City of Grand Island

Tuesday, June 21, 2005

Study Session Packet

City Council:

Carole Cornelius
Peg Gilbert
Joyce Haase
Margaret Hornady
Robert Meyer
Mitchell Nickerson
Don Pauly
Jackie Pielstick
Scott Walker
Fred Whitesides

Mayor:

Jay Vavricek

City Administrator:

Gary Greer

City Clerk:

RaNae Edwards

7:00:00 PM
Council Chambers - City Hall
100 East First Street

Call to Order

Invocation - Pastor Allen Runyon, Grand Island Family Church, 2304 Macron Street

Pledge of Allegiance

Roll Call

A - SUBMITTAL OF REQUESTS FOR FUTURE ITEMS

Individuals who have appropriate items for City Council consideration should complete the Request for Future Agenda Items form located at the Information Booth. If the issue can be handled administratively without Council action, notification will be provided. If the item is scheduled for a meeting or study session, notification of the date will be given.

B - RESERVE TIME TO SPEAK ON AGENDA ITEMS

This is an opportunity for individuals wishing to provide input on any of tonight's agenda items to reserve time to speak. Please come forward, state your name and address, and the Agenda topic on which you will be speaking.

MAYOR COMMUNICATION

This is an opportunity for the Mayor to comment on current events, activities, and issues of interest to the community.

City of Grand Island

Tuesday, June 21, 2005
Study Session

Item -1

Presentation of Water Department Financial Status Report

Staff Contact: Gary R. Mader

Council Agenda Memo

From: Gary R. Mader, Utilities Director

Meeting: June 21, 2005

Subject: Water Department Financial Status Report

Item #'s: 1

Presenter(s): Gary R. Mader, Utilities Director

Background

The philosophy of the Water Department financial planning is to "pay as you go" for operations, maintenance and for normal and routine system expansions, such as water main districts and trunk line extensions. Bonded indebtedness has been used only for those very large projects which are necessary to support the continued operation of the system, but are well beyond the immediate financial capability of the Department. At present, the debt of the Water Department is $3,170,000 which resulted from the need to build a second 30 inch diameter water transmission line from the Well Field to the Rogers Reservoir. That debt was placed in 1993 and refinanced in 1999, and will be closed out in 2014.

This philosophy has served the Department well over the years, allowing access to long term financing, when needed, from a strong financial position, without the burden of a compounding debt load.

As regulatory standards tighten and as ground water contamination becomes more prevalent in the area, at some point in the future, it is anticipated that the municipal water system will be required to institute a level of treatment which will require major capital expenditures; along with the substantially increased staffing levels, and the substantially increased operation and maintenance costs associated with full water treatment plant operations. At that time, a minimal debt load will be beneficial for the financing that will be necessary, and to lessen the impact on water rates.

At present, Water Department revenue is not sufficient to sustain the normal and routine operations, maintenance, and system expansion needs.

The Water Department last had a major increase in rates in 1994. Last year, the Utilities staff noted a down turn in the finances of the Water Department and included a minimal 2% increase for the '04-'05 fiscal year. That's been the only rate change in the last eleven years.

During that eleven years, the Water Department has been able to meet the continual need for system expansions to meet growth, completed major capital improvement projects to rebuild and expand basic water infrastructure, and absorbed eleven years of increased costs for operation and maintenance needs. As the budget for the upcoming fiscal year was being prepared, it became evident that an increase in revenue for that Department will be necessary to continue system operation and maintenance, and to meet City expansion needs.

The Water Department is an equipment and facilities intensive enterprise where a large percentage of revenue must be used for Capital Projects to meet growth and Operations and Maintenance Costs of existing infrastructure. As illustration of the nature of that department, the following are descriptions of major **Capital Projects** and **Operation and Maintenance Costs** over the last five years, showing the continuing projects needed to expand water supply, rebuild aging facilities, improve reliability, expand the distribution system, and maintain regulatory compliance.

Capital Projects

The Capital Projects generally fall into three categories; 1) projects for overall system improvements; 2) water system extensions done by the Water Department; and 3) system extensions done by developers for new subdivisions.

Overall System Improvements:

2000 – 2001

- Comprehensive water system engineering evaluation
- Water trunk lines to the Platte Valley Industrial Park
- Engineering design for expansion of the Rogers Pumping Station, in west Grand Island

2001 – 2002

- The federally mandated Corrosion Control Study
- Replacement of the water system SCADA (System Control and Data Acquisition) replacing obsolete 40 year old equipment.
- Installation of five new wells at the Well Field to increase water supply

2002 – 2003

- Modifications to the Well Field Collection Basin to provide redundancy for reliability
- Corrosion Control Treatment system installation, and initial operation
- Reconstruction of four existing wells at the Well Field, adding well closures for security and improved reliability
- Rebuild of the 70 year old Kimball Reservoir and demolition of the abandoned Pine Reservoir
- Water infrastructure to provide service within the Platte Valley Industrial Park

2003 – 2004

- Replaced Well Field Pump Station Pump #3
- Reconstruction of four additional existing Well Field wells
- Replacement of a portion of the 40 year old electric switchgear at the Well Field pump station
- Replacement of a 50 year old power transformer at the Well Field Pump Station

2004 – 2005

- Installation of an additional 7,500 gpm high pressure water pump at the Rogers Reservoir Pump Station
- Building expansion and electrical switchgear replacement at Rogers Reservoir
- Installation of two miles of water trunk line in west Grand Island to support growth and utilize increased pumping capacity from Rogers Reservoir
- Replacement of failed pumping unit at the Stolley Park Well

Future Projects – 2005 – 2006

- Replace Well Field Well #6 that does not meet new state standards
- Re-design and rebuild Well Field Pump Station intake structure to eliminate cavitation
- Hydrological study with the U.S. Geological Survey Division and the Central Platte NRD to quantify and develop trending of proportional flows in the four river channels affecting the Well Field.

These projects coupled with increased operating and maintenance costs over the last eleven years have depleted the Water Department reserves.

Looking to the immediate future, Utility Staff can identify a number of additional projects not yet initiated.

- Replace 250 HP motor on Burdick Pump Station Pump 1.
- Continued expansion of the Well Field to meet growth and possibly to replace in-town wells lost to contamination.
- Extensions of major trunk lines to developing areas around the City, such as the East Lakes area and the Airport helicopter base.
- Additional trunkline construction in west Grand Island to support growth and allow utilization of the recently completed Rogers Pumping Station capacity addition.
- Addition of a second water storage reservoir in west Grand Island.
- Replacement of remaining old electric switchgear at the Well Field pumping station.
- Construction of Water Main Districts in areas where private wells are lost to contamination; such as the Parkview Subdivision.
- Continue replacement of older fire hydrants with improved flow units along with addition to and/or replacement of older, smaller water lines.
- Continued upgrade of older Well Field wells piping and closures.
- As regulation and control of the Platte River expand, the Department expects the need to expend funds for hydrologic modeling and engineering and possibly even legal consultant assistance.

Water Department Projects

The below listing is of projects undertaken by the Water Department that were added to the City distribution system for operation and maintenance by the Department over the last five years.

YEAR	*DISTRICT*	*PROJECT*	*LOCATION*	*NOTES*
2000	433T		In Locust St., Lake St., to Wood River	For Wood River Floodway
2000	434		At PVIP – Juergen Road and Gold Core Road	
2000	436		Lengenheder Street	

YEAR	*DISTRICT*	*PROJECT*	*LOCATION*	*NOTES*
2002		2002-W-5	Burdick Station Combustion Turbines Fire Line	
2002	437		In Gold Core Road – Schimmer Road to Wildwood Drive	
2002	438T		In Schimmer Road – Gold Core Road to Blaine Street	
2002	439T		In Wildwood Road – Juergen to Gold Core Road	
2003		2003-W-2	Wildwood Drive & Hwy. 281	Newly annexed area
2003		2003-W-4	Faidley at Waldo, Grace & White Streets	
2003	440		Roberta, Gretchen, and Del Mar Streets	
2003	441		In Faidley Avenue – Diers Avenue to Claude Road Extended	
2003	442T		In Faidley Avenue – Lot 9 & 10 Richmond Subdivision	
2004	443		American Independence Subdivision	
2004	444E		Marylane Subdivision	
2004	445E		Kentish Hills Subdivision	
2004	446T		Section 25-11-10; east of Marylane Subdivision	
2004	447T		In Shanna & Independence to Mansfield Streets	
2005		2005-W-1	Heartland Events Center	
2005	449T		North Road & Faidley Avenue	
2005	450		Sunny Brooke Road Area	
2005	451		Circle Drive Area	

System Extension Projects for New Subdivisions:

Maintenance and operational requirements of the Water Department increase as subdivisions are completed and water lines are placed in service and added to the municipal system. These projects are constructed during subdivision development by private contractors.

YEAR	*DISTRICT*	*PROJECT*	*LOCATION*	*NOTES*
1999		1999-W-1	Westwood Park Subdivision, Faidley Avenue & North Road	
1999		1999-W-2	Jeffrey Oaks 8th Subdivision	
1999		1999-W-3	Summerfield Estates Subdivision, 13th Street & North Road	
1999		1999-W-4	Airport Re-Hab Project	
1999		1999-W-5	Martin's Subdivision, Potash Hwy. & Hwy. 281	
1999		1999-W-6	Crane Valley Subdivision, Faidley & Diers Avenue	
1999		1999-W-7	Lincoln View Estates Subdivision, 9th & Lambert	
1999		1999-W-8	Meadowlark West 3rd Subdivision, Allen Drive	
1999		1999-W-9	Grand West Subdivision	
2000		2000-W-3	Westwood Park 5th Subdivision	
2001		2001-W-1	Wortman Drive at Central Community College	
2001		2001-W-2	Westwood Park 6th Subdivision	
2001		2001-W-3	Grand West 2nd Subdivision	
2001		2001-W-4	Ponderosa Lake Estates 5th Subdivision	
2002		2002-W-1	Starostka Subdivision	
2002		2002-W-10	Indianhead 7th Subdivision	
2002		2002-W-2	Pedcor Subdivision – Riverbend Apartments	
2002		2002-W-3	Grand West 3rd Subdivision	

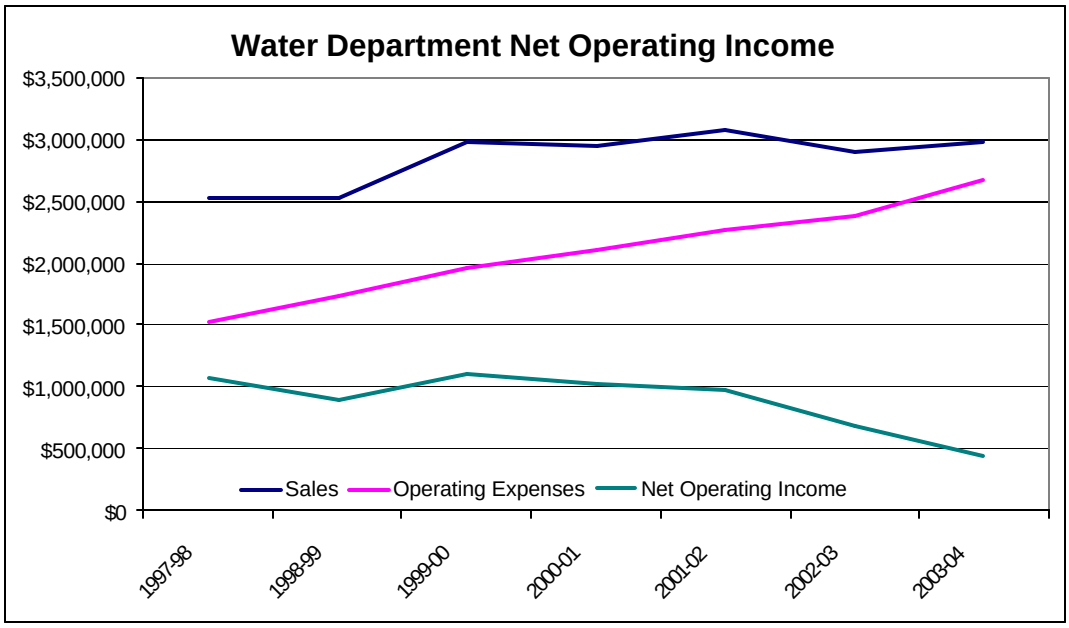
YEAR	*DISTRICT*	*PROJECT*	*LOCATION*	*NOTES*
2002		2002-W-6	Crane Valley 4th Subdivision	
2002		2002-W-7	Westwood Park 7th Subdivision	
2002		2002-W-8	Country Meadows Subdivision	
2002		2002-W-9	Weis Acres Subdivision	
2003		2003-W-1	Cedar Ridge 1st & 2nd Subdivisions	
2003		2003-W-10	Richmond 3rd Subdivision	
2003		2003-W-3	El Huerto Subdivision	Plans Approved, not constructed
2003		2003-W-5	Crane Valley 6th & 7th Subdivisions	Plans Approved, not constructed
2003		2003-W-6	Country Meadows 2nd Subdivision	
2003		2003-W-7	Waste Water Treatment Plant Expansion	
2003		2003-W-8	Summerfield Estates 3rd Subdivision	
2003		2003-W-9	Grand West 4th Subdivision	
2004		2004-W-1	Westwood Park 8th Subdivision	
2004		2004-W-10	Livengood Subdivision	
2004		2004-W-11	Wal-Mart North Subdivision – Carleton Avenue	
2004		2004-W-2	Equestrian Meadows Subdivision	
2004		2004-W-3	Lacy Subdivision	
2004		2004-W-4	Pleasantview 13th Subdivision	
2004		2004-W-5	Woodland Park 1st Subdivision	
2004		2004-W-6	Wal-Mart South Subdivision	
2004		2004-W-7	Richmond 4th Subdivision	
2004		2004-W-8	North Pointe Subdivision	

YEAR	*DISTRICT*	*PROJECT*	*LOCATION*	*NOTES*
2004		2004-W-9	Summerfield 4th Subdivision	
2005		2005-W-2	Via Milano Subdivision	
2005		2005-W-3	Martin's 2nd & 3rd Subdivisions	
2005		2005-W-4	St. Francis Hospital Tower Expansion	
2005		2005-W-6	Woodland Park 2nd Subdivision	

The City Water System has grown substantially in size in the last five years; from 241.6 miles in 2000 to 258.2 miles today. Along with that 87,650 ft. of additional water line come valves which must be maintained and, over a large portion, fire hydrants every 300 ft. which are checked and repaired as needed, twice annually, adding to maintenance costs. That growth is expected to continue.

Operational and Maintenance Costs

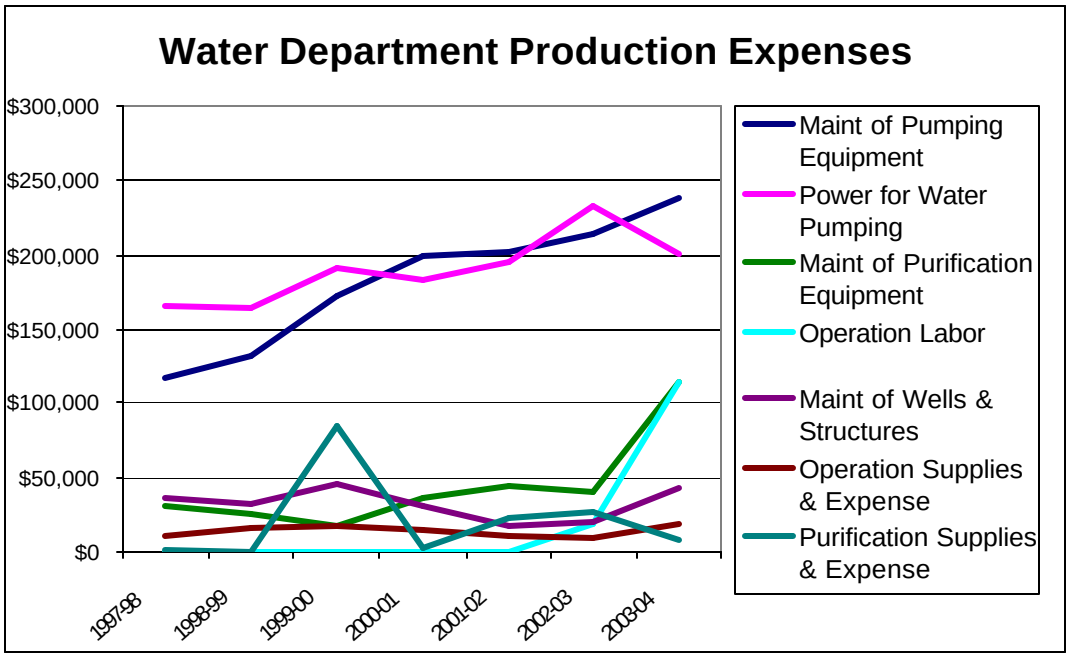
As the City continues to grow, as regulation and control of the state's water resources increases, and as operating and maintenance expenses increase with growth, it is anticipated that the revenue needed to maintain the Water Department will increase. Over the past several years the Department's reserves have been depleted as illustrated in the attached graph. These data are from the Department's annual audits.



The source of the increased expenses for operation and maintenance were then further analyzed to determine and evaluate the causes of the financial decline of the Water Department. This detailed analysis was broken into two categories; **Production Expenses** - which are generally associated with the production of source water, and **Operations Expenses** – which are associated with the distribution of water across the City.

Production Expenses:

The total production expenses are broken down into seven specific areas associated with the water production function as shown on the below graph. The lines at the right side of the graph correspond, top to bottom, to the line identifications index in the box to the right of the graph.



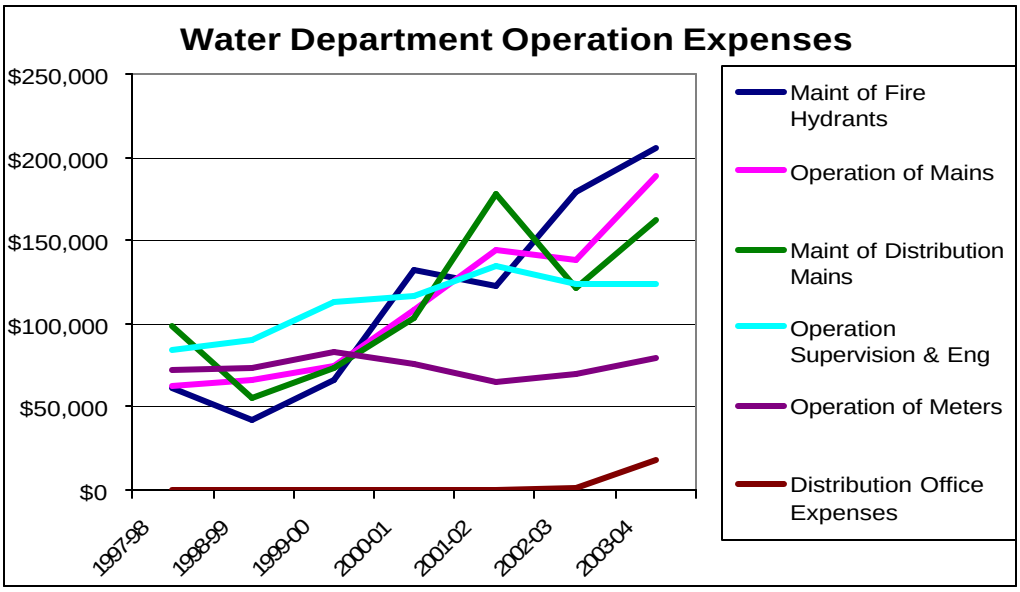
While there is variation from year to year in the cost of water production functions, with a general increase in most areas, there is substantial recent increase in two functions.

The Maintenance of Purification Equipment includes actual equipment maintenance on the chlorination and the newly installed corrosion reducing chemical equipment along with the additional testing and reporting required to support and document the water treatment process. Also the chlorination rate of the municipal system has been increased by approximately 50% at the direction of the Health and Human Services Department.

The Operation Labor cost increase is due primarily to a corrected assignment of labor costs from the Electric Department to the Water Department. It was found that the Water Department was not paying the appropriate share of labor cost for operation of the water pumping facilities, which is done from the Burdick Station Power Plant.

Operation Expenses:

The Water Department Operation Expenses category is broken down further to six specific functions as shown in the below graph.



Substantial increases are seen in three functions:

Maintenance of Fire Hydrants: The Water Department has undertaken a continuing, multi-year project to replace all of the older hydrants on the system with modern units compatible with the modern fire trucks. The older style hydrants were used in the City system until the late '60's. At that time the transition was made to the newer design. Several years ago, the Department began replacing hydrants as could be worked into the work schedule, replacing up to 60 old hydrants per year. This program will run for many years to the future. Additionally, the cost of new fire hydrant assemblies has increased substantially over the last few years, from about $600 to $1,000.

Operation of Mains: This function includes such things as labor for sampling and laboratory costs of increased regulatory requirements; response to the one-call diggers hot line, (which has developed into a full time job for at least one employee) flushing of water mains, which has increased substantially with the use of cul-de-sac design in subdivisions over the years (these radial feed lines require routine flushing to maintain water quality, due to low usage); construction residency on all new construction projects, and other needs of system operation.

Maintenance of Distribution Mains: Like the costs of fire hydrant assemblies, the costs of line valves, fittings, and other hardware required for system maintenance have been increasing over the last few years. A 6" line valve that was $200 a few years ago is now $300. And a valve box that was $35 is now $75. Also, the increase in this function is associated with the hydrant replacement project. By nature, this work is done on the older portions of the water system, and

older equipment fails more often than new when the distribution system is operated to facilitate hydrant replacements.

Discussion

In summary, there is no single item causing the financial decline in the Water Department's financial status.

The cash reserves of the Water Department have been depleted by the increasing costs of operation and maintenance and the need for capital improvements. After eleven years with only a minimal rate increase, the Utilities Department concludes that a water rate increase is necessary to:

- Meet increased costs of equipment and labor.
- Meet the increasing need for capital improvement projects to support the needs of a growing community.
- Meet increasing testing, regulatory, and treatment requirements.
- Continue upgrades to the older portions of the water system, both in production and in the distribution system.
- Meet the increasing demands of the state and federal water control programs; and
- Meet the continually increasing operation and maintenance requirements of an expanding water system.

The financial condition of the Water Department is at present very weak. Department staff's first inclination is not to raise rates but to take other measures. But after detailed review, it is concluded that a rate increase is necessary to sustain the current level of growth while meeting expanded operation and maintenance needs. Additionally, in preparing the Water Department Budget for the upcoming '05-'06 fiscal year, it was discovered that an error occurred in the projected carry over amount and in the projected revenue during '04 – '05 year budgeting. The error does not affect the needs analysis but it does affect the timing of the recommended rate change. With the implementation of the GASB 33 accounting rules, the revenue reporting of Water Main Contributions (the cost of mains added to the system by developers) makes the financial statements appear to have more cash than is actually available. This confused the issue further.

The Department would prefer to incorporate rate increases on a fiscal year basis. But because of the current situation, it is recommended that the rate increase be implemented for billing in August of the current fiscal year. Implementation prior to the end of the current fiscal year will moderate the financial affects of this year's budgeting error.

Recommendation

It is the recommendation of the Utilities Department that a rate increase of $0.10 per 100 cubic feet of water used be implemented. For reference, that equates to 1.34/100th cent per gallon or 13.4¢ per 1,000 gallons.

In anticipation of the need to increase revenue, the Utilities Department conducted a survey of other Nebraska cities of comparable nature. The results of that survey show that Grand Island is extraordinarily low in its water rates when compared to other Nebraska cities. The rate comparison data is attached.

Attachments:

1) Tabulation of rate survey results from comparable Nebraska cities with comparisons to the City's present rates and a "proposed" rate of adding 10¢ per 100 cubic feet to each of the rate blocks in the current rate schedule.
2) Graphs of comparisons to the same Nebraska cities with the addition of cities from across the nation, at the various levels of consumption. The national results were obtained from the Omaha M.U.D. web site; and were the base for selecting the consumption levels used for the comparisons.

Water Rates

Residential: *1500 cubic ft. (11,220 gallons)*

GI Present: $11.77
GI Proposed: $13.27

Rate Comparisons:

City		%Difference from GI Present	% Difference from GI Proposed
North Platte	$17.02	+45%	+28%
Hastings	$25.00	+112%	+88%
Kearney	$21.00	+78%	+58%
Lincoln	$19.35	+64%	+46%
Omaha, winter	$18.14	+54%	+37%
Omaha, summer	$20.04	+70%	+51%

Commercial: *50,000 cubic ft. (374,000 gallons)*

GI Present: $208.06
GI proposed: $258.06

Rate Comparisons:

City		%Difference from GI Present	% Difference from GI Proposed
North Platte*	$455.47	+119%	+76%
Hastings*	$467.00	+124%	+81%
Kearney*	$484.47	+133%	+88%
Lincoln	$612.00	+194%	+137%
Omaha, winter	$389.42	+87%	+51%
Omaha, summer	$507.42	+144%	+97%

*for 4” meter size

Commercial/Industrial: *1,500,000 cubic ft. (11,220,000 gallons)*

GI Present: $4,306.06
GI Proposed: $5,806.06

Rate Comparisons:

City		%Difference from GI Present	% Difference from GI Proposed
North Platte*	$10,509.07	+144%	+81%
Hastings**	$11,116.00	+158%	+91%
Kearney**	$13,591.81	+216%	+134%
Lincoln	$13,050.00	+203%	+125%
Omaha	$10,933.89	+154%	+88%

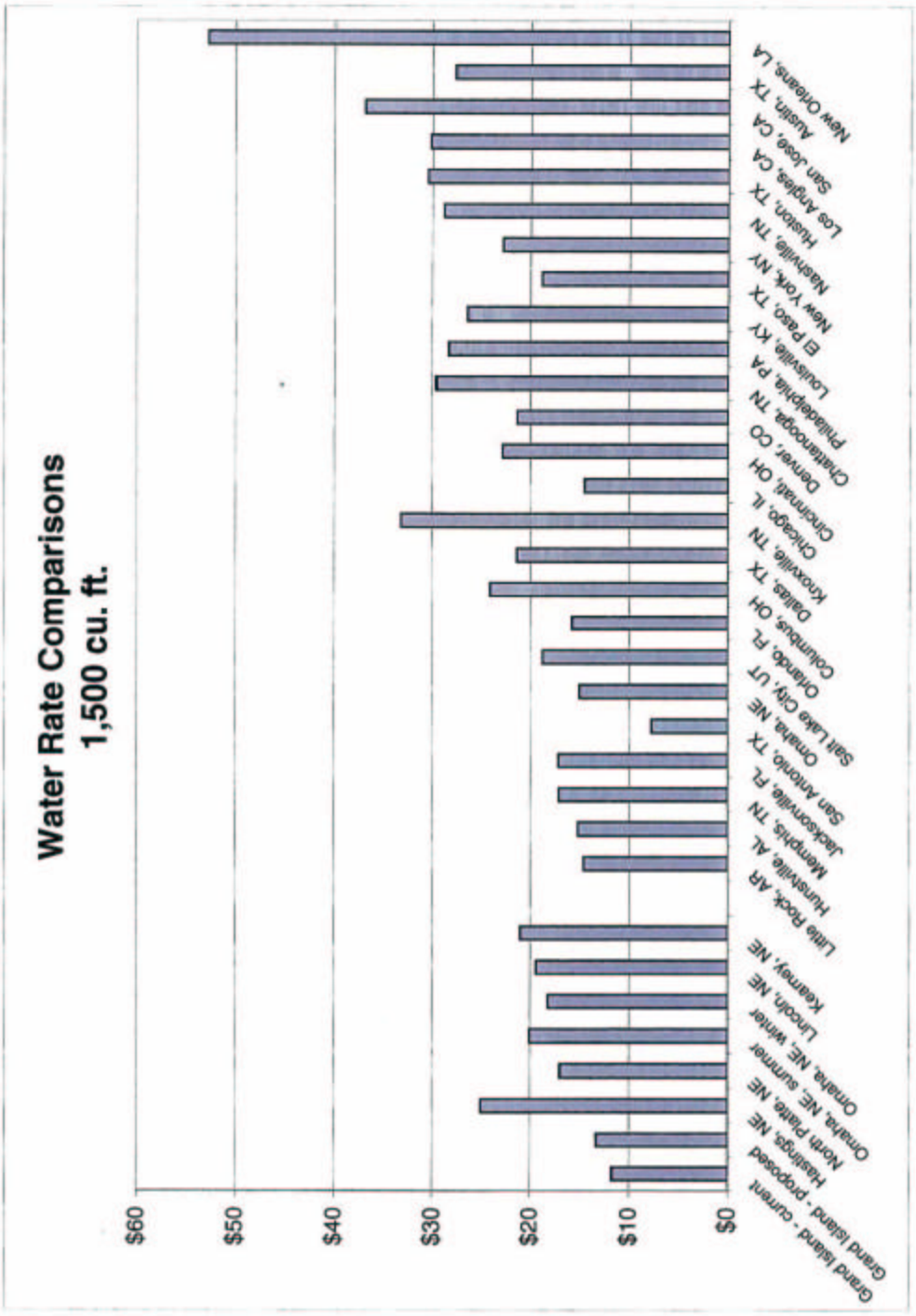
*for 6" meter size – largest meter in North Platte rates
** for 10" meter size

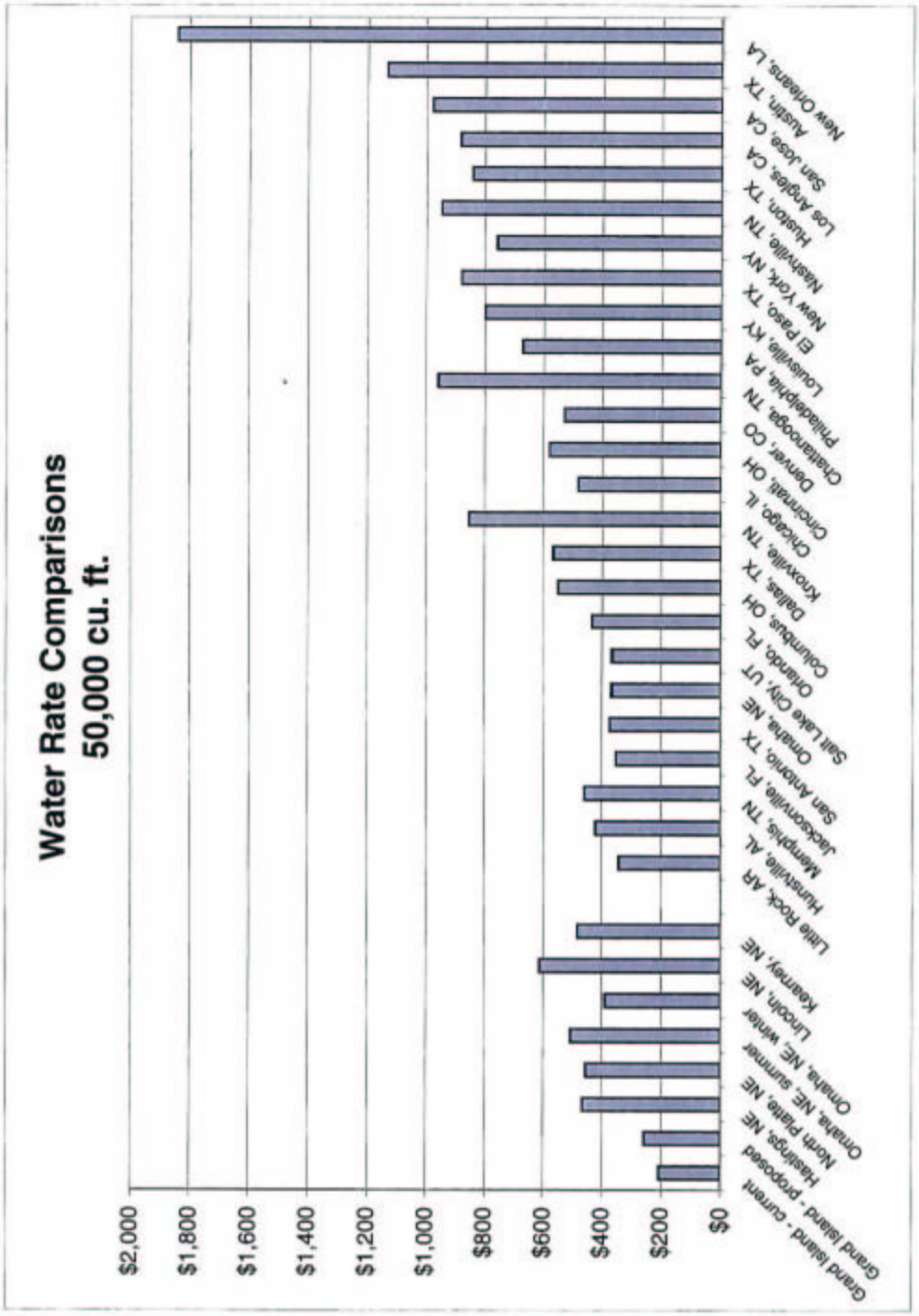
Large Industrial: *6,000,000 cubic feet (44,880,000 gallons)*

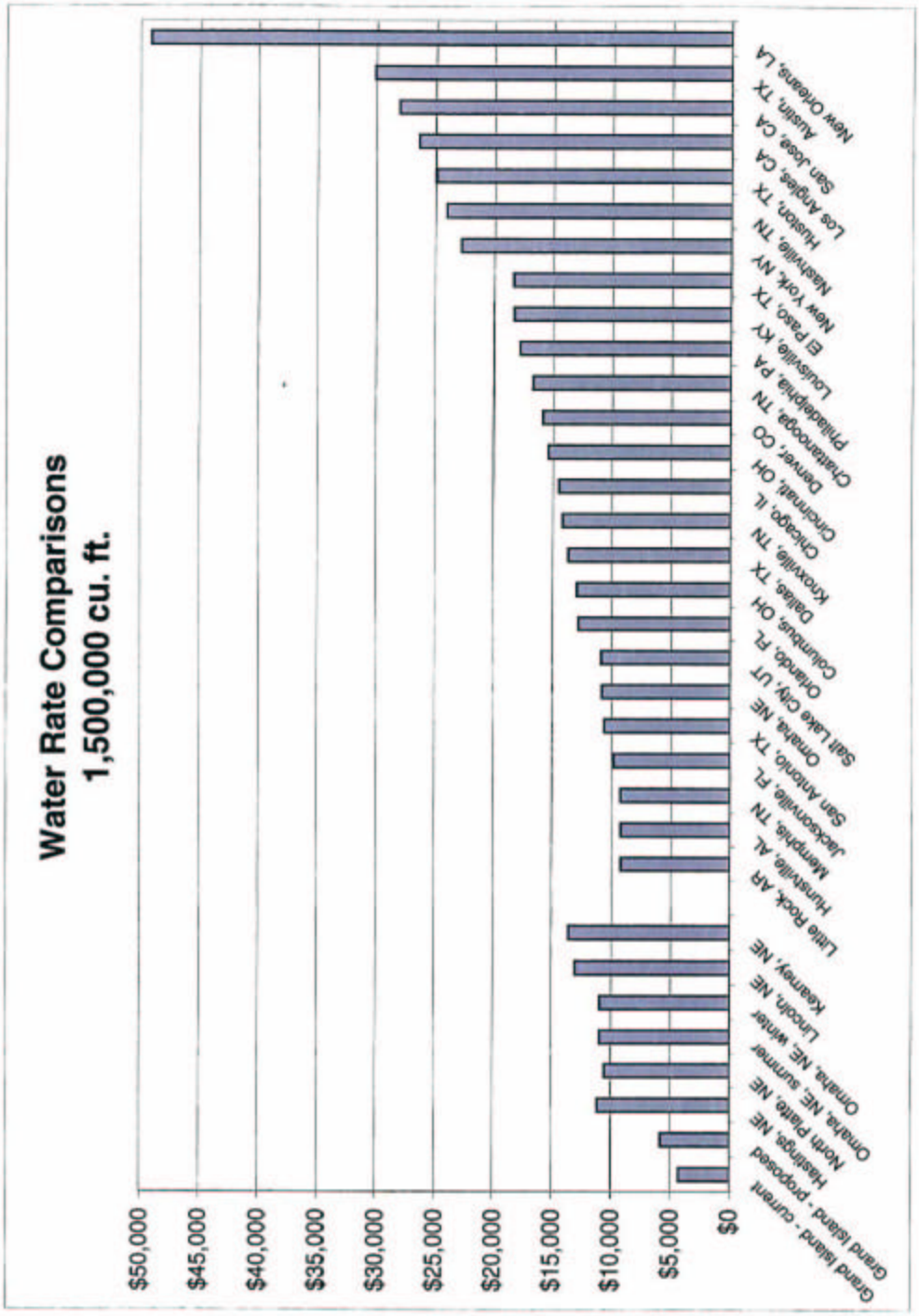
GI Present: $16,726.06
GI Proposed: $22,726.06

City		%Difference from GI Present	% Difference from GI Proposed
North Platte*	$41,419.05	+148%	+82%
Hastings**	$36,314.00	+117%	+60%
Kearney**	$54,109.45	+224%	+138%
Lincoln	$52,200.00	+212%	+130%
Omaha**	$41,617.53	+149%	+83%

*for 6" meter size
** for 12" meter size


Water Rate Comparisons
1,500 cu. ft.
$60
$50
$40
$30
$20
$10
$0
Grand Island - current
Grand Island - proposed
Hastings, NE
North Platte, NE
Omaha, NE, summer
Omaha, NE, winter
Lincoln, NE
Kearney, NE
Little Rock, AR
Huntsville, AL
Memphis, TN
Jacksonville, FL
San Antonio, TX
Omaha, NE
Salt Lake City, UT
Orlando, FL
Columbus, OH
Dallas, TX
Knoxville, TN
Chicago, IL
Cincinnati, OH
Denver, CO
Chattanooga, TN
Philadelphia, PA
Louisville, KY
El Paso, TX
New York, NY
Nashville, TN
Huston, TX
Los Angles, CA
San Jose, CA
Austin, TX
New Orleans, LA


Water Rate Comparisons
50,000 cu. ft.
$2,000
$1,800
$1,600
$1,400
$1,200
$1,000
$800
$600
$400
$200
$0
Grand Island - current
Grand Island - proposed
Hastings, NE
North Platte, NE
Omaha, NE, summer
Omaha, NE, winter
Lincoln, NE
Kearney, NE
Little Rock, AR
Huntsville, AL
Memphis, TN
Jacksonville, FL
San Antonio, TX
Omaha, NE
Salt Lake City, UT
Orlando, FL
Columbus, OH
Dallas, TX
Knoxville, TN
Chicago, IL
Cincinnati, OH
Denver, CO
Chattanooga, TN
Philadelphia, PA
Louisville, KY
El Paso, TX
New York, NY
Nashville, TN
Huston, TX
Los Angles, CA
San Jose, CA
Austin, TX
New Orleans, LA


Water Rate Comparisons
1,500,000 cu. ft.
$50,000
$45,000
$40,000
$35,000
$30,000
$25,000
$20,000
$15,000
$10,000
$5,000
$0
Grand Island - current
Grand Island - proposed
Hastings, NE
North Platte, NE
Omaha, NE, summer
Omaha, NE, winter
Lincoln, NE
Kearney, NE
Little Rock, AR
Hunstville, AL
Memphis, TN
Jacksonville, FL
San Antonio, TX
Omaha, NE
Salt Lake City, UT
Orlando, FL
Columbus, OH
Dallas, TX
Knoxville, TN
Chicago, IL
Cincinnati, OH
Denver, CO
Chattanooga, TN
Philadelphia, PA
Louisville, KY
El Paso, TX
New York, NY
Nashville, TN
Huston, TX
Los Angles, CA
San Jose, CA
Austin, TX
New Orleans, LA