential Service	$40.35
Low Income Residential Service	28.25
Multiple Unit Housing – Monthly Per Unit	37.46
Small Commercial Service – Monthly	68.24
Regular Domestic – Monthly Service Charge	38.20
Restaurants, Motels,* Grocery Store, Dry Cleaning Estab. – Monthly Service Charge	38.20
Wigwam Resort Monthly Rate – Per Room	37.46
Wigwam Resort Main Hotel Facilities – Per Month	1,483.47
Elementary Schools	1,008.75
Middle & High Schools	1,186.77
Community College	1,839.50
Effluent Sales Charge Per 1,000 gallons	**

*Motels without restaurants charges Multi-Unit Housing – Monthly Unit rate

**Market Rate – Maximum effluent rate shall not exceed $430 per acre foot based on a potable water rate of $1.32 per thousand gallons.

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all **WASTEWATER** service areas

PART THREE

STATEMENT OF CHARGES FOR WASTEWATER SERVICE

B. Commodity Charge

(per 1,000 gallons of water)	
Regular Domestic	$3.33
Restaurants, Motels, Grocery Store, Dry Cleaning Estab.	4.45

Applies to all **WASTEWATER** service areas

PART THREE

STATEMENT OF CHARGES FOR WASTEWATER SERVICE

C. **Miscellaneous Service Charges**

Service	Charge
Establishment	$20.00
Re-Establishment (within 12 months)	(a)
Reconnection	$20.00
NSF Check	25.00
Deferred Payment (per month)	1.50%
After Hours Service Calls*	$40.00
Deposit	(b)
Deposit Interest	6.00%
Late Charge	(c)
Service Lateral Connection Charge – All Sizes	(d)
Main Extension Tariff	(e)

(a) Number of full months off the system times the minimum charge, per A.A.C. R14-2-603(D).
(b) Per Rule R14-2-603(B). Residential – two times the average monthly bill. Non-residential – two and one half times the average monthly bill.
(c) Greater of $5.00 or 1.50% of unpaid balance.
(d) At cost. Customer/Developer shall install or cause to be installed all Service Laterals as a non-refundable contributions in aid of construction.
(e) Per A.A.C. R14-2606(b). All Main Extensions shall be completed at cost and shall be treated as non-refundable contribution-in-aid of construction.
*For After Hours Service Calls for work performed on the customer's property after hours, at customer's request. In addition to the charge for an utility service provided.

Applies to all **WASTEWATER** service areas

PART THREE

STATEMENT OF CHARGES FOR WASTEWATER SERVICE

II. TAXES AND ASSESSMENTS

In addition to all other rates and charges authorized herein, the Company shall collect from its customers all applicable sales, transaction, privilege, regulatory or other taxes and assessments as may apply now or in the future, per Rule R14-2-608(D)(5).

Applies to all **WASTEWATER** service areas
PART THREE
STATEMENT OF CHARGES FOR WASTEWATER SERVICE

III. PERMITTED COSTS

A. Costs shall be verified by invoice.

B. For services that are provided by the Company at cost, costs shall include labor, materials, other charges incurred, and overhead. However, prior to any such service being provided, the estimated cost of such service will be provided by the Company to the customer. After review of the cost estimate, the customer will pay the amount of the estimated cost to the Company.

C. In the event that the actual cost is less than the estimated cost, the Company will refund the excess to the customer within 30 days after completion of the provision of the service or after Company's receipt of invoices, timesheets or other related documents, whichever is later.

D. In the event the actual cost is more than the estimated cost, the Company will bill the customer for the amount due within 30 days after completion of the invoices, timesheets or other related documents, whichever is later. The amount so billed will be due and payable 30 days after the invoice date.

E. At the customer's request, the Company shall make available to the customer all invoices, timesheets or related documents that support the cost for providing such service.

F. Permitted costs shall include any Federal, State or local taxes that are or may be payable by the Company as a result of any tariff or contract for wastewater facilities under which the Customer advances or contributes funds or facilities to the Company.

Applies to all **WASTEWATER** service areas

PART FOUR

STATEMENT OF TERMS AND CONDITIONS FOR WASTEWATER SERVICE

I. CUSTOMER DISCHARGE TO SYSTEM

A. Service Subject to Regulation

The Company provides wastewater service using treatment and collection facilities that are regulated by numerous county, state and federal Statutes and Regulations. Those Regulations include limitations as to domestic strength wastewater and the type of wastewater that may be discharged into the system by any person directly or indirectly connected to the plant.

B. Waste Limitations

The Company has established the permissible limits of concentration as domestic strength wastewater and will limit concentration for various specific substances, materials, waters, or wastes that can be accepted in the sewer system, and to specify those substances, materials, waters, or wastes that are prohibited from entering the sewer system. Each permissible limit so established shall be placed on file in the business office of the Company, with a copy filed with the Commission. No person shall discharge, or cause to be discharged, any new sources of inflow including, but not limited to, storm water, surface water, groundwater, roof runoffs, subsurface drainage, cooling water, or polluted industrial process waters into the sanitary sewer. The Company will require an affidavit from all commercial and industrial customers, and their professional engineer, stating that the wastewater discharged to the system does not exceed domestic strength.

C. Inspection and Right of Entry

Every facility that is involved directly or indirectly with the discharge of wastewater to the Treatment Plant may be inspected by the Company as it deems necessary. These facilities shall include but not be limited to sewer; sewage pumping plants; all processes; devices and connection sewer; and all similar sewerage facilities. Inspections may be made to determine that such facilities are maintained and operated properly and are adequate to meet the provisions of these rules. Inspections may include the collection of samples. Authorized personnel of the Company shall be provided immediate access to all of the above facilities or to other facilities directly or indirectly connected to the Treatment Plant at all reasonable times including those occasioned by emergency conditions. Any permanent or temporary obstruction to easy access to the user's facility to be inspected shall promptly be removed by the facility user or owner at

Applies to all **WASTEWATER** service areas

PART FOUR

STATEMENT OF TERMS AND CONDITIONS FOR WASTEWATER SERVICE

the written or verbal request of the Company and shall not be replaced. No person shall interfere with, delay, resist or refuse entrance to an authorized Company representative attempting to inspect any facility involved directly or indirectly with a discharge of wastewater to the Treatment Plant. Adequate identification shall be provided by the Company for all inspectors and other authorized personnel and these persons shall identify themselves when entering any property for inspection purposes or when inspecting the work of any contractor.

All transient motor homes, travel trailers and other units containing holding tanks must arrive at the Company's service area in an empty condition. Inspection will be required of said units prior to their being allowed to hookup to the wastewater system.

D. Termination of Water Service for Violation of Wastewater Rules and Regulations

The Company is authorized to discontinue water service to any person connected to both its water and sewer systems who violates the Company's wastewater terms and conditions as set forth in this PART FOUR or in any way creates a public health hazard or the likelihood of such a public health hazard. This termination authority does not apply to non-payment for water or wastewater services.

Applies to all **WASTEWATER** service areas

PART FOUR

STATEMENT OF TERMS AND CONDITIONS FOR WASTEWATER SERVICE

II. RULES AND REGULATIONS

The Company has adopted the Rules and Regulations established by the Commission as the basis for its operating procedures. A.A.C. R14-2-601 through A.A.C. R14-2-609 will be controlling of Company procedures, unless specifically approved tariffs or Commission Order(s) provide otherwise.

Greg Sorensen, President - Arizona
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392

Applies to all **WATER** and **WASTEWATER** service areas

PART FIVE

ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)

SINGLE FAMILY ACCOMMODATION

APPLICABILITY

Applicable to residential water and wastewater service for domestic use rendered to low-income households where the customer meets all the program qualifications and special conditions of this rate schedule.

TERRITORY

Within all customer service areas served by Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty Utilities").

RATES

Thirty percent (30%) discount applied to the regular filed tariff.

PROGRAM QUALIFICATIONS

1. The Liberty Utilities bill must be in your name and the address must be your primary residence or you must be a tenant receiving water service by a sub-metered system.
2. You may not be claimed as a dependent on another person's tax return.
3. You must reapply each time you move residences.
4. You must renew your application once every two (2) years, or sooner, if requested.
5. You must recertify each year by submitting a declaration attesting to your continuing eligibility, and provide one of the following items as proof of eligibility: 1) copy of tax return from prior year; or 2) copy of W2 form from prior year; or 3) copy of welfare / food stamp cards.
6. You must notify Liberty Utilities within thirty (30) days if you become ineligible for ARWW.
7. Your total gross annual income of all persons living in your household cannot exceed the income levels below:

Applies to all **WATER** and **WASTEWATER** service areas

PART FIVE
ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)
SINGLE FAMILY ACCOMMODATION

Effective January 1, 2014

No. of Person in Household	Total Gross Annual Income
1	$17,505
2	$23,595
3	$29,685
4	$35,775
5	$41,865
6	$47,955

For each additional person residing in the household, add $6,090

For the purpose of the program the "gross household income" means all money and non cash benefits, available for living expenses, from all sources, both taxable and non taxable, before deductions for all people who live in your home. This includes, but is not limited to:

Wages or salaries
Interest or dividends from:
Savings account, stocks or bonds
Unemployment benefits
TANF (AFDC)
Pensions
Gifts
Social Security, SSI, SSP
Scholarships, grants, or other aid used for living expenses
Disability payments
Food Stamps
Insurance settlements
Rental or royalty income
Profit from self-employment (IRS form Schedule C, Line 29)
Worker's Compensation
Child Support
Spousal Support

Applies to all **WATER** and **WASTEWATER** service areas

PART FIVE
ALTERNATE RATES FOR WATER AND WASTEWATER (ARWW)
SINGLE FAMILY ACCOMMODATION

SPECIAL CONDITIONS

1. Application: An application on a form authorized by the Commission is required for each request for service under this schedule. A customer must reapply every two (2) years.

2. Recertification: A customer enrolled in the ARWW program must, each year, recertify by submitting a declaration attesting to continuing eligibility, and provide one of the following items as proof of eligibility: 1) copy of tax return from prior year; or 2) copy of W2 form from prior year; or 3) copy of welfare / food stamp cards.

3. Commencement of Rate: Eligible customers whose applications have been approved shall be billed on this schedule commencing with the next regularly scheduled billing period that follows receipt of application by Liberty Utilities.

4. Verification: Information provided by the applicant is subject to verification by Liberty Utilities. Refusal or failure of a customer to provide documentation of eligibility acceptable to Liberty Utilities, upon request by Liberty Utilities, shall result in removal from this rate schedule.

5. Notice from Customer: It is the customer's responsibility to notify Liberty Utilities if there is a change of eligibility status.

6. Rebilling: Customers may be re-billed retroactively for periods of ineligibility under the applicable rate schedule.

7. Master-metered: A reduction will be calculated in the bill of master-metered customers, who have sub-metered tenants that meet the income eligibility criteria, so an equivalent discount (30%) can be passed through to eligible customer(s).

8. Participation Cap: The ARWW program is limited to 5,000 water division customers and 5,000 wastewater division customers. Applications will be reviewed and approved on a first come, first served basis. Applicants will be placed on a waiting list if the participation cap has been met.

Application for
Alternate Rates for Water and Wastewater (ARWW)

To qualify for Liberty Utilities ARWW please check (✓) all that apply:

- ☐ I am a Liberty Utilities residential customer and the Liberty Utilities account is in my name.
- ☐ I am a sub-metered tenant within the Liberty Utilities service area.
- ☐ My household income is at or below the income level in the listing below.

Household Size	Total Gross Annual Income from All Sources
1	$17,505
2	$23,595
3	$29,685
4	$35,775
5	$41,865
6	$47,955

For each additional person residing in the household, add $6,090.

The definition of "gross household income" (before taxes) is all money and non cash benefits available for living expenses from all sources, both taxable and non taxable, before deductions, including expenses, for all people who live in your home. **This includes, but is not limited to the following (please check (✓) all that apply):**

- ☐ Wages, salaries or profit from self-employment
- ☐ Disability and/or Workers' Compensation payments
- ☐ Insurance and/or legal settlements
- ☐ Pensions
- ☐ Spousal and/or child support
- ☐ Scholarships, grants, or other aid used for living
- ☐ Interest/dividends from: savings, stocks, bonds, or retirement accounts
- ☐ Social Security, SSI or SSP
- ☐ Food Stamps
- ☐ TANF (AFDC)
- ☐ Veterans Affairs benefits
- ☐ Unemployment benefits
- ☐ Rental and/or royalty income
- ☐ Cash, gifts and/or other income

Please print the following information. **Incomplete information will delay your discount.** The name used to apply for the discount **must** be the same as the name on the Liberty Utilities statement.

PLEASE PRINT LEGIBLY		
Liberty Utilities Account Number (As shown on statement)		
Total No. of persons living in household:	Household's Total Gross Annual Income: $	Contact Phone Number
Name as shown on Liberty Utilities statement		
Liberty Utilities Service Address		
City	State	Zip Code

Please attach one of the items listed as proof of income for eligibility verification: Copy of tax return from prior year, or copy of W2 from prior year, or copy of welfare / food stamp cards.

By signing below, I certify under penalty of perjury that this information is true and correct under the laws of the State of Arizona. I will provide proof of income and I will notify Liberty Utilities of any changes that affect my eligibility. I understand that if I receive the discount without meeting the qualifications for it, I may be required to pay back the discount I received.

_____ _____

Customer Signature Date

Note: An Application for ARWW must be submitted every two years. A Declaration of Eligibility must be submitted annually for verification. Please allow 30-45 days for processing.

Office Use Only: Date Verified _____ Verified By _____ Expires _____

Declaration of Eligibility
Alternate Rates for Water and Wastewater (ARWW)

To recertify enrollment in the ARWW Program please fill out the following attesting to continuing eligibility:

PLEASE PRINT LEGIBLY			
Name as shown on Liberty Utilities statement			
Liberty Utilities Account Number (As shown on statement)			
Liberty Utilities Service Address			
City	State	Zip Code	
Contact Phone Number	Work Phone Number		

I,

_____,
Your Name (Please Print)

Last submitted an Application for Alternative Rates (ARWW) on _____
(dd/mm/yyyy)

and hereby confirm my eligibility for the year ending _____.
(dd/mm/yyyy)

Please attach one of the items listed below as proof of income for eligibility verification:
Copy of tax return from prior year, or copy of W2 form from prior year, or copy of welfare / food stamp cards.

By signing below, I certify under penalty of perjury that this information is true and correct under the laws of the State of Arizona. I will provide proof of income and I will notify Liberty Utilities of any changes that affect my eligibility. I understand that if I receive the discount without meeting the qualifications for it, I may be required to pay back the discount I received.

_____ _____
Customer Signature Date

Note: An Application for ARWW must be submitted every two years. A Declaration of Eligibility must be submitted annually for verification.

Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Alternate Rates for Water and Wastewater (ARWW)

Applicability

Applicable to residential water and wastewater service for domestic use rendered to low-income households where the customer meets all the Program Qualifications and Special Conditions of this rate schedule.

Territory

Within all customer service areas served by Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Discount

Thirty percent (30%) discount applied to the regular filed tariff. The discount will be applied to the customer's total bill before any adjustments and application of any other taxes, credit, penalties or fees.

Program Qualifications

- The Liberty Utilities account must be in your name and the address must be your primary residence in our service area or you must be a tenant receiving water service by a sub-metered system.
- You may not be claimed as a dependent on another person's tax return.
- You must reapply each time you move residences.
- You must renew your application once every two (2) years or sooner if requested.
- You must recertify each year by submitting a declaration attesting to your continuing eligibility, and provide one of the following items as proof of eligibility: 1) copy of tax return from prior year; or 2) copy of W2 form from prior year; or 3) copy of welfare/food stamp cards.
- You must notify Liberty Utilities within thirty (30) days if you become ineligible for ARWW.
- Your total gross annual income of all persons living in your household cannot exceed the income levels provided on the application.

Special Conditions

- You must fill out and sign the ARWW Application completely. Incomplete information will delay your discount. You must reapply every two (2) years.
- You must recertify your enrollment in the ARWW annually by submitting a Declaration of Eligibility and providing one of the following items as proof of eligibility: 1) copy of tax return from prior year; or 2) copy of W2 form from prior year; or 3) copy of welfare/food stamp cards.
- Customers shall be billed on this schedule commencing with the next regularly scheduled billing period that follows the receipt and approval of the application by Liberty Utilities.
- Documentation of your gross annual income must be provided to Liberty Utilities for verification of eligibility for ARWW. Refusal or failure to provide documentation of acceptable eligibility to Liberty Utilities shall result in removal from this rate schedule.
- It is the customer's responsibility to notify Liberty Utilities if there is a change in eligibility status.
- You may be re-billed for any periods of ineligibility under the applicable rate schedule.
- Master-metered customers who have sub-metered tenants will receive a reduction in the billing. Sub-metered tenants must qualify and meet the income eligibility criteria so an equivalent discount (30%) can be passed through to eligible customer(s).
- The ARWW program is limited to 5,000 water division customers and 5,000 wastewater division customers.

How to Submit Completed ARWW Application and/or Declaration of Eligibility

Mail, Fax or Email your ARWW Application and Declaration of Eligibility to:
Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Rd. Ste. D101
Avondale, AZ 85392
Fax: 623-935-1020
Email: customerserviceavondale@libertywater.com

PART SIX
HOOK-UP FEE TARIFF

WATER HOOK-UP FEE

I. Purpose and Applicability

The purpose of the off-site hook-up fees payable to Liberty Utilities (Litchfield Park Water & Sewer) Corp. - Water Division (the "Company") pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities necessary to provide water production, delivery, storage and pressure among all new service connections. These charges are applicable to all new service connections undertaken via Main Extension Agreements or requests for service not requiring a Main Extension Agreement entered into after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company's establishment of service, as more particularly provided below.

II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-401 of the Arizona Corporation Commission's ("Commission") rules and regulations governing water utilities shall apply in interpreting this tariff schedule.

"Applicant" means any party entering into an agreement with Company for the installation of water facilities to serve new service connections, and may include Developers and/or Builders of new residential subdivisions and/or commercial and industrial properties.

"Company" means Liberty Utilities (Litchfield Park Water & Sewer) Corp. – Water Division.

"Main Extension Agreement" means any agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of water facilities necessary to the Company to serve new service connections within a development, or installs such water facilities necessary to serve new service connections and transfers ownership of such water facilities to the Company, which agreement shall require the approval of the Commission pursuant to A.A.C. R-14-2-406, and shall have the same meaning as "Water Facilities Agreement" or "Line Extension Agreement."

"Off-site Facilities" means wells, storage tanks and related appurtenances necessary for proper operation, including engineering and design costs. Off-site facilities may also include booster pumps, pressure tanks, transmission mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the applicant and will benefit the entire water system.

"Service Connection" means and includes all service connections for single-family residential, commercial, industrial or other uses, regardless of meter size.

III. Water Hook-up Fee

For each new service connection, the Company shall collect an off-site hook-up fee derived from the following table:

Meter Size	Size Factor	Total Fee
5/8" x 3/4"	1	$1,800
3/4"	1.5	$2,700
1"	2.5	$4,500
1-1/2"	5	$9,000
2"	8	$14,400
3"	16	$28,800
4"	25	$45,000
6"	50	$90,000
8"	80	$144,000
10"	115	$310,500
12" or larger	215	$967,500

(A) For "Active Adult" communities with demonstrated age-restricted zoning and/or CCRs providing for age-restricted living, the Total Fee for domestic water use shall be Two-Thirds (2/3) of the Total Fee shown above, based on an ERU factor of 190 gallons per day. All non-domestic service connections shall pay the Hook-up fee per the above table.

IV. Terms and Conditions

(A) Assessment of One Time Off-Site Hook-up Fee: The off-site hook-up fee may be assessed only once per parcel, service connection, or lot within a subdivision (similar to meter and service line installation charge).

(B) Use of Off-Site Hook-up Fee: Off-site hook-up fees may only be used to pay for capital items of Off-site Facilities, or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or operational costs. The Company shall record amounts collected under the tariff as CIAC; however, such amounts shall not be deducted from rate base until such amounts have been expended for plant.

(C) Time of Payment:

1) For those requiring a Main Extension Agreement: In the event that the person or entity that will be constructing improvements ("Applicant", "Developer" or "Builder") is otherwise required to enter into a Main Extension Agreement, whereby the Applicant, Developer or Builder agrees to advance the costs of installing mains, valves, fittings, hydrants and other on-site improvements in order to extend service in accordance with R-14-2-406(B), payment of the Hook-Up Fees required hereunder shall be made by the Applicant, Developer or Builder no later than within 15 calendar days after receipt of notification from the Company

that the Utilities Division of the Arizona Corporation Commission has approved the Main Extension Agreement in accordance with R-14-2-406(M).

2) For those connecting to an existing main: In the event that the Applicant, Developer or Builder for service is not required to enter into a Main Extension Agreement, the Hook-Up Fee charges hereunder shall be due and payable at the time the meter and service line installation fee is due and payable.

(D) Off-Site Facilities Construction By Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

(E) Failure to Pay Charges; Delinquent Payments: The Company will not be obligated to make an advance commitment to provide or actually provide water service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will the Company set a meter or otherwise allow service to be established if the entire amount of any payment due hereunder has not been paid.

(F) Large Subdivision/Development Projects: In the event that the Applicant, Developer or Builder is engaged in the development of a residential subdivision containing more than 150 lots, the Company may, in its discretion, agree to payment of off-site hook-up fees in installments. Such installments may be based on the residential subdivision development's phasing, and should attempt to equitably apportion the payment of charges hereunder based on the Applicant's, Developer's or Builder's construction schedule and water service requirements. In the alternative, the Applicant, Developer, or Builder shall post an irrevocable letter of credit in favor of the Company in a commercially reasonable form, which may be drawn by the Company consistent with the actual or planned construction and hook up schedule for the subdivision and/or development.

(G) Off-Site Hook-Up Fees Non-refundable: The amounts collected by the Company as Hook-Up Fees pursuant to the off-site hook-up fee tariff shall be non-refundable contributions in aid of construction.

(H) Use of Off-Site Hook-Up Fees Received: All funds collected by the Company as off-site hook-up fees shall be deposited into a separate interest bearing trust account and used solely for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities that will benefit the entire water system.

(I) Off-Site Hook-up Fee in Addition to On-site Facilities: The off-site hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Main Extension Agreement.

(J) Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site hook-up fees, or if the off-site hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

(K) Fire Flow Requirements: In the event the applicant for service has fire flow requirements that require additional facilities beyond those facilities whose costs were included in the off-site hook-up fee, and which are contemplated to be constructed using the proceeds of the off-site hook-up Fee, the Company may require the applicant to install such additional facilities as are required to meet those additional fire flow requirements, as a non-refundable contribution, in addition to the off-site hook-up fee.

(L) Status Reporting Requirements to the Commission: The Company shall submit a calendar year Off-Site Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2015, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and a list of all facilities that have been installed with the tariff funds during the 12 month period.

PART SIX
HOOK-UP FEE TARIFF

WASTEWATER HOOK-UP FEE

I. Purpose and Applicability

The purpose of the off-site facilities hook-up fees payable to Liberty Utilities (Litchfield Park Water & Sewer) Corp. – Wastewater Division (the "Company") pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities to provide wastewater treatment and disposal facilities among all new service laterals. These charges are applicable to all new service laterals undertaken via Collection Main Extension Agreements, or requests for service not requiring a Collection Main Extension Agreement, entered into after the effective date of this tariff. The charges are one-time charges and are payable as a condition to Company's establishment of service, as more particularly provided below.

II. Definitions

Unless the context otherwise requires, the definitions set forth in R-14-2-601 of the Arizona Corporation Commission's ("Commission") rules and regulations governing sewer utilities shall apply interpreting this tariff schedule.

"Applicant" means any party entering into an agreement with Company for the installation of wastewater facilities to serve new service laterals, and may include Developers and/or Builders of new residential subdivisions, and industrial or commercial properties.

"Company" means Liberty Utilities (Litchfield Park Water & Service) Corp. – Wastewater Division.

"Collection Main Extension Agreement" means an agreement whereby an Applicant, Developer and/or Builder agrees to advance the costs of the installation of wastewater facilities necessary to serve new service laterals, or install wastewater facilities to serve new service laterals and transfer ownership of such wastewater facilities to the Company, which agreement does not require the approval of the Commission pursuant to A.A.C. R-14-2-606, and shall have the same meaning as "Wastewater Facilities Agreement."

"Off-site Facilities" means the wastewater treatment plant, sludge disposal facilities, effluent disposal facilities and related appurtenances necessary for proper operation, including engineering and design costs. Offsite facilities may also include lift stations, force mains, transportation mains and related appurtenances necessary for proper operation if these facilities are not for the exclusive use of the applicant and benefit the entire wastewater system.

"Service Lateral" means and includes all service laterals for single-family residential, commercial, industrial or other uses.

III. Wastewater Hook-up Fee

For each new residential service lateral, the Company shall collect a Hook-Up Fee of $1,800 based on the Equivalent Residential Unit ("ERU") of 320 gallons per day. Commercial and industrial applicants shall pay based on the total ERUs of their development calculated by dividing the estimated total daily wastewater capacity usage needed for service using standard engineering standards and criteria by the ERU factor of 320 gallons per day. For "Active Adult" communities with demonstrated age-restricted zoning and/or CCRs providing for age-restricted living, the Hook-Up Fee shall be $1,070, based on an ERU factor of 190 gallons per day.

IV. Terms and Conditions

(A) Assessment of One Time Off-Site Facilities Hook-up Fee: The off-site facilities hook-up fee may be assessed only once per parcel, service lateral, or lot within a subdivision (similar to a service lateral installation charge).

(B) Use of Off-Site Facilities Hook-up Fee: Off-site facilities hook-up fees may only be used to pay for capital items of Off-site Facilities, or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site hook-up fees shall not be used to cover repairs, maintenance, or operational costs. The Company shall record amounts collected under the tariff as CIAC; however, such amounts shall not be deducted from rate base until such amounts have been expended for plant.

(C) Time of Payment:

(1) In the event that the person or entity that will be constructing improvements ("Applicant", "Developer" or "Builder") is otherwise required to enter into a Collection Main Extension Agreement, payment of the fees required hereunder shall be made by the Applicant, Developer or Builder within 15 days of execution of a Main Extension Agreement.

(2) In the event that the Applicant, Developer or Builder for service is not required to enter into a Collection Main Extension Agreement, the Hook-Up Fee charges hereunder shall be due and payable at the time wastewater service is requested for the property.

(D) Off-Site Facilities Construction by Developer: Company and Applicant, Developer, or Builder may agree to construction of off-site facilities necessary to serve a particular development by Applicant, Developer or Builder, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site hook-up fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant, Developer or Builder and conveyed to Company is less than the applicable off-site hook-up fees under this Tariff, Applicant, Developer or Builder shall pay the remaining amount of off-site hook-up fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant, Developer or Builder and conveyed to Company is more than the applicable off-site hook-up fees under this Tariff, Developer or Builder shall be refunded the difference upon acceptance of the off-site facilities by the Company.

(E) Failure to Pay Charges; Delinquent Payments: The Company will not be obligated to make an advance commitment to provide or actually provide wastewater service to any Developer, Builder or other applicant for service in the event that the Developer, Builder or other applicant for service has not paid in full all charges hereunder. Under no circumstances will the Company connect service or otherwise allow service to be established if the entire amount of any payment has not been paid.

(F) Large Subdivision and/or Development Projects: In the event that the Applicant, Developer or Builder is engaged in the development of a residential subdivision and/or development containing more than 150 lots, the Company may, in its reasonable discretion, agree to payment of off-site hook-up fees in installments. Such installments may be based on the residential subdivision and/or development's phasing, and should attempt to equitably apportion the payment of charges hereunder based on the Applicant's, Developer's or Builder's construction schedule and water service requirements. In the alternative, the Applicant, Developer, or Builder shall post an irrevocable letter of credit in favor of the Company in a commercially reasonable form, which may be drawn by the Company consistent with the actual or planned construction and hook up schedule for the subdivision and/or development.

(G) Off-Site Hook-Up Fees Non-refundable: The amounts collected by the Company pursuant to the off-site facilities hook-up fee tariff shall be non-refundable contributions in aid of construction.

(H) Use of Off-Site Hook-Up Fees Received: All funds collected by the Company as off-site facilities hook-up fees shall be deposited into a separate account and bear interest and shall be used solely for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities.

(I) Off-Site Facilities Hook-up Fee in Addition to On-site Facilities: The off-site facilities hook-up fee shall be in addition to any costs associated with the construction of on-site facilities under a Collection Main Extension Agreement.

(J) Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to the off-site facilities hook-up fees, or if the off-site facilities hook-up fee has been terminated by order of the Arizona Corporation Commission, any funds remaining in the trust shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

(K) Status Reporting Requirements to the Commission: The Company shall submit a calendar year Off-Site Facilities Hook-Up Fee status report each January to Docket Control for the prior twelve (12) month period, beginning January 2012, until the hook-up fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the hook-up fee tariff, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and an itemization of all facilities that have been installed using the tariff funds during the 12 month period.

EXHIBIT 8

ESTIMATED ANNUAL OPERATING REVENUE AND EXPENSES – FIRST FIVE YEARS

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Estimated Water 5 year Financials

For

Luke Landing & Luke Land 58

Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Luke Landing & Luke Land 58
Projected Incremental Statements of Income
Water

Line No.		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
1	Flat Rate Wastewater Revenue /a					
2	Residential	-	18,459	43,072	78,452	96,912
3	Commercial	-	-	409	819	819
4	Industrial	-	-	-	-	-
5						
6	Other Wastewater Revenues	-	720	980	1,380	720
7	**Total Estimated Revenues**	-	19,179	44,461	80,651	98,451
8						
9	Purchased Power/1	-	1,866	4,356	7,935	9,801
10	Chemicals &etc. /1	-	621	1,449	2,640	3,261
11	Repairs & Maint/2	-	376	883	1,610	1,986
12	Insurance/2	-	16	38	69	85
13	Office, Billing, Postage, Ops. /2	-	242	568	1,035	1,277
14	**Total Variable Costs**	-	3,121	7,295	13,290	16,411
15						
16	Depreciation /3	6,805	21,364	32,837	41,214	48,301
17	CIAC Amort /4	(3,403)	(11,626)	(17,406)	(22,007)	(26,953)
18	Property Taxes /5	-	234	779	1,773	2,767
19	Income Taxes /6	(1,205)	2,156	7,423	16,429	20,518
20	**Total Other Expense**	2,197	12,128	23,633	37,409	44,633
21						
22	**Total Operating Expenses**	2,197	15,249	30,929	50,699	61,044
23						
24	**Operating Income (Expense)**	(2,197)	3,930	13,533	29,953	37,407
25						
26	/a - Based on customer growth and flat rate revenue					
27	/1 - Based on gallons sold					
28	/2 - Based on number of customers					
29	/3 - Based on plant estimate & authorized depreciation rates					
30	/4 - Based on customer growth at current HUF					
31	/5 - ADOR property tax calculation					
32	/6 - Based on composite rate last rate case					
33						

Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Luke Landing & Luke Land 58
Projected Incremental Balance Sheet
Water

Line No.		Y 1	Yr 2	Yr 3	Yr 4	Yr 5
1	**Assets**					
2						
3	Utility Plant /1	662,521	1,212,901	1,260,801	1,260,801	1,260,801
4	Utility Plant /2		97,200	226,800	413,100	510,300
5	Accumulated Depreciation /3	(6,805)	(28,169)	(61,006)	(102,220)	(150,521)
6						
7	Cash	1,205	(17,526)	(31,762)	(44,703)	(18,349)
8						
9	**Total Assets**	656,921	1,264,405	1,394,832	1,526,977	1,602,231
10						
11	**Equity**					
12						
13	Retained Earnings	(2,197)	1,733	15,265	45,218	82,625
14						
15	**Total Equity**	(2,197)	1,733	15,265	45,218	82,625
16						
17	**Liabilities & Deferred Credits**					
18	Advances in Aid of Const.					
19	Contribution in Aid of Const. /4	662,521	1,277,701	1,412,001	1,536,201	1,601,001
20	CIAC Amortization	(3,403)	(15,028)	(32,434)	(54,441)	(81,394)
21	**Total Liabiliites and Deferred Credits**	659,118	1,262,672	1,379,567	1,481,760	1,519,607
22						
23	**Total Equity and Liabilities**	656,921	1,264,405	1,394,832	1,526,978	1,602,231
24						
25		0	0	0	0	0
26						
27						
28	/1 - Developer Constructed Facilities per Line Extension Agreement					
29	/2 - Utility Constructed Plant Using HUFs					
30	/3 - See pages 3-7, Exhibit 8					
31	/4 - Developer Constructed Facilities plus HUFs					

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Estimated Wastewater 5 year Financials

For

Luke Landing & Luke Land 58

Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Luke Landing & Luke Land 58
Projected Incremental Statements of Income
Wastewater

Line No.		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
1	Flat Rate Wastewater Revenue /a					
2	Residential	-	8,716	29,052	57,378	82,798
3	Commercial	-	-	409	819	819
4	Industrial	-	-	-	-	-
5						
6	Other Wastewater Revenues	-	720	980	1,380	720
7	**Total Estimated Revenues**	-	9,436	30,441	59,577	84,337
8						
9	Purchased Power/1	-	575	1,934	3,819	5,497
10	Chemicals & Sludge Removal/1	-	480	1,613	3,187	4,586
11	Repairs & Maint/2	-	149	501	990	1,424
12	Insurance/2	-	8	27	54	77
13	Office, Billing, Postage, Ops. /2	-	101	341	673	969
14	**Total Variable Costs**	-	1,314	4,416	8,723	12,555
15						
16	Depreciation /3	2,611	9,294	15,863	21,464	26,189
17	CIAC Amort /4	(1,306)	(4,777)	(8,471)	(12,489)	(16,928)
18	Property Taxes /5	-	110	478	1,205	2,144
19	Income Taxes /6	(462)	1,238	6,431	14,407	21,387
20	**Total Other Expense**	843	5,866	14,301	24,588	32,791
21						
22	**Total Operating Expenses**	843	7,179	18,717	33,310	45,346
23						
24	**Operating Income (Expense)**	(843)	2,256	11,725	26,266	38,991
25						
26	/a - Based on customer growth and flat rate revenue					
27	/1 - Based on gallons treated					
28	/2 - Based on number of customers					
29	/3 - Based on plant estimate & authorized depreciation rates					
30	/4 - Based on customer growth at current HUF					
31	/5 - ADOR property tax calculation					
32	/6 - Based on composite rate last rate case					
33						

Liberty Utilities (Litchfield Park Water & Sewer) Corp.
Luke Landing & Luke Land 58
Projected Incremental Balance Sheet
Wastewater

Line No.		Y 1	Yr 2	Yr 3	Yr 4	Yr 5
1	**Assets**					
2						
3	Utility Plant /1	243,113	443,309	476,953	476,953	476,953
4	Utility Plant /2	18,000	127,800	214,200	338,400	403,200
5	Accumulated Depreciation /3	(2,611)	(11,905)	(27,768)	(49,232)	(75,421)
6						
7	Cash	462	7,236	26,352	61,594	109,846
8						
9	**Total Assets**	258,964	566,440	689,737	827,714	914,577
10						
11	**Equity**					
12						
13	Retained Earnings	(843)	1,413	13,138	39,404	78,395
14						
15	**Total Equity**	(843)	1,413	13,138	39,404	78,395
16						
17	**Liabilities & Deferred Credits**					
18	Advances in Aid of Const.					
19	Contribution in Aid of Const. /4	261,113	571,109	691,153	815,353	880,153
20	CIAC Amortization	(1,306)	(6,082)	(14,554)	(27,043)	(43,971)
21	**Total Liabiliites and Deferred Credits**	259,807	565,027	676,599	788,310	836,182
22						
23	**Total Equity and Liabilities**	258,964	566,440	689,737	827,714	914,577
24						
25		0	0	0	0	0
26						
27						
28	/1 - Developer Constructed Facilities per Line Extension Agreement					
29	/2 - Utility Constructed Plant Using HUFs					
30	/3 - See pages 3-7, Exhibit 8					
31	/4 - Developer Constructed Facilities plus HUFs					

EXHIBIT 9

WRITTEN REQUESTS FOR SERVICE

mpc DEVELOPMENT

Market Place Communities

August 9, 2017

Mr. Greg Sorenson
LIBERTY UTILITIES (LITCHFIELD PARK WATER & SEWER) CORPORATION
12725 W. Indian School Rd, Suite D101
Avondale, Arizona, 85392

Re: REQUEST FOR WATER AND SEWER SERVICE

Dear Mr. Sorenson:

MPC Development is the owner of the following land located in Section 2, Township 2 North, Range 1 West consisting of the following parcel numbers:

501-53-004F

MPC Development is planning to develop the property to include 168 single family residential homes.

MPC Development hereby requests that Liberty Utilities (Litchfield Park Water & Sewer) Corp. provide water and sewer services to the indicated tax parcel and include the property in the company's planned extension of its Certificate of Convenience and Necessity for water and sewer services.

Sincerely,

Mike Nuessle
MPC DEVELOPMENT
6501 E. Greenway Parkway, #103-452
Phoenix, Arizona 85254

August 9, 2017

Mr. Greg Sorenson
LIBERTY UTILITIES (LITCHFIELD PARK WATER & SEWER) CORPORATION
12725 W. Indian School Rd, Suite D101
Avondale, Arizona, 85392

Re: REQUEST FOR WATER AND SEWER SERVICE

Dear Mr. Sorenson:

Luke Land 58, LLC is the owner of the following land located in Section 2, township 2 North, Range 1 West consisting of the following assessor parcel number:

501-53-004G

Luke Land 58, LLC is planning to develop the property to include a commercial facility (specifically a self storage facility).

Luke Land 58, LLC hereby requests that Liberty Utilities (Litchfield Park Water & Sewer) Corp. provide water and sewer services to the indicated tax parcel and include the property in the company's planned extension of its Certificate of Convenience and Necessity for water and sewer services.

Sincerely,

Luke Lewis
LUKE LAND 58, LLC
320 W. Lone Cactus Drive, #12
Phoenix, Arizona 85023

EXHIBIT 10

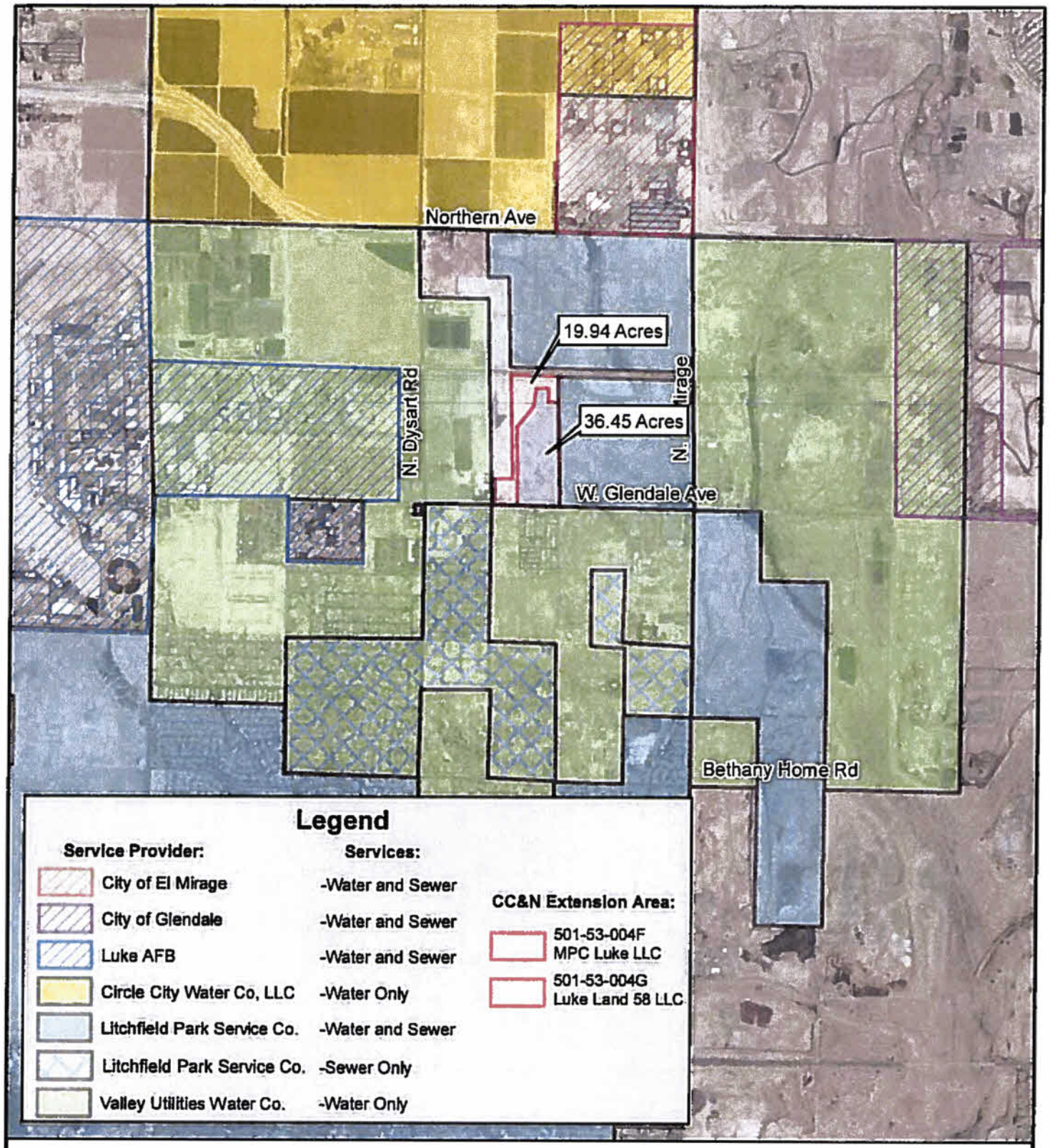
MAPS OF EXISTING SERVICE AREAS AND EXTENSION AREA

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Exhibit 10 Map 1

Combined Water/Sewer Map showing nearby Municipalities and Utility providers within 1 mile plus CCN Expansion Property owners with their Maricopa County Assessor Tax Parcel Numbers

Path: M:\Jobs\1900's\1952.01\ENG\Mxd\Liberty Utility CC&N\CC&N Extension_Nearby Service Area_PAM.mxd



N

0 0.25 0.5 Miles

WestLand Resources

The CC&N Extension Area consists of two parcels. The total Extension Area is 56.39 acres. The current owners of the parcels are Luke Land 58 LLC and MPC Luke LLC per the key above. There are no existing water or sewer service connections within the CC&N Extension Area.

LIBERTY UTILITIES
CC&N EXTENSION

NEARBY SERVICE AREAS

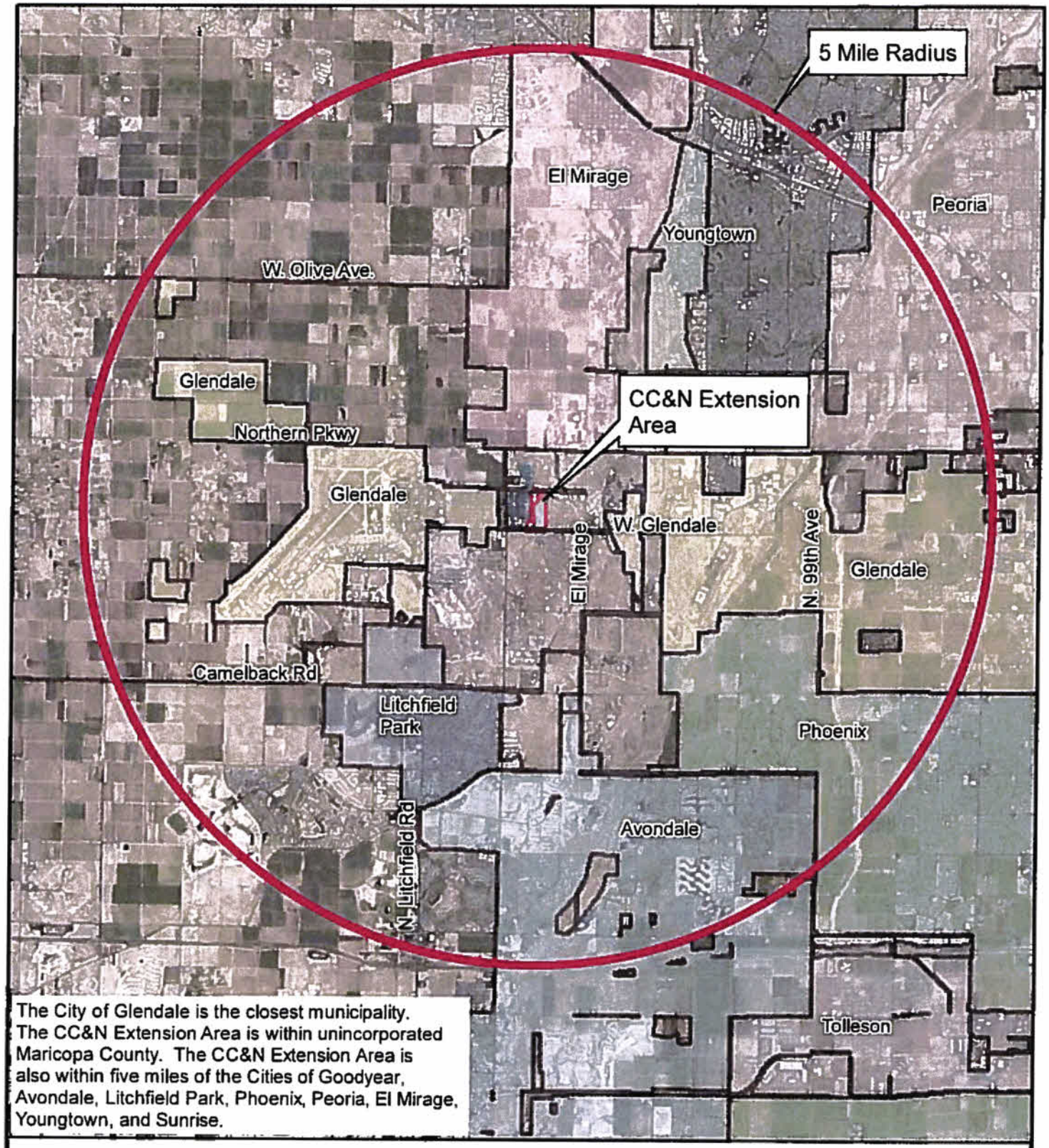
Figure #2

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Exhibit 10 Map 2

Combined CC Expansion Property and nearby Municipalities within a 5 mile radius

Path: M:\Jobs\1900's\1952.01\ENG\Mxd\Liberty Utility CC&N\5 Mile_Radius.mxd



The City of Glendale is the closest municipality. The CC&N Extension Area is within unincorporated Maricopa County. The CC&N Extension Area is also within five miles of the Cities of Goodyear, Avondale, Litchfield Park, Phoenix, Peoria, El Mirage, Youngtown, and Sunrise.

N

0 4,500 9,000 Feet

WestLand Resources

Legend

- Avondale
- El Mirage
- Glendale
- Litchfield Park
- Peoria
- Phoenix
- Tolleson
- Youngtown
- 501-53-004F MPC Luke LLC
- 501-53-004G Luke Land 58 LLC

LIBERTY UTILITIES
CC&N EXTENSION

NEARBY MUNICIPALITIES

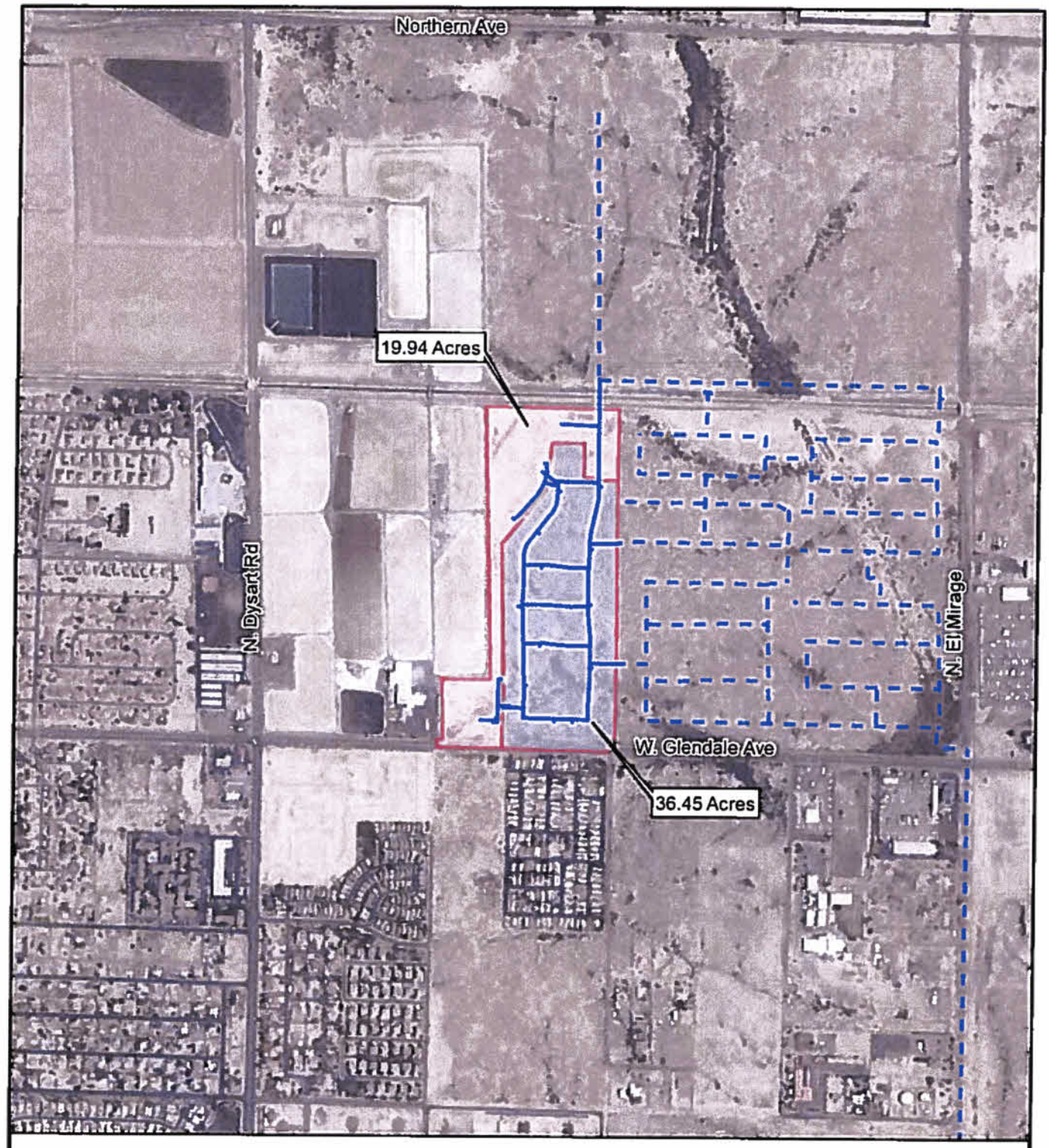
Figure #1

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Exhibit 10 Map 3

Water Facilities Map

Path: M:\Jobs\1900's\1952.01\ENG\Mxd\Liberty Utility CC&N\CC&N Extension_Water.mxd



N

0 500 1,000 Feet

WestLand Resources

Legend

- Offsite Water
- Water Line
- 501-53-004F MPC Luke LLC
- 501-53-004G Luke Land 58 LLC

LIBERTY UTILITIES

CC&N EXTENSION

PROPOSED WATER SERVICE CONNECTION

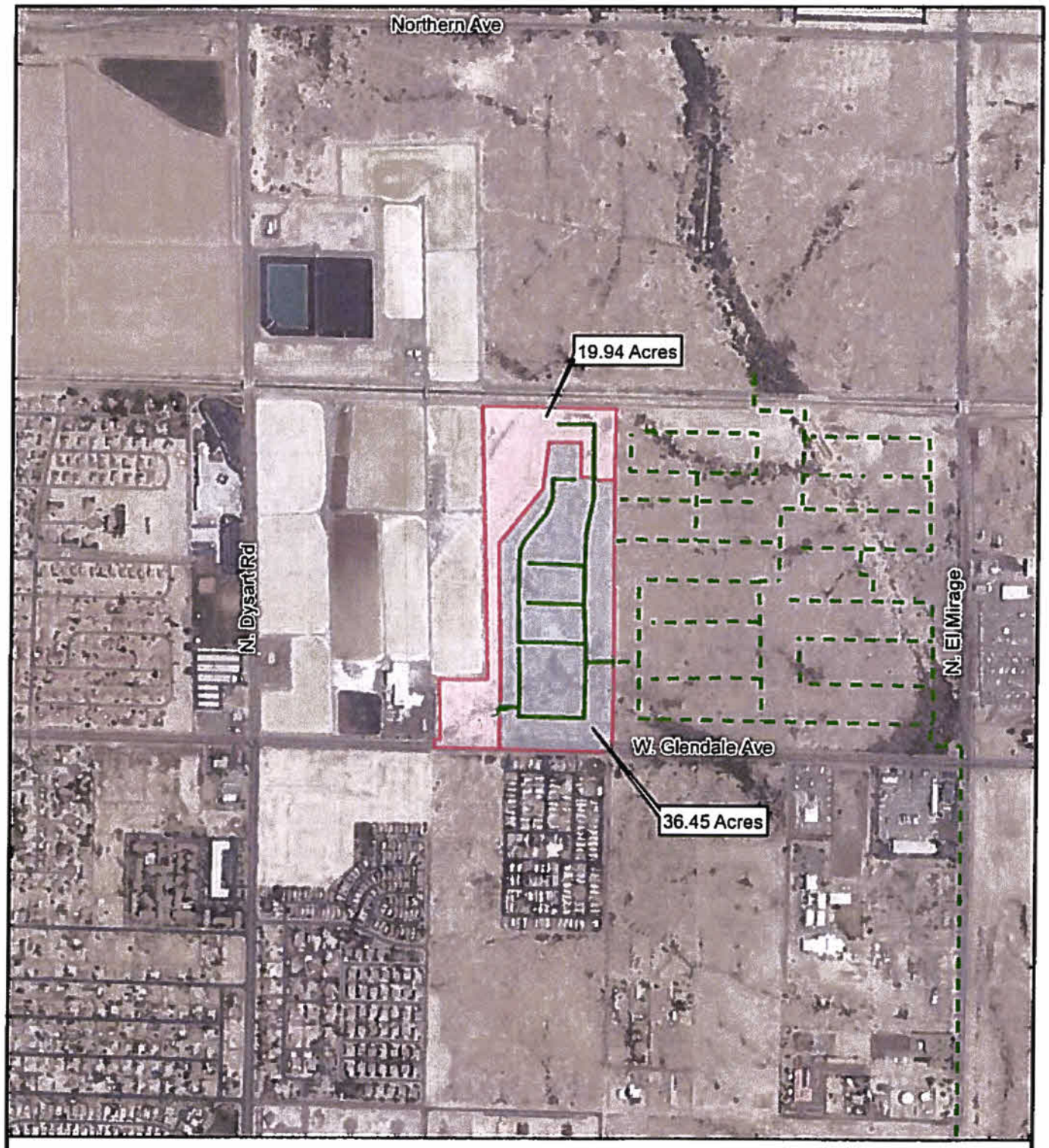
Figure #3

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Exhibit 10 Map 4

Wastewater Facilities Map

Path: M:\Jobs\1900's\1952.01\ENG\Mxd\Liberty Utility CC&N\CC&N Extension_Sewer.mxd



N

0 500 1,000 Feet

WestLand Resources

Legend

- Offsite Sewer
- Sewer Line
- Private Sewer
- 501-53-004F MPC Luke LLC
- 501-53-004G Luke Land 58 LLC

LIBERTY UTILITIES

CC&N EXTENSION

PROPOSED SEWER SERVICE CONNECTION

Figure #4

EXHIBIT 11

FORM OF NOTICE TO BE SENT TO MUNICIPALITIES WITHIN 5 MILES OF EXTENSION AREA

Liberty Utilities
WATER | GAS | ELECTRIC

Notice Required Pursuant to R14-2-402.B.4 and R14-2-602.B.4
Request for Extension of Certificates of Convenience and Necessity
Filed by Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Pursuant to A.A.C. R14-2-402.B.4 and R14-2-602.B.4, Liberty Utilities (Litchfield Park Water & Sewer) Corp. ("Liberty Litchfield Park") is providing this notice that Liberty Litchfield Park has made application to the Arizona Corporation Commission ("ACC") to extend its Certificates of Convenience and Necessity ("CC&Ns") to provide water and wastewater utility service to the Extension Area set forth below. The requested Extension Area is within five miles of your municipality's corporate limits. The specific notice requirements are as follows:

Applicant Name, Mailing Address and Telephone Number

Liberty Utilities (Litchfield Park Water & Sewer) Corp.
12725 W. Indian School Road, Suite D-101
Avondale, AZ 85392
623-935-9367

Date Applications Were Filed

Applications for an extension of the CC&Ns were filed on March 30, 2018

Type of Service to be Provided

Water and Wastewater Services

A Description of Requested Extension Area

Luke Landing and Luke Land 58 combined projects are approximately 56 acres in size and are estimated to contain 189 residential homes and one commercial parcel. The projects are located on the north side of Glendale Avenue midway between Dysart Road and El Mirage Road. The properties lie within Section 2 of Township 2 North, Range 1 West of the Gila and Salt River Meridian.

ACC Docket Numbers

ACC Docket Nos. W-01427A-18-XXXX and SW-01428A-18-XXXX

Instructions on How to Obtain a Copy of Applications

The applications are available for inspection during regular business hours at the offices of the ACC in Phoenix at 1200 West Washington Street, and at Liberty Utilities, 12725 W. Indian School Road, Suite D-101, Avondale, AZ 85392. In addition, Liberty Litchfield Park will provide printed copies or electronic copies of the applications upon request.

EXHIBIT 12

ESTIMATED NUMBER OF CUSTOMERS – FIRST FIVE YEARS

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Combined Estimated Number of Customers First 5 years

For

Luke Landing & Luke Land 58

Luke Landing and Luke Land 58 Yearly

Customer Additions	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	36	48	69	36
Commercial	-	-	1	-	-
Industrial	-	-	-	-	-

Additional Water Consumption (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	6,307,200	8,409,600	12,088,800	6,307,200
Commercial	-	-	2,736,405	-	-
Industrial	-	-	-	-	-

Additional Wastewater Production (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	4,204,800	5,606,400	8,059,200	4,204,800
Commercial	-	-	2,414,475	-	-
Industrial	-	-	-	-	-

Luke Landing and Luke Land 58 Cumulative

Customers	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	36	84	153	189
Commercial	-	-	1	1	1
Industrial	-	-	-	-	-

Water Consumption (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	6,307,200	14,716,800	26,805,600	33,112,800
Commercial	-	-	2,736,405	2,736,405	2,736,405
Industrial	-	-	-	-	-

Wastewater Production (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	4,204,800	9,811,200	17,870,400	22,075,200
Commercial	-	-	2,414,475	2,414,475	2,414,475
Industrial	-	-	-	-	-

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Estimated Number of Customers First 5 years

For

Luke Landing

Luke Landing Yearly

Customer Additions	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	36	48	48	36
Commercial	-	-	-	-	-
Industrial	-	-	-	-	-

Additional Water Consumption (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	6,307,200	8,409,600	8,409,600	6,307,200
Commercial	-	-	-	-	-
Industrial	-	-	-	-	-

Additional Wastewater Production (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	4,204,800	5,606,400	5,606,400	4,204,800
Commercial	-	-	-	-	-
Industrial	-	-	-	-	-

Luke Landing Cumulative

Customers	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	36	84	132	168
Commercial	-	-	-	-	-
Industrial	-	-	-	-	-

Water Consumption (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	6,307,200	14,716,800	23,126,400	29,433,600
Commercial	-	-	-	-	-
Industrial	-	-	-	-	-

Wastewater Production (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	4,204,800	9,811,200	15,417,600	19,622,400
Commercial	-	-	-	-	-
Industrial	-	-	-	-	-

Absorbtion schedules assume that approximately 4 homes are sold per month after construction, with the first homes being constructed and sold sometime in the year following the AOC for Phase I.

Liberty Utilities (Litchfield Park Water & Sewer) Corp.

Estimated Number of Customers First 5 years

For

Luke Land 58

Luke Land 58 Yearly

Customer Additions	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	-	-	21	-
Commercial	-	-	1	-	-
Industrial	-	-	-	-	-

Additional Water Consumption (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	-	-	3,679,200	-
Commercial	-	-	2,736,405	-	-
Industrial	-	-	-	-	-

Additional Wastewater Production (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	-	-	2,452,800	-
Commercial	-	-	2,414,475	-	-
Industrial	-	-	-	-	-

Luke Land 58 Cumulative

Customers	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	-	-	21	21
Commercial	-	-	1	1	1
Industrial	-	-	-	-	-

Water Consumption (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	-	-	3,679,200	3,679,200
Commercial	-	-	2,736,405	2,736,405	2,736,405
Industrial	-	-	-	-	-

Wastewater Production (Gallons Per Year)	Year 1	Year 2	Year 3	Year 4	Year 5
Residential	-	-	-	2,452,800	2,452,800
Commercial	-	-	2,414,475	2,414,475	2,414,475
Industrial	-	-	-	-	-

Absorbption schedules assume that approximately 4 homes are sold per month after construction, with the first homes being constructed and sold sometime in the year following the AOC for Luke Land 58's residential. The schedule assumes that the commercial project will be occupied the year after its AOC.

EXHIBIT 13

MCESD WATER SYSTEM COMPLIANCE REPORT

Maricopa County

Environmental Services Department

PUBLIC WATER SYSTEM COMPLIANCE STATUS REPORT

A review of all available records for the public water system listed below revealed that this permit is currently in COMPLIANCE with drinking water system regulations included in the Maricopa County Environmental Health Code as of 03/01/2018.

PWS ID #: **07-046** PWS Name: **Liberty Utilities**

System Type*: **Community Water System** Water Source Type(s): **Ground Water Only**

Population Served: **45,298** Number of Service Connections: **18,119**

MCESD Permit Exp: **12/31/2018** Initial Monitoring Year: **1995**

PWS Distribution Grade: **4** PWS Treatment Grade: **4**

Certified Operator (CO): **Joel Wade** CO Certification(s) Exp: **08/31/2020**

CO Distribution Grade: **4** CO Treatment Grade: **4**

Date of Last Sanitary Survey: **12/08/2016** Date of Last Facility Inspection: **11/16/2017**

Report for: **Permit Holder** Report Tracking #: **DWR-**

Requestor Name/Contact Info:

This above listed public water system currently has unresolved violations or deficiencies in the following compliance areas:

☐ Source Water	☐ Monitoring or Reporting (data verification)
☐ Treatment	☐ Management and Operations
☐ Distribution	☐ Operator Compliance
☐ Finished Water Storage	☐ Department Issued Permit
☐ Pumps	☐ Department Issued Plan Approvals
☐ Others (List):	

Description of unresolved violations or deficiencies noted in categories above:

No current violations in Drinking Water Watch

Additional documentation related to this review can be made available upon receipt of a public record's request. Contact the Drinking Water Program for more information.

Review Completed By: **Cynthia Hernandez, Environmental Specialist** Phone: **(602) 506-6644**

Drinking Water Program

1001 N. Central Ave., Suite 250

Phoenix, Arizona 85004-1940 Phone: (602) 506-6935 Fax: (602) 372-0866

Revised 9/2015

EXHIBIT 14

ADEQ AQUIFER PROTECTION PERMIT

STATE OF ARIZONA
AQUIFER PROTECTION PERMIT NO. P-100310
PLACE ID 815, LTF 53068

1.0 AUTHORIZATION

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Articles 1, 2 and 3, Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 1 and 2, A.A.C. Title 18, Chapter 11, Article 4 and amendments thereto, and the conditions set forth in this permit, Litchfield Park Service Company is hereby authorized to operate Palm Valley Water Reclamation Facility, located in Goodyear, Arizona, in Maricopa County, over groundwater of the Phoenix Active Management Area, in Township 2 N, Range 1 W, Section 33, SE¼, SW¼, SW¼, of the Gila and Salt River Baseline and Meridian.

This permit becomes effective on the date of the Water Quality Division Director's signature and shall be valid for the life of the facility (operational, closure, and post-closure periods) unless suspended or revoked pursuant to A.A.C. R18-9-A213. The permittee shall construct, operate and maintain the permitted facilities:

1. Following all the conditions of this permit including the design and operational information documented or referenced below, and
2. Such that Aquifer Water Quality Standards (AWQS) are not violated at the applicable point(s) of compliance (POC) set forth below or if an AWQS for a pollutant has been exceeded in an aquifer at the time of permit issuance, that no additional degradation of the aquifer relative to that pollutant and as determined at the applicable POC occurs as a result of the discharge from the facility.

1.1 PERMITTEE INFORMATION

Facility Name:	Palm Valley Water Reclamation Facility
Facility Address:	14222 West McDowell Road Goodyear, Arizona 85338
County:	Maricopa
Permittee:	Litchfield Park Service Company
Permittee Address:	12725 W Indian School Rd, Suite D101 Avondale, AZ 85392
Facility Contact:	Matthew Garlick
Emergency Phone No.:	(623) 935-9367
Latitude/Longitude:	33° 27' 55" N/ 112°21' 55" W
Legal Description:	Township 2 N, Range 1 W, Section 33, SE¼, SW¼, SW¼ of the Gila and Salt River Baseline and Meridian

1.2 AUTHORIZING SIGNATURE

Michael A. Fulton, Director
Water Quality Division
Arizona Department of Environmental Quality

Signed this 13th day of April, 2012

2.0 SPECIFIC CONDITIONS [A.R.S. §§ 49-203(4), 49-241(A)]

2.1 Facility / Site Description [A.R.S. § 49-243(K)(8)]

Litchfield Park Service Company (LPSCO) is authorized to operate Palm Valley Water Reclamation Facility (WRF), 5.1 million gallons per day (mgd) facility. The treatment process consists of two (2) bar screens, a vortex grit removal unit, an influent pump station, an influent equalization basin, three (3) sequential batch reactor (SBR) basins, a surge tank, four (4) cloth media disk filters, three (3) ultraviolet (UV) disinfection units, three (3) sludge holding tanks, two (2) centrifuges and two (2) rotary drum thickeners. The WRF is designed and constructed according to plans approved by ADEQ.

Effluent shall be reused for any allowable use under a valid reclaimed water permit (A.A.C. R18-9, Article 7), discharged to the Roosevelt Irrigation District (RID) canal under a valid AZPDES permit, or used for on-site process water applications (such as equipment cleaning). Discharges to the RID canal are exempt from APP requirements pursuant to A.R.S. § 49-250(B)(6) and (16). The Palm Valley WRF reclaimed water distribution system may also be connected to the reclaimed water distribution system for the City of Goodyear 157th Avenue WRF (APP No. P-101324), after the APP for the City of Goodyear 157th Avenue WRF has been amended to allow the connection (as per Section 3.0, Compliance Schedule). Once the reclaimed water distribution systems for the two facilities have been connected, reclaimed water from each of the facilities may be delivered to either facility's reclaimed water customers. Sludge shall be dewatered onsite by centrifuges and/or rotary drum thickeners. The dewatered sludge, including screenings, grit, and scum, shall be hauled off-site for management and disposal in accordance with state and federal regulations.

4.1 mgd Facility

The existing 4.1 mgd WRF includes two (2) bar screens, three (3) SBR basins, three (3) cloth media disc filters, and two (2) UV disinfection units. Discharge monitoring for this stage of operation shall be conducted as per Section 4.2, Table IA-1. Upon completion of construction of the 5.1 mgd expansion, monitoring under Table IA-1 shall be discontinued as per Section 3.0, Compliance Schedule.

5.1 mgd Expansion

The 5.1 mgd WRF shall include two (2) bar screens, three (3) SBR basins, four (4) cloth media disc filters, and three (3) UV disinfection units. In addition, two (2) of the three (3) existing SBR basins shall be retrofitted with new floating decanters and jet aeration systems, in order to expand the capacity of the facility without constructing additional SBR basins. Discharge monitoring for this stage of operation shall be conducted as per Section 4.2, Table IA-2.

Amendment Description

The purpose of this amendment is to increase the capacity of the WRF from 4.1 mgd to 5.1 mgd by adding a disc filter unit and a UV disinfection unit to the existing plant, to retrofit two (2) of the three (3) existing SBRs with new equipment to expand the capacity of the plant, and to allow connection between the Palm Valley WRF reclaimed water distribution system and the City of Goodyear 157th Avenue WRF reclaimed water distribution system.

The depth to groundwater is approximately 120 feet below land surface, and the direction of groundwater flow is toward the west-northwest.

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

The site includes the following permitted discharging facility:

Palm Valley Water Reclamation Facility	33° 27' 55" N	112° 21' 55" W

Annual Registration Fee [A.R.S. § 49-242 and A.A.C. R18-14-104]

The Annual Registration Fee for this permit is established by A.R.S. § 49-242 and is payable to ADEQ each year. The design flow is 5.1 mgd.

Financial Capability [A.R.S. § 49-243(N) and A.A.C. R18-9-A203]

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203(C)(5). The permittee shall maintain financial capability throughout the life of the facility. Litchfield Park Service Company submitted a Letter of Credit in the amount of $500,000.00 to ADEQ as a financial assurance mechanism.

2.2 Best Available Demonstrated Control Technology [A.R.S. § 49-243(B) and A.A.C. R18-9-A202(A)(5)]

The WRF shall be designed, constructed, operated, and maintained to meet the treatment performance criteria for new facilities as specified in A.A.C. R18-9-B204. The facility shall meet the performance requirement for industrial pre-treatment as per A.A.C. R18-9-B204(B)(6)(b).

2.2.1 Engineering Design

This expansion of the WRF was designed and shall be constructed as per the design report stamped, dated, and signed (sealed) on August 17, 2010, by Brian P. McBride, P.E. (Professional Engineer) with McBride Engineering Solutions, Inc., and subsequent sealed submittals that served as additions to the design report.

2.2.2 Site-specific Characteristics

Not applicable.

2.2.3 Pre-operational Requirements

The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion in a format approved by the Department per Compliance Schedule in Section 3.0. The Certificate shall be submitted to the Groundwater Section, and a copy shall be sent to the Water Quality Compliance Section.

2.2.4 Operational Requirements

1. The permittee shall maintain a copy of the up-to-date operations and maintenance manual at the WRF site at all times; the manual shall be available upon request during inspections by ADEQ personnel.
2. The pollution control structures shall be inspected for the items listed in Section 4.2, Table III - Facility Inspection (Operational Monitoring).
3. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and material(s) used shall be documented on the Self-Monitoring Report Form submitted quarterly to the ADEQ Water Quality Compliance Section.

2.2.5 Reclaimed Water Classification

[A.A.C. R18-9-703(C)(2)(a), A.A.C. R18-11-303 through 307]

The treatment facility is rated as producing reclaimed water meeting the Class A+ Reclaimed Water Quality Standards (A.A.C. R18-11, Article 3), which may be used for any allowable Class A, B, or C use under a valid reclaimed water permit (A.A.C. R18-9, Article 7).

2.2.6 Certified Areawide Water Quality Management Plan Conformance
[A.A.C. R18-9-A201(B)(6)(a)]

Facility operations must conform to the approved Certified Areawide Water Quality Management Plan according to the 208 consistency determination in place at the time of permit issuance.

2.3 Discharge Limitations [A.R.S. §§ 49-201(14), 49-243 and A.A.C. R18-9-A205(B)]

1. The permittee is authorized to operate the WRF with a maximum average monthly flow of 5.1 mgd.
2. The permittee shall notify all users that the materials authorized to be disposed of through the WRF are typical household sewage and pre-treated commercial wastewater and shall not include motor oil, gasoline, paints, varnishes, hazardous wastes, solvents, pesticides, fertilizers or other materials not generally associated with toilet flushing, food preparation, laundry facilities and personal hygiene.
3. The permittee shall operate and maintain all permitted facilities to prevent unauthorized discharges pursuant to A.R.S. § 49-201(12) resulting from failure or bypassing of applicable BADCT pollutant control technologies including liner failure[1], uncontrollable leakage, overtopping (e.g., exceeding the maximum storage capacity, defined as a fluid level exceeding the crest elevation of a permitted impoundment), of basins, lagoons, impoundments or sludge drying beds, berm breaches, accidental spills, or other unauthorized discharges.
4. Specific discharge limitations are listed in Section 4.2, Tables 1A-1, 1A-2 and 1B.

2.4 Points of Compliance (POCs) [A.R.S. § 49-244]

The POCs are established at the following designated locations:

POC No.	POC Description	Latitude	Longitude
1	Theoretical POC located at the northwest corner of the WRF	33° 27' 56" N	112° 21' 54" W

Groundwater monitoring is not required at the point of compliance, except as a contingency action.

The Director may amend this permit to require the installation of a well and the initiation of groundwater monitoring at the POC, or to designate additional points of compliance, if information on groundwater gradients or groundwater usage indicates the need.

2.5 Monitoring Requirements [A.R.S. § 49-243(K)(1), A.A.C. R18-9-A206(A)]

All monitoring required in this permit shall continue for the duration of the permit, regardless of the status of the facility. All sampling, preservation and holding times shall be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks and duplicate samples shall also be obtained, and Chain-of-Custody procedures shall be followed, in accordance with currently accepted standards of professional practice. The permittee shall develop a site-specific Quality Management Plan (QMP) which describes the sample collection and analysis procedures to ensure that the result of work

[1]Liner failure in a single-lined impoundment is any condition that would result in leakage exceeding 550 gallons per day per acre.

performed under this permit will satisfy the data quality objectives of the permit. The permittee shall be responsible for the quality and accuracy of all data required by this permit. If a third party collects or analyzes samples on behalf of the permittee, the permittee shall obtain a copy of the third party site-specific QMP. The permittee shall consult with the most recent version of the ADEQ QMP and Title 40, PART 136, of the Environmental Protection Agency's Code of Federal Regulations (CFR) for guidance in this regard. Copies of laboratory analyses and Chain-of-Custody forms shall be maintained at the permitted facility. Upon request, these documents shall be made immediately available for review by ADEQ personnel.

2.5.1 Pre-operational Monitoring

Not applicable at the time of permit issuance.

2.5.2 Routine Discharge Monitoring

The permittee shall monitor the effluent on a routine basis according to Section 4.2, Table IA-1 or IA-2, as applicable. Representative samples of the effluent shall be collected downstream of the UV disinfection channel.

2.5.3 Reclaimed Water Monitoring

On a routine basis, the permittee shall monitor the reclaimed water parameters listed under Section 4.2, Table IB in addition to the routine discharge monitoring parameters listed in Section 4.2, Tables IA-1 and IA-2. Representative samples of the reclaimed water shall be collected downstream of the UV disinfection channel.

2.5.4 Facility / Operational Monitoring

Operational monitoring inspections shall be conducted according to Section 4.2, Table III.

1. If any damage of the pollution control structures is identified during inspection, proper repair procedures shall be performed. All repair procedures and materials used shall be documented on the SMRF submitted quarterly to the ADEQ Water Quality Compliance Section, Data Unit. If none of the conditions occur, the report shall say "no event" for a particular reporting period. If the facility is not in operation, the permittee shall indicate this on the SMRF.
2. The permittee shall submit data required in Section 4.2, Table III regardless of the operating status of the facility unless otherwise approved by the Department or allowed in this permit.

2.5.5 Groundwater Monitoring and Sampling Protocols

Not applicable.

2.5.6 Surface Water Monitoring and Sampling Protocols

Not applicable.

2.5.7 Analytical Methodology

All samples collected for compliance monitoring shall be analyzed using Arizona state-approved methods. If no state-approved method exists, then any appropriate EPA-approved method shall be used. Regardless of the method used, the detection limits must be sufficient to determine compliance with the regulatory limits of the parameters specified in this permit. Analyses shall be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work shall meet quality control standards specified in the approved methods. A list of state-certified laboratories in Arizona can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
250 North 17th Avenue
Phoenix, Arizona 85007
Phone: (602) 364-0720

2.5.8. Installation and Maintenance of Monitoring Equipment

Monitoring equipment required by this permit shall be installed and maintained so that representative samples required by the permit can be collected. If new groundwater wells are determined to be necessary, the construction details shall be submitted to the ADEQ Groundwater Section for approval prior to installation, and the permit shall be amended to include any new monitoring points.

2.6 Contingency Plan Requirements
[A.R.S. § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204 and R18-9-A205]

2.6.1 General Contingency Plan Requirements

At least one copy of this permit and the approved contingency and emergency response plan(s) submitted in the application shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plans.

Any AL exceedance, violation of a DL, AQL, or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

Some contingency actions involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling had been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL, or any other permit condition.

2.6.2 Exceeding of Alert Levels/Performance Levels

2.6.2.1 Exceeding of Performance Levels Set for Operational Conditions

1. If an operational performance level (PL) set in Section 4.2, Table III has been exceeded the permittee shall:

   a. Notify the ADEQ Water Quality Compliance Section within five days of becoming aware of the exceedance.

   b. Submit a written report within 30 days after becoming aware of the exceedance. The report shall document all of the following:

      (1) A description of the exceedance and its cause;
      (2) the period of the exceedance, including exact date(s) and time(s), if known, and the anticipated time period during which the exceedance is expected to continue;
      (3) any action taken or planned to mitigate the effects of the exceedance or spill, or to eliminate or prevent recurrence of the exceedance or spill;

(4) any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS; and
(5) any malfunction or failure of pollution control devices or other equipment or process.

2. The facility is no longer on alert status once the operational indicator no longer indicates that a PL is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

2.6.2.2 Exceeding of Alert Levels (ALs) Set for Discharge Monitoring

1. If an AL set in Section 4.2, Tables IA-1 and IA-2 has been exceeded, the permittee shall immediately investigate to determine the cause. The investigation shall include the following:

   a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the exceedance;
   b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences; and
   c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the exceedance, the permittee shall sample individual waste streams composing the wastewater for the parameters in question, if necessary to identify the cause of the exceedance.

2. The permittee shall initiate actions identified in the approved contingency plan and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6.

3. Within 30 days of an AL exceedance, the permittee shall submit the laboratory results to the ADEQ Water Quality Compliance Section, Data Unit, along with a summary of the findings of the investigation, the cause of the exceedance, and actions taken to resolve the problem.

4. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.

2.6.2.2.1 Exceeding Permit Flow Limit

1. If the AL for average monthly flow in Section 4.2, Tables IA-1 or IA-2 has been exceeded, the permittee shall submit an application for an APP amendment to expand the WRF or submit a report detailing the reasons that expansion is not necessary.
2. Acceptance of the report instead of an application for expansion requires ADEQ approval.

2.6.3 Discharge Limit Violation

1. If a DL set in Section 4.2, Tables IA-1, IA-2, or IB has been violated, the permittee shall immediately investigate to determine the cause of the violation. The investigation shall include the following:

   a. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the violation;
   b. Review of recent process logs, reports, and other operational control information to identify any unusual occurrences; and

c. If the investigation procedures indicated in (a) and (b) above fail to reveal the cause of the violation, the permittee shall sample individual waste streams composing the wastewater for the parameters in violation, if necessary to identify the cause of the violation.

The permittee also shall submit a report according to Section 2.7.3, which includes a summary of the findings of the investigation, the cause of the violation, and actions taken to resolve the problem. The permittee shall consider and ADEQ may require corrective action that may include control of the source of discharge, cleanup of affected soil, surface water or groundwater, and mitigation of the impact of pollutants on existing uses of the aquifer. Corrective actions shall either be specifically identified in this permit, included in an ADEQ-approved contingency plan, or separately approved according to Section 2.6.6.

2. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

2.6.4 Aquifer Quality Limit Violation

Not applicable - Groundwater monitoring is not required under this permit.

2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges pursuant to A.R.S. § 49-201(12) and pursuant to A.R.S. § 49-241

2.6.5.1 Duty to Respond

The permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

2.6.5.2 Discharge of Hazardous Substances or Toxic Pollutants

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances (A.R.S. § 49-201(19)) or toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the discharged material. The permittee shall record information, including name, nature of exposure and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. The permittee shall notify the ADEQ Water Quality Compliance Section within 24 hours of discovering the discharge of hazardous material which (a) has the potential to cause an AWQS or AQL exceedance, or (b) could pose an endangerment to public health or the environment.

2.6.5.3 Discharge of Non-hazardous Materials

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the ADEQ Water Quality Compliance Section within 24 hours of discovering the discharge of non-hazardous material which (a) has the potential to cause an AQL exceedance, or (b) could pose an endangerment to public health or the environment.

2.6.5.4 Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to the ADEQ Water Quality Compliance Section within 30 days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure, and facility response activities and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification, any additional information requested in the notice shall also be submitted within the time frame

specified in the notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

2.6.6 Corrective Actions

Specific contingency measures identified in Section 2.6 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Groundwater Section prior to implementing a corrective action to accomplish any of the following goals in response to exceedance of an AL or violation of an AQL, DL, or other permit condition:

1. Control of the source of an unauthorized discharge;
2. Soil cleanup;
3. Cleanup of affected surface waters;
4. Cleanup of affected parts of the aquifer;
5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within 30 days of completion of any corrective action, the operator shall submit to the ADEQ Water Quality Compliance Section a written report describing the causes, impacts, and actions taken to resolve the problem.

2.7 Reporting and Recordkeeping Requirements [A.R.S. § 49-243(K)(2) and A.A.C. R18-9-A206(B) and R18-9-A207]

2.7.1 Self-monitoring Report Form

1. The permittee shall complete the SMRFs provided by ADEQ, and submit them to the Water Quality Compliance Section, Data Unit.
2. The permittee shall complete the SMRF to the extent that the information reported may be entered on the form. If no information is required during a reporting period, the permittee shall enter "not required" on the SMRF and submit the report to ADEQ. The permittee shall use the format devised by ADEQ.
3. The tables contained in Section 4.0 list the parameters to be monitored and the frequency for reporting results for compliance monitoring. Analytical methods shall be recorded on the SMRFs.
4. In addition to the SMRF, the information contained in A.A.C. R18-9-A206(B)(1) shall be included for exceeding an AL or violation of an AQL, DL, or any other permit condition being reported in the current reporting period.

2.7.2 Operation Inspection / Log Book Recordkeeping

A signed copy of this permit shall be maintained at all times at the location where day-to-day decisions regarding the operation of the facility are made. A log book (paper copies, forms, or electronic data) of the inspections and measurements required by this permit shall be maintained at the location where day-to-day decisions are made regarding the operation of the facility. The log book shall be retained for ten years from the date of each inspection, and upon request, the permit and the log book shall be made immediately available for review by ADEQ personnel. The information in the log book shall include, but not be limited to, the following information as applicable:

1. Name of inspector;
2. Date and shift inspection was conducted;
3. Condition of applicable facility components;
4. Any damage or malfunction, and the date and time any repairs were performed;
5. Documentation of sampling date and time; and
6. Any other information required by this permit to be entered in the log book.

Monitoring records for each measurement shall comply with A.A.C. R18-9-A206(B)(2).

2.7.3 Permit Violation and Alert Level Status Reporting

1. The permittee shall notify the Water Quality Compliance Section in writing (by mail or by fax - see Section 2.7.5) within five days (except as provided in Section 2.6.5) of becoming aware of a violation of any permit condition, discharge limitation, or of an AL exceedance.

2. The permittee shall submit a written report to the Water Quality Compliance Section within 30 days of becoming aware of the violation of any permit condition or discharge limitation. The report shall document all of the following:

   a. Identification and description of the permit condition for which there has been a violation and a description of the cause;
   b. The period of violation including exact date(s) and time(s), if known, and the anticipated time period during which the violation is expected to continue;
   c. Any corrective action taken or planned to mitigate the effects of the violation, or to eliminate or prevent a recurrence of the violation;
   d. Any monitoring activity or other information which indicates that any pollutants would be reasonably expected to cause a violation of an AWQS;
   e. Proposed changes to the monitoring which include changes in constituents or increased frequency of monitoring; and
   f. Description of any malfunction or failure of pollution control devices or other equipment or processes.

2.7.4 Operational, Other or Miscellaneous Reporting

The permittee shall complete the SMRF provided by the Department to reflect facility inspection requirements designated in Section 4.2, Table III and submit to the ADEQ Water Quality Compliance Section, Data Unit quarterly along with other reports required by this permit. Facility inspection reports shall be submitted no less frequently than quarterly, regardless of operational status.

If the treatment facility is classified for reclaimed water under this permit, the permittee shall submit the reclaimed water monitoring results as required in Section 4.2, Table IB and flow volumes to any of the following in accordance with A.A.C. R18-9-703(C)(2)(c):

1. Any reclaimed water agent who has contracted for delivery of reclaimed water from the permittee; and
2. Any end user who has not waived interest in receiving this information.

2.7.5 Reporting Location

All SMRFs shall be submitted to:

Arizona Department of Environmental Quality
Water Quality Compliance Section, Data Unit
Mail Code 5415B-1
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4681

All documents required by this permit to be submitted to the Water Quality Compliance Section shall be directed to the following address:

Arizona Department of Environmental Quality
Water Quality Compliance Section
Mail Code 5415B-1
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4497
Fax (602) 771-4505

All documents required by this permit to be submitted to the Groundwater Section shall be directed to:

Arizona Department of Environmental Quality
Groundwater Section
Mail Code 5415B-3
1110 West Washington Street
Phoenix, Arizona 85007
Phone (602) 771-4428

2.7.6 Reporting Deadline

The following table lists the quarterly report due dates[2]:

January-March	April 30
April-June	July 30
July-September	October 30
October-December	January 30

The following table lists the semi-annual and annual report due dates:

Semi-annual: January-June	July 30
Semi-annual: July-December	January 30
Annual: January-December	January 30

2.7.7 Changes to Facility Information in Section 1.0

The Groundwater Section and the Water Quality Compliance Section shall be notified within ten days of any change of facility information including Facility Name, Permittee Name, Mailing or Street Address, Facility Contact Person, or Emergency Telephone Number.

2.8 Temporary Cessation [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A209(A)]

The permittee shall give written notice to the Water Quality Compliance Section before ceasing operation of the facility for a period of 60 days or greater. The permittee shall take the following measures upon temporary cessation:

[2]A post-mark date no later than the due date is considered meeting the due date requirements under this Section.

1. If applicable, direct the wastewater flows from the facility to another state-approved wastewater treatment facility;
2. Correct the problem that caused the temporary cessation of the facility; and
3. Notify the ADEQ Water Quality Compliance Section with a monthly facility status report describing the activities conducted on the treatment facility to correct the problem.

At the time of notification the permittee shall submit for ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following ADEQ approval, the permittee shall implement the approved plan. If necessary, ADEQ shall amend permit conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, the permittee shall provide written notice to the Water Quality Compliance Section of the operational status of the facility every three years. If the permittee intends to permanently cease operation of any facility, the permittee shall submit closure notification, as set forth in Section 2.9 below.

2.9 Closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9-A209(B)]

For a facility addressed under this permit, the permittee shall give written notice of closure to the Water Quality Compliance Section of the intent to cease operation without resuming activity for which the facility was designed or operated.

2.9.1 Closure Plan

Within 90 days following notification of closure, the permittee shall submit for approval to the Groundwater Section a closure plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3).

If the closure plan achieves clean-closure immediately, ADEQ shall issue a letter of approval to the permittee. If the closure plan contains a schedule for bringing the facility to a clean-closure configuration at a future date, ADEQ may incorporate any part of the schedule as an amendment to this permit.

2.9.2 Closure Completion

Upon completion of closure activities, the permittee shall give written notice to the Groundwater Section indicating that the approved closure plan has been implemented fully and providing supporting documentation to demonstrate that clean-closure has been achieved (soil sample results, verification sampling results, groundwater data, as applicable). If clean-closure has been achieved, ADEQ shall issue a letter of approval to the permittee at that time. If any of the following conditions apply, the permittee shall follow the terms of post-closure stated in this permit:

1. Clean-closure cannot be achieved at the time of closure notification or within one year thereafter under a diligent schedule of closure actions;
2. Further action is necessary to keep the facility in compliance with AWQS at the applicable POC;
3. Continued action is required to verify that the closure design has eliminated discharge to the extent intended;
4. Remediation or mitigation measures are necessary to achieve compliance with Title 49, Ch. 2; and
5. Further action is necessary to meet property use restrictions.

2.10 Post-closure [A.R.S. §§ 49-243(K)(6), 49-252 and A.A.C. R18-9 A209(C)]

Post-closure requirements shall be established based on a review of facility closure actions and will be subject to review and approval by the Groundwater Section.

In the event clean-closure cannot be achieved pursuant to A.R.S. § 49-252, the permittee shall submit for approval to the Groundwater Section a post-closure plan that addresses post-closure maintenance and monitoring actions at the facility. The post-closure plan shall meet all requirements of A.R.S. §§ 49-201(30)

and 49-252 and A.A.C. R18-9-A209(C). Upon approval of the post-closure plan, this permit shall be amended or a new permit shall be issued to incorporate all post-closure controls and monitoring activities of the post-closure plan.

2.10.1 Post-closure Plan

A specific post-closure plan may be required upon the review of the closure plan.

2.10.2 Post-closure Completion

Not required at the time of permit issuance.

3.0 COMPLIANCE SCHEDULE [A.R.S. § 49-243(K)(5) and A.A.C. R18-9-A208]

For each compliance schedule item listed below, the permittee shall submit the required information, including a cover letter that lists the compliance schedule items, to the Groundwater Section. A copy of the cover letter must also be submitted to the ADEQ Water Quality Compliance Section.

The permittee shall submit a signed, dated, and sealed Engineer's Certificate of Completion for the 5.1 mgd expansion in a format approved by the Department that confirms that the facility is constructed according to the Department-approved design report or plans and specifications, as applicable.	Within 90 days after completion of construction of the 5.1mgd expansion.
The permittee may cease monitoring as per Section 4.2, Table 1A-1, begin monitoring as per Section 4.2, Table 1A-2, and notify the Water Quality Compliance Section, Data Unit, of the change in monitoring.	Within 30 days after submitting the Engineer's Certificate of Completion for the 5.1mgd expansion.
The permittee shall notify ADEQ of commencement of discharge from the 5.1 mgd WRF.	Within 15 days after commencement of monitoring under Section 4.2, Table 1A-2.
The permittee may apply for a permit amendment to remove Section 4.2, Table 1A-1.	After commencement of monitoring under Section 4.2, Table 1A-2.
The permittee may connect the Palm Valley WRF reclaimed water distribution system to the City of Goodyear 157th Avenue WRF reclaimed water distribution system.	After a permit amendment is issued to the City of Goodyear allowing the City of Goodyear 157th Avenue WRF (APP No. P-101324) to connect its reclaimed water distribution system to the Palm Valley WRF reclaimed water distribution system.

4.0 TABLES OF MONITORING REQUIREMENTS

4.1 PRE-OPERATIONAL MONITORING (OR CONSTRUCTION REQUIREMENTS)

Not applicable.

4.0 TABLES OF MONITORING REQUIREMENTS

4.2 COMPLIANCE (or OPERATIONAL) MONITORING

TABLE IA-1
ROUTINE DISCHARGE MONITORING – 4.1 MGD[3]

1	Immediately downstream of the UV Channel			33° 27' 55" N	112° 21' 56" W
Total Flow[6]: Daily[7]	NE[8]	NE	mgd[9]	Everyday	Quarterly
Total Flow: Monthly Average[10]	3.9	4.1	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	NE	4.1	mgd	Everyday	Quarterly
Reuse Flow: Monthly Average	NE	4.1	mgd	Monthly Calculation	Quarterly
E. coli: Single sample maximum	NE	15.0	CFU or MPN[11]	Daily	Quarterly
E. coli: four (4) of seven (7) samples in a week[12]	NE	Non-detect[13]	CFU or MPN	Daily	Quarterly
Total Nitrogen[14]: Five-sample rolling geometric mean	8.0	10.0	mg/l[15]	Monthly[16]	Quarterly

[3]Monitoring under Table IA-1 is no longer required after the commencement of monitoring under Table IA-2.
[4]AL = Alert Level
[5]DL = Discharge Limit
[6]Total flow is the total of flows to on-site process use, reclaimed water, discharge to the RID canal, and the City of Goodyear 157th Avenue WRF, and flow from the City of Goodyear 157th Avenue WRF.
[7]Flow shall be measured using a continuous recording flow meter which totals the flow daily.
[8]NE = Not Established = Monitoring is required but no limits are specified.
[9]mgd = million gallons per day
[10]Monthly average of daily flow values.
[11]CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample. For CFU, a value of <1.0 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.
[12]Week means a seven-day period starting on Sunday and ending on the following Saturday.
[13]If at least four (4) of seven (7) samples in a week are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of seven (7) samples in a week have detections of *E. coli*, report "no" in the appropriate space on the SMRF (indicating that the standard has not been met).
[14]Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen
[15]mg/l = milligrams per liter
[16]A five-month geometric mean of the results of the five (5) most recent samples

TABLE IA-1
ROUTINE DISCHARGE MONITORING – 4.1 MGD (continued)

Sampling Point Number	Sampling Point Identification	Latitude	Longitude
2	Flow meter at the connection to the City of Goodyear 157th Avenue WRF reclaimed water distribution system, located 3,000 feet west of Palm Valley WRF at the intersection of McDowell Road and Bullard Avenue	33° 27' 51.48" N	112° 22' 31.08" W

Parameter	AL	DL	Units	Sampling Frequency	Reporting Frequency
Flow from the Palm Valley WRF reclaimed water distribution system to the City of Goodyear 157th Avenue WRF reclaimed water distribution system	NE	NE	mgd	Everyday	Quarterly
Flow from the City of Goodyear 157th Avenue WRF reclaimed water distribution system to the Palm Valley WRF reclaimed water distribution system	NE	NE	mgd	Everyday	Quarterly

TABLE IA-1
ROUTINE DISCHARGE MONITORING – 4.1 MGD (continued)

Sample Point Number	Sample Point Description			Latitude	Longitude
1	Immediately downstream of the UV Channel			33° 27' 55" N	112° 21' 56" W
Parameter	AAD	ADL	Units	Sample Frequency	Reporting Frequency
Metals (total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

TABLE IA-1
ROUTINE DISCHARGE MONITORING – 4.1 MGD (continued)

Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs):					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

TABLE IA-2
ROUTINE DISCHARGE MONITORING – 5.1 MGD[17]

Sample Point Number	Sample Point Description			Latitude	Longitude
1	Immediately downstream of the UV Channel			33° 27' 55" N	112° 21' 56" W
Parameter	AL[18]	DL[19]	Units	Sample Frequency	Sample Type
Total Flow[20]: Daily[21]	NE[22]	NE	mgd[23]	Everyday	Quarterly
Total Flow: Monthly Average[24]	4.9	5.1	mgd	Monthly Calculation	Quarterly
Reuse Flow: Daily	NE	5.1	mgd	Everyday	Quarterly
Reuse Flow: Monthly Average	NE	5.1	mgd	Monthly Calculation	Quarterly
E. coli: Single sample maximum	NE	15.0	CFU or MPN[25]	Daily	Quarterly
E. coli: four (4) of seven (7) samples in a week[26]	NE	Non-detect[27]	CFU or MPN	Daily	Quarterly
Total Nitrogen[28]: Five-sample rolling geometric mean	8.0	10.0	mg/l[29]	Monthly[30]	Quarterly

[17]Monitoring under Table IA-1 is no longer required upon commencement of monitoring under Table IA-2. The permittee shall notify the Water Quality Compliance Section, Data Unit, of the change in monitoring as per Section 3.0, Compliance Schedule.
[18]AL = Alert Level
[19]DL = Discharge Limit
[20]Total flow is the total of flows to on-site process use, reclaimed water, discharge to the RID canal, and the City of Goodyear 157th Avenue WRF, and flow from the City of Goodyear 157th Avenue WRF.
[21]Flow shall be measured using a continuous recording flow meter which totals the flow daily.
[22]NE = Not Established = Monitoring is required but no limits are specified.
[23]mgd = million gallons per day
[24]Monthly average of daily flow values.
[25]CFU = Colony Forming Units / 100 ml sample. MPN = Most Probable Number / 100 ml sample. For CFU, a value of <1.0 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.
[26]Week means a seven-day period starting on Sunday and ending on the following Saturday.
[27]If at least four (4) of seven (7) samples in a week are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of seven (7) samples in a week have detections of *E. coli*, report "no" in the appropriate space on the SMRF (indicating that the standard has not been met).
[28]Total Nitrogen = Nitrate as N + Nitrite as N + Total Kjeldahl Nitrogen
[29]mg/l = milligrams per liter
[30]A five-month geometric mean of the results of the five (5) most recent samples

TABLE IA-2
ROUTINE DISCHARGE MONITORING – 5.1 MGD (continued)

Sample Point Number	Sample Point Description	Latitude	Longitude
2	Flow meter at the connection to the City of Goodyear 157th Avenue WRF reclaimed water distribution system, located 3,000 feet west of Palm Valley WRF, at the intersection of McDowell Road and Bullard Avenue	33° 27' 51.48" N	112° 22' 31.08" W

Parameter	Minimum	Maximum	Units	Sample Frequency	Sample Type
Flow from the Palm Valley WRF reclaimed water distribution system to the City of Goodyear 157th Avenue WRF reclaimed water distribution system	NE	NE	mgd	Everyday	Quarterly
Flow from the City of Goodyear 157th Avenue WRF reclaimed water distribution system to the Palm Valley WRF reclaimed water distribution system	NE	NE	mgd	Everyday	Quarterly

TABLE IA-2
ROUTINE DISCHARGE MONITORING – 5.1 MGD (continued)

SAMPLING POINT NUMBER	SAMPLING POINT DESCRIPTION			LATITUDE	LONGITUDE
1	Immediately downstream of the UV Channel			33° 27' 55" N	112° 21' 56" W
EFFLUENT CHARACTERISTIC	AAL	MDL	UNITS	MONITORING FREQUENCY	REPORTING FREQUENCY
Metals (total):					
Antimony	0.0048	0.006	mg/l	Quarterly	Quarterly
Arsenic	0.04	0.05	mg/l	Quarterly	Quarterly
Barium	1.60	2.00	mg/l	Quarterly	Quarterly
Beryllium	0.0032	0.004	mg/l	Quarterly	Quarterly
Cadmium	0.004	0.005	mg/l	Quarterly	Quarterly
Chromium	0.08	0.1	mg/l	Quarterly	Quarterly
Cyanide (as free cyanide)	0.16	0.2	mg/l	Quarterly	Quarterly
Fluoride	3.2	4.0	mg/l	Quarterly	Quarterly
Lead	0.04	0.05	mg/l	Quarterly	Quarterly
Mercury	0.0016	0.002	mg/l	Quarterly	Quarterly
Nickel	0.08	0.1	mg/l	Quarterly	Quarterly
Selenium	0.04	0.05	mg/l	Quarterly	Quarterly
Thallium	0.0016	0.002	mg/l	Quarterly	Quarterly

TABLE 1A-2
ROUTINE DISCHARGE MONITORING – 5.1 MGD (continued)

PARAMETER	LIMIT		UNITS	SAMPLE FREQUENCY	REPORTING FREQUENCY
Volatile and Semi-Volatile Organic Compounds (VOCs and SVOCs):					
Benzene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Carbon tetrachloride	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
o-Dichlorobenzene (1,4 - Dichlorobenzene)	0.48	0.6	mg/l	Semi-Annually	Semi-Annually
para-Dichlorobenzene	0.06	0.075	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,1-Dichloroethylene	0.0056	0.007	mg/l	Semi-Annually	Semi-Annually
cis-1,2-Dichloroethylene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
trans-1,2-Dichloroethylene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Dichloromethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
1,2-Dichloropropane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Ethylbenzene	0.56	0.7	mg/l	Semi-Annually	Semi-Annually
Hexachlorobenzene	0.0008	0.001	mg/l	Semi-Annually	Semi-Annually
Hexachlorocyclopentadiene	0.04	0.05	mg/l	Semi-Annually	Semi-Annually
Monochlorobenzene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Styrene	0.08	0.1	mg/l	Semi-Annually	Semi-Annually
Tetrachloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Toluene	0.8	1.0	mg/l	Semi-Annually	Semi-Annually
1,1,1-Trichloroethane	0.16	0.2	mg/l	Semi-Annually	Semi-Annually
1,2,4 - Trichlorobenzene	0.056	0.07	mg/l	Semi-Annually	Semi-Annually
1,1,2 - Trichloroethane	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Trichloroethylene	0.004	0.005	mg/l	Semi-Annually	Semi-Annually
Vinyl Chloride	0.0016	0.002	mg/l	Semi-Annually	Semi-Annually
Xylenes (Total)	8.0	10.0	mg/l	Semi-Annually	Semi-Annually

TABLE 1B
RECLAIMED WATER MONITORING – CLASS A+[31]

Sampling Point Number	Description	Latitude	Longitude
1	Immediately downstream of the UV Channel	33° 27' 55" N	112° 21' 56" W

Parameter	Effluent Limit	Unit	Sampling Frequency	Reporting Frequency
Total Nitrogen[32]: Five-sample rolling geometric mean	10.0	mg/l	Monthly	Quarterly
E. coli: Single-sample maximum	15.0	CFU or MPN[33]	Daily[34]	Quarterly
E. coli: Four (4) of last seven (7) samples	Non-detect[35]	CFU or MPN	Daily	Quarterly
Turbidity[36]: Single reading	5.0	NTU[37]	Everyday[38]	Quarterly
Turbidity: 24-hour average	2.0	NTU	Everyday	Quarterly
Enteric Virus: Four (4) of last seven (7) samples	Non-detect	PFU[39]	Suspended/ Monthly[40]	Quarterly

[31]Reclaimed water monitoring under Table 1B shall be performed in addition to routine discharge monitoring required under Section 4.2, Tables 1A-1 and 1A-2.
[32]Nitrate N, plus Nitrite N, plus Total Kjeldahl Nitrogen (TKN)
[33]CFU = Colony Forming Units per 100 ml; MPN = Most Probable Number per 100 ml. For CFU, a value of <1.0 shall be considered to be non-detect. For MPN, a value of <2.2 shall be considered to be non-detect.
[34]For fecal coliform, "daily" sampling means every day in which a sample can practicably be obtained and delivered in sufficient time for proper analysis, provided that no less than four (4) samples in each seven-day period are obtained and analyzed.
[35]If at least four (4) of the last seven (7) samples are non-detect, report "yes" in the appropriate space on the SMRF (indicating that the standard has been met). If at least four (4) of the last seven (7) samples have detections of fecal coliform, report "no" in the appropriate space on the SMRF (indicating that the standard has not been met).
[36]Turbidimeter shall have a signal averaging time not exceeding 120 seconds. Occasional spikes due to back-flushing or instrument malfunction shall not be considered an exceedance. All exceedances must be explained and submitted to the Department with the corresponding quarterly SMRF.
[37]NTU = Nephelometric Turbidity Units
[38]For the single turbidity reading, "everyday" means the maximum reading during the 24-hour period.
[39]Plaque Forming Units per 40 Liters. A value of <1.1 PFU/40 L shall be considered to be non-detect.
[40]Enteric virus sampling shall resume only when the discharge limit for the 24-hour average for turbidity is exceeded for two (2) consecutive 24-hour monitoring periods. Monthly enteric virus monitoring shall continue until four (4) out of seven (7) consecutive sample results show no detection. During times when enteric virus sampling is suspended, enter "suspended" in the appropriate space on the SMRF.

TABLE II
GROUNDWATER MONITORING

Not applicable.

TABLE III
FACILITY INSPECTION (Operational Monitoring)

Facility/Item	Performance Level	Inspection Frequency	Recording Frequency
Pump Integrity	Good working condition	Weekly	Quarterly
Treatment Plant Components	Good working condition	Weekly	Quarterly

5.0 REFERENCES AND PERTINENT INFORMATION

The terms and conditions set forth in this permit have been developed based upon the information contained in the following, which are on file with the Department:

1.	APP Application, dated:	August 24, 2010
2.	Final Engineering Report, dated:	March 24, 2011
3.	Public Notice, dated:	January 26, 2012
4.	Public Hearing, dated:	Not applicable.
5.	Responsiveness Summary, dated:	Not applicable.

6.0 NOTIFICATION PROVISIONS

6.1 Annual Registration Fees

The permittee is notified of the obligation to pay an Annual Registration Fee to ADEQ. The Annual Registration Fee is based upon the amount of daily influent or discharge of pollutants in gallons-per-day (gpd) as established by A.R.S. § 49-242.

6.2 Duty to Comply [A.R.S. §§ 49-221 through 263]

The permittee is notified of the obligation to comply with all conditions of this permit and all applicable provisions of Title 49, Chapter 2, Articles 1, 2 and 3 of the Arizona Revised Statutes, Title 18, Chapter 9, Articles 1 through 4, and Title 18, Chapter 11, Article 4 of the Arizona Administrative Code. Any permit non-compliance constitutes a violation and is grounds for an enforcement action pursuant to Title 49, Chapter 2, Article 4 or permit amendment, suspension, or revocation.

6.3 Duty to Provide Information [A.R.S. §§ 49-243(K)(2) and 49-243(K)(8)]

The permittee shall furnish to the Director, or an authorized representative, within a time specified, any information which the Director may request to determine whether cause exists for amending or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

6.4 Compliance with Aquifer Water Quality Standards [A.R.S. §§ 49-243(B)(2) and 49-243(B)(3)]

The permittee shall not cause or contribute to a violation of an AWQS at the applicable POC for the facility. Where, at the time of issuance of the permit, an aquifer already exceeds an AWQS for a pollutant, the permittee shall not discharge that pollutant so as to further degrade, at the applicable point of compliance for the facility, the water quality of any aquifer for that pollutant.

6.5 Technical and Financial Capability [A.R.S. §§ 49-243(K)(8) and 49-243(N) and A.A.C. R18-9-A202(B) and R18-9-A203(E) and (F)]

The permittee shall have and maintain the technical and financial capability necessary to fully carry out the terms and conditions of this permit. Any bond, insurance policy, trust fund, or other financial assurance mechanism provided as a demonstration of financial capability in the permit application, pursuant to A.A.C. R18-9-A203(D), shall be in effect prior to any discharge authorized by this permit and shall remain in effect for the duration of the permit.

6.6 Reporting of Bankruptcy or Environmental Enforcement [A.A.C. R18-9-A207(C)]

The permittee shall notify the Director within five days after the occurrence of any one of the following:

1. The filing of bankruptcy by the permittee; or
2. The entry of any order or judgment not issued by the Director against the permittee for the enforcement of any environmental protection statute or rule.

6.7 Monitoring and Records [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A206]

The permittee shall conduct any monitoring activity necessary to assure compliance with this permit, with the applicable water quality standards established pursuant to A.R.S. §§ 49-221 and 49-223 and §§ 49-241 through 49-252.

6.8 Inspection and Entry [A.R.S. §§ 41-1009, 49-203(B), and 49-243(K)(8)]

In accordance with A.R.S. §§ 41-1009 and 49-203(B), the permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to enter and inspect the facility as reasonably necessary to ensure compliance with Title 49, Chapter 2, Article 3 of the Arizona Revised Statutes, and Title 18, Chapter 9, Articles 1 through 3 of the Arizona Administrative Code and the terms and conditions of this permit.

6.9 Duty to Modify [A.R.S. § 49-243(K)(8) and A.A.C. R18-9-A211]

The permittee shall apply for and receive a written amendment before deviating from any of the designs or operational practices authorized by this permit.

6.10 Permit Action: Amendment, Transfer, Suspension, and Revocation [A.R.S. §§ 49-201, 49-241 through 251; A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

This permit may be amended, transferred, suspended, or revoked for cause, under the rules of the Department. The permittee shall notify the Groundwater Section in writing within 15 days after any change in the owner or operator of the facility. The notification shall state the permit number, the name of the facility, the date of property transfer, and the name, address, and phone number where the new owner or operator can be reached. The operator shall advise the new owner or operators of the terms of this permit and the need for permit transfer in accordance with the rules.

7.0 ADDITIONAL PERMIT CONDITIONS

7.1 Other Information [A.R.S. § 49-243(K)(8)]

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, the permittee shall promptly submit the correct facts or information.

7.2 Severability [A.R.S. §§ 49-201, 49-241 through 251; A.A.C. R18-9-A211, R18-9-A212 and R18-9-A213]

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. The filing of a request by the permittee for a permit action does not stay or suspend the effectiveness of any existing permit condition.

7.3 Permit Transfer

This permit may not be transferred to any other person except after notice to and approval of the transfer by the Department. No transfer shall be approved until the applicant complies with all transfer requirements as specified in A.A.C. R18-9-A212(B) and (C).

EXHIBIT 15

LIBERTY LITCHFIELD PARK'S
WATER & WASTEWATER USE DATA SHEETS

Water & Wastewater Use Data Sheets (past 12 months)

WATER USE DATA

Month	Year	# of Customers	Gallons Sold	Gallons Pumped	
March	2017	18,767	177,018,897	246,070,000	
April	2017	18,794	223,661,700	308,596,000	
May	2017	18,847	292,609,053	372,663,000	
June	2017	18,843	355,455,820	409,574,700	
July	2017	18,857	389,063,952	408,265,000	
August	2017	18,912	373,712,561	407,193,000	
September	2017	18,930	377,459,639	397,421,000	
October	2017	18,978	353,937,542	399,982,000	
November	2017	19,005	371,314,702	303,058,000	
December	2017	19,039	281,604,100	258,007,000	
January	2018	19,066	233,322,359	237,361,000	
February	2018	19,081	219,625,107	228,734,000	

TOTALS ---->	3,648,785,432	3,976,924,700

WASTEWATER FLOWS

Month	Year	# of Services	Total Monthly Sewage Flow	Sewage Flow on Peak Day	
March	2017	17,704	129,965,000	4,596,000	
April	2017	17,728	124,429,000	4,656,000	
May	2017	17,787	114,599,000	4,138,000	
June	2017	17,806	107,321,000	4,380,000	
July	2017	17,801	121,320,000	4,382,000	
August	2017	17,879	117,548,000	4,542,000	
September	2017	17,881	113,727,000	4,316,000	
October	2017	17,945	116,591,000	4,241,000	
November	2017	17,964	115,659,000	4,231,000	
December	2017	18,024	118,925,000	4,293,000	
January	2018	18,050	122,289,000	4,310,000	
February	2018	18,059	110,420,000	4,415,000	

TOTAL ---->	1,412,793,000

EXHIBIT 16

NOTARIZED SIGNATURE
ON BEHALF OF LIBERTY LITCHFIELD PARK

AFFIDAVIT OF STEVE CARLSON

Steve Carlson, being duly sworn, deposes and says:

1. I am a resident of Maricopa County, over 18 years of age, and make this affidavit based on my own personal knowledge.

2. I am the Development Services Manager for Liberty Utilities (Litchfield Park Water and Sewer) Corp. ("Liberty").

3. The Application for an Extension of Liberty's existing water and wastewater CC&N, to which this affidavit is attached, was prepared under my supervision.

Steve Carlson

Steve Carlson

SUBSCRIBED and sworn to before me this 16th day of March, 2018.

Virginia P. Covarrubias

Notary Public

My Commission Expires:

April 13, 2018

Official Seal
VIRGINIA P COVARRUBIAS
Notary Public State of Arizona
Maricopa County
My Comm Expires April 13, 2018