



Control Number: 43069



Item Number: 44

Addendum StartPage: 0

SOURCE

ENVIRONMENTAL SCIENCES, INC.

ENGINEERS & CONSULTANTS

43069
2060 North Loop West, Suite 140
Houston, Texas 77018
Phone: (713) 621-4474
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RESPONSE TO
COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION

to

INLINE DEVELOPMENT LLC

Question Numbers:

STAFF 1-1

through

STAFF 1-3

MARCH 2016

Prepared For:

Inline Development LLC

21755 I-45

Building 11

Spring, Texas 77388

Prepared by:

Source Environmental Sciences, Inc.

Principal Consultant: Jack Coblenz

2060 North Loop West, Suite 140

Houston, Texas 77018

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44

**DOCKET NO.
43069**

**COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION
TO INLINE DEVELOPMENT LLC
QUESTION NOS. STAFF 1-1 THROUGH STAFF 1-3**

Introduction: This response document follows the format of the PUC emailed document "Item Number: 43" of Control Number 43069 (that document is included as Attachment 4 of this response). In this response, please find the bolded questions of Item Number 43 as listed on Pages 4 of 6 and 5 of 6 within Attachment 4. The answers to these bolded questions are provided in normal print. The data for all the answers has been furnished by Mr. Michael Martz, President of Inline Development LLC, and has been typed and briefly edited for clarity by Mr. Jack Coblenz and his staff. Mr. Jack Coblenz and his staff prepared the original Rate/Tariff Change Application, which is currently under consideration. Mr. Coblenz acknowledges that the submittal of any amended answers will be considered under oath, as they will be supplemental to the originally submitted answers. As such, Mr. Coblenz fully attests to the truthfulness and validity of the following answers.

Staff 1-1 For the sewer application, please provide the following:

a) A detailed list of the repairs and maintenance that total \$60,419 that the applicant is requesting in the revenue requirement column of Table VI.A., February 2, 2016 filing.

Response: The repairs and maintenance list is the "Revenue Requirements for Next Year" found on the page titled "Section VI – Utility Income & Expense Information – Sewer" (please see Attachment 1). The \$60,419 shown is the sum of \$6,419 in the column headed by "12 Month Test Year Per Books" plus \$54,000 in the column titled "Known and Measurable Changes". The amount of \$6,419 was spent during the test year of 2013 for sewer services. The amount of \$54,000 is the known amount planned for spending during the next year.

The \$54,000 is a portion of the cost for replacing the West Digester Tank. This tank was required to be replaced per a notice from the System Operator. The cost for the tank replacement is shown on the bid sheet from Aucoin and Associates (please see Attachment 2). The cost for this tank has been divided between the water and sewer service expenses as follows: 60% for sewer services (or \$90,000 multiplied by 60% equals \$54,000) and 40% for water services (or \$90,000 multiplied by 40% equals \$36,000). The remainder of the

\$60,419 revenue requirement is \$6,419 (or \$60,419 minus \$54,000 equals \$6,419).

b) Copies of invoices exceeding \$500 for the expenses included in RFI No. VI.A.

Response: Copies of all 4 invoices exceeding \$500 for the above expenses have been furnished by Mr. Michael Martz and are included as Attachment 3.

c) A detailed list of the materials and supplies that total \$60,419.00 that the applicant shows in Table IV.E., February 2, 2016, filing.

Response: A detailed list for the above items has been furnished by Mr. Michael Martz and are included as Attachments 1, 2, and 3. This list is composed of a bid to furnish a new-tank for \$90,000 with \$54,000 for sewer expenses and \$36,000 for water expenses.

d) Copies of invoices exceeding \$500 for the expenses included in RFI No. I.C.

Response: The invoices exceeding \$500 are shown with the response to Item 1.b) found above.

e) Provide the detail for Table IV.D in the application with regard to debt outstanding as follows:

1) Name of the Bank or Lender;

Response: Michael Martz

2) Date of Issue;

Response: March 8, 2013

3) Date of Maturity;

Response: December 1, 2029

4) Original Amount of Loan;

Response: \$1,830,416.66

5) Outstanding Balance;

Response: \$1,741,003.21

6) Interest Rate;

Response: 9.5%

7) if the loan is only partially for sewer assets or operations, please state the amount of the loan that is for sewer;

Response: The portion of the loan for sewer assets is 60% (or \$1,830,416.66 multiplied by 60% equals \$1,098,249.99).

8) if only part of the loan is for sewer assets or operations, please provide the basis used to determine the percentage that is allocated to sewer.

Response: The portion of the loan for sewer assets is 60%. The basis for this 60% is based on our many years of experience with the costs of building and/or operating joint sewer and water service plants. The 60/40 percentage split is the most commonly applied percentage.

Staff 1-2 For the water application:

a) Admit or deny that the applicant charges their customers \$2.32/1,000 gallons for North Harris County Regional Water Authority (NHCRWA) pass through gallons in addition to the base rate and gallonage charges listed on the applicant's tariff.

Response: We Admit

b) Admit or deny that the applicant's test year purchased water of \$54,178 as shown on table VI. A of the October 29, 2014, was for the NHCRWA pass through.

Response: We Admit. Please see the Remarks "rectangle" on Page 3 of 7 on the Inline Annual Report for Water and Wastewater Utilities for the calendar year of 2013 (Attachment 4). This page includes the remark "Regional Water Fees: \$54,167.75". This stated amount is within 1% of the amount shown for the purchased water cost used for the NHCRWA charges used on Inline's Pass-Through Rate Change Application. With over 1,000 connections, the difference per connection is less than one-tenth of a penny per year (or less than one-hundredth of a penny per month), making the difference negligible per connection and making a detailed search for an explanation of the cause of the 1/10th of a penny difference unreasonable.

Staff 1-3 For the water application, provide the following:

a) A detailed list of the repairs and maintenance that total \$40,280, included in the application revenue requirement column of Table VI.A., October 29, 2014 filing.

Response: This \$40,280 is the sum of the test year's expenses for water service Repairs/Maintenance/Supplies (or \$4,280) plus 40% of the Known and Measurable Costs for the new tank that was required (or \$90,000 multiplied by 40%). Plainly stated, the sum of these items is \$4,280 plus \$36,000 (which yields the amount of \$40,280 stated above).

We have shown on Attachment 2 the \$90,000 bid price for the new tank and the test year's expenses of \$4,280 for the water system's Repairs/Maintenance/Supplies. The detailed list of water Repairs/Maintenance/Supplies during the test year of 2012 has been furnished by Mr. Michael Martz.

b) A detailed list of the materials and supplies that total \$112,033, included in the application Table IV.E., February 2, 2016 filing.

Response: The detailed list of materials and supplies that total \$112,033 on Table III is for the original Cost & Depreciation of material and supplies. Repairs of the original costs and depreciation schedule and our memory show that the \$112,033 was scheduled to be spent for the start-up of water service of 400 new houses' pipes, water meters, and water connection labor of \$241 per house. Plus the purchase of a "Ditch-Witch" and John Deere tractor to perform the necessary connection of the pipes to the houses. The cost spent for the items actually was \$112,033 in total.

c) Provide the following detail for Table IV.D included in the application:

1) name of the bank or lender;

Response: Michael Martz

2) date of issue;

Response: March 8, 2013

3) date of maturity;

Response: December 1, 2029

4) original amount of loan;

Response: \$1,830,416.66

5) outstanding balance;

Response: \$1,741,003.21

6) interest rate;

Response: 9.5%

7) If the loan is only partially for water assets or operations, please state the amount of the loan that is for water;

Response: This \$112,033 was for water service only.

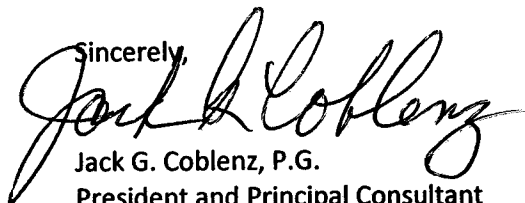
8) If only part of the loan is for water assets or operations, please provide the basis used to determine the percentage that is allocated to water.

Response: All of the loan amount was for water services.

Summary: The expenses and cost information data of this response was furnished by Mr. Michael Martz. It was then written/edited by Mr. Jack Coblenz, P.G. & Principal Consultant of Source Environmental Sciences, Inc. An original and three copies of our answers to the above questions are being provided to:

Attn: Filing Clerk
Public Utility Commission of Texas
1701 N. Congress Avenue
P.O. Box 13326
Austin, TX – 78711-3326

Sincerely,



Jack G. Coblenz, P.G.
President and Principal Consultant
Source Environmental Sciences, Inc.
Email: Jack@Source-Environmental.com

ATTACHMENT 1

Section VI – Utility Income & Expense Information – Water.....Pg 13 of 40

Section VI – Utility Income & Expense Information - Sewer.....Pg 25 of 40

A. REVENUE REQUIREMENT

variable portion.

TABLE VI. A.

Test Year	to	Line	12 Month "test year" per books	Known and Measurable Changes	Revenue Requirement for next yr	% of (3) that is fixed (Note 1)	Fixed Expenses (Note1)	Variable Expenses (Note 1)
		Salaries and Wages	[A] 13,600	NONE	13,600	50	6,800	6,800
		Contract Labor	[B] 35,239		35,239	90	31,715	3,524
		Purchased Water	[C] 54,178		54,178	0	0	-
		Chemicals for Treatment	[D] 7,441		7,441	0	0	7,441
		Utilities (Electricity)	[E] 14,414		14,414	0	0	14,414
		Repairs/Maintenance/Supplies	[F] 4,280	36,000	40,280	50	20,140	20,140
		Office Expenses	[G] 22,130		22,130	50	11,065	
		Accounting & Legal Fees	[H] 28,108		28,108	100	28,108	
		Insurance	[I] 3,827		3,827	100	3,817	
		Rate Case Expense	[J] 3,738		3,738	100	3,738	
		Miscellaneous	[K] 57,170		57,170	50	28,585	28,585
		Subtotal-Sum of Line [A] thru Line [K]	[L] 244,125		280,125⑦			
		Payroll Taxes	[M] 8,096		8,096	50		4,048
		Property and Other Taxes	[N]			100		
		Annual Depreciation and Amortization-From Table III. B. Box ①	[O] 95,373		95,373	100	95,373	
		Income Taxes-From Table V, Line [F]	[P]			100		
		Return -From Table IV.E., Line[H]	[Q]	16,175	16,175	100		
		Subtotal-Sum of Line [L] thru Line [Q]	[R] 347,594	16,175	363,769			
		Other Revenues	[S] 15,763		15,763	100		
		Total Cost=Line [R] – Line [S]	[T] 331,831	316,068	315,915⑧		⑨	⑩
		Alternative Allocation between Fixed and Variable [NoteI]	[U] 67%		315,915⑧	67	222,326⑨	109,504⑩

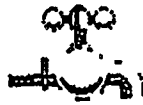
A. REVENUE REQUIREMENT

TABLE VI. A.

⑦ Divide this amount by 8 and enter the result in Table IV. E., Line [B], ③ To Table IX. B., Line [A] ⑩ To Table IX. A., Line [A]

ATTACHMENT 2

Bid Sheet from: Aucoin and Associates



Aucoin and Associates Inc.

October 12, 2012

Inline Utilities LLC
21755 I-45 Building 11
Spring, Tx. 77388

Attn: Mike Martz

Re: Bid for Tank Replacement

Dear Mr. Martz,

Aucoin and Associates is pleased to quote the following:

REPLACE WEST DIGESTER TANK

Work to consist of the following:

1. Remove existing wall on west wall of building
2. Remove old tank on west side with crane and haul off and dispose
3. Fabricate new digester and deliver with 18 wheeler, lift crane and install
4. Re-fabricate west wall and reinstall
5. Install all new diffusers
6. Paint with Epoxy paint per manufacturers recommendation
7. Put system back in service

Exclusions:

Meeting with Centerpoint to coordinate disconnect and reconnect power due to crane

The cost for the above will be \$90,000 (NINETY THOUSAND DOLLARS), plus any additional cost from energy company to relocate power source.

Work will be completed within 18 months from receipt of 20% deposit.

If you have any questions, please do not hesitate to call.

Patrick H. Aucoin
PHA/pj

Water and Wastewater Operations
Booster Pump and Lift Pump Repair
Chlorinator Installations
Chemical Consulting

24 Hours - (7x1) 800-6865
Fax (281) 223-7502

ATTACHMENT 3

COPIES OF INVOICES REFERENCED IN RFI #V1.A.

Detail of Invoices Requested in Docket.....	i
TX 101-1: Standby Power Solutions Invoice.....	ii
TX 101-2: Standby Power Solutions Invoice.....	iii
TX 101-3: Standby Power Solutions Invoice.....	iv
Circle S Hardware Invoice.....	v

DOCKET NO. 43069
Commission Staff's First Request for Information

INLINE DEVELOPMENT, LLC			
STAFF 1-1			
Item A - Detail of invoices requested in Docket			
Standby Power Solutions	TX 101-1	\$1,260.31	Generator
Standby Power Solutions	TX 101-2	\$1,220.77	Generator
Standby Power Solutions	TX 101-3	\$749.33	Generator
Circle 5 Hardware		\$923.90	Manhole/Culvert
Lowe's		\$390.79	Manhole/Supplies
Home Depot		\$228.16	Equipment
Sunbelt Rentals		\$86.83	Equipment
Aztec Rental Center		\$151.56	Equipment
Aztec Rental Center		\$157.05	Equipment
Sunbelt Rentals		\$220.40	Equipment
Hilltop Tool Rental		\$274.39	Equipment
Aztec Rental Center		\$314.87	Equipment
Sunbelt Rentals		\$441.03	Equipment
		\$6,418.79	



INVOICE

TO: InLine Utilities
Att: Mike Martz
21755 I-45 Bldg 11
Spring, TX 77388

Fax: (281)651-1134

[illegible]**TOTAL DISCOUNT**

TOTAL	\$	1,220.77
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iii

1M1M2

SHIPPING FOR SHIPPING AT
OUR FREIGHT STORE

Circle S Hardware

11200 1st 20th Rd
Houston, TX 77254
281-550-7978

JUSTIN KALA

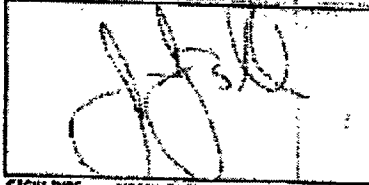
ITEM	QTY	SALE/PCS	EXT
300MPC	1	868.99	868.99
EACH			
34 DOUBLE WALL POLY CULVERT			

SUBTOTAL \$	868.99
TAX \$	54.31
TOTAL \$	923.30

CREDIT CARD 923.30

CARD *****545
AUTH 023570

I AGREE TO PAY THE ABOVE TOTAL ACCORDING TO
THE POSTED TERMS AND CONDITIONS



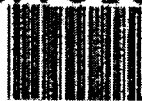
SIGNATURE JUSTIN KALA

EMPLOYEE	TERM	INVR	TIME	DATE
9	5	5853	04:14	26-Jan-13

Receipt Required Guarantee
You A No-Hassle-Return

Happy New Year

INVOICE



ATTACHMENT 4

Inline Annual Report: 2013 – Water & Wastewater Utilities

Section 3: Revenues

	Water	Wastewater	Total Water + Wastewater
OPERATING REVENUES:			
Utility Service/Sales	180,380.49	835,739.20	516,118.69
Fees (Tap, Reconnection, etc.)	7,603.09	8,875.54	16,478.63
OTHER REVENUES:			
Please Identify: LATE FEES	15,762.61	7,061.66	22,824.27
TOTAL REVENUES	203,746.19	351,676.40	655,422.79

Section 4: Expenses

	Water	Wastewater	Total Water + Wastewater
Salaries & Wages			34,000.00
Contract Labor			117,664.78
Purchased Water			0.00
Chemicals for Treatment			18,903.14
Utilities (electricity)			36,034.47
Repairs/Maintenance/Supplies			10,593.46
Office Expenses			44,239.48
Professional Fees (Accounting, Legal)			53,217.54
Insurance			7,855.05
Depreciation & Amortization			0.00
Miscellaneous (describe in remarks below)			0.00
Subtotal			347,580.82
Taxes:			
Federal Income Taxes			0.00
Property and Other Taxes (Payroll, etc.)			18,192.88
Regulatory Expenses (Rate Case, Permits)			7,478.48
Other (describe in remarks below)			820,890.86
TOTAL EXPENSES			591,423.04

Remarks:

SLUDGE REMOVAL \$20,296.66 SUGARBERRY PLACE PHASE I
REGIONAL WATER FEES \$54,167.75 SUGARBERRY PLACE PHASE II
PRINCIPAL AND INTEREST CHARGES \$3142,926.45

ATTACHMENT 5

PUC Document "Item Numbers: 40 - 43" of Control Number 43069

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APPLICATION OF INLINE
DEVELOPMENT LLC FOR A
RATE/TARIFF CHANGE

§
§
§

PUBLIC UTILITY COMMISSION
FILING CLERK
OF TEXAS

**INLINE DEVELOPMENT LLC'S
SUPPLEMENTAL APPLICATION INFORMATION, REQUEST TO REMOVE
ABATEMENT, AND REVISED PROCEDURAL SCHEDULE**

COMES NOW Inline Development LLC ("*Inline*"). by and through its attorneys of record, and files this Supplemental Application Information, Request to Remove Abatement, and Revised Procedural Schedule, and would show the following:

I. BACKGROUND

On August 28, 2014, Inline filed an Application for a Water and Sewer Rate/Tariff Change (the "*Application*") with the Public Utility Commission of Texas (the "*Commission*"). Most recently, on December 3, 2015, the Administrative Law Judge ("*ALJ*") issued Order No. 14 in this matter, setting a deadline of February 2, 2016 for Inline to provide additional information for its Application and for Inline and the Commission to jointly request to remove the abatement and provide a revised procedural schedule.

II. SUPPLEMENTAL APPLICATION INFORMATION

As previously noted, Inline and Commission Staff have conducted meetings to discuss additional information that Commission Staff needs to complete its review of Inline's Application. Accordingly, Inline has engaged consultants to prepare such additional information. Attached hereto as Attachment A is Inline's trending study, along with other supplemental, supporting materials.

III. REQUEST TO REMOVE ABATEMENT AND PROCEDURAL SCHEDULE

Inline believes that the supplemental materials provided in Attachment A should address the Commission's Staff's requests for additional information. Thus, Inline requests that this Application proceed, unabated, through the Commission's review process. Further, it is Inline's understanding that the Commission will provide the proposed Revised Procedural Schedule through a separate, joint filing.

Respectfully submitted.

**LLOYD GOSSELINK ROCHELLE &
TOWNSEND, P.C.**

816 Congress Avenue, Suite 1900
Austin, Texas 78701
(512) 322-5800
(512) 472-0532 (Fax)




DAVID J. KLEIN
State Bar No. 24041257
dklein@lglawfirm.com

CHRISTIE DICKENSON
State Bar No. 24037667
cdickenson@lglawfirm.com

**ATTORNEYS FOR INLINE DEVELOPMENT
LLC**

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was transmitted by fax, hand-delivery and/or regular, first class mail on this 2nd day of February, 2016, to the parties of record.


David J. Klein

ATTACHMENT A

TRENDING STUDY AND SUPPLEMENTAL SUPPORTING MATERIALS

To: PUC Staff
From: Inline Development LLC

In our past communications, you have indicated that you need Inline to provide a Trending Study and other additional information to continue processing Inline's rate change application. To this end, Inline provides the following:

1. Trending Study and Supporting Documents. Enclosed behind Exhibit 1 is Inline's Trending Study, performed by GDS Associates, Inc. This Trending Study is based upon sound economic valuation principles, commonly used by experts in the field of water and wastewater utilities, to determine the original cost and current valuation of the Inline system. Additionally, Exhibit 1 contains a summary of the indices used in the Trending Study, as well as an explanation of why such indices were used. There is also a spreadsheet detailing which index was applied to each significant asset.
2. Photographs. To further support the Trending Study, Inline submits the photographs included in Exhibit 2. These pictures provide the additional detail requested by Commission Staff to prove-up the significant (above-ground) assets contained in the Trending Study.
3. Meters. Staff informally raised additional questions regarding the counting and accounting of meters in the Inline System. In response, Inline included the costs of the meters in the net cost of the system because all of the meters were initially installed at each lot- even if there was not a retail customer at that location yet. The development served by Inline is a zero lot-line development, and it is Inline's understanding that installing the meters initially was the most cost efficient solution with minimal disruption to the residents in the neighborhood.
4. Applying the Trending Study to Requested Rate Change Application. Per the Commission's request, the ALJ's prior order directs Inline to consider modifying its Application to take into consideration the net value of the larger assets that were used as a basis for determining the proposed rate increases. This request is a follow-up to the Commission's previous call for a Trending Study to determine the current net value of the assets after their total depreciation.

To this end, a detailed Trending Study, with supplemental comments, is provided in this filing. As noted above, this Trending Study lists the trended value of all major water and sewer service assets, the date the assets were installed, and the index used. Such data was then used to list the current trended values, age and total depreciation of the assets, and the net value of the assets (after depreciation).

Then, Inline used this information to modify all applicable PUC Water and Sewer Tariff Rate Change forms. Those forms are attached hereto as Exhibit 3 and are submitted to supplement the Application. Since most of the assets were installed a long time ago, the depreciated net value of those assets decreased substantially. As you will see in the revised forms in Exhibit 3, when these costs were applied to Inline's annual operating expenses, it provided further support to Inline's decision to apply for the "Alternate Method of Rate Design" as authorized in SECTION X of the application. (Note that Section X of the application has this statement: "After you have performed the calculations in Section IX, you may find that the cost increase per 1,000 gallons is not what you think your customers will approve. If that is the case, then the following will allow you to suggest your own increase...etc.")

Ultimately, the application of the Trending Study to the pending Application reveals that Inline could, and should, increase its rates above what it originally requested in the Application. However, in order to avoid rate shock to its retail customers, Inline has opted to continue seeking Commission approval for the rate increase it originally requested in the Application. Said another way, while Inline modified most Rate/Tariff Change application forms, it has not changed Table X.A. (the water rate per 1,000 gallons or the base rate). This is in compliance with the Section IX suggestions and has the additional benefit of not needing to send additional rate change notices to customers.

Exhibit 1

Trending Study/Summary of Trending Study/Spreadsheet Detailing Trending Study

Thomas G. Gebhard, Jr., P.E., Ph.D.
Executive Engineer

Ph: 512.494.0369
Fax: 512.494.0205
tom.gebhard@gdsassociates.com

To Whom It May Concern,

This report was prepared to establish the original cost and current value of the systems. Verification of assets, replacement cost valuation and the installation date of assets were provided to GDS Associates by Jerry Ince, P.E. of Ince Engineering, LLC. The replacement cost valuation is not an appraisal, but is reflective of the value of the systems based on recent contractor estimates.

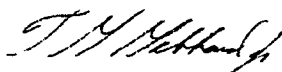
The replacement costs and installed dates provided by Ince Engineering were then used to estimate the original cost of the plant. Indices used to estimate the original value of the system include the Handy-Whitman Cost Trending Index, the Engineering News-Record Building Cost Index History, and the United States Bureau of Reclamation Construction Cost Trends. The organizations compiling these indices gather construction cost information that includes materials, labor, equipment, overhead and profit. That information is summarized into an index number that is a percentage ratio between the cost of an item at any stated time and its cost at a base period. Engineers doing utility asset evaluations often rely upon these types of indices for estimating costs in different time periods for water and sewer utilities, as well as electric and natural gas utilities.

The trended original value of the assets was then used to calculate current net value of the assets. For those assets assigned a service life in Schedule III-3 of the Public Utility Commission's current Class B rate change application, those service lives were used to determine the net value of the assets using straight-line depreciation. Sewer assets were assigned service lives based on Schedule III.B. of the previous Commission application as service lives for sewer assets are not included in the current Class B application. For assets not assigned a service life by the Commission (identified by an asterisk in Column k of the report), the following service lives have been used:

Fire Hydrants	50 Years
Electrical Equipment	20 Years
Generators	20 Years
Sewer Pipe	50 Years
Structures – Metal	50 Years

If you have any questions about this project, please contact me at (512) 494-0369.

Sincerely,



Tomas G. Gebhard, Jr., P.E., Ph.D.
Texas Registered Engineer No. 39577

212 E HWY 90 A
Richmond, Texas 77406
281-232-7075
jgince@gmail.com

.....

Ince Engineering, LLC

November 6, 2015

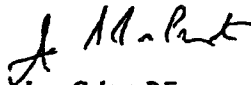
To whom it may concern,

Re: Sugarberry Place and Cottage Gardens Trending Study

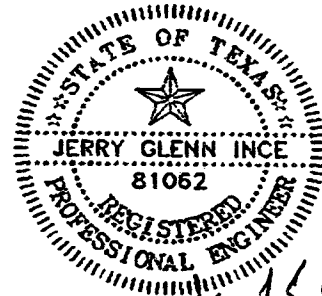
This letter is to acknowledge that Ince Engineering, LLC provided an evaluation of the installed components at the above referenced locations. Ince Engineering field verified the above ground and visible items covered in the report. Below ground feature and items not accessible were taken from the construction drawings. The installation prices were evaluated from recent contractor estimates on similar items. Dates for the installations were obtained from interviews with the developer and system operator.

If you have any questions regarding this project, please contact Jerry G. Ince, P.E. 281-232-7075, fax 281-232-7075.

Sincerely,



Jerry G. Ince, P.E.
President/Engineer



JG 11/6/15

System	Asset Type	Asset Description	Current Replacement Cost (d)	Date Installed (e)	Asset Age (Yrs.) 12/31/2013	Trending Index Code	Install Trending Value (b)	Current Value (f)	Trending Original Asset Cost (i)	Asset Useful Life (h)	Annual Depreciation Expense (j)	Accumulated Depreciation (m)	Net Value (n)
Sugarberry Place	Fencing	2' Chainlink Fence 1,310 ft	\$ 30,150	6/1/2000	13.6	ENL	3553	5497	\$ 18,875	20	\$ 994	\$ 13,498	\$ 6,178
Sugarberry Place	Fencing	Wicket Fence 2850 ft	64,400	6/1/2000	13.6	ENL	3553	5497	34,311	20	2,211	30,024	14,186
Sugarberry Place	Fencing	Gate	750	6/1/2000	13.6	ENL	3553	5497	483	20	28	379	316
Sugarberry Place	Building	Wooden Building	13,500	6/1/2000	13.6	HW-01	314	514	2,480	15	499	6,793	708
Sugarberry Place	Well	2' Cement well	110,000	6/1/2000	13.6	HW-01	314	514	11,495	50	2,832	38,484	101,170
Sugarberry Place	Pump + Ship	2-25 hp booster pumps	25,000	6/1/2000	13.6	HW-03	314	514	20,465	10	-	20,065	-
Sugarberry Place	Prestress Tanks	8,000 gal Pressure Tank	65,000	6/1/2000	13.6	HW-07	270	743	31,632	50	473	24,712	17,217
Sugarberry Place	Ground Storage Tanks	125,000 gal GST	750,000	6/1/2000	13.6	HW-07	270	743	30,702	50	1,819	66,358	68,642
Sugarberry Place	Distribution System	10" 1800 Pipe 940 ft	54,960	6/1/2000	13.6	HW-17	201	334	34,824	50	695	9,460	25,864
Sugarberry Place	Distribution System	6" 1800 Pipe 426 ft	23,240	6/1/2000	13.6	HW-17	201	334	15,010	50	300	4,077	10,932
Sugarberry Place	Distribution System	4" 1800 Pipe 13,472 ft	431,104	6/1/2000	13.6	HW-17	201	334	256,367	50	5,327	65,442	186,755
Sugarberry Place	Distribution System	2" 1800 Pipe 5,238 ft	112,832	6/1/2000	13.6	HW-17	201	334	67,002	50	1,342	18,226	40,867
Sugarberry Place	Distribution System	Fire hydrant 3	11,700	6/1/2000	13.6	HW-21	494	616	7,112	50	5,180	-	5,180
Sugarberry Place	Meters and services	3/4" Meters and service connections, 402	241,200	6/1/2000	13.6	HW-18	275	664	131,407	20	6,580	89,378	42,320
Sugarberry Place	Misc	Electric controls - water plant	22,000	6/1/2000	13.6	HW-03	532	828	12,613	20	631	8,465	4,047
Sugarberry Place	Misc	Plant Electric - 200HP	32,000	6/1/2000	13.6	HW-03	532	828	12,613	20	631	8,465	4,047
Sugarberry Place	Misc	Diesel Generator	75,000	6/1/2009	4.4	14-44	492	694	64,753	20	3,318	15,298	51,458
Sugarberry Place	Misc	C/E Facilities	1,000	6/1/2000	13.6	HW-08	382	763	499	10	728	9,888	26,511
Sugarberry Place	Distribution System	Yard Piping	75,000	6/1/2000	13.6	HW-13	314	647	36,998	50	-	-	36,998
Sugarberry Place	Collection System	10" SDR35 Sewer Pipe - 10,708 ft	642,340	6/1/2000	13.6	HW-17	201	334	381,995	50	7,640	103,769	278,276
Sugarberry Place	Collection System	8" SDR35 Sewer Pipe - 1,874 ft	92,180	6/1/2000	13.6	HW-17	201	334	54,817	50	1,096	14,971	39,526
Sugarberry Place	Collection System	6" SDR35 Sewer Pipe - 2,947 ft	147,350	6/1/2000	13.6	HW-17	201	334	87,625	50	1,733	23,803	63,822
Sugarberry Place	Sewer Service	402 service connections	72,000	6/1/2000	13.6	HW-18	275	604	39,286	20	1,964	28,680	12,606
Sugarberry Place	200,000 gal	200,000 gal	2,000,000	6/1/2000	13.6	ENR	2553	5497	1,292,705	50	25,954	351,163	941,542
Sugarberry Place	Building	Metal Building no roof	200,000	6/1/2000	13.6	HW-04	314	524	114,641	50	2,693	31,859	90,782
Sugarberry Place	2 Lift Stations	2 Lift Stations	170,000	6/1/2000	13.6	HW-03	358	647	66,399	50	-	18,037	48,862
Sugarberry Place	Misc	Electrical controls - sewer plant	30,000	6/1/2000	13.6	HW-03	532	828	12,185	20	860	11,680	5,519
Sugarberry Place	Misc	Diesel Generator	60,000	6/1/2009	4.4	14-44	492	644	53,464	20	2,670	12,238	41,166
Sugarberry Place	Land	Land for plants-3	111,400	6/1/2000	13.6	1000-13	309	618	37,615	494	-	-	37,615
Sugarberry Place Total			\$ 5,212,318						\$ 3,144,971		\$ 74,028	\$ 971,949	\$ 2,177,028

System	Asset Type	Asset Description	Current Replacement Cost	Date Installed	Asset Age (Yrs.)	Trending Index Code	Initial Trending Value	Current Date Value	Trending Original Asset Cost	Asset Useful Life	Annual Depreciation Expense	Accumulated Depreciation	Net Value
Cottage Gardens	Fencing	8' Chainlink Fence 500'	12,500	5/1/2004	9.7	NR	3844	5487	3,996	20	5	4,348	4,448
Cottage Gardens	Fencing	Gate - 8'	6,000	5/1/2004	9.7	NR	3545	5487	4,318	20	5	2,007	2,211
Cottage Gardens	Building	Wooden Building	12,500	5/1/2004	9.7	NR	3545	5487	3,996	20	5	2,007	2,211
Cottage Gardens	Building	Metal Building - Maintenance	133,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	17,733	73,902
Cottage Gardens	Well	2-Complete well	210,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	21,261	130,274
Cottage Gardens	Pump & Skip	1.10 hp booster pumps	15,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	5,484	316
Cottage Gardens	Pump & Skip	1.10 hp booster pumps	8,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	4,742	163
Cottage Gardens	Pressure Tank	12,000 gal Pressure Tank	25,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	6,117	25,520
Cottage Gardens	Ground Storage Tank	125,000 gal GST	25,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	6,117	25,520
Cottage Gardens	Distribution System	12" 1500 Pigs - 1,375 ft	94,250	5/1/2004	9.7	NR	3545	5487	3,996	20	5	20,553	85,749
Cottage Gardens	Distribution System	10" 1500 Pigs - 1,375 ft	72,250	5/1/2004	9.7	NR	3545	5487	3,996	20	5	16,744	56,506
Cottage Gardens	Distribution System	8" 1200 Pigs - 2,024 ft	272,250	5/1/2004	9.7	NR	3545	5487	3,996	20	5	35,815	169,435
Cottage Gardens	Distribution System	6" 1200 Pigs - 2,024 ft	121,464	5/1/2004	9.7	NR	3545	5487	3,996	20	5	16,040	62,720
Cottage Gardens	Distribution System	6" 1200 Pigs - 3,784 ft	109,088	5/1/2004	9.7	NR	3545	5487	3,996	20	5	16,040	62,720
Cottage Gardens	Free Hydrants, 16	3/4" Meters and service connections, 270	40,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	5,212	27,788
Cottage Gardens	Misc	Electric Control Water Plant	33,490	5/1/2004	9.7	NR	3545	5487	3,996	20	5	11,714	21,776
Cottage Gardens	Misc	Main Electric - 20HP	22,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	6,774	15,226
Cottage Gardens	Misc	Desert Generator	75,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	15,226	60,000
Cottage Gardens	Misc	CD Facilities	1,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	483	558
Cottage Gardens	Misc	Yard Pump	75,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	8,024	33,475
Cottage Gardens	Collection System	12" 500x26 Sewer Pipe - 1,377 ft	89,940	5/1/2004	9.7	NR	3545	5487	3,996	20	5	11,714	49,320
Cottage Gardens	Collection System	8" 500x26 Sewer Pipe - 4,188 ft	111,210	5/1/2004	9.7	NR	3545	5487	3,996	20	5	14,646	158,448
Cottage Gardens	Collection System	6" 500x26 Sewer Pipe - 2,024 ft	367,350	5/1/2004	9.7	NR	3545	5487	3,996	20	5	48,354	201,750
Cottage Gardens	Collection System	6" 500x26 Sewer Pipe - 2,024 ft	114,940	5/1/2004	9.7	NR	3545	5487	3,996	20	5	15,122	62,091
Cottage Gardens	Collection System	4" 500x26 Sewer Pipe - 2,024 ft	254,960	5/1/2004	9.7	NR	3545	5487	3,996	20	5	30,988	166,634
Cottage Gardens	Sanitary Service	570 service connections	142,500	5/1/2004	9.7	NR	3545	5487	3,996	20	5	32,073	24,285
Cottage Gardens	Land	Lots for plants - 1	28,000	5/1/2004	9.7	NR	3545	5487	3,996	20	5	7,759	56,723
Cottage Gardens	Misc	3-phase	3,853,187	5/1/2004	9.7	NR	3545	5487	3,996	20	5	597,643	1,932,230

Attachment A –

Resume of Thomas G. Gebhard, Jr., P.E., Ph. D.



GDS Associates, Inc
ENGINEERS & CONSULTANTS

THOMAS G. GEBHARD, JR., P.E., PhD
Executive Consultant

EDUCATION

B.S. Civil Engineering, University of Texas at Austin, June 1962.

M.S. Environmental Health Engineering, University of Texas at Austin, January 1964.

Ph.D., University of Texas at Austin, June 1968.

PROFESSIONAL MEMBERSHIP

Texas, No. 39577

PROFESSIONAL SOCIETIES

American Society of Civil Engineers

American Water Works Association

CONTINUING EDUCATION

- 3 Short Course in Engineering Systems Analysis at Massachusetts Institute of Technology in June 1969.
- 3 Second International Seminar for Hydrology Professors at Utah State University in Austin 1970.
- 3 EPA Short Course in Water Quality Management at Edison, N.J. Water Quality Laboratory in March 1971.
- 3 NSF Short Course in Flow Through Porous Media with Applications to Ground Water Hydrology at University of Wisconsin, Madison, Wisconsin, July 1971.
- 3 Short Course in Energy Conservation and Management in Manufacturing Facilities at The University of Texas at Austin, June 1977.
- 3 EPA Seminar on Small Wastewater Flows, Dallas, Texas, August 1977.
- 3 EPA Seminar on Pretreatment of Industrial Wastes, Dallas, July 1978.
- 3 EPA Seminar in Troubleshooting at Wastewater Treatment Plants - Process Control, Sludge Handling and Conditioning, Dallas, August 1978.
- 3 ASCE Seminar on Flood Plain and Drainage Analysis, Lubbock, October 1978.
- 3 EPA Seminar on Sludge Treatment and Disposal, Dallas, November 1978.
- 3 Cost of Capital for Regulated Utilities, Public Utilities Reports, Washington, D.C., September 1983.

PROFESSIONAL SERVICE

GDS Associates, Inc.

Dr. Gebhard joined GDS Associates, Inc. on July 30, 1997 and became a shareholder on January 1, 2001. The following summarizes Dr. Gebhard's significant project work.

- 3 Representation of East Texas Electric Coops as Hydroelectric Power Customers of Southwestern Power Administration at Meetings of (a) Southwestern Power Resources Association on O&M expenditures, (b) Corps of Engineers on Hydropower issues, and (c) joint meetings of Southwestern Power Administration and Corps of Engineers on operations, maintenance and capital replacements.

- 3 Canyon Lake Water Supply Corporation: Provided an independent review of the proposed purchase of this 6,600 connection member owned water system by a major publicly traded investor owned water utility. The review included a general evaluation of the assets and facilities, evaluation of the ownership capabilities, and assessment of the proposed purchase price which included a comparison with purchases of similar systems. The resulting report was submitted to the WSC's directors, and the customers ultimately approved the sale.
- 3 AquaTexas, Inc.: Supervised a project team that prepared a complete update to the Company's Texas capital asset rate base accounts to meet state filing requirements. Prepared responses to financial, accounting and technical questions, and provided support testimony in the regulatory proceedings. The capital asset valuation update included adding over \$50 million dollars of capital additions and a complete asset valuation for 10 purchased systems for which no records were available.
- 3 SJWTX Water, Inc.: Performed an evaluation of four water systems offered for purchase by SJWTX Water, Inc. Inspected systems, reviewed plans, developed inventory, and computed a trended evaluation of net book value.
- 3 Aqua Texas, Inc.: Performed an evaluation of the water and wastewater systems at Cypress Bayou, north of Orange, Texas. Performed field inspection and determined the value of Replacement Cost Depreciated from asset summaries. Also evaluated ratio of market capitalization to book value, comparable sales values, and net present value of future cash flows. The valuation was used in negotiations between Aqua Texas and the City of Orange, Texas.
- 3 Aqua Texas, Inc.: Performed an evaluation of the water and wastewater systems at Crighton Ridge, south of the City of Conroe, Texas. Performed field inspection and determined the value of Comparable Sales, Ratio of Market Capitalization to Book Value, and net present value of future cash flows. The valuation was used in negotiations between Aqua Texas and the City of Conroe, Texas.
- 3 AquaSource Utility, Inc.: Provided a valuation of purchased assets by developing an inventory, using financial records and trending to determine original cost, depreciation, value at acquisition, and replacement cost depreciated in Docket Nos. 2000-1074-UCR, 2000-1075-UCR, 2000-1366-UCR, 2000-1367-UCR, 2000-1368-UCR and 2000-1369-UCR before the Texas Natural Resource Conservation Commission and Dockets Nos. 582-01-0416 and 582-01-1365 before State Office of Administrative Hearings.
- 3 Maverick County Water Control and Improvement District No. 1: Analysis of electrical marketing and value of power produced by deliveries of water by MCWCID, analysis of FERC licensing status, and alternate hydroelectric power generation capabilities.
- 3 American States Utility Services, Inc.: Preparation of proposal for purchase of water and wastewater utility systems of Channel Islands, Kingsley Field, Fresno Air Terminal Air National Guard Stations, and Corpus Christi Naval Stations.
- 3 Southwest Utilities, Inc.: Providing expert witness services and regulatory assistance for an application to change the company's water and sewer rates in Dockets 31791-R and 31792-R before the Texas Natural Resource Conservation Commission.
- 3 H-M-W Water Supply Corporation: Preparation of an Engineering Report for the conversion of a Water Supply Corporation to a Special Utility District and the provision of regulatory services before the Texas Natural Resource Conservation Commission.
- 3 Ables Springs Water Supply Corporation: Provision of regulatory assistance and expert witness services in support of an application to amend the certificated service area before the Texas Natural Resource Conservation Commission.

- 3 Brushy Creek Municipal Utility District: Providing an analysis of water utility rates charged by the City of Round Rock and performing true-up calculations based upon a mutual agreement to use a methodology used by TNRCC in a docket to settle a rate dispute between the parties.
- 3 Utility Center, Inc. of Fort Wayne, Indiana (A subsidiary of AquaSource Utility, Inc.): Computation of Replacement Cost New Less Depreciation (RCNLD) as part of a rate case before the Indiana Utility Regulatory Commission (IURC), Cause No. 41968, requiring a review of plant asset accounts, inspection of assets, evaluation of electronic maps, and trending of original cost data.
- 3 Azurix North America, Inc.: Planning study for support of Request for Waiver of 75/90 Rule of Texas Natural Resource Conservation Commission for Southwest Utilities, Inc.
- 3 B&D Environmental Inc.: Providing support services in valuation of water and wastewater utility assets.
- 3 AquaSource Utility Inc.: Performing a valuation study for water and wastewater utility assets of Central Jefferson County Utility Company of Missouri for litigation support in Cause No. 4:00CV863DDN in the United States District Court, Eastern District of Missouri.
- 3 Acquisition Partners, Inc. (A former subsidiary of AquaSource Inc.): Preparation of Statements of Interest in acquiring utility assets of U.S. military bases, and investigation of opportunities on specific military installations.
- 3 J.W. Lightfoot: Protest of Connection Fee

Dr. Gebhard has been active in providing volunteer services to professional committees. The committees and activities include:

Electric Power Research Institute: Probable Maximum Flood Guidelines Committee

EPRI with the cooperation of the Federal Energy Regulatory Commission (FERC) developed a set of guidelines for the determination of the Probable Maximum Flood. The committee provided peer review for the contractor, Bechtel Corporation, and has reviewed the draft document. 1992 - 1994.

American Society of Civil Engineers: Energy Division - Hydro Power Committee

Hydro Power Guidelines: Small-Scale Hydropower Subcommittee

A comprehensive set of guidelines for planning and designing the civil engineering aspects of hydroelectric facilities was produced in a five-volume set over within a five-year period. Dr. Gebhard chaired the subcommittee that produced the volume on small-scale hydropower. The ASCE publication, *Civil Engineering Guidelines for Planning and Designing Hydroelectric Developments*, won the 1990 ASCE Rickey Medal. 1984-1989.

Task Committee on Rehabilitation of Hydroelectric Power Plants

A set of guidelines for the rehabilitation of civil engineering facilities at hydroelectric plants was produced as a companion set to the design guidelines. Dr. Gebhard was a member of the control group that produced the ASCE publication, *Guidelines for Rehabilitation of Civil Works of Hydroelectric Plants*. 1989-1991.

Task Committee on Lessons Learned from the Design, Construction, and Operation of Hydroelectric Facilities

This committee effort is to compile information on the powerhouse and the facilities that convey water to, through, and from the powerhouse. The ASCE publication, *Lessons Learned from the Design, Construction, and Operation of Hydroelectric Facilities*, that was produced by the committee, won the 1995 ASCE Rickey Medal. 1991 - 1994.

Gebhard Sarma Group, Inc.

The engineering firm was founded by Dr. Gebhard in March 1977 in Austin, Texas. After June 1984, the firm was known as Gebhard Engineers. The company changed its name from Gebhard Engineers, Inc. to Gebhard Sarma Group, Inc. on March 3, 1992 when principals of Sarma & Associates and Project Design Consultants joined Gebhard Engineers, Inc. The firm provided engineering services in the development and management of water and energy resources, as well as civil engineering services for land development and utility companies. The following summarizes his participation on some projects until he left on July 25, 1997.

- U.S. Department of Energy: Conducted Field Reconnaissance Studies to Evaluate the Development of Hydroelectric Power. Visited, Examined, and Reported on Over 110 Dams in the States of Kansas, Missouri, Iowa, Kentucky, Tennessee, Mississippi, Georgia, South Carolina, Florida, Alabama, and North Carolina and in the Commonwealth of Puerto Rico to Determine Feasibility of Adding Hydroelectric Power Generation Facilities to Existing or Abandoned Sites.
- State of Kansas, Department of Energy: Performed feasibility study for the addition of hydroelectric power to Rocky Ford Dam on the Big Blue River near Manhattan, Kansas. The dam initially had turbines and generators, but they had been removed. A detailed hydrologic analysis was made to determine the a suitable investment strategy to obtain more power during peak summer months. As Rocky Ford Dam established the tailwater elevation for a Corps of Engineers Dam, a detailed dam safety study was conducted and reviewed by the Corps of Engineers. Suitable enhancements to the fishery were designed to accompany the addition of hydroelectric power to the dam.
- American Hydro of Peterborough, New Hampshire: Design and Construction Supervision for 700 KW Hydroelectric Plant, Included Negotiations with Corps of Engineers for Construction and Operation at Corps Owned Dam, Design of Intake Structure, Penstock, Powerhouse, and Tailrace.
- Energy Law Institute of Concord, New Hampshire: On Contract with Metropolitan District Commission (Boston, Mass) to Determine Potential for Developing Hydroelectric Power at Water Supply Dams.
- U.S. Agency for International Development for K&M Engineering Co.: Conducted Field Reconnaissance Studies to Evaluate the Potential for Developing Small Hydroelectric Power Sites. Visited, Examined, and Reported on Four Small Hydroelectric Projects in the Republic of Armenia. Reviewed the Armenia Plan to produce more hydroelectric power. Recommended the Purchase of Hydroelectric Equipment produced in Russia and Armenia.
- U.S. Agency for International Development for K&M Engineering Co.: Visited Republic of India to negotiate the wording of a model power purchase agreement with the Federal Government. The model agreement would enable the state governments to purchase power from independent power producers who have built run-of-the-river hydroelectric plants.
- City of Charleston, Illinois: Consultant for Development of Hydroelectric Power at Breached Water Supply Dam.
- International Boundary and Water Commission, El Paso, Texas: Planning for Proposed Hydroelectric Dam to be combined with a new bridge, border crossing on Rio Grande upstream from Laredo, Texas.
- U.S. Section, International Boundary and Water Commission, El Paso, Texas: Developed hydraulic and hydrologic flow model of Rio Grande below Falcon Dam for use in assessing the availability of water pursuant to an application for a water right at the Texas Natural Resource Conservation Commission.
- U.S. Bureau of Indian Affairs and U.S. Department of Justice: Preparing Surface Water Hydrology Study of 26,000 Square Mile River Basin in New Mexico and Arizona in Support of Indian Water Rights Claims in Arizona and New Mexico.

- 3 U.S. Department of Justice: Supervision of Modifications to SWRRB - Rainfall Runoff Model by U.S. Agricultural Research Service and Texas A&M Research Foundation, Modifications to Add Routing Model for Application in Large Drainage Basins.
- 2 Earthworks, Inc., New Hampshire: Consultant for Design and Construction for Addition of Turbine at Dam.
- 2 International Boundary and Water Commission, El Paso, Texas: Performed an analysis of drought conditions on Rio Grande in vicinity of El Paso.
- 3 City of Austin: Seven Contracts - (a) Performed Hydrologic Studies for Addition of Hydroelectric Power to Longhorn Dam, (b) Performed Analysis of the Addition of Hydroelectric Power to Onion Creek Wastewater Treatment Plant, (c) Design of Storm Sewers in Areas with Excessive Drainage Waters, (d) Design of Wastewater Interceptor Sewer for Slaughter Creek to Bear Creek Segment using a 54 Inch Diameter Tunnel through the Austin Chalk Formation, (e) Analysis of Water Availability and Rights Related to Charges for Water By LCRA, (f) Master Planning for Stormwater Runoff in the Walnut Creek Watershed, and (g) Erosion Controls in Miscellaneous Watersheds.
- 2 City of Cedar Park, Texas: Rate Consultant for Establishing Water and Wastewater Utility Rates in 1987. Provided Advisory Services on Water Rates in 1991. Conducted 1993 Rate Study.
- 3 City of Pasadena, Texas: Consultant for Water Rates in Dispute with City of Houston before Texas Water Commission. Provided Prefiled Expert Witness Testimony in Docket Nos. RC-022 and RC-023. Provided consultation in settlement agreement and negotiation of new contract. This docket was settled before hearing began.
- 3 Kirtland Air Force Base, New Mexico: Water and Wastewater Rate Study for Contract Renewal with the City of Albuquerque, New Mexico. Reviewed the Impact of Ground Water Rights, Recharge from the Rio Grande, and Water Purchases from the City on Base Operations. Both City and Base adopted recommendations for Rates and Operational Modifications.
- 3 Coe Utilities, Inc.: Prepared "Valuation Studies for Facilities of Coe Utilities, Inc." that was used to support a loan from the Texas Water Development Board to H-M-W Water Supply Corporation for the purchase of water and wastewater facilities owned by Coe Utilities, Inc., May 1996.
- 3 Southwest Utilities, Inc., Texas: Prepared Application and Provided Expert Witness Testimony for Rate Increase in Docket No. 4824 before the Public Utility Commission of Texas in 1983. Prepared Application for Rate Increase in TWC Docket No. 7456-R. Prepared Application for Rate Increase in TWC Docket No. 9296-R.
- 3 Military Highway Water Supply Corporation, Relampago, Texas: Analyzed water use and financial data to develop a recommendation for new water and wastewater utility rates. Examined water supply alternatives for colonia located in service area of WSC.
- 3 Greystone Country Estates, Inc., Texas: Provided Expert Witness Testimony in TWC Docket No. 9954-X for establishing extension fee for a developer served by Hill Country Waterworks, Inc. Performed used and useful analysis of transmission system of Hill Country Waterworks, Inc.
- 3 Onion Creek Wastewater Corporation, Texas: Prepared the application for a Certificate of Convenience and Necessity, and developed a rate structure for a newly formed Investor Owned Utility. Changed the rates in a subsequent proceeding.
- 3 North Runnels Water Supply Corporation, Texas: Provided Expert Witness Testimony in TWC Docket No. 8496-W for Review of Water Rates Charged by the City of Winters.
- 3 Staff Water Supply Corporation, Texas: Provided Expert Witness Testimony in TWC Docket No. 9240-M for Review of Water Rates Charged by the City of Carbon.
- 3 Woodcreek Utilities, Inc., Texas: Provided Assistance in Creating Capital Structure and Acquisition Adjustment for Company whose rates were being Arbitrated as condition of sale by Federal Deposit Insurance Corporation in TWC Docket No. 7486-R.

- City of Truth or Consequences, New Mexico: Analyzed Local Groundwater Conditions and Testified at Hearing of New Mexico State Engineers Office for Water Right. Developed Project and Obtained Funding from Three Agencies to Develop a Low Temperature Geothermal Well for Providing Energy for Space Heating of the Senior Citizens Center.
- City of Georgetown and City of Round Rock, Texas: Provided Expert Witness Testimony in TWC Docket No. 8169-M, Dow Chemical Company v. Brazos River Authority, regarding issues on water management, Hydrologic system of Brazos River, dam failures, and other engineering and water management issues affecting water rates.
- West Leonard Water Supply Corporation, Texas: Provided Water Utility Rate Advisory Services in Rate Appeal before the Texas Water Commission.
- Poetry Water Supply Corporation and Lawrence Water Supply Corporation, Texas: Provided Rate Advisory Services in Review of Rates of the City of Terrell in TWC Docket 7331-M.
- Coe Utilities, Inc., Texas: Prepared Application and Provided Expert Witness Testimony for Rate Increase in Docket No. 5757 before the Public Utility Commission of Texas.
- Consultant to Protestants of Rate Increase of H&J Water Company. Provided Expert Witness Testimony in Docket No. 7054-R before the Texas Water Commission.
- Consultant to Utilities for Rates and Capital Improvement Programs for Utilities with Wells. Utilities include Southwest Utilities, Inc., Coe Utilities, Inc., Shoreline Utilities, Inc., and Green Valley Water Supply Corporation.
- Hornsby Bend Water Company: Prepared Application for Certificate of Convenience and Necessity, Wrote Tariff, Prepared Layout of Water and Wastewater Utility, Locating Source of Well Water in Eastern Travis County.
- Cap-View Utility Company: Prepared Application for Certificate of Convenience of Necessity, Wrote Tariff, and Testified on Water Quality Issues at Hearing on Discharge Permit.
- Creedmoor-Maha Water Supply Corporation: Prepared Testimony Against Applicant for Certificate of Convenience and Necessity in Certificated Service of Creedmoor-Maha.
- City of Rollingwood, Texas: Served as Hydrologist for City, Obtained Amendment for Change of 100 Year Flood Plain from Federal Emergency Management Agency, Review Plans for Development in 100 Year Flood Plain and for Detention and Filtration Ponds.
- Southern Rio Grande Council of Governments: Provided Consulting Services to Improve Energy Use Efficiency of Six Municipal Utilities Providing Water, Wastewater, Electric and Natural Gas Service. Included Analysis of Groundwater Conditions for Each Municipal Utility.
- New Mexico Energy Institute: Performed Two Studies Relating to Planning for the Use of Geothermal Waters in Dona Ana County, New Mexico. Coordinated Planning of City, County, and State Governments.
- New Mexico Solar Energy Institute: Performed Feasibility Analysis of Proposed Bioconversion Project to Produce Ethanol from Algae.
- Subcontractor to Walsh Engineering Co: Advised and Assisted in Proposed Conversion of Municipal Water Well to Low Temperature Geothermal Heating Source for Hubbard, Texas.
- Willow Springs Water Supply Corporation: Conducted Examination of Well in Karst Aquifer with High Concentration of Chlorides and Recommended New Source of Water from Adjacent Utilities.

Public Utility Commission of Texas

Director of Public Utilities

From November, 1975 through February, 1977, I was the Chief Administrative Officer of the Public Utility Commission (PUC). The PUC was created on September 1, 1975, and began regulating the rate and services of over 2,000 electric, telephone, water and sewer utilities on September 1, 1976. During my employment, the PUC went from an organization of administrative support personnel to a

functioning regulatory agency composed of accountants, attorneys, economists and engineers. The following summarizes my administrative responsibilities:

- (1) Hiring of Key Personnel
- (2) Hiring Facilities and Equipment
- (3) Establishing Administrative Procedures
- (4) Approving Expenditures
- (5) Contracting Company Officials to Resolve Consumer Complaints
- (6) Coordinating the Drafting of Substantive Rules to Regulate Rates and Services of Public Utilities

City of Las Cruces, New Mexico

Director of Utilities

From January, 1974 through October, 1975, I directed the planning engineering and operations of the municipal water, wastewater and natural gas systems, and I was Operations Manager for the Rio Grande Natural Gas Association. The following summarizes my administrative experiences:

- (1) Prepared and Administered \$5.3 Million Operations Budget
- (2) Administered Engineering Contracts for over \$3 Million in Capital Improvement
- (3) Supervised 130 Employees
- (4) Developed merit award system which doubled the number of certified operators, laboratory technicians and welders
- (5) Established Engineering Section
- (6) Developed an Accounting and Work Order System based upon Uniform System of Utility Accounting
- (7) Contracted for Engineering Work with Five Consulting Engineering Firms

The following summarizes my experience on the water distribution system:

- (1) Coordinated City Participation in Regional Study of Groundwater Resources by U.S. Geological Survey
- (2) Contracted for Wells in a New Field
- (3) Began Installation of Telemetry Equipment for Remote Monitoring and Operation

The following summarizes my experience on the natural gas distribution system:

- (1) Began Operation of Telemetry Equipment for Remote Monitoring and Operation
- (2) Began Installation of Cathodic Protection
- (3) Established Curtailment Allotments
- (4) Testified on Curtailment Problems before the Federal Power Commission and Committees of the New Mexico Legislature
- (5) Testified at Rate Hearing of the New Mexico Public Service Commission
- (6) Proposed Separation of Service Area Served by Dual Facilities of Two Companies

New Mexico State University

Department of Civil Engineering

From September, 1967 through August, 1971, I was an Assistant Professor. From September, 1971 through January, 1975, I was an Associate Professor with tenure. From January, 1975, through December, 1975, I was an Adjunct Associate Professor. The following summarizes my teaching experiences:

- 1) Teaching of Graduate Courses in

- (a) Water Resources Engineering
 - (b) Open Channel Hydraulics
 - (c) Groundwater Hydrology
 - (d) Surface Water Hydrology
 - (e) Introduction to Research (Statistics, Regression Analysis, Dimensional Analysis, Nomography)
- 2) Teaching of Undergraduate Courses in
- (a) Hydraulics
 - (b) Advances Hydraulics
 - (c) Groundwater Hydrology
 - (d) Sanitary Engineering
 - (e) Strength of Materials
 - (f) Statics
 - (g) Introduction to Engineering II (Slide Rule Operations and FORTRAN Programming)
- 3) Advisory Duties
- (a) 20 Undergraduate Students per year
 - (b) 8 EPA Graduate Traineeships per year
 - (c) Directed program of Study for 5 M.S. Students
 - (d) Directed program of Study for 2 Sc. D. Students
 - (e) Participated on 22 Thesis Review Committees

The following summarizes my research experiences:

- Grant on Flood Control Planning in New Mexico
- Grant on Water Utilization of Rio Grande to analyze Economic Impact of Water Use Alternatives
- Supervised Thesis Research in Groundwater Modeling, Recharge Wells, Dispersion Analysis, Water Quality Modeling and Flooding in Detroit
- Management of \$292,777 in Grant Funds from 1969 through 1974

The following summarizes my service activities:

- Delegate to UCOWR from 1970 through 1975; Chairman of Committee on Education and Research in Water Resources Engineering
- Chairman of Technical Advisory Committee of Southern Rio Grande Council of Governments for performing A-95 Reviews
- Member of New Mexico Water Conference Planning Committee
- Member of New Mexico Land Use Conference Planning Committee
- Consultant to Elephant Butte Irrigation District
- New Mexico Delegate to O.W.R.R. Conferences to Establish Research Priorities for Southern Plains and Great Basin Regions
- Director for Developing Curriculum and Writing Grant Proposal for Training Program of Water and Wastewater Utility Operators which was created in the College of Continuing Education

University of Texas, 1966-1967

Research Engineer Assistant

- Toledo Bend Dam Model Study. I supervised the construction of the model, conducted the tests and evaluated the data. 1964.
- Wind Wave Flume. I designed and built the flume, conducted tests on overtopping of seawalls and evaluated the test data. 1964.

Thomas G. Gebhard, Jr., P.E., PhD

- 3 Teaching Associate. I taught the undergraduate civil engineering course of Fluid Mechanics. 1966.
- 3 Dispersion in Reservoirs, I performed field tests using tracers in Lake Travis. Using numerical analysis techniques, I solved the two dimensional convective dispersion equation explicitly, implicitly and characteristically.

Dr. Frank D. Masch, 1963

Consultant

Performed the engineering analysis for a water well for the Austin Country Club.

U.S. Geological Survey, 1960-1963

Hydraulic Engineer

Performed field duties of streamflow measurement and streamflow station maintenance.

Trending Comments for Inline Utilities

Various groups and agencies compile construction cost indices, in which materials, labor, equipment, overhead, and profit are summarized into an index number that is a percentage ratio between the cost of an item at any stated time and its cost at a base period. These cost indices are sometimes referred to by their functional use -- trending indices. Because these construction indices relate construction costs to the same base period, indices can be used to relate costs from one time period to another time period by their ratio. Thus, known construction costs from an earlier period can be used to estimate construction costs at a later time period or from a later date to an earlier period. Three separate indices for this study for Inline Utilities: (1) Handy-Whitman Index of Water Utility Construction Costs for the South Central Region (Region 4); (2) the ENR (formerly Engineering News Record) Index of Building Cost Trends; and (3) the Bureau of Reclamation Construction Cost Trends.

The Handy-Whitman Index was the primary reference source used for this study because utility regulators and the industry routinely accept it. The Handy-Whitman Index is commonly used in Texas ratemaking dockets. Whitman, Requardt and Associates from Baltimore, Maryland, prepare the Handy-Whitman Index for six different geographical regions of the United States. For wastewater treatment facilities and fencing, the Building Cost Index of ENR is the most suitable alternative when the Handy-Whitman Index is not applicable. The ENR Building Cost Index is preferable to the ENR Construction Cost Index because it has a slightly lower inflation rate. The U.S. Bureau of Reclamation Construction Cost Trends Index is used for land costs and other specialized items not covered by the Handy-Whitman Index and the ENR Building Cost Index.

The three indices exist in tabular form by utility item and dates. The Handy-Whitman Index is through a copyrighted, subscription service available at <https://www.wrallp.com/about-us/handy-whitman-index>. The ENR Building Cost Index is available through http://www.enr.com/economics/historical_indices. The U.S. Bureau of Reclamation Construction Cost Trends Index is located at <http://www.usbr.gov/tsc/techreferences/mands/cct.html>. A list of which index and asset type was used for each class of item is attached to these comments.

To estimate the original cost of an item, one uses the replacement cost of the item for current date, and multiplies that cost by the ratio of the trending index of the installation date to the

trending index of the current date. The resulting value is an appropriate estimate of the original cost of the utility asset:

$$\text{Original Cost} = \frac{\text{Installation Index Value}}{\text{Current Index Value}} \times \text{Replacement Cost}$$

For example, to estimate the original purchase price of 8" plastic pipes with a current replacement cost of \$58,560 and an installation date of 6/1/2000, you must first determine the correct index to use for the item. In this case, the Handy-Whitman Index is appropriate, specifically the line for PVC Mains. The current index value for PVC Mains is 338 and the index value for the installation date is 201. The original cost of \$58,560 is multiplied by the ratio of the two trending values in order to come up with an original cost of \$34,824.

$$\$34,824 = \frac{201}{338} \times \$58,560$$

Similarly for land, if the current cost is estimated to be \$111,400 and the ratio of the applicable USBR trending ratios is 209/618, the estimate of the original purchase price is \$37,674. The estimated original costs determined by the trending study are then depreciated to find the net value of the assets at the end of the Inline Utilities' test year.

Asset Type	Index Used	Index Line No.	Index Category Description
Fencing	Engineering News Report	N/A	Building Cost Index History
Building - Wood	Handy Whitman - Water	8	Pumping Plant Structures and Improvements
Building - Metal	Handy Whitman - Water	8	Pumping Plant Structures and Improvements
Wells	Handy Whitman - Water	2	Collecting & Impounding Res.
Pump <= 5hp	Handy Whitman - Water	9	Electric Pumping Equipment
Pump > 5hp	Handy Whitman - Water	9	Electric Pumping Equipment
Pressure Tanks	Handy Whitman - Water	23	Steel Reservoirs
Ground Storage Tanks	Handy Whitman - Water	23	Steel Reservoirs
Distribution System	Handy Whitman - Water	38	PVC Mains
Meters and Services	Handy Whitman - Water	39	Services Installed
Misc. - Electrical	Handy Whitman - Water	9	Electric Pumping Equipment
Misc. - Diesel Generator	Handy Whitman - Materials	50	Construction Equipment
Misc. - Chlorinators	Handy Whitman - Water	17	Small Treatment Plant Equipment
Misc. - Yard Piping	Handy Whitman - Water	34	Mains - Average all Types
Collection System	Handy Whitman - Water	34	Mains - Average all Types
Sewer Service	Handy Whitman - Water	39	Services Installed
Plant - Sewer	Engineering News Report	N/A	Building Cost Index History
Lift Station	Handy Whitman - Water	34	Mains - Average all Types
Land	U.S. Bureau of Reclamation	LS1	Land - Texas

Exhibit 2

Photographs of Inline System

