



City of Garden Ridge

9400 Municipal Parkway
Garden Ridge, Texas 78266-2600
(210) 651-6632
Fax (210) 651-9638

AGENDA REGULAR CITY WATER COMMISSION MEETING

Tuesday, August 26, 2014 at 6:00 P.M.

The Garden Ridge City Water Commission will meet in a regular session on Tuesday, August 26, 2014 at 6:00 p.m. in the City Council Chambers, City Hall, 9400 Municipal Parkway, Garden Ridge, Texas. This meeting is open meeting, open to the public, subject to the Open Meetings Law of the State of Texas, and as required by law, notice is hereby posted on Friday, August 22, 2014 before 5:00 p.m., providing time, place, date and agenda thereof. The meeting facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpretive services must be made 48 hours in advance of this meeting.

1. Call to Order
2. Roll Call
3. Citizen's Participation – 3 minute limit per citizen

Rules for Citizen's Participation:

The Water Commission welcomes citizen participation and comments at all of their Commission Meetings. As a courtesy to your fellow citizens and out of respect to our appointed officials, we must request that if you wish to speak, that you please follow these guidelines.

- a. Direct your comments to the entire Commission, not to an individual member, nor to the audience.
- b. Show the Water Commission the same respect and courtesy that you would like to be shown.
- c. Limit remarks to three (3) minutes per citizen during Item 3.
- d. Citizen comments may be deferred to a specific Business Item set forth in Section 5, below, if such comments pertain to such Business Item.

*NOTE: The Texas Open Meetings Act permits a member of the public or a member of the governmental body to raise a subject that has not been included in the notice for the meeting. However, any discussion of the subject **must be limited** to a proposal to place the subject on the agenda for a future meeting and any response to a question posed to the Commission is limited to either a statement of specific factual information or a recitation of existing policy. TEX. GOV'T CODE § 551.042.*

4. Approval of Minutes
 - a. July 15, 2014 Regular Water Commission Meeting
5. Business Items

The City Water Commission may discuss, consider and/or take possible action on recommendation to the City Council on the following:

- a. Update on Comprehensive Water Plan assignments/projects
 - b. Water Conservation Public Awareness Program for the City of Garden Ridge to include participation in National Night Out
 - c. Discussion on conducting a Public Hearing on September 23, 2014 to receive citizen input into proposed amendments to Ordinance 159 establishing landscape and irrigation system requirements for residential and commercial properties in the City of Garden Ridge for the purpose of water conservation; providing for variances and providing a penalty for violation of said ordinance
 - d. Petition by Mr. and Mrs. James E. Young, 21329 Forest Waters Circle for a waiver of three fourths of their August 2014 water bill due to a malfunctioning toilet
 - e. Petition by the City of Garden Ridge for a variance to be allowed to water a city drainage easement through property owned by Carmen Morales located at 20325 Grass Creek to reestablish lawn/landscape disturbed by the CIP Project and variance being requested for a period of 60 days
 - f. Presentation by Shelby Trial on drip irrigation
 - g. Discussion on possible amendments to Ordinance 54-012014, Section 35, Rebate Programs and Water Conservation Incentives, for the inclusion of Residential Irrigation Design Rebate, Swimming Pool Filter Replacement Rebate and WaterSaver Patioscape Rebate
 - h. Lease of three acre feet of Edwards Water Rights from Lloyd Lohman at \$138.50 per acre foot for a term of three years
 - i. Reappointment/Appointment of City Water Commissioners for Place 1, Place 3 and Place 4 due to expiring terms of office on September 30, 2014
 - j. Water Search Committee report and recommendations
6. Update on actions taken by the City Council in previous City Council Meetings
7. Water Manager Monthly Activity Report
- a) Water pumping/usage from city wells
 - b) Water system infrastructure maintenance, repairs and/or projects
 - c) Static levels, drawdown levels and flow rates on the Trinity Well
 - d) Water and/or Drought Management
8. Adjourn

AGENDA NOTICES:

Decorum Required:

Any disruptive behavior, including shouting or derogatory statements or comments may be ruled out of order by the Presiding Officer. Continuation of this type of behavior could result in a request by the Presiding Officer that the individual leave the meeting, and if refused, an order of removal.

Action by Commission Authorized:

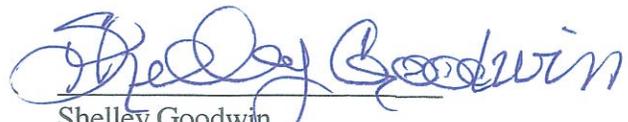
The Commission may vote and/or act upon any item within this Agenda. The Commission reserves the right to retire into executive session concerning any of the items listed on this Agenda, pursuant to and in accordance with Texas Government Code Section 551.071, to seek the advice of its attorney about pending or contemplated litigation, settlement offer or on a matter in which the duty of the attorney to the governmental body under the Texas Disciplinary Rules of Professional Conduct of the State Bar of Texas conflict with the Open Meetings Act and may invoke this right where the City Attorney, the Mayor or a majority of the Governing Body deems an executive session is necessary to allow privileged consultation between the City Attorney and the governing body, if considered necessary and legally justified under the Open Meetings Act. The City Attorney may appear in person, or appear in executive session by conference call in accordance with applicable state law.

Executive Sessions Authorized:

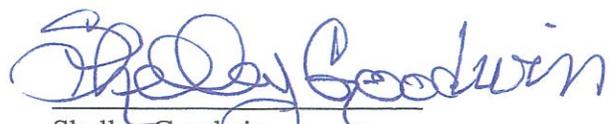
This agenda has been reviewed and approved by the City's legal counsel and the presence of any subject in any Executive Session portion of the agenda constitutes a written interpretation of Texas Government Code Chapter 551 by legal counsel for the governmental body and constitutes an opinion by the attorney that the items discussed therein may be legally discussed in the closed portion of the meeting considering available opinions of a court of record and opinions of the Texas Attorney General known to the attorney. This provision has been added to this agenda with the intent to meet all elements necessary to satisfy Texas Government Code Chapter 551.144(c) and the meeting is conducted by all participants in reliance on this opinion.

Attendance By Other Elected or Appointed Officials:

It is anticipated that members of other city board, commissions and/or committees may attend the meeting in numbers that may constitute a quorum of the other city boards, commissions and/or committees. Notice is hereby given that the meeting, to the extent required by law, is also noticed as a meeting of the other boards, commissions and/or committees of the City, whose members may be in attendance. The members of the boards, commissions and/or committees may participate in discussions on the same items listed on the agenda, which occur at the meeting, but no action will be taken by such in attendance unless such item and action is specifically provided for on an agenda for that board, commission or committee subject to the Texas Open Meetings Act.


Shelley Goodwin
City Secretary

This is to certify that I, Shelley Goodwin, posted this Agenda at 10:30 a.m. on August 22, 2014 on the bulletin board located at the entrance to the Garden Ridge City Hall, 9400 Municipal Parkway, Garden Ridge, Texas.


Shelley Goodwin
City Secretary



City of Garden Ridge

9400 Municipal Parkway
Garden Ridge, Texas 78266-2600
(210) 651-6632
Fax (210) 651-9638

MINUTES OF CITY WATER COMMISSION RESCHEDULED REGULAR MEETING July 15, 2014

Members Present:

Chairman Jim Bower
Commissioner David Heier
Commissioner Jim Kohl
Commissioner Pat Ramirez
Commissioner Ray Pitzen
Commissioner Richard Holloway
Mayor Pro Tem Knaus

Member Absent:

None

City Staff Present:

Nancy Cain, City Administrator
Bryan Lantzy, Councilmember
Royce Goddard, Water Department Manager
Deirdre Gentry, Administrative Assistant
Shelley Goodwin, City Secretary

1. Call to Order

With a quorum of the City Water Commissioner present, Chairman Bower called the regular meeting of the Garden Ridge City Water Commission to order at 6:00 p.m. on Tuesday, June 24, 2014, in the City Council Chambers of the Garden Ridge City Hall, 9400 Municipal Parkway, Garden Ridge, Texas 78266.

2. Citizen's Participation – 3 minute limit per citizen

No one wished to speak.

3. Approval of Minutes

a) June 24, 2014 Regular Water Commission Meeting

Motion: A motion was made by Chairman Bower and seconded by Commissioner Ramirez to approve the minutes of June 24, 2014 Water Commission Meeting. The motion passed unanimously.

4. Business Items

The City Water Commission may discuss, consider and/or take possible action on recommendation to the City Council on the following:

a. Hydrologist presentation on the Trinity aquifer and the City of Garden Ridge Trinity well

Hydrologist, Bill Stein, P.G. gave a presentation on the Trinity aquifer and the City of Garden Ridge Trinity well #1 and relooking at Trinity well #2.

b. Update on Comprehensive Water Plan assignments/projects

The Commission and the City Administrator discussed the status of their assignments.

c. Water Conservation Public Awareness Program for the City of Garden Ridge to include Water Conservation Fair

The Water Commission discussed what to include in the upcoming Fair/National Night Out activities. The Commission decided to discuss their research on conservation and what they will present at the next month's meeting on August 26th, 2014.

d. Discussion on current and possible future rebates offered by the City of Garden Ridge Water Company to include possible amendment to Ordinance 54, Section 35, Rebate Program and Water Conservation Incentives

The Water Commission discussed adding to the ordinance what would be included for a rebate and how much the rebate would be, providing this information to residents, and how it would be monitored.

e. Amendments to Ordinance 159-092010 establishing landscape and irrigation system requirements for residential and commercial properties in the City of Garden Ridge for the purpose of water conservation; providing for variances and providing a for violation of said ordinance

Mayor Pro Tem Nancy Knaus recommended the Water Commission use a plot to a typical Garden Ridge three quarter acre lot (33,000 sq ft.), use a foot print of a typical Garden Ridge home, and forward them to the City Council so that they can visually see the remaining 13,068 ft for irrigation requirements.

Motion: Upon motion made by Commissioner Ramirez, and seconded by Commissioner Kohl, it was approved that the amendment to Ordinance 159-092010 moves forward to the City Council. The Water Commission voted seven (7) for, none (0) opposed. The motion carried unanimously.

f. Water Search Committee update

The Water Commission discussed, putting the Trinity well #2 back on the list.

The Water Commission discussed drilling a well on Timber Rose site behind the storage tank; also getting in touch with Cibolo/Schertz Water regarding drilling their pipeline.

5. Update on actions taken by the City Council in previous City Council Meetings

City Administrator Nancy Cain reported that at the July 7, 2014 City Council meeting the Council had no items from the Water Commission for consideration, so there were no actions on water related items.

6. Water Manager Monthly Activity Report

a) Water pumping/usage from city wells

Royce Goddard, Water Manager reviewed the monthly water pumping/usage from the city wells and discussed the water system operations

Royce Goddard, Water Manager reported 46.69 acre ft from the Edwards Aquifer and 2.55 acre ft. from the Trinity. Current rate from the Edwards Aquifer is 6 acre ft. over the estimated redemption amount.

b) Water system infrastructure maintenance, repairs and/or projects

Nothing to report at this time

c) Static levels, drawdown levels and flow rates on the Trinity Well

Water Manager Director Royce Goddard reported that the drawdown level was at 93.6 feet, the water level returns to the current static level of 184.5' feet.

d) Water and/or Drought Management

The City of Garden Ridge is still currently at Stage 3 Watering Restrictions

7. Adjourn

Motion to adjourn was made by Chairman Kohl and seconded by Commissioner Heier. The motion passed unanimously and the meeting adjourned at 7:10 p.m.

Jim Bower, Chair

ATTEST:

Shelley Goodwin, TRMC
City Secretary

Garden Ridge Water Department
9400 Municipal Pkwy.
Garden Ridge, TX 78266

31 July 2014

Account Number: 204545-00

Account Holders: Mr. and Mrs. James E. Young, 21329 Forest Waters Circle

To: City of Garden Ridge Water Commission

This letter is requesting a waiver to our August 2014 water bill. The excessive amount of water use inside our home was during the timeframe in which we were out of town on vacation (25 Jun–11Jul). It appears the excessive amount of water was due to a malfunctioning toilet that must have run the entire time we were on vacation.

Our record over the last 23 years will show we are not excessive users of water. The following is a snapshot of our water usage in 2011, 2012, 2013 and 2014 for the months of May, June, July and August:

May 2011: \$107.29	May 2012: \$85.50
June 2011: \$79.04	June 2012: \$66.75
July 2011: \$86.54	July 2012: \$176.75
Aug 2011: \$86.54	Aug 2012: \$60.25
May 2013: \$60.25	May 2014: \$38.25
June 2013: \$25.00	June 2014: \$111.00
July 2013: \$138.50	July 2014: \$283.99
Aug 2013: \$100.50	Aug 2014: \$1411.78 (amount billed)

We have paid approximately a fourth of the August bill in the amount of \$360.00. We respectfully request a waiver of the remaining three fourths, due to the unusual circumstance. Thank you for your consideration.

Sincerely,


JAMES E. YOUNG

TRELIS V. YOUNG



City of Garden Ridge

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CITY OF GARDEN RIDGE WATER DEPARTMENT

NAME Jim Young
SERVICE ADDRESS 21329 Forest Water Cir
ACCOUNT # 20-4545-00 PHONE # _____

I am requesting an adjustment on my Aug 2014 water bill due to a leak.

I understand I can only receive this adjustment ONCE every TWO years.

Amount of Total Bill \$1441.02

-Non-Water Items - 29.26

-Base Water Rate - 18.00

Amount to be Adjusted \$1393.76 x 50%

Adjustment Given \$696.88

+Non-Water Items + 29.26

+ Base Water Rate + 18.00

New Total Amt. Due \$744.14

Customer Signature _____ Date _____

Water Mgr. Approval _____ Date _____

- = minus + = plus



City of Garden Ridge Water Department

9400 Municipal Parkway
Garden Ridge, Texas 78266
(210) 651-6831
Fax: (210) 651-9638

COPY



CRRT R003
COL J.E./LT COL YOUNG
21329 FOREST WATERS CIR
SAN ANTONIO TX 78266-2786

Important Information on
Reverse Side

ACCOUNT NUMBER	DATE BILL MAILED	SERVICE FROM	SERVICE TO	DAYS USED	DUE DATE
20-4545-00	07/31/2014	06/23/14	07/23/14	30	08/15/2014
PREVIOUS READING	PRESENT READING	GALLONS USED	DESCRIPTION		AMOUNT DUE
183000	327000	144000	RI WATER TR1 GARBAGE EAA EAA FEE TAX		1,411.76 24.56 2.67 2.03
STAGE 3 WATER RESTRICTIONS IN EFFECT SEE CALENDAR. SURCHARGE BEGINS AFTER 45,000 GALLONS. THANK YOU FOR ALL YOUR CONSERVATIONS EFFORTS. NON-EMERGENCY/ AFTER HOURS/LOST & FOUND PETS CALL 651-6831					

SERVICE ADDRESS ► 21329 FOREST WATERS CIRC

AMOUNT DUE	AFTER DUE DATE	BY DUE DATE
	\$1,584.93	\$1,441.02

KEEP THIS PORTION FOR YOUR RECORDS

PLEASE RETURN THIS PORTION
WITH YOUR PAYMENT TO:



City of Garden Ridge Water Department

9400 Municipal Parkway
Garden Ridge, Texas 78266
(210) 651-6831
Fax: (210) 651-9638



DUE DATE	ACCOUNT NUMBER
08/15/14	20-4545-00
AFTER DUE DATE	BY DUE DATE
\$1,584.93	\$1,441.02

AMOUNT DUE



CRRT R003
COL J.E./LT COL YOUNG
21329 FOREST WATERS CIR
SAN ANTONIO TX 78266-2786

SERVICE ADDRESS ► 21329 FOREST WATERS CIRC



Account Number: Address:

Zone: Name:

General | Metered | Non-Metered | Financial | Information | Comments | History | Consumption History | Service Orders | Devices |

Services: Filter: Period: Thru:

Grid Graph



Year:

Month	Date	Read		Total Consumption	Demand		Reading		Occupant
		Previous	Current		Read	Consumption	Flag	Source	
Year: 2014 Total 7									
Jul	07/23/2014	183	327	144			Regular	Service Order	00
Jun	06/23/2014	123	183	60			Regular	Hand Held	00
May	05/22/2014	88	123	35			Regular	Hand Held	00
Apr	04/23/2014	72	88	16			Regular	Hand Held	00
Mar	03/24/2014	9	72	63			Regular	Hand Held	00
Feb	02/21/2014	0	9	26			Regular	Hand Held	00
Jan	01/23/2014	2964	2979	15			Regular	Hand Held	00
Year: 2013 Total 12									
Dec	12/23/2013	2956	2964	8			Regular	Hand Held	00
Nov	11/21/2013	2950	2956	6			Regular	Hand Held	00
				Avg 26					

Edit This Record

View water

August 20, 2014

To: Water Commission Chairman Bower and
Water Commissioners

From: City Administrator Cain

The City of Garden Ridge ongoing Capital Improvement Project required the city to obtain a drainage easement through property owned by Carmen Morales at 20325 Grass Creek for the installation of drainage culverts and grading of a drainage channel. During the negotiation of the easement with Mrs. Morales the city agreed to reestablish the lawn and associated landscaping that was disturbed by the necessary work through the drainage easement. The City of Garden Ridge requests a variance to water newly laid sod and any other landscape that is disturbed during work performed in the drainage easement through Mrs. Morales's yard. The variance requested would be for a period of 60 days upon completion of the drainage improvements through the drainage easement on her property and installation of new sod and landscape within the drainage easement.

35.04- Residential Irrigation Design Rebate

Customers of the Water Department are entitled to a (1) rebate per household of up to \$800, to be credited to their water bill for any combination of options, depending on the number of zones converted or capped, and if irrigation remains at or below a personalized schedule for water use over a one year period. Only existing systems are eligible for rebates. All customers approved to receive the first installment of their rebate will be given the final installment if they meet the water use requirements.

How it works:

Step 1: Have a licensed irrigator review your landscape and conservation goals, make recommendations specific to your home and leave you with written recommendations, that you can use to apply for rebate.

Step 2: Have licensed irrigator complete the work , or you may complete it yourself. If you complete it yourself you must follow all city and state laws governing irrigation installation and design.

Step 3: Once installation of the redesigned system has been completed, call the city to schedule a final inspection. The city will conduct a final inspection, including work completed and irrigation controller scheduling. The inspector will then determine the amount of rebate you may qualify for and provide you with a written copy. **This will serve as your application for the Residential Irrigation Design Rebate.** Upon final inspection and application approval, The City will credit your water bill with the initial installment of 50 percent of the total approved rebate.

STEP 4: If your water use remains at or below the watering recommendations for a period of one year, the final installment of the remaining 50 percent of the eligible rebate will be applied to your account.

What is Eligible?

The following may be done on each zone of your system, but the **maximum total rebate payment per property is \$800.**

IRRIGATION DESIGN REBATE

Amount	Procedure	Description
\$450	Disabling entire system	The removal of the backflow device, backflow box, all valve boxes and the controller; cutting the "T" connection and capping snugly to the mainline.
\$250	Capping a zone	<p>The removal and capping of an existing zone valve.</p> <ul style="list-style-type: none"> This might be chosen because an area is now hardscape, has been converted to bedding area instead of turf, or because the plants are mature and do not require regular irrigation.

IRRIGATION DESIGN REBATE

Amount	Procedure	Description
\$200	Converting a pop-up spray zone to drip/bubblers	<p>The conversion of a zone that is currently irrigated by a pop-up spray or rotor irrigation system.</p> <ul style="list-style-type: none"> ▪ Drip system pop-up spray must include appropriate pressure regulation, a filter and pressure release valve. ▪ For conversion from fixed sprays and rotors to a drip system, emitters must not exceed 1 gallon per hour. ▪ Drip irrigation must consist of: (1.) Half-inch tubing with built-in emitters; or (2.) Smaller point-source tubing connected laterally with individual emitters for specific plants. Tubing with laser holes is not eligible for rebate. ▪ Fittings should not be the barbed connection fittings but compression fittings that are more secure. ▪ System must include: (1.) A pop-up head with its nozzle closed or capped and the stem painted a bright color; or (2.) A manufactured flag indicator. This will indicate that the zone is working properly. Misters are not allowed. ▪ Bubblers must be nonadjustable, fixed flow - not to exceed 1 gallon/minute per head.
\$150	Splitting a zone to beds and turf	Conversion of a single zone that covers both turf and beds to two separate zones for turf and beds.

35.05- Swimming Pool Filter Replacement Rebate

Here's a dirty little secret about your old swimming pool filtering system:

It wastes water, energy and money. It's time to consider a new water- and energy-efficient cartridge filter system. Here's why:

- The City will give you a rebate up to **\$250** on your water bill when you replace your pool's sand or diatomaceous earth (D.E.) filter(s) with a new high-efficiency cartridge filter system.
- Replacing your sand or D.E. filter with a high-efficiency cartridge filter system can reduce your water consumption by as much as 20,000 gallons per year.
- Translation: Lower water and energy bills.

Requirements

All participants in the City Pool Filter Replacement Rebate program must:

- Be City water customers for the requested installation property site.
- Own their pools and have either a sand filter or diatomaceous earth filter.

Participants shall not hold City Conservation responsible for pool water quality or any costs associated with maintenance or repairs.

Rebate Details:

- Rebate will be credited to the City water account of the applicant.
- Rebate is available only on filter systems purchased after June 1, 2014.

35.06- WaterSaver Patioscape Rebate

Customers of the Water Department are entitled to (1) rebate per household to be credited to their water bill for the proof of replacing 200 square feet of grass with an approved patioscape.

Program Eligibility & Highlights

- Residential customers must meet these eligibility requirements: (a.) Must be a water customer. (b.) Must be the homeowner.
- If you have an irrigation system, you must schedule an irrigation checkup with a licensed irrigator, then you must **cap the spray heads/rotors or drip lines** in the area you intend to install your patioscape.
- Participants can **call the city to apply**.
- The package is available for grass/turf replacement only. Existing beds and/or patios are not eligible for this program.
- The patioscape must be at least 200 contiguous square feet.
- Patioscape must be at least 10 feet wide and cannot be used to create a pathway.
- The dug up area for the patioscape should be free of debris and have a hard packed, yet pervious, sub-soil to build a proper patio foundation.
- The WaterSaver Patioscape Rebate is only available for the purchase of **flagstone, stepping stones or pavers**. No substitutions are allowed.
- The customer must agree to allow a post-inspection by City staff.

Amount of Rebate - one hundred dollars (\$100.00)

August 19, 2014

To: Chairman Bower and Water Commission

From: City Administrator Cain

I was contacted by Lloyd Lohman inquiring if the City of Garden Ridge would be interested in leasing 3 acre feet of Edward's water rights that he has available for lease. Mr. Lohman has stated that he would lease the water rights to the city at \$138.50 per acre foot annually for a lease term of three years.

The City is currently in a lease agreement with Mr. Freisenhahn for 15 acre feet of Edward's water rights at \$135 per acre and an additional 50 acre feet beginning January 1, 2015 for a period of five years. The City is also leasing 400 acre feet of Edwards Water Rights from the City of Schertz at a rate of \$138.50 per acre foot for a period of two years with an additional year option.

The city's cost for the lease of an additional 3 acre feet of Edwards water rights equates to \$415.50 annually with a full lease term cost of \$ 1,246.50. The City will pay the required EAA fees.

Mr. Lohman has stated that he will hold the water rights until he hears back from me on the City's desires.

CITY OF GARDEN RIDGE
WATER COMMISSION

<u>PLACE</u>	<u>COMMISSIONER</u>	<u>TERM EXPIRES</u>
1	Jim Kohl 20740 Timber Rose Dr. 651-5895 jkohl@minigrip.com jgkohl@yahoo.com	9/30/14
2	David Heier 9185 Garden Ridge Dr. 651-4255 david.heier@med.va.gov	9/30/15
3	Patricia A. Ramirez, P.E. 8827 Cherokee Path 385-4475 pramirez@professionaledg.com	9/30/14
4	Raymond E. Pitzen 19534 Creekview Oaks 651- 7577 rpitzen@hotmail.com	9/30/14
5	Nadine Knaus Mayor Pro Tem 651-6632 - Office 727-6884 – Cell nKnaus@satx.rr.com	Open
6	Richard Holloway 9307 Teakwood Lane 651-7431 rehhardwood@earthlink.net	9/30/15
7	James Bower, Chairman 8947 Garden Ridge Drive 650-8881 jmbmail@satx.rr.com	9/30/15

Garden Ridge Water Search Committee

Report to Water Commission

August 26, 2014

Objectives

The Water Search Committee was tasked to:

1. Identify potential sources of additional water for the City of Garden Ridge
2. Estimate their initial and on-going costs, technical and legal risks, and time to complete
3. Emphasize finding additional source(s) before the current lease with the City of Schertz expires

27 Potential Sources Identified

These can be summarized in groups as follows:

- Extend the lease from the City of Schertz
- Buy additional Edwards water rights
- Purchase water from various entities
- Participate in a water pipeline project
- Drill new well(s)

Extend the Lease with Schertz

- The City of Schertz
 - Stated publicly that they will be needing additional water supplies in the next 5 years
 - Authorized an expensive expansion of their participation in the Schertz-Sequin LGC
- Conclusion:
 - Not a secure long-term solution
 - Might be available for a short period of time
 - Continue to monitor

Buy Additional Edwards Rights

- Need 400 – 500 acre feet (AF) actual water
- At stage 4 that would require 667 – 833 AF
- Current cost approximately \$12,000 acre-foot
 - Cost if available \$8.0 – 10.0 million
 - Probably not available at this cost if at all
- Monitor prices; may want to purchase small quantities at “reasonable” prices

Purchase Water Locally

- Pipeline cost estimated at \$500,000 per mile not including right-of-ways or significant obstacles
- Pipeline costs alone make Rockwall Ranch, SAWS, quarries in New Braunfels, etc. very expensive
- Green Valley and City of Schertz unable to supply our requirements at the current time

Participate in Pipeline Project

- Cibolo Valley and SAWS Vista Ridge completion dates too distant
- Canyon Regional route and completion date too uncertain
- Various other options in discussions only
- Only apparent viable pipeline for Garden Ridge's short-term needs would be the new Schertz-Sequin proposal

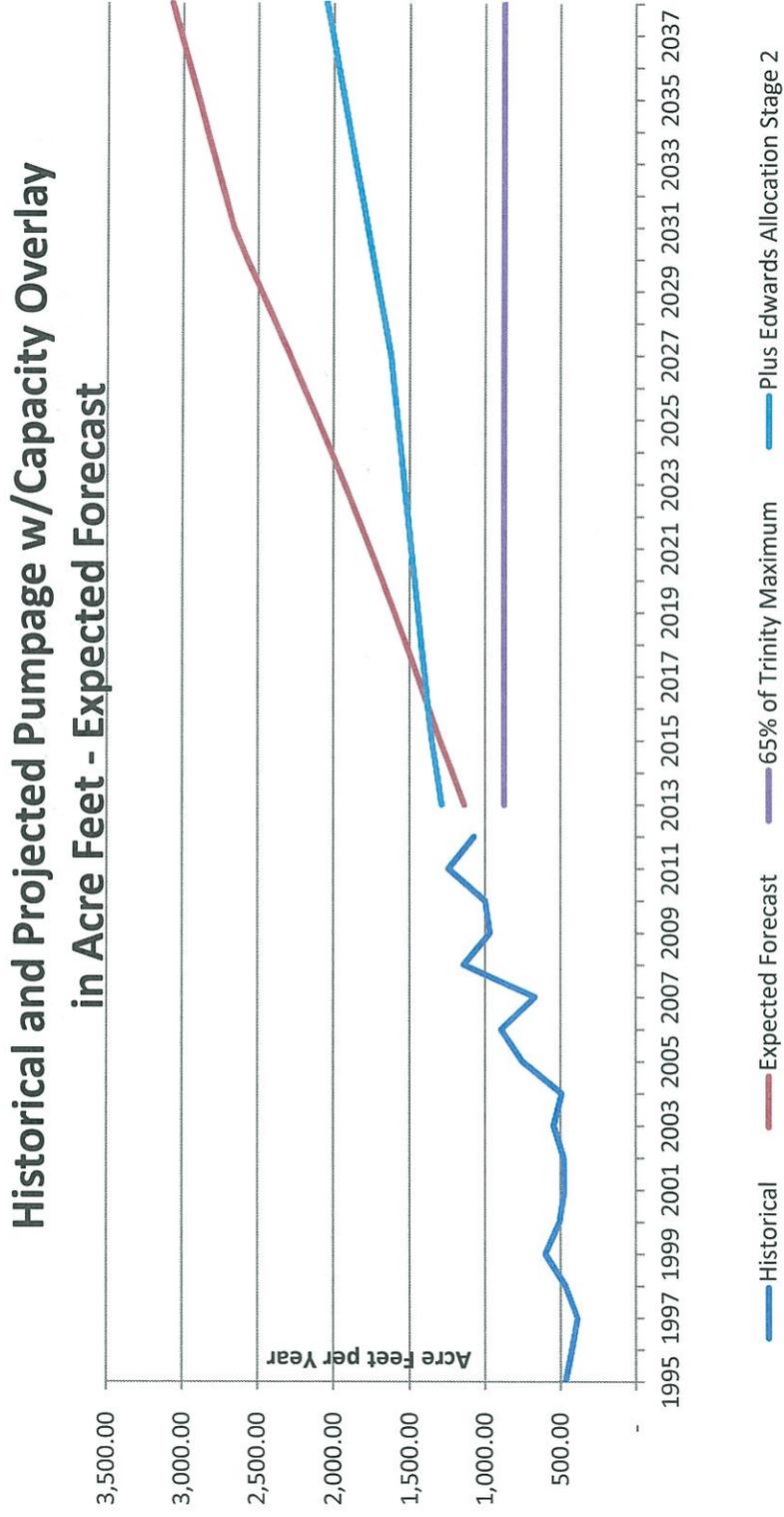
Schertz-Sequin Contract Conditions

- Take or pay contract: 30 - 40 year term
- Cost based rates with uneven cost sharing
- Would require City of Schertz to “wheel”
water to FM 2252
 - Results in further volume controls (gallons per
minute ranges, etc.)
 - Adds operational complexities
- Water delivered equally per month / day

Not Only an Issue of
How Much Water
Garden Ridge Needs

But When does Garden Ridge
Need the Water?

Need Forecasted at 500 Acre Feet per Year



Additional Water Needed

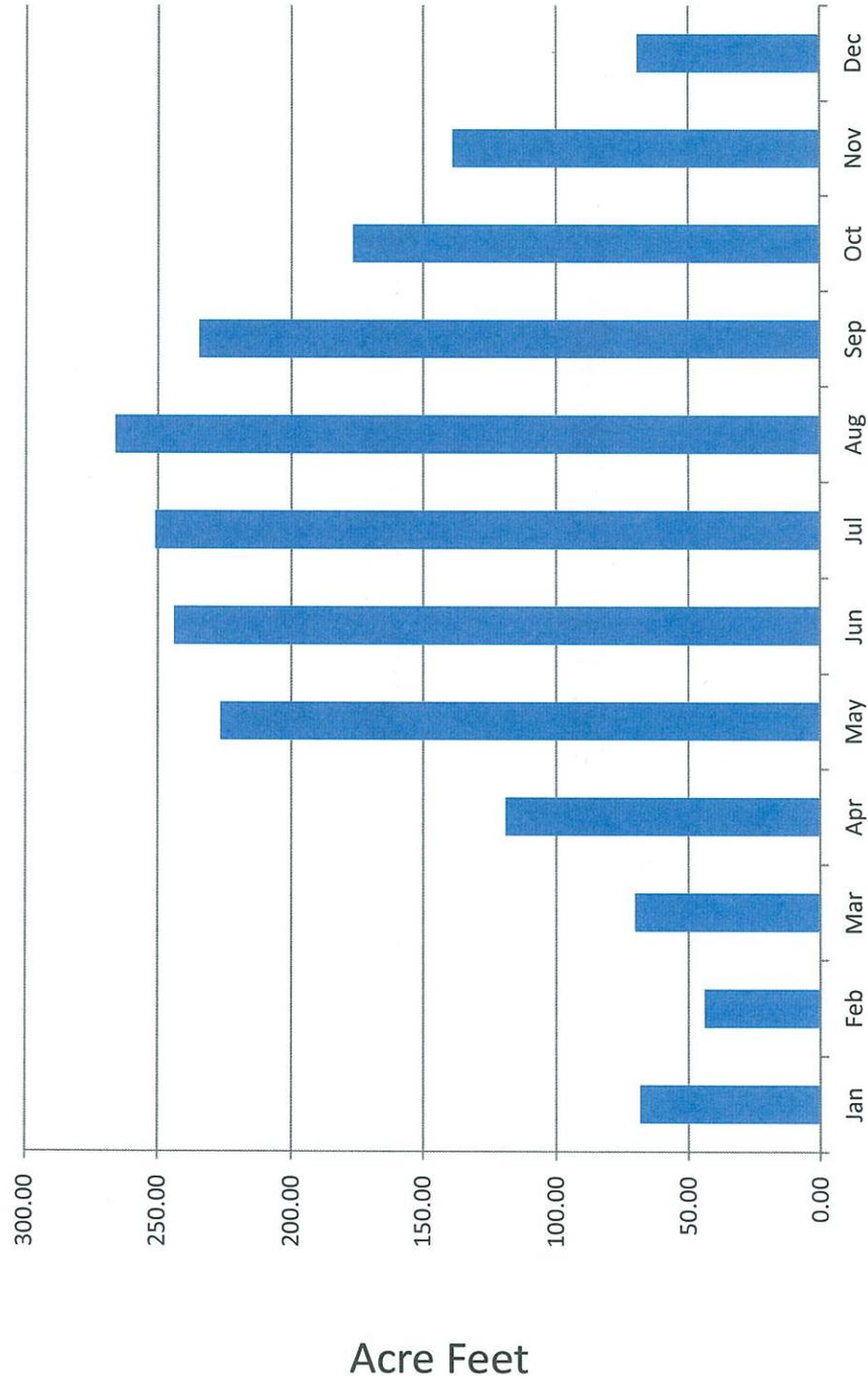
Limited Restrictions – Drought Conditions

- 400 - 500 acre feet additional water required
 - Last year's forecast showed a shortage of 500 acre feet
 - The new SCADA capabilities and associated changes to operating parameters the Trinity may produce up to an additional 100 acre feet

Needed to Estimate Use per Day

- Projected daily 2018 water requirements
- Hot, drought conditions
- Continued trend of new housing units using more irrigation water than traditional areas
- Based usage on 2010 2011 historical date
 - Record pumpage
 - Drought conditions
 - Limited irrigation restrictions at those times

Projected Daily Use by Month 2018

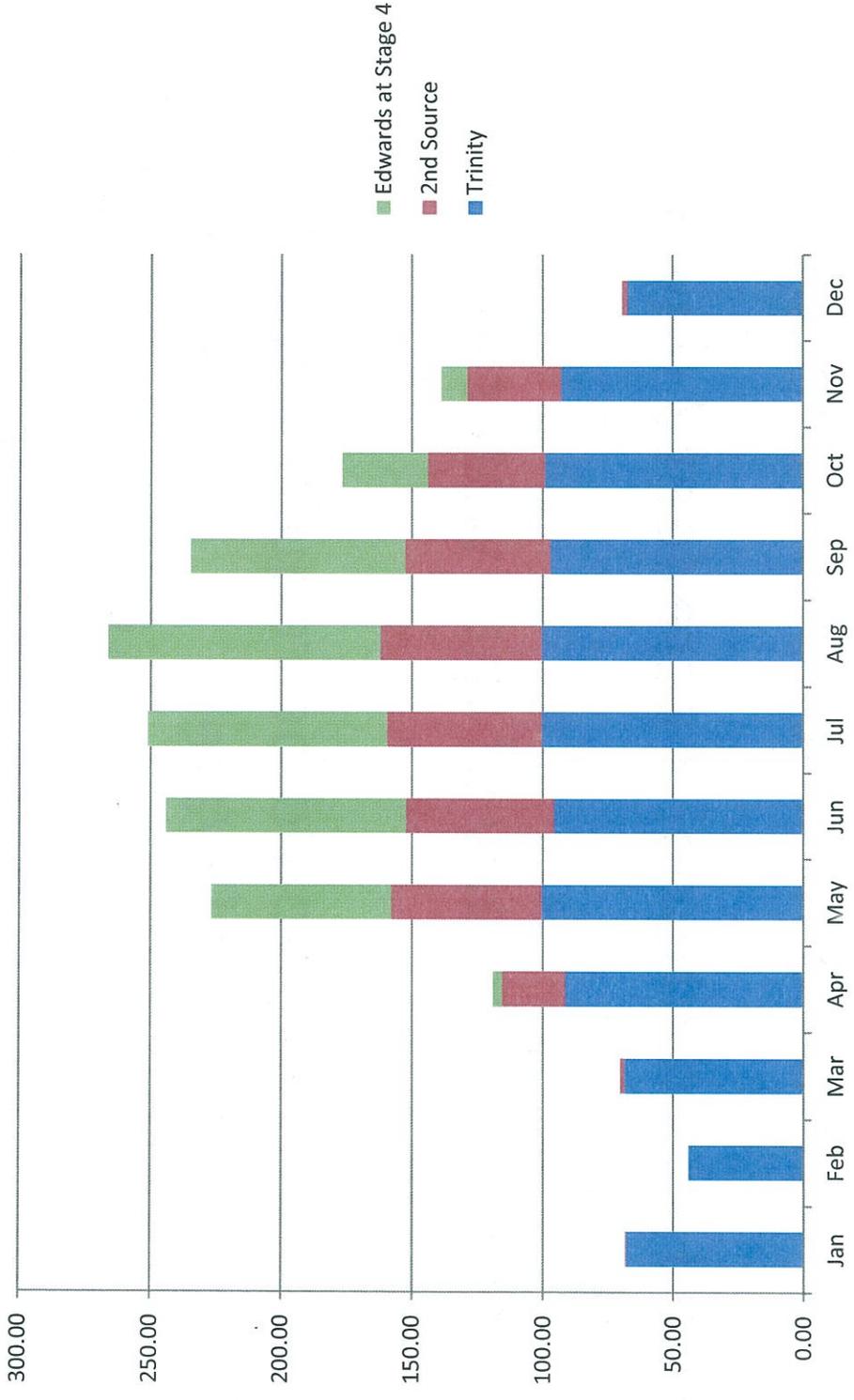


Simulated System Operations

Ideal Dispatch Parameters:

- Run the Trinity as much as possible (4 hour rest period per day)
- Use all Edwards rights to meet peak demand
- Solve for least levelized amount to meet demand

Additional Water Only Needed Half the Days in a Year



Water from Pipeline Contract

Limited Restrictions – Drought

- Need an additional 2 acre feet / day during peak periods
- Does not need any of that water about half the time
- However, we would be required pay for the fixed quantity of water
- Would greatly increase the complexity of Garden Ridge's water system operations
- Extremely expensive proposition

Financial Considerations

Schertz-Sequin LGC Contract

- Two acre feet per day - 730 acre feet per year
- Current estimate: \$4.55 per thousand gallons
\$1,100,000 per year initially
30 – 40 year commitment
- Rate not guaranteed – cost basis contract
- Rates will increase over time as costs rise
- Deliveries could be interrupted or reduced
- Annual commitment to pay would remain

Financial Recap of Alternatives

- Pipeline contract: 2 Acre Feet / Day capacity
 - 730 acre feet/year \$1,100,000 per year*
 - Based upon quoted Schertz-Sequin Local Government Corporation's latest estimate
 - Would require significant infrastructure additions
- Edwards rights More than \$8.0 million *
 - If available
 - Based on current estimate of \$12,000 acre/foot

*plus storage, etc.

Drill New Trinity Well

- Various options were noted regarding drilling a new Trinity well
 - Drill through existing Edwards wells at Timber Rose, Fairview Circle, Bracken Church, etc.
 - Revisit abandoned well at old City Hall
 - Drill on new site

Drilling a Trinity Well

Presentation by Bill Stein from

WBG Guyton July 15, 2014

- Drilling a well is never guaranteed
- However, Garden Ridge is located in a very favorable location
- No one site in Garden Ridge is seen superior to any other

Bill Stein

- Several Years ago
 - Was the hydrologist on the abandoned well at the old City Hall several years ago
- Recently was the hydrologist
 - For Green Valley on their very successful well on FM 2252
 - For New Braunfels Utilities on their 4 very successful Trinity wells

According to Bill

- All of the new Trinity wells are getting water from the upper Trinity
- The current Trinity well was drilled to acquire water from the middle Trinity Aquifer
- Consequently, the well at the old City Hall targeted the middle Trinity
 - the water volumes were disappointing
- Looking at the records from Trinity #1, Bill now believes the water is actually from the upper

Proposal

- Go back into the abandoned well
 - Perforate the casing to access the upper Trinity
 - Acidize the perforations and test output
- Estimated cost through testing -
approximately \$150,000
- If productive, cost to fully develop would need
to be determined – guess the cost at \$1.5 –
2.0 million

Summary

- Schertz lease is not a long-term solution
- Pipeline contracts are very expensive and complex – only one available in the near term
- Additional Edwards rights might be a solution
 - At least \$8.0 million to meet drought conditions
 - Probably not enough rights available for purchase
- Drilling another Trinity well appears to be a cost-effective option

Recommendation:
Determine viability of the
Abandoned Trinity well

- Can this well be salvaged?
- \$150,000 to find the answer
- Will determine future course of action

What we would Learn

Potential Outcome	Impact on Future Actions
<ul style="list-style-type: none">• Little or no value in old well	<ul style="list-style-type: none">• Consider other options<ul style="list-style-type: none">– Increased conservation– Look for Edwards rights– Other
<ul style="list-style-type: none">• 150 – 300 GPM output	<ul style="list-style-type: none">• Develop well – consider other options as needed

Additional Notes

- The new SCADA will allow for increased Trinity use, reducing the need for more water
- Trend in increased water for irrigation is a significant driver
 - Adopt proposal to limit size of irrigation systems
 - Consider new metering options
 - Start a new meter reading book for new developments to allow easier tracking
 - Separate irrigation meters would provide options
 - Reduce size of water meters to 5/8"

New SCADA Report

Date	TRINITY		TIMBER		WELL		SM3009		LG3009		3009GS		SM2252		LG2252		Timber		Total		
	WELL # 1	WELL	ROSE	WELL	2252	WELLS	FLOW	GPM	FLOW	GPM	FLOW	GAL	FLOW	GAL	FLOW	GAL	FLOW	ROSE	FLOW	Usage Gallons (Wells- Tank)	Total Usage GPM
8/20/2014 0:00	0	0	0	0	0	0	1,910	1,600	6,667	0	0	0	0	0	0	0	0	0	0	10,833	1,083
8/20/2014 0:10	0	0	0	0	0	0	1,922	4,000	8,889	0	0	0	0	0	0	0	0	0	0	6,331	633
8/20/2014 0:20	0	0	0	0	0	0	1,923	3,200	6,667	0	0	0	0	0	0	0	0	0	0	9,363	936
8/20/2014 0:30	0	0	0	0	0	0	1,924	3,200	8,889	0	0	0	0	0	0	0	0	0	0	7,151	715
8/20/2014 0:40	0	0	0	0	0	0	1,925	3,200	11,111	0	0	0	0	0	0	0	0	0	0	13,377	1,338
8/20/2014 0:50	0	0	0	0	0	0	1,928	-800	4,444	0	0	0	0	0	0	0	0	0	0	7,198	720
8/20/2014 1:00	0	0	0	0	0	0	1,931	1,600	2,222	0	0	0	0	0	0	0	0	0	0	7,050	705
8/20/2014 1:10	0	0	0	0	0	0	1,933	800	4,444	0	0	0	0	0	0	0	0	0	0	5,648	565
8/20/2014 1:20	0	0	0	0	0	0	1,929	-2,400	-4,444	0	0	0	0	0	0	0	0	0	0	9,259	926
8/20/2014 1:30	0	0	0	0	0	0	1,937	-800	-2,222	0	0	0	0	0	0	0	0	0	0	5,517	552
8/20/2014 1:40	0	0	0	0	0	0	1,925	-800	-4,444	0	0	0	0	0	0	0	0	0	0	7,619	762
8/20/2014 5:20	0	0	0	0	0	0	0	-800	-2,222	0	0	0	0	0	0	0	0	0	0	19,897	1,990
8/20/2014 5:30	0	0	0	0	0	0	0	-1,600	-4,444	0	0	0	0	0	0	0	0	0	0	14,482	1,448
8/20/2014 5:40	0	0	0	0	0	0	0	-800	-2,222	0	0	0	0	0	0	0	0	0	0	19,897	1,990
8/20/2014 5:50	0	0	0	0	0	0	0	-1,600	-4,444	0	0	0	0	0	0	0	0	0	0	14,482	1,448
8/20/2014 6:00	0	0	0	0	0	0	985	8,000	15,555	-16,728	0	0	0	0	0	0	0	0	0	19,898	1,990
8/20/2014 6:10	0	0	0	0	0	0	1,931	6,400	13,333	-19,516	0	0	0	0	0	0	0	0	0	27,530	2,753
8/20/2014 6:20	0	0	0	0	0	0	1,931	4,800	8,889	-16,728	0	0	0	0	0	0	0	0	0	22,349	2,235