FedEx Kinko's
Office and Print Center

715 CENTRAL EXPY S.
ALLEN, TX 75013

ocation: DNEKK
levice ID: DNEKK-POS1
:mployee: 541676
Transaction: 250061196858

PRIORITY OVERNIGHT
860419097926 28.10 lb (S) $51.97

Shipment subtotal: $51.97

Total Due: $51.97

(A) CreditCard: $51.97
**********23002

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

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March 29, 2007 2:28:31 PM

14 1909 7926

•1972 1603 6653

33
Dept./Floor/Suite/Room

ZIP 76034 75244

903 984 0551

Dept./Floor/Suite/Room

75662

Sender's Copy

4a Express Package Service — Packages up to 150 lbs.

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service — Packages over 150 lbs.

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation. ** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment Bill to: Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [X] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. — Exp. Date

Total Packages | Total Weight | Total Declared Value† $ .00 | FedEx Use Only

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

8 NEW Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Anyone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, anyone at a neighboring address may sign for delivery. Fee applies.

520

Rev. Date 8/06 Part #150231-©1994-2006 FedEx PRINTED IN U.S.A. SRY

DDU008183

FedEx Express US Airbill

FedEx Tracking Number 8604 1909 7948

Sender's Copy

From *Please print and press hard.*

Date 2/30/07 Sender's FedEx Account Number

Sender's Name R. MEHTA Phone (972) 603-6653

Company MWB GROUP

Address 4141 BLUE LAKE STE 133

Dept./Floor/Suite/Room

City DALLAS State TX ZIP 75244

Your Internal Billing Reference OPTIONAL
First 24 characters will appear on invoice.

To

Recipient's Name RECEIVING Phone (903) 984-0551

Company ANA-LAB

Recipient's Address 2600 DUDLEY RD
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address
To request a package be held at a specific FedEx location, print FedEx address here.

City KILGORE State TX ZIP 75622

4a Express Package Service *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

* Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [X] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. 3731228548 23007 Exp. Date 9/10

Total Packages	Total Weight	Total Declared Value†
		$ 0.00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability. FedEx Use Only

8 *NEW* Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [X] Direct Signature — Anyone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, anyone at a neighboring address may sign for delivery. Fee applies.

520

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DDU008184

enterprise

INVOICE

PAGE 1 of 4

659TXFAL08

OWNER OF VEHICLE: ENTERPRISE RENT-A-CAR COMPANY OF TEXAS
BRANCH ADDRESS: 3600 PRESIDENTIAL BLVD STE 214 512 536-8100
AUSTIN TX 78719-2365

MO 6:30A-11:59P TU 6:30A-11:59P
WE 6:30A-11:59P TH 6:30A-11:59P
FR 6:30A-11:59P SA 6:30A-11:59P
SU 6:30A-11:59P

RENTAL AGREEMENT NO D 892972

RENTAL TYPE R SOURCE# NATRES I.D. # 799

RENTER BRASHEAR* KIMBERLIE*

[redacted]

DAY = 24 HOUR PERIOD
NO CHARGE FOR MILES

HOURS @ 3.00/HOUR
DAYS @ 18.49/DAY

+CFC FEE 1.95 DAY

DW 14.99/DAY

PAI/PEC 5.00/DAY

SLP 12.99/DAY

FUEL @ 3.19/GALLON

*TX REMB 1.50DAY
AF ACCES
AT 11.110%

GPS 7.95/Day

MTR VH TX 15.[illegible]%

DATE OUT: 0728 AM 4/06/07
START CHARGES IF DIFFERENT

ORIGINAL VEHICLE

COLOR: S. GRY LICENSE NO.: 658SVW
MODEL: CAR: DR2382

MILEAGE IN:
MILEAGE OUT: 64547
DRIVEN:

CONDITION AGREED TO: X RENTER KWB

NO DAMAGE

X= DENT -- = SCRATCH O= MISSING

OUT E 1/8 1/4 3/8 1/2 5/8 3/4 7/8 F
IN E 1/8 1/4 3/8 1/2 5/8 3/4 7/8 F

BILL TO: COMPANY N
ATTN: PHONE EXT.
REFERENCE NUMBER: SCAR

ADDITIONAL AUTHORIZED DRIVER(S) - EXCEPT AS REQUIRED BY LAW, NONE PERMITTED WITHOUT OWNER'S WRITTEN APPROVAL.
I REQUEST OWNER'S PERMISSION TO ALLOW NO OTHER DRIVER PERMITTED

[redacted]

WHO IS UNDER MY CONTROL AND DIRECTION TO DRIVE VEHICLE FOR ME AND ON MY BEHALF. I AM RESPONSIBLE FOR THEIR ACTS WHILE THEY ARE DRIVING, AND FOR FULFILLING TERMS AND CONDITIONS OF THIS RENTAL AGREEMENT (AGREEMENT). USE OF VEHICLE BY AN UNAUTHORIZED DRIVER WILL AFFECT MY LIABILITY AND RIGHTS UNDER THIS AGREEMENT
RENTER: X [signature]

PERMISSION GIVEN TO USE VEHICLE ONLY IN THE STATE OF RENTAL AND THE FOLLOWING STATE(S):
TX ONLY NO SHP
OPERATION IN ANY OTHER STATE OR COUNTRY WILL AFFECT YOUR LIABILITY AND RIGHTS UNDER THIS AGREEMENT.

NOTICE: YOUR RENTAL AGREEMENT OFFERS, FOR AN ADDITIONAL CHARGE, AN OPTIONAL WAIVER TO COVER ALL OR A PART OF YOUR RESPONSIBILITY FOR DAMAGE TO OR LOSS OF THE VEHICLE. BEFORE DECIDING WHETHER TO PURCHASE THE WAIVER, YOU MAY WISH TO DETERMINE WHETHER YOUR OWN AUTOMOBILE INSURANCE OR CREDIT CARD AGREEMENT PROVIDES YOU COVERAGE FOR RENTAL VEHICLE DAMAGE OR LOSS AND DETERMINE THE AMOUNT OF THE DEDUCTIBLE UNDER YOUR OWN INSURANCE COVERAGE. THE PURCHASE OF THE WAIVER IS NOT MANDATORY. THE WAIVER IS NOT INSURANCE.

RENTER DECLINES OPTIONAL DAMAGE WAIVER (DW) AND ASSUMES DAMAGE RESPONSIBILITY. SEE PAGE 2, PARAGRAPH 6. RENTER: X KWB	RENTER ACCEPTS OPTIONAL DAMAGE WAIVER (DW) AT FEE SHOWN IN COLUMN TO RIGHT. SEE NOTICE TO LEFT AND PAGE 3, PARAGRAPH 16. DW IS NOT INSURANCE. RENTER: X
RENTER DECLINES OPTIONAL PERSONAL ACCIDENT INSURANCE COVERAGE/PERSONAL EFFECTS COVERAGE (PAI/PEC). RENTER: X KWB	RENTER ACCEPTS OPTIONAL PERSONAL ACCIDENT INSURANCE COVERAGE/PERSONAL EFFECTS COVERAGE (PAI/PEC) AT FEE SHOWN IN COLUMN TO RIGHT. SEE PAGE 3, PARAGRAPH 18. RENTER: X
RENTER DECLINES OPTIONAL SUPPLEMENTAL LIABILITY PROTECTION (SLP). SEE PAGE 2, PARAGRAPH 7 RENTER: X KWB	RENTER ACCEPTS OPTIONAL SUPPLEMENTAL LIABILITY PROTECTION (SLP) AT FEE SHOWN IN COLUMN TO RIGHT. SEE NOTICE BELOW AND PAGE 3, PARAGRAPH 17. RENTER: X

ACKNOWLEDGMENT OF THE ENTIRE AGREEMENT, WHICH CONSISTS OF PAGES 1 THROUGH 4.
BY SIGNING BELOW I AGREE TO THE TERMS AND CONDITIONS ON PAGES 1 THROUGH 4 OF THIS AGREEMENT AND [illegible]. BY SIGNING BELOW I AM THE "RENTER" UNDER THIS AGREEMENT. BY SIGNING BELOW, I AM AUTHORIZING [illegible] TO PROCESS CHARGES ON MY CREDIT CARD(S) AND/OR DEBIT CARD(S) FOR ADVANCE DEPOSITS, [illegible] AUTHORIZATIONS/DEPOSITS, AND CHARGES INCURRED, AS WELL AS PAYMENTS REFUSED BY A [illegible] TO WHOM BILLING WAS DIRECTED. I CERTIFY THAT THE DRIVERS LICENSE(S) PRESENTED AS [illegible] HAVE NOT BEEN SUSPENDED, EXPIRED, REVOKED, CANCELLED OR SURRENDERED.

RENTER: X [signature] DATE 4/06/07

OWNER REP X [signature] EMPL # 57004

REPLACEMENT VEHICLE

DATE OUT:
COLOR LICENSE NO.
MODEL CAR#
MILEAGE IN:
MILEAGE OUT:
DRIVEN:

CONDITION AGREED TO: X RENTER

NO DAMAGE

X= DENT -- = SCRATCH O= MISSING

I WILL RETURN CAR BY: DATE	TIME	DEPOSIT(S): AMOUNT	PAID BY
4/07/07	09:00F	200.00	XXXXXXXXXXXX6173 VIAUTH

NOTICE: YOUR PERSONAL AUTOMOBILE INSURANCE MAY PROVIDE COVERAGE FOR YOUR LIABILITY WHILE OPERATING A RENTAL VEHICLE. THE PURCHASE OF SLP IS NOT REQUIRED AS A CONDITION OF RENTING AN AUTOMOBILE. THIS INSURANCE DOES NOT APPLY TO ANY BODILY INJURY OR PROPERTY DAMAGE ARISING OUT OF THE USE OF A RENTAL VEHICLE BY ANY DRIVER WHILE UNDER THE INFLUENCE OF DRUGS OR ALCOHOL IN VIOLATION OF THE LAW. THE RENTAL CAR COMPANY'S EMPLOYEES, AGENTS OR ENDORSEES ARE NOT QUALIFIED TO EVALUATE THE ADEQUACY OF THE RENTER'S EXISTING COVERAGE.

ADDITIONAL INFORMATION
**TEXAS PROP TAX, TITLE &

TOTAL CHARGES
DEPOSITS DDU008185
REFUNDS
AMOUNT DUE
CLOSED BY
PAID BY CASH CHECK CHARG

Expense Report

Name John Hoffmann
Department
Period 3/30/2007 to 3/302007
Per Mile Reimbursement 0.485
Total Reimbursement Due $188.79

Date Submitted 16-Apr
Authorized by CRM

Date	Description of Expense	Supplies	Phone	Meals & Tips	Services (printing/ copying etc.)	Miles (Personal Car Only)	Mileage Reimbursement	Miscellaneous	U.S. $
3/30/2007	To Rock Creek	$9.82				183	$88.76		$98.58
3/31/2007	To Rock Creek					186	$90.21		$90.21
							$0.00		$0.00
							$0.00		$0.00
							$0.00		$0.00
							$0.00		$0.00
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							$0.00		$0.00
							$0.00		$0.00
							$0.00		$0.00
							$0.00		$0.00
							$0.00		$0.00
TOTAL		**$9.82**	**$0.00**	**$0.00**	**$0.00**	**369**	**$178.97**	**$0.00**	**$188.79**

DDU008186

DDU008187

WAL★MART

ALWAYS LOW PRICES.

Always.

6001 N.CENTRAL EXPRESSWAY
PLANO, TEXAS 75023
MANAGER MIKE CARROLL
(972) 422 - 3000
WE SELL FOR LESS

ST# 1117 OP# 00004381 TE# 27 TR# 09009

GV FRZ GAL30	007874209539	2.16 X
COOLER	007707100062	5.27 X
10 LB ICE	000000003207KF	1.64 T
	SUBTOTAL	9.07
TAX 1	8.250 %	0.75
	TOTAL	9.82
	CASH TEND	20.82
	CHANGE DUE	11.00

ITEMS SOLD 3

TC# 3357 5515 5370 0791 0939

New! Olay Definity UV Foam & Cleansers

03/30/07 10:20:07

SOAH DOCKET NO. 582-09-4288
TCEQ DOCKET NO. 2009-0505-UCR

APPLICATION OF DOUBLE DIAMOND UTILITIES COMPANY, INC. TO CHANGE WATER RATE TARIFF FOR SERVICE IN HILL, PALO PINTO, AND JOHNSON COUNTIES	§	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

WHITE BLUFF SUBDIVISION RATEPAYERS EXHIBIT LIST AS OF MARCH 29, 2010

Number	Description
WBSR-1	Direct Testimony of Nelisa Heddin
WBSR-2	Resume of Nelisa Heddin
WBSR-3	Previous Rate Case Order
WBSR-4	Tables from Application
WBSR-5	Excerpt from AWWA M1 Manual
WBSR-6	Excerpt from 2006 Application
WBSR-7	Price Quote for Pipe
WBSR-8	Price Quote for Pipe
WBSR-9	Price Quote for Pipe
WBSR-10	Price Quote for Pipe
WBSR-11	Retreat Trending Analysis
WBSR-12	White Bluff Trending Analysis
WBSR-13	Handy Whitman Index
WBSR-14 to WBSR-31	Invoices for Purchase of Pipe
WBSR-32 to WBSR-47	Invoices for Installation of Pipe
WBSR-48 to WBSR-74	Accounts Payable Coding Forms and Check Stubs
WBSR-75 to WBSR-82	Accounts Payable Coding Forms
WBSR-83	Generation of Revenue for Various White Bluff Rates

SOAH DOCKET NO. 582-09-4288
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APPLICATION OF DOUBLE DIAMOND UTILITIES COMPANY, INC. TO CHANGE WATER RATE TARIFF FOR SERVICE IN HILL, PALO PINTO, AND JOHNSON COUNTIES	§ § § § § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS

DIRECT TESTIMONY

OF

NELISA HEDDIN

FOR WHITE BLUFF SUBDIVISION RATEPAYERS

MARCH 29, 2010

WBSR-1

DIRECT TESTIMONY OF NELISA HEDDIN
TABLE OF CONTENTS

EXHIBIT LIST

I. QUALIFICATIONS AND EXHIBITS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Nelisa Heddin. My business address is 1617 W. Koenig Lane, Austin, TX 78756.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am the Vice President of Water Resources Management, L.P. I have served in this role since 2003. Prior to this time, I served as a financial, economic and management consultant for Reed, Stowe & Yanke, LLC. My resume detailing all of my relevant work experience is attached as Exhibit WBSR-2.

Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS VICE PRESIDENT OF WATER RESOURCES MANAGEMENT, L.P.

A. My responsibilities include performing cost of service and rate design studies for water, wastewater, solid waste, and electric utilities throughout the country having operating budgets ranging from $150,000 to $100,000,000. Some examples of cities where I have provided consulting services include the Cities of Missouri City, Richmond, Bonham, Pecos, Pflugerville, and Horseshoe Bay.

Q. PLEASE OUTLINE YOUR EDUCATIONAL AND PROFESSIONAL QUALIFICATIONS.

A. I hold a Bachelors of Science degree in Biology from New Mexico State University. I have a Masters of Business Administration from New Mexico State University with a concentration in Finance. I am a member of American Water Works Association ("AWWA"). Further, I am the current Chair of the Texas Section AWWA Rates and Charges Subcommittee, working to provide educational insight on rate and financial issues facing water utilities in the State of Texas. I have been invited to speak at industry functions ranging from the Government Financial Officers Association of Texas, the Texas and Southwest Sections AWWA, as well as for Incode, Inc. Because of my background and experience, I have a broad understanding of the water, wastewater and solid waste utilities industries including issues associated with water supply, system capacity, operational issues, rate design and financial implications. I have been performing cost of service and rate design studies since 2000.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN ANY RATE PROCEEDINGS?

A. Yes. In 2009, I testified on behalf of the White Bluff Subdivision Ratepayers in the *Application of Double Diamond Utilities Company, Inc., CCN No. 12087, to Change its Water Rates and Tariff in Hill, Palo Pinto, and Johnson Counties*, SOAH Docket No. 582-08-0698, TCEQ Docket No. 2007-1708-UCR. A copy of the final order in that proceeding is provided as Exhibit WBSR-3.

Q. PLEASE DESCRIBE YOUR ROLE IN THAT PROCEEDING.

A. The White Bluff Subdivision Ratepayers challenged the water rate increases requested by Double Diamond Utilities Company, Inc., the same utility requesting rate increases in this proceeding. I provided testimony demonstrating that the water rate increases were not just and reasonable and recommended that lower rates be adopted.

Q. WHAT WAS THE OUTCOME OF THAT PROCEEDING?

A. The TCEQ rejected the water rate increases requested by the utility.

Q. HAVE YOU ASSISTED WITH OTHER RATE CASE PROCEEDINGS IN THE PAST?

A. Yes. I have also assisted other utilities and customer groups in rate cases which ultimately were resolved during mediation negotiations.

Q. DO YOU BELIEVE YOUR EXPERIENCE AND EDUCATION QUALIFY YOU TO TESTIFY AS AN EXPERT IN THIS CASE?

A. Yes.

Q. WHY DO YOU BELIEVE YOU ARE QUALIFIED TO TESTIFY AS AN EXPERT IN THIS PROCEEDING?

A. As I explained above, I have extensive experience analyzing revenue requirements and designing rates for entities providing water and wastewater service.

Q. PLEASE IDENTIFY ALL EXHIBITS THAT YOU ARE SPONSORING.

A. I am sponsoring the following exhibits:

WBSR-1	My Testimony
WBSR-2	My Resume
WBSR-3	Previous DDU Water Rate Case Order
WBSR-4	Tables from Application
WBSR-5	Excerpt from AWWA M1 Manual
WBSR-6	Excerpt from 2006 Application
WBSR-7	Price Quote for Pipe
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WBSR-75 through WBSR-82	Accounts Payable Coding Forms
WBSR-83	Generation of Revenue for Various White Bluff Rates

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS TESTIMONY?

A. I am testifying on behalf of the White Bluff Subdivision Ratepayers (the "WBSR").

Q. PLEASE SUMMARIZE THE PURPOSE OF YOUR TESTIMONY.

A. The purpose of my testimony is to describe the issues I have found in Double Diamond Utilities Company, Inc.'s ("DDU") rate application filed in this docket on October 24, 2008 (the "Application") and DDU's direct case (testimony and exhibits) filed in this docket on March 1, 2010. My analysis of these issues demonstrates that the rates requested by DDU in its Application, and later revised in its direct case, are not just and reasonable.

Q. PLEASE PROVIDE A BRIEF SUMMARY OF THE TOPICS YOU WILL DISCUSS IN YOUR TESTIMONY.

A. In my testimony, I will to address the following topics:

- DDU's failure to adopt separate revenue requirements and rates for each system despite the systems being substantially dissimilarity in terms of age, size, type of development served, source of water, and, most importantly, cost of service (with dissimilarities persisting over time);

- DDU's inappropriate use of a regulatory asset to cover shortfalls in operating expenses from years past;
- DDU's inappropriate use of an asset trending analysis in its direct case in order to inflate asset value over the stated value in the Application;
- Disallowance of DDU's rate case expenses;
- My recommendations for developing just and reasonable rates via a separate revenue requirement for the White Bluff Subdivision system.

Q. WHAT DOCUMENTS DID YOU REVIEW IN PREPARATION FOR YOUR TESTIMONY?

A. I reviewed the Application, DDU's direct case, documents on file with the TCEQ from DDU's prior water rate case, documents provided by DDU in discovery, relevant Texas statutes and TCEQ rules, and AWWA's Principles of Water Rates, Fees and Charges (also known as the "M1 Manual").

III. DISSIMILARITY OF DDU'S SYSTEMS AND THE NEED FOR SEPARATE REVENUE REQUIREMENTS AND RATES FOR EACH SYSTEM

A. BACKGROUND

Q. ARE YOU FAMILIAR WITH TEXAS WATER CODE SECTION 13.145?

A. Yes, I am.

Q. PLEASE STATE, ACCORDING TO THE TEXAS WATER CODE, WHAT REQUIREMENTS YOU BELIEVE MUST BE MET FOR A UTILITY TO CONSOLIDATE MULTIPLE SYSTEMS UNDER ONE RATE?

A. Texas Water Code Section 13.145 specifically states:

> "A utility may consolidate more than one system under a single tariff only is:
> (1) the systems under the tariff are substantially similar in terms of facilities, quality of service, and cost of service and;
> (2) the tariff provides for rates that promote water conservation for single-family residences and landscape irrigation."

Q. DO YOU BELIEVE ANY OF THE THREE SYSTEMS AT ISSUE IN THIS PROCEEDING MEET THESE REQUIREMENTS?

A. No, I do not. All three systems fail in the test of substantial similarity with respect to each other.

Q. IN WHAT WAYS ARE THESE THREE SYSTEMS DISSIMILAR?

A. As I will discuss in great detail later in my testimony, these systems are dissimilar in many aspects, including the following: age, size, type of development served, sources of water and cost of service.

Q. WHAT IS YOUR UNDERSTANDING OF THE FINAL ORDER ATTACHED AS EXHIBIT WBSR-3 WITH RESPECT TO SIMILARITY OF THE THREE SYSTEMS AT ISSUE IN THIS PROCEEDING?

A. The order states in Finding of Fact No. 43 that the three systems are different in terms of age, size, type and layout of development served, cost of service and sources of water.

Q. DO YOU AGREE WITH THAT FINDING?

A. Yes.

Q. TO YOUR KNOWLEDGE, HAS ANYTHING CHANGED REGARDING THE ABOVE-MENTIONED DIFFERENCES IN THE TIME FRAME SINCE THE INCEPTION OF THAT CASE?

A. No.

B. DISSIMILARITIES: AGE, SIZE, TYPE OF DEVELOPMENT SERVED, SOURCES OF WATER, AS DISCUSSED IN DDU'S PRIOR RATE CASE

Q. IN YOUR OPINION, ARE THE THREE SYSTEMS AT ISSUE IN THIS PROCEEDING SUBSTANTIALLY SIMILAR IN TERMS OF AGE, SIZE, TYPE OF DEVELOPMENT SERVED, AND SOURCES OF WATER?

A. No, they are not. The TCEQ already found that the three systems were not substantially similar in terms of age, size, type of development served, and sources of water in DDU's prior rate case. The systems have not changed significantly since that time. Although there have been instances of cross-subsidization between the groundwater and surface water systems; it appears that DDU now acknowledges that the Cliffs is very different

from the groundwater systems and must be fully separated for ratemaking purposes. I will, therefore, focus on the differences between the two groundwater systems. The Retreat and White Bluff systems are very different from each other even though they are both groundwater systems. The two systems are dissimilar in their treatment process, which requires different facilities. The Retreat uses hypo-chlorination, and White Bluff uses gaseous chlorination. According to DDU asset records, the first purchase of White Bluff assets was in 1990, and the first purchase of assets for the Retreat was in 2003, making them quite different in age. Being at different stages in their life cycle, they will require different levels of maintenance; impacting the cost of service of the utilities. Additionally, the rate base which can be included in the rate of return calculation is impacted by the age of the system. Newer systems typically cost more than older systems as a result of inflation. The accumulated depreciation of an older system will reduce the net book value of an asset, which also impacts the rate base that can be included in the rate of return calculation. Thus, with such a difference in age, these systems will continue to be dissimilar, even when viewed over time. As can be seen in Mr. Ekrut's testimony, they have also experienced a vastly different build out rates. As a result of all of these differences, these systems have significantly different costs of services, currently, and, more importantly, will continue to have significantly different costs of service in the future. I will discuss this in much more detail below.

C. DISSIMILARITY: COST OF SERVICE

Q. IN YOUR OPINION, ARE THE RETREAT AND WHITE BLUFF SYSTEMS SUBSTANTIALLY SIMILAR IN TERMS OF COSTS OF SERVICE?

A. No, in my opinion, they are not substantially similar in terms of costs of service. The TCEQ already found that the three systems were not substantially similar in terms of cost of service in DDU's last rate case. The systems have not changed significantly since that time. I will, however, provide additional detail in terms of the ongoing dissimilarity of the systems in my testimony today.

Q. IN ORDER TO ASSESS COST OF SERVICE AND SUBSTANTIAL SIMILARITY WHAT KINDS OF THINGS DO YOU CONSIDER?

A. I look at the actual costs; which I examine both currently as well as over-time (to the extent possible). I also examine the cost drivers and how they are influenced over time. There are certain drivers to the costs that must be examined. These cost drivers include, but are not limited to:

- System size,
- System density,
- Full time population of the community,
- Water Usage,
- System water loss, and
- Variable costs of producing the water.

Q. CAN YOU PLEASE DESCRIBE THE CURRENT CUSTOMERS AND THE BUILD-OUT CUSTOMERS OF THESE TWO SYSTEMS?

A. At the end of 2007, there were 562 customers at White Bluff and only 60 customers at the Retreat (Gracy Direct, 5/5). At final build-out, the White Bluff system will serve approximately 7,000 lots while the Retreat system will serve approximately 5,200 lots (Gracy Direct, 4/23-24). Currently, there are approximately eight times more customers at White Bluff than at the Retreat. Even at build out, the White Bluff system will ultimately be more than 25% larger than the Retreat. Table 1 illustrates this.

TABLE 1: Comparison of White Bluff and Retreat Subdivisions

	White Bluff	Retreat	Variance	% Variance
Active Connections as of December 2007	562	60	502	89.3%
Lots Served	6,314	1,931	4,383	69.4%
Build-Out Lots	7,000	5,200	1,800	25.7%

Q. CAN CURRENT CUSTOMERS SERVED AND ULTIMATE BUILD-OUT OF THE SYSTEMS IMPACT THE COST OF SERVICE?

A. Yes, it can influence the cost of service. A simple example would be that each system has one utility manager (Gracy Direct, 10/8-9). This means the salary for a utility manager will currently be spread over 562 active connections at White Bluff and only 60 active connections at the Retreat. At build-out, the Utility Manager's salary at each system

would still be spread over 7,000 lots at the White Bluff System and only 5,200 lots at the Retreat.

Q. WHAT KIND OF IMPACT COULD THIS HAVE?

A. Let's say for example (and for the sake of using round figures), the Utility Manager's net salary and benefits totals $100,000 at each system. In 2007, this would result in a net annual impact of $178 per customer at White Bluff and a net annual impact of $1,667 per customer at the Retreat. In looking at the build-out of the systems, then this would result in a net annual impact of $19 per customer at the Retreat, but the impact would only be $14 per customer at White Bluff at build-out. This difference in cost of service is not only illustrated in the differences in the cost for 2007, it will remain a difference, even when both systems reach full build-out.

Q. PLEASE DESCRIBE THE DENSITIES OF THESE TWO SYSTEMS.

A. White Bluff has 6,314 lots which are currently served (Gracy Direct, 4/18-19) spanning 2,918 acres; this computes to 2.16 lots per acre. In contrast, the Retreat currently has 1,931 lots spanning 1,145 acres; this computes to 1.69 lots per acre. Further, DDU projects the same density at build-out. Therefore, the White Bluff system is a denser community (more lots per acre) than the Retreat. Table 2 demonstrates these differences.

TABLE 2: Comparison of Density at the Retreat and White Bluff Subdivisions

	White Bluff	Retreat	Variance	% Variance
Current Lots Served	6,314	1,931	4,383	69.4%
Current Acres Served	2,918	1,145	1,773	60.8%
Current Lots Served per Acre	2.16	1.69	0.48	22.1%

Q. HOW COULD BUILD-OUT DENSITY IMPACT THE COSTS OF SERVICE?

A. While there are other factors that may be influenced by density (such as water loss), I will focus my discussion on required investment in the transmission and distribution system. Generally, the more houses per acre (the more dense), the less linear feet of pipe the utility will have to install to serve each connection. The less linear feet of pipe installed, the lower the investment, and thus, the lower the cost per connection. The lower investment in the transmission and distribution system leads to lower costs for depreciation expense and return on investment, two key components of cost of service.

This impact to similarity in cost of service would remain true not only for the current cost of service, but would also remain true upon ultimate build-out, meaning that the cost of the assets for the denser system (White Bluff) would always be substantially dissimilar than the cost of assets for the less dense system (Retreat).

Q. PLEASE DESCRIBE THE FULL TIME POPULATION OF THE TWO SYSTEMS.

A. According to Mr. Gracy, approximately 65% of White Bluff water customers are full time residents (Gracy Direct, 5/17) and approximately 90% of the Retreat water customers are full time residents (Gracy Direct, 6/21).

Q. DOES THE FULL-TIME NATURE OF THE RESIDENTS IMPACT COSTS OF SERVICE?

A. It does. When we have a portion of the population which are not full time residents, this impacts the water sold, and thus the source of revenue on the system. Exhibit WBSR-4 (Tables from the Application for Water Rate/Tariff Change) identifies certain cost categories which are fixed and variable costs. Table IX.A. computes the volumetric rate by dividing the variable costs by the gallons of water sold. Table IX.B. computes the minimum bill by dividing the fixed costs by the meter equivalents on the system. Therefore, fixed costs impact the minimum bill and variable costs impact the volumetric rate. As a result of this, fixed costs are spread to customers regardless of whether or not they are full time residents (assuming customers who are not full time residents still maintain water service and pay a minimum monthly bill).

In contrast, variable costs identified in the application are recovered through water consumption. Some variable cost categories, such as chemicals and electricity are direct variable costs meaning the amount of the commodity (chemicals or electricity) utilized is directly correlated to the amount of water produced. However, cost categories such as salaries and wages, contract labor, repairs and maintenance, office expenses, and miscellaneous are not directly correlated to the volume of water sold to customers. While these costs may increase slightly if the utility sold a greater volume of water, there likely would not be a direct correlation to the volume of water sold.

The AWWA M1 Manual provides the following discussion of fixed and variable costs:

"Variable costs are those costs that tend to vary directly with the volume of water produced. Examples of variable costs include chemicals used in treatment and the energy portion of the costs of power used in pumping. Water purchased on a charge per unit of volume basis is also a variable cost. Fixed costs are those capital and operating costs that remain relatively unchanged over a given operating period, such as a year. Fixed costs include virtually all capital costs such as debt service, or depreciation expense and return, as well as costs of operating and maintaining system facilities." (See Exhibit WBSR-5)

As a result, costs for categories such as salaries and wages, contract labor, repairs and maintenance, office expenses, and miscellaneous which are not directly correlated to the volume of water sold to customers are partially collected through the volumetric rate. Thus, due to the disproportionate nature of the full-time residents at each system, this would require the system with more full time residents to share a higher proportion of these costs of services as their residents utilize a higher volume of water. This is further amplified as DDU is seeking minimum bill rates which are lower than that determined on the base rate calculation in Table IX.B (See Exhibit WBSR-4), with the result that fixed costs are pushed into the volumetric rates. These fixed costs are disproportionately recovered by the full time residents. As the two systems have substantial differences in the amount of full time residents, this leads to substantial differences in costs of service between the two systems. Because these communities are likely to continue in their current levels of full time residents, there will always be substantial dissimilarity for each set of residents in how their water rates recover costs. This is just one way in which the costs of services of these two systems will always be dissimilar.

Q. PLEASE DESCRIBE THE WATER CONSUMPTION SEEN ON EACH SYSTEM?

A. In 2007, the Retreat sold a total of 15,631,760 gallons of water to an end customer count of 60 connections this yields an average usage per connection per month of approximately 21,711 gallons. In contrast, the White Bluff system sold a total of 73,795,744 gallons of water to an end customer count of 562 connections; which yields average usage per connection per month of 10,942 gallons. (Gracy Direct, 5/5-11 and Application, Attachment 11, Bates p. DDU000388). Meaning, Retreat water sales per connection, per month were nearly double of that observed at White Bluff. This

differential is likely related to the differential between full time and part time residents as previously discussed. It also may be related to, among other things, differences in lot sizes, landscaping, customers who may use their own wells for irrigation, household size, other non-residential connections on the system (such as the resorts, hotels, restaurants, golf courses, etc.), conservation mindedness of residents, and rainfall. Based on my review of these systems, I do not expect this difference in water sales per connection to change siginificantly in the future.

Q. PLEASE DESCRIBE HOW THIS DIFFERENCE CAN IMPACT COST OF SERVICE.

A. As I have described above, if DDU had designed its rates utilizing the methodology outlined in the Application on Tables IX.A. and IX.B (Exhibit WBSR-4), then cost categories of salaries and wages, contract labor, repairs and maintenance, office expenses, and miscellaneous, which are not directly variable to the volume of water sold, are included in the calculation of the volumetric rate. Thus, customers using more water would bear a greater proportion of these costs, even though they are not directly variable to the amount of water produced. Furthermore, as DDU has not requested rates which fully recover the fixed costs of services through the minimum bill, some of the fixed costs are being recovered through the volumetric rates. The rates thereby recover a higher proportionate share of the fixed costs from those customers who utilize more water. Because water use per connection is an ongoing difference in these systems, the only way to solve this subsidization problem is by having separate revenue requirements and rates for these two systems.

Q. PLEASE DESCRIBE THE WATER LOSS SEEN ON EACH SYSTEM.

A. As illustrated on the table below, the White Bluff system had a 31% lost and unaccounted for water (computed as the differential between water produced and water sold), while the Retreat had over 40% loss during the test year. Water loss, computed as the differential between water produced and water sold, can be caused by a variety of factors, including but not limited to, leaks in the transmission/distribution system, inaccurate metering, and system flushing. Table 3 compares water loss between the systems.

TABLE 3: Comparison of System Water Loss

	White Bluff	Retreat
2007 Water Production	107,384,900	26,174,400
2007 Metered Water Consumption	73,795,744	15,631,760
Variance	33,589,156	10,542,640
Percentage	**31.28%**	**40.28%**

Q. AND HOW CAN WATER LOSS IMPACT THE COSTS OF SERVICE?

A. I'd like to discuss four primary cost factors which may be influenced by water loss.

- The first is necessary future investment in the transmission and distribution system. Systems that have excessive water loss which is associated with line losses may eventually require future investment in those lines to repair the leaks.
- The second impact is investment in meters. Systems that have excessive "apparent" water loss due to metering inaccuracies (when the meters are not capturing all of the water a customer consumes) may require an extensive meter replacement program. Such a program would significantly impact the cost of investment.
- The next factor which is impacted through water loss is revenue recovery on the system. A system with excessive water losses which are associated with inaccurate meters, is not fully recovering its revenues. Thus, the resultant impact is billing units are understated and as a results, the volumetric rates increase.
- The forth impact is increased costs associated with producing water which is not sold to end users. Any water which is truly lost into the ground through leaks or flushing has been treated, and there is a cost associated with that. Specifically, the utility has incurred costs for chemicals and electricity which are direct variable costs. Thus, systems with a higher water loss will have higher total system costs.

As each system has a substantially different water loss, and we know water loss can have impacts to costs of service, it therefore stands to reason that due to the differences in water loss between these systems, there are substantial differences in cost of service. These differences are not likely to go away over time, resulting in different costs of service over time.

Q. PLEASE DISCUSS THE DIRECT VARIABLE SYSTEM COSTS OF THE TWO SYSTEMS AND HOW THEY CAN IMPACT COSTS OF SERVICE.

A. Virtually every water utility system uses chemicals to treat its water. Further, each must utilize electricity to pump the water out of the ground and then treat and distribute it to customers. I refer to these as direct variable costs, as they typically increase in direct correlation to the volume of water which is produced. Chemical costs may vary between systems due to differences in the volume of a particular chemical that is required to treat 1,000 gallons of water due to differences in the initial quality of the raw water quality as it is pumped out of the ground. Electricity purchase costs may vary depending on the electric supplier; dramatic differences may exist between electric providers for a kWh of service. A second influence to the system costs of electricity service is the amount of electricity a particular system must use in order to produce 1,000 gallons of potable water. Factors which may influence this are the depth of the wells, type and efficiency of pumps, etc.

Q. PLEASE DESCRIBE THE COMPONENTS OF COSTS OF SERVICE.

A. Cost of service is generally comprised of operations and maintenance expenses; and depreciation expense, reasonable rate of return, and income taxes (which are essentially linked to plant investment).

Q. IN YOUR OPINION, DO THE RETREAT AND THE WHITE BLUFF SYSTEMS HAVE SUBSTANTIALLY SIMILAR OPERATIONS AND MAINTENANCE COSTS OF SERVICE?

A. No, they do not. There are distinct differences that are present today, and I believe will continue to be present into the future. These include, but are not limited to:

- O&M costs associated with the position of Utility Manager, as described above. This differential in costs of service is currently experienced, and would continue to be experienced through build-out of the system.
- O&M costs associated with treating water which is lost into the system, as described above. As long as the water losses are still experienced, the costs associated with this loss would continue to be experienced.
- O&M costs which are not variable in nature; cost categories such as salaries and wages, contract labor, repairs and maintenance, office expenses, and miscellaneous - are not directly correlated to the volume of water sold to customers. According to the AWWA M1 Manual Fixed costs include "costs of

operating and maintaining system facilities." (Exhibit WBSR-5) As each system will naturally have these fixed costs and there are substantial differences in build-out, usage patterns of customers, and water loss, the cost to serve each customer, and the rates to recovery those costs, are going to also be substantially different. These differences not only exist today but will exist into the future.

- Direct variable O&M costs associated with chemicals and electricity, which I will describe below.

Q. YOU REFERRED TO CHEMICALS AND ELECTRICITY AS DIRECT VARIABLE COSTS. PLEASE ELABORATE ON THAT TOPIC.

A. As I described earlier, chemicals and electricity are generally considered direct variable costs. Therefore, as the system produces more water, the cost for these commodities will increase in direct proportion. In rate analysis, we therefore project future chemicals and electricity costs which may be associated with future growth, by computing the cost per thousand gallons produced in the test year. This is simply done by dividing the total cost by the total gallons produced, and multiplying that by 1,000 to arrive at a cost per thousand gallons. We then apply that cost per thousand gallons to the projection of future gallons produced. My experience has been that this approach is a fairly reliable way to project future costs for these direct variable costs. This analysis is also useful in evaluating the cost of service for two different utility systems as the cost is directly variable so items such as system growth will not influence the unit cost.

Q. HAVE YOU PERFORMED AN ANALYSIS OF THE CHEMICALS O&M COSTS FOR THESE TWO SYSTEMS?

A. Yes. I have. I divided the test year actual chemicals costs reported by DDU for both systems by the water produced by each system in 2007. I determined that the chemicals cost per thousand gallons produced was $0.037 for the White Bluff system, and the cost per thousand gallons was $0.041 for the Retreat system. Therefore, the chemicals expense for White Bluff are approximately 10% per thousand gallons less expensive than they are at the Retreat. This analysis is illustrated in Table 4 below.

TABLE 4: Comparison of Chemicals Cost of Service

	White Bluff	Retreat	Variance	% Variance
2007 Chemicals Expense	$3,980	$1,069		
2007 Water Production (thousand gallons)	107,385	26,174		
2007 Cost per Thousand Gallons	$0.0371	$0.0408	$(0.0038)	**-10.2%**

Q. HAVE YOU PERFORMED AN ANALYSIS OF THE UTILITY O&M COSTS FOR THESE TWO SYSTEMS?

A. Yes. Using the same approach as for the chemicals, I determined that the cost per thousand gallons for utility expenses for the White Bluff system was $0.7435, while the cost for the Retreat system was $0.9339 (Table 5). Therefore, the utility costs at the Retreat are more than 25% greater than the utility costs at White Bluff. This analysis is illustrated in Table 5 below.

TABLE 5: Comparison of Electricity Cost of Service

	White Bluff	Retreat	Variance	% Variance
2007 Chemicals Expense	$79,843	$24,444		
2007 Water Production (thousand gallons)	107,385	26,174		
2007 Cost per Thousand Gallons	$0.7435	$0.9339	$(0.1904)	**-25.6%**

Q. IN YOUR OPINION, ARE THE COSTS OF CHEMICALS AND ELECTRICAL O&M COSTS SUBSTANTIALLY SIMILAR FOR THESE TWO SYSTEMS?

A. No, they are not. As outlined in the in Table 6 below, the total chemicals and electricity cost per thousand gallons for 2007 at the Retreat was $0.9747 where as the cost per thousand gallons for 2007 at White Bluff was $0.7806. There is a very clear difference in the direct variable costs. As these are variable costs, they will not change on a per thousand gallon basis as the systems grow. Therefore, the substantial difference in cost will continue over time resulting in a perpetual difference in cost of service.

TABLE 6: Summary of Chemicals and Electricity Cost of Service

	White Bluff	Retreat	Variance	% Variance
Chemicals Cost per Thousand Gallons	$0.0371	$0.0408		
Electricity Cost per Thousand Gallons	$0.7435	$0.9339		
Total Chemicals and Electricity Cost per Thousand Gallons	$0.7806	$0.9747	$(0.1941)	**-24.9%**

Q. IN YOUR OPINION, DO THE RETREAT AND THE WHITE BLUFF SYSTEMS HAVE SUBSTANTIALLY SIMILAR DEPRECIATION EXPENSE, RETURN ON INVESTMENT AND INCOME TAX COSTS OF SERVICE?

A. No, they do not. There are distinct differences between the two systems which not only exist today, but will continue to exist over time as the systems grow.

Q. HOW ARE THE COSTS OF DEPRECIATION EXPENSE, RETURN ON INVESTMENT AND INCOME TAX COSTS OF SERVICE INFLUENCED?

A. Each of these costs of service is influenced by the total plant investment at each system. Annual depreciation expense is generally determined by dividing the total plant investment (less customer contributions of assets) by the average useful life for each individual asset category. Return on investment is generally determined by multiplying the net plant investment, adjusted for accumulated depreciation, (less customer and developer contributions of assets) by an expected rate of return. Finally income tax is a function of the return on investment and is thus correlated to the total plant investment. Therefore, if there are substantial differences in total plant investment between the systems, it follows that there will be substantial differences in costs of service for annual depreciation expense, return on investment and income taxes.

Q. PLEASE DESCRIBE THE AREAS IN WHICH THERE ARE SUBSTANTIAL DIFFERENCES IN TOTAL PLANT INVESTMENT BETWEEN THE TWO SYSTEMS.

A. Areas in which there are substantial differences in plant investment include, but are not limited to:

- Linear feet of pipe installed at each system
- Plant investment cited in Application

- Plant investment identified in trending analysis

Q. PLEASE DESCRIBE THE SUBSTANTIAL DIFFERENCES IN PLANT INVESTMENT AS ILLUSTRATED THROUGH THE LINEAR FEET OF PIPE INSTALLED AT EACH SYSTEM.

A. According to data presented by Ms. Harkins in her testimony, there are a total of 345,902 linear feet of pipe installed at White Bluff, and 121,159 linear feet of pipe installed at the Retreat (Gracy Direct, 4/18-19). Mr. Gracy stated that the White Bluff system serves 6,314 lots and the Retreat system services 1,931 lots (Gracy Direct, 4/18-19). As illustrated in Table 7 below, this means that the White Bluff system has approximately 55 linear feet of pipe installed per lot served, while the Retreat has approximately 63 linear feet of pipe installed per lot served. Therefore, the Retreat system has approximately 14% more linear feet of pipe installed per lot served than the White Bluff system. This is likely due to the system density issues I have previously described.

TABLE 7: Comparison of Linear Feet of Pipe Installed

	White Bluff	Retreat	Variance	% Variance
Linear Feet of Pipe Installed	345,902	121,159		
Lots Served	6,314	1,931		
Linear Feet per Lot Served	**54.78**	**62.74**	**(7.96)**	**-14.5%**

Q. CAN THIS SUBSTANTIAL DIFFERENCE IN LINEAR FEET OF PIPE INSTALLED AT EACH SYSTEM LEAD TO SUBSTANTIAL DIFFERENCES IN COSTS OF SERVICE?

A. Yes, if both systems had the same topography, the same technology, the same geology, were built in the same year, by the same contractor, (even though each of these factors also influence costs substantially if different) they would still have substantially different costs of construction per connection from one another simply due to the system density. Essentially, DDU has installed approximately 14% more linear feet of pipe at the Retreat System for every connection than it has at the White Bluff system. The cost of pipe and installation of pipe is influenced by linear feet of pipe installed; thereby leading to substantial differences in total plant investment for pipe installation, which leads to

substantial differences in costs of services for depreciation expense and return on investment.

Q. HAVE YOU REVIEWED ACTUAL COST DATA FOR TOTAL PLANT INVESTMENT FOR THE RETREAT AND THE WHITE BLUFF SYSTEMS?

A. Yes, I have. However, prior to discussing the differences between the total plant investment for each system, I first needed to identify which "total plant investment" is most appropriate to utilize in this analysis as there are significant discrepancies between the total plant investment stated in the original Application and what DDU later suggests as the total plant investment as a result of its trending analysis. I have summarized these discrepancies below:

TABLE 8: Comparison of White Bluff Total Plant Investment Stated on Application and that determined Through the Trending Analysis

	Application Stated	Trended Value	Variance	% Variance
Original Cost of Plant	$1,442,460	$3,080,532	$1,638,072	**113.6%**

As will be described in more detail later, DDU is now suggesting a net plant investment for the White Bluff system which is more than double that requested in the application. While WBSR maintains that DDU should not be allowed to request the higher plant investment than that described in its Application; I have presented my comparisons using both sets of numbers simply as a means to illustrate that regardless of which total plant investment is utilized, there are substantial differences in the total plant investment per lot each system services.

Q. PLEASE DESCRIBE THE DIFFERENCES BETWEEN ACTIVE CONNECTIONS, LOTS SERVED, AND BUILD-OUT OF THE TWO SYSTEMS.

A. Each system was built to serve a set amount of connections. Typically, in a planned development such as the Retreat and White Bluff, you have various phases – thus, the utility system is built for the active phases of development. Utilities will be built for future phases once those future phases go into construction. The system will have a planned build out (which would be achieved once all phases of construction have been completed). Also, each system will have an active connection count. The active

connections may be very different from the lots served as often you have lots which homes are not yet built and thus these lots do not yet have water utility services connected. Mr. Gracy stated the number of lots served by each utility, the number of active connections at the end of 2007, and the build out size of each development as cited below in Table 9 (Gracy Direct, 4 /18-19).

TABLE 9: Comparison of Lots Serviced, Build-Out Lots and Current Connections

	White Bluff	Retreat	Variance	% Variance
Active Connections as of December 2007	562	60	502	89.3%
Lots Served	6,314	1,931	4,383	69.4%
Build-Out Lots	7,000	5,200	1,800	**25.7%**

Q. WHEN LOOKING AT THE IMPACT THAT TOTAL PLANT INVESTMENT HAS ON COST OF SERVICE, DO YOU EXAMINE THE COST OF THE PLANT INVESTMENT FOR CURRENT CONNECTION COUNT, LOTS SERVED, OR BUILD-OUT?

A. In my opinion, you should look at plant investment per current connection as well as plant investment per lot served. The total plant investment per current connection provides a summary of the differences in cost of service today. This indicates the degree to which cross-subsidization between systems would exist for current customers and the costs today. However, if you want a picture of whether substantial similarity in costs will exist over time, you will need to look at the total plant investment per lot served.

Q. WHY WOULD YOU LOOK AT TOTAL PLANT INVESTMENT PER LOT SERVED RATHER THAN TOTAL PLANT INVESTMENT PER BUILD-OUT?

A. You would only utilize the total plant investment per build-out, if and only if, the utility system was built, in its entirety, to serve the build-out. Otherwise, you are understating the cost per connection as the utility has not yet been built to serve all of the build-out lots. Mr. Gracy stated in his pre-filed testimony the number of lots that each system serves; therefore, I had to make the assumption that the utility system has not yet been constructed for the entire build-out population. However, having said that, I have also

performed a comparison of plant investment per build-out lot, just as a means of showing that the substantial differences exist regardless of which factor utilized.

Q. PLEASE PROVIDE THE RESULTS OF YOUR ANALYSIS.

A. Tables 10 and 11 below summarize my results.

TABLE 10: Comparison of Application Stated Total Plant Investment

	White Bluff	Retreat	Variance	% Variance
Application Original Cost of Plant	$1,442,460	$1,665,321	$(222,861)	-15.5%
Active Connections as of December 2007	562	60	502	89.3%
Lots Served	6,314	1,931	4,383	69.4%
Build-Out Lots	7,000	5,200	1,800	25.7%
Original Cost of Plant per Active Connection	$2,567	$27,755	(25,189)	-981.4%
Original Cost of Plant per Lot Served	**$228**	**$862**	**(634)**	**-277.5%**
Original Cost of Plant per Build-Out Lot	$206	$320	(114)	-55.4%

TABLE 11: Comparison of Trended Total Plant Investment

	White Bluff	Retreat	Variance	% Variance
Trending Analysis Original Cost of Plant	$3,080,532	$1,700,104	$1,380,428	44.8%
Active Connections as of December 2007	562	60	502	89.3%
Lots Served	6,314	1,931	4,383	69.4%
Build-Out Lots	7,000	5,200	1,800	25.7%
Original Cost of Plant per Active Connection	$5,481	$28,335	(22,854)	-416.9%
Original Cost of Plant per Lot Served	**$488**	**$880**	**(393)**	**-80.5%**
Original Cost of Plant per Build-Out Lot	$440	$327	113	25.7%

Q. IN YOUR OPINION, WHICH COMPARISON OF PLANT INVESTMENT IS THE MOST ACCURATE AND APPROPRIATE TO UTILIZE IN EVALUATING WHETHER SUBSTANTIAL SIMILARITY IN COST OF SERVICE DUE TO PLANT INVESTMENT BETWEEN THE WHITE BLUFF AND THE RETREAT SYSTEMS?

A. In my opinion, it is most appropriate to utilize the original plant investment per lot served using the Application stated figured as it presents the more accurate representation of the actual plant investment (even though DDU has not fully substantiated this number either) for the reasons stated above. Additionally, it presents the comparison on a basis of lots served by the utility. This is the total connections which the utility was built to serve, and thus is the more accurate reflection of true costs per connection. Using this factor, we see there is a more than 277% differential in plant investment per lot served; which, in my opinion, leads to a substantial difference in cost of service which will persist over time.

Q. IS IT POSSIBLE THAT THIS DISCREPANCY IS DUE TO THE DIFFERENT CONSTRUCTION DATES OF THE TWO SYSTEMS, AND THEREFORE OVER-TIME AS THE SYSTEMS NEED REHABILITATION, THE PLANT INVESTMENT WOULD EVENTUALLY BE EQUAL?

A. I did consider this possibility. However, to test this parameter, I utilized the trended current costs of the pipe installed at each system as stated by Ms. Harkins (Exhibit DDU-15, pp. DDU012460 and DDU012471) and computed the current cost of pipe installed per lot served and arrived at a cost of $764 per lot served at White Bluff and $941 per lot served at the Retreat. Therefore, even using costs that are both stated as "current" and Ms. Harkins' analysis (which in my opinion is not a reasonable cost assumption to utilize as will be described later in my testimony), substantial differences in plant investment per lot served still exist. Table 12 below illustrates these differences, and, as I have noted before, these differences will continue over time and the result is that the two systems will have substantially dissimilar costs of service even when viewed over time.

TABLE 12: Comparison of Current Cost of Pipes Installed

	White Bluff	Retreat	Variance	% Variance
Trending Analysis "Current" Cost of Pipes	$4,823,327	$1,816,733	$3,006,593	62.3%
Active Connections as of December 2007	562	60	502	89.3%
Lots Served	6,314	1,931	4,383	69.4%
Build-Out Lots	7,000	5,200	1,800	25.7%
Original Cost of Plant per Active Connection	$8,582	$30,279	(21,696)	-252.8%
Original Cost of Plant per Lot Served	**$764**	**$941**	**(177)**	**-23.2%**
Original Cost of Plant per Build-Out Lot	$689	$349	340	49.3%

D. DISCUSSION OF AQUA TEXAS DECISION

Q. ARE YOU AWARE OF THE DECISION IN TCEQ DOCKET NOS. 2004-1120-UCR AND 2004-1671-UCR, APPLICATION BY AQUA DEVELOPMENT COMPANY AND AQUA UTILITIES, INC. D/B/A AQUA TEXAS, INC. TO CHANGE WATER AND SEWER TARIFFS AND RATES IN VARIOUS COUNTIES (THE "AQUA TEXAS CASE")?

A. Yes.

Q. WAS THE AQUA TEXAS CASE DISCUSSED DURING DDU'S PRIOR WATER RATE CASE FOR THESE SYSTEMS?

A. Yes, DDU raised the applicability of the Aqua Texas Case to its case in exceptions to the Proposal for Decision issued in that docket.[1] However, the ALJ and the Commissioners declined to change the Proposal for Decision despite the analysis presented by DDU.

Q. ARE YOU AWARE THAT DDU'S WITNESS, CHRIS EKRUT, SUPPORTS THE CONSOLIDATION OF THE WHITE BLUFF AND THE RETREAT WATERS SYSTEMS FOR RATE SETTING AND TARIFF PURPOSES BASED ON THE DECISION IN THE AQUA TEXAS CASE?

[1] Filings from this docket are available here: http://www7.tceq.state.tx.us/uploads/eagendas/Agendas/2009/10-7-2009/doublediamond.pdf.

A. Yes, I am.

Q. DO YOU AGREE WITH MR. EKRUT THAT THE WHITE BLUFF AND THE RETREAT WATER SYSTEMS SHOULD BE CONSOLIDATED BASED ON THE DECISION IN THE AQUA TEXAS CASE?

A. No, I do not.

Q. WHY NOT?

A. DDU and its systems at issue in this proceeding are not comparable to the entities and systems at issue in the Aqua Texas Case for many reasons, which I will explain in detail below. Aqua Texas is the poster child for consolidation and regionalization, while DDU is not. The reasons are as follows:

- *Magnitude of systems at issue* (Aqua Texas Case: 335 existing systems serving about 100,000 water customers and 38,000 sewer customers[2]; DDU: three systems serving 866 connections in the test year). The concept of regionalization assumes the consolidation of systems across a region – *many* systems sharing costs where the addition of a new system that will not vastly impact the rates of existing ratepayers, not a handful of vastly different systems. Consolidation of the Aqua Texas systems is, therefore, of a completely different magnitude than consolidation in the case of the DDU systems. One goal of regionalization is to lessen rate shock to customers. Regionalization for the Aqua Texas systems may indeed be able to prevent rate shock to certain customers, while not dramatically affecting other customers. This is because the Aqua Texas customer base is so large that adding a new and more expensive system will not create a very large change in rates when the increased cost is shared over so many customers. Consolidation in a case like DDU's, however, would actually multiply the rate shock felt by customers in older systems. The customers of the oldest system would certainly have experienced some rate shock when they first began paying rates when their system was new and their community small; however, these same customers, if forced to subsidize each new development, would experience rate shock *each time* a new system is added and they are forced to bear part of the costs of the new system -- *in addition to* the costs of their own system. This is because, with only a handful of water systems, there are simply not

[2] Aqua Texas Case, Proposal for Decision at pp. 15-16 and 31.

enough customers to absorb the additional costs of new system development without these customers experiencing a major impact to their rates each time a new system is added. It is fairer in this situation for the customers of each development to bear the costs of only their systems. Due to the scale of Aqua Texas, it is more reasonable to determine that the Aqua Texas systems are similar, despite their differences, than in DDU's case. The dissimilarities simply have a much greater impact when there are far fewer customers. What may seem similar in the Aqua Texas context is not at all similar in the DDU context because the effects on customers' rates are significant if the three systems are combined. It is possible to make generalizations about the Aqua Texas facilities, simply because there are so many of them. Not so for DDU's facilities. While no two systems are ever exactly alike, the differences among the three DDU systems are incredibly significant given the small number of customers DDU serves.

- *Differences between DDU and Aqua Texas as organizations.* DDU is not at all like Aqua Texas. DDU is a utility, but its parent is not simply a utility holding company, like the Aqua Texas parent company. Double Diamond Delaware, Inc. is a development company, and DDU is simply a part of a larger scheme – the development of subdivisions. In Aqua Texas, managers and operators worked to operate many systems in a region, not accounting for their time separately. [3] DDU, on the other hand, has separate managers and operators for each system.
- *Ability to separately account for system expenses.* In the Aqua Texas Case, the ALJs noted that Aqua Texas did not even have the ability to account for individual system expenses separately, and the systems were not tracked that way prior to Aqua Texas' purchase of the systems.[4] DDU, on the other hand, does track many expenses separately and its expert was even able to determine separate rates for each systems (Eckrut Direct 17/17 and Exhibit DDU-22). Additionally, it has set separate rates for the Cliffs system for several years without apparent difficulty. There is, therefore, no

[3] Aqua Texas Case, Proposal For Decision at p. 35.
[4] Aqua Texas Case, Proposal For Decision at p. 34: "As a result of Aqua Texas' adoption of the AquaSource regional structure and its decision not to conduct cost of service studies for its 335 systems, there is little system-specific information on the factors in Section 13.145(a)(1)."

reason not to set separate rates for these systems, because DDU already has the capability.

- *Differences in system type.* The ALJs in the Aqua Texas Case described, based on extensive evidence presented, the similarities of those systems in great detail and concluded, "when viewed in terms of the universe of potential system types, Aqua Texas' facilities are substantially similar in that they are designed to offer the bottom tier of 'municipal services.'"[5] The ALJs noted that, "[t]he systems themselves are 'very simple, rudimentary' and do not offer options like superfiltration or, in general, surface water treatment facilities."[6] DDU's systems, on the other hand, are not like these. The White Bluff water system is a groundwater system using gaseous chlorination. The Retreat is a groundwater system using hypo-chlorination. The Cliffs is a surface water system which uses mostly reverse osmosis to treat its water. These three systems are not of the same general type when compared to one another.

Q. DO YOU HAVE ANY FURTHER THOUGHTS ON THE POLICY OF REGIONALIZATION AND THE AQUA TEX CASE?

A. Yes. While regionalization is an important goal and the Aqua Texas Case embodiment of that goal, the Aqua Texas Case did not do away with the requirement of substantial similarity in combining systems under one rate structure. Mr. Ekrut's analysis is so broad that if applied to other cases, it would allow *any* utility to combine all of its systems under one revenue requirement. I do not believe that this is the intent of the policy for regionalization. We still must examine each set of systems in detail to determine whether they are substantially similar before allowing combination of the systems.

Q. ARE YOU FAMILIAR WITH THE "TEXAS LANDING UTILITIES CASE"[7] REFERENCED BY MR. EKRUT?

A. Yes, I am.

Q. DO YOU THINK THIS CASE IS SIMILAR TO DDU'S CASE? PLEASE EXPLAIN YOUR ANSWER.

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[5] Aqua Texas Case, Proposal For Decision at p. 38.
[6] Aqua Texas Case, Proposal For Decision at pp. 28-29.
[7] Application for a Water Rate / Tariff Change of Texas Landing Utilities, SOAH Docket No. 582-08-1023

A. No, I do not. In that case, there was not a full cost of service analysis performed.[8] In DDU's prior rate case, there was. Additionally, the TCEQ ED's position was quite different in that case.[9] Finally, that case was filed before the final order in DDU's prior rate case issued. It appears that the ALJ in the Texas Landing Utilities case considered the Aqua Texas Case more strongly because of that;[10] however, the ALJ in that case noted that DDU's prior rate case had set additional precedent which must be examined in addition to the Aqua Texas Case. As a result, I do not believe the Texas Landing Utilities case is instructive for the systems at issue in this docket.

IV. DDU'S INAPPROPRIATE USE OF A REGULATORY ASSET TO COVER SHORTFALLS IN OPERATING EXPENSES FROM YEARS PAST

Q. IS IT YOUR UNDERSTANDING THAT DDU IS ATTEMPTING TO INCLUDE PRIOR UNRECOVERED COSTS IN ITS REVENUE REQUIREMENTS IN THE RATE APPLICATION AT ISSUE IN THIS PROCEEDING?

A. Yes, DDU's witness Chris Ekrut explains in his testimony (Ekrut Direct, 19/12-23) that DDU is requesting a regulatory asset in the total amount of $554,319 (with $284,012 assigned to the groundwater systems) to be amortized over a period of five years. This regulatory asset would be used to pay back outstanding loans from DDU's parent which are soon to become due. The regulatory asset is referenced at page 4 of Attachment 5 of the Application.

Q. IS THIS AN APPROPRIATE USE OF DEFERRED ACCOUNTING VIA A REGULATORY ASSET?

A. No, deferred accounting is not appropriate for the expenses identified by DDU.

Q. WHY NOT?

A. First, deferred accounting is only appropriate in exceptional circumstances and when clearly planned for by the utility. In the Aqua Texas Case, the utility had a specific plan to phase in rates specifically to avoid rate shock to its customers.[11] DDU witness attempts

[8] Texas Landing Utilities Case, Proposal For Decision at p.6.
[9] *Id.*
[10] *Id.*
[11] Aqua Texas Case, Proposal for Decision at p.55.

to assert the same grounds, but with no backing documentation to show how much rate shock customers would have experienced (Eckrut Direct, 18/7-14). I see no evidence of a strategic plan regarding the shortfalls DDU incurred. Additionally, DDU is attempting to recover debt created many years ago. In my opinion this is poor management of the utility. DDU could have filed a rate case when it needed additional funds for operations, or soon thereafter. It chose not to do so, instead incurring debt with additional interest costs. Allowing deferred accounting in such a situation only rewards poor management of a utility.

Q. WOULD YOU LIKE TO ADD ANYTHING FURTHER ABOUT CREATION OF A REGULATORY ASSET?

A. Yes. Even if deferred accounting were appropriate in this situation, which it is not, the appropriate solution would be to recover costs via a surcharge instead of a regulatory asset. Because DDU is not required to file another rate case, a regulatory asset could be collected into perpetuity, leaving DDU with a windfall long after the regulatory asset costs were recovered.

Q. DO YOU HAVE CONCERNS ABOUT THE LOANS WHICH WOULD BE RECOVERED VIA THE REGULATORY ASSET?

A. Yes. These are loans from DDU's parent to itself. DDU is attempting to utilize its parent's capital structure in determining its rate of return (Application, Exhibit DDU-1, p12); however, DDU is also attempting to recover loans made from the parent to itself as a regulatory asset. These two actions are inconsistent. If DDU wishes to recover loans from its parent, it should not be allowed to use its parent's capital structure. This would result in a sort of double dipping – gaining the benefit of the parent's capital structure, while at the same time getting the benefit of claiming the loans (and interest) from the parent. DDU's activities here make its attempts to recover prior expenses (loan from an affiliate) even more suspect. These costs, therefore, are not reasonable or necessary.

V. DDU'S INAPPROPRIATE USE OF ASSET (PLANT) TRENDING ANALYSIS IN ITS DIRECT CASE

Q. HAVE YOU REVIEWED COST DATA FOR TOTAL PLANT INVESTMENT FOR THE RETREAT AND THE WHITE BLUFF SYSTEMS?

A. Yes, I have. There are significant discrepancies between the total plant investment stated in the original Application and what DDU later suggests as the total plant investment as a result of their trending analysis. I have summarized these discrepancies in Table 13 below:

TABLE 13: Evaluation of Application Stated Original Cost of Plant Assets and Trended Values

	Application Stated	Trended Value	Variance	% Variance
Original Cost of Plant	$1,442,460	$3,080,532	$1,638,072	**113.6%**

DDU is now requesting a total plant investment for the White Bluff system which is more than double that requested in the application.

Q. IN YOUR OPINION, IS THIS REQUESTED CHANGE JUST OR REASONABLE?

A. In my opinion, this change in total plant investment for the White Bluff system is neither just nor reasonable for the following reasons:

- First, DDU president, Mr. Randy Gracy signed an affidavit as part of the original Application which stated "I, Randy Gracy, being duly sworn, file this notice….. and that all statements made and matters set forth herein are true and correct." (Application, Exhibit DDU-1, p.32). The Total Plant investment for the White Bluff system was included as part of the information presented within that document. Now, DDU asserts that this investment is more than double what was originally stated.
- Second, it is my understanding that this change in total Plant Investment is a result of the trending analysis conducted by Ms. Harkins, and, as I will explain in more detail, I have some concerns about its accuracy.

- Further, it is my understanding that this trending analysis was conducted because DDU could not locate or produce the appropriate invoices necessary to substantiate claimed investments on the system. As DDU has not offered a plausible explanation as to why their original Application stated a lower original cost of assets than the trending analysis, and the original Application was supposedly based upon data obtained from DDU's books, in my opinion, in this situation, a trending analysis should be utilized simply to verify the claimed costs of the assets, not determine actual costs of assets.
- Furthermore, in an Application DDU submitted for a Water Rate Tariff Change in 2006, Mr. Randy Gracy signed an affidavit as part of that application which stated "I, Randy Gracy, being duly sworn, file this notice..... and that all statements made and matters set forth herein are true and correct." I've provided relevant pages from this application as Exhibit WBSR-6. The Net Plant investment for the White Bluff system was included as part of the information presented within that document, and that the document listed an original cost of assets of $1,215,319. As the assets in question were installed prior to 2006, this directly contradicts the trended values.
- A trending analysis uses current cost data and then uses indices (in this case, the Handy Whiteman indices) to trend back the costs. Many factors may influence the accuracy of this trending. These factors include, but are not limited to:
    - Price elasticity due to local demand for services - The construction market, for example, can be very sensitive to changes in the micro economy. Contractor prices may vary from one job to the next depending on the demand for their services at any one point in time. The same contractor may price the exact same services very differently depending on the demand for their services at a particular point in time. This sensitivity in the local labor market may not be caught in a national or even regional index.
    - Additionally, contractors/vendors often bid out an entire job, which may lead to a different cost per foot of pipe installation, for example, than they'd quote for a different installation; it is entirely dependent upon the

specific circumstances that existed when the work was performed. This too, may not be captured by the means in which the trending analysis was conducted.

- Finally, we often see variances in pricing from one contractor to the next for the same job at the same point in time; which is precisely why utilities often seek bids from more than one contractor.

Q. YOU MENTIONED PREVIOUSLY THAT YOU HAD SOME SPECIFIC CONCERNS ABOUT THE ACCURACY OF THE TRENDING ANALYSIS PERFORMED, PLEASE EXPLAIN.

A. I do have several concerns about the analysis, which include, but are not limited to:

- the current cost of the assets utilized to trend,
- the Handy-Whitman indices utilized to trend assets,
- reconciliation back to the stated trended value of White Bluff assets,
- the utilization of trending for assets for which invoices exist,
- the dates trended back to, and
- documentation for who/how the assets were paid for.

Q. PRIOR TO GETTING INTO YOUR SPECIFIC CONCERNS, PLEASE DESCRIBE YOUR UNDERSTANDING OF THE TRENDING PROCESS AND THE UTILIZATION OF THE HANDY-WHITMAN INDEX.

A. It is my understanding that Ms. Harkins first determined a current cost for the inventoried assets. Next, for each asset category she determined the Handy-Whitman index for the current year as well as for the assumed year of construction. The Index for the current year is then divided by the index for the assumed year of construction to arrive at a factor for the costs. To compute the estimated original cost of the asset, the current cost of the asset is then divided by the factor to arrive at an estimate of the original construction cost. I've written out the steps in more detail below:

- Step 1: Determination of Current Cost of Assets = Current Cost
- Step 2: Determination of Handy-Whitman Index for the Current Year = CurrentHW Index
- Step 3: Determination of Handy-Whitman Index for the Construction Year = Construction HW Index

- Step 4: Determination of the Handy Whitman Factor = HW Factor = CurrentHW Index/ConstructionHW Index
- Step 5: Determination of the Original Cost of Asset = Current Cost/HW Factor = Estimate of original asset costs.

As an example, if the current year HW Index was 300 and the construction HW index was 100, then the current year cost of construction is three times greater today than it was during the construction year.

Q. PLEASE DESCRIBE YOUR FIRST CONCERN WITH THE CURRENT COST OF ASSETS UTILIZED TO TREND.

A. As I previously described, different contractors and suppliers charge different fees for the same services/products. This is why utilities request competitive bids from more than one vendor/contractor. I reviewed DDU documents provided during discovery which appear to provide current price quotations for various products. I am providing examples of these documents as Exhibit WBSR-7 – WBSR-10. Each vendor has different prices for the same product. As an example of these differences, I've summarized the differences between the linear foot price for 4", 6" and 8" C900 PVC Pipe (the quotes from Charlotte and Thurman/Ballard did not specify C900, however, I assumed this for my analysis) from different vendors in Table 14 below.

TABLE 14: Comparison of Price Quotes from Different Vendors

	Ferguson Waterworks	JM Eagle	Charlotte	Thurman/Ballard
4" Pipe: C900 PVC Pipe	$1.85	$0.98-$1.16	$4.60	$13.74
6" Pipe: C900 PVC Pipe	$3.65	$1.88-2.25	$8.16	$15.41
8" Pipe: C900 PVC Pipe	$6.35	$3.25-$3.89	$12.40	$21.83

The prices stated for all vendors, except, Thurman/Ballard, were for the piping material only and did not include installation. The price quote from Thurman/Ballard included installation.

As you can see, each vendor has a different price structure. Often, a utility utilizes the lowest-bidder for its supplier. As a result, the trending analysis should recognize the differences in vendor pricing and the fact that a utility will likely go with the lowest bidder.

Ms. Harkins states the current price per linear foot of pipe as follows (Exhibits WBSR 11 through WBSR-12):

- 2" $12.38
- 4" $13.74
- 6" $15.40
- 8" $15.41

With the exception of the 6" and 8" line, the price per linear foot of pipe appears to be directly from the quotation from Thurman/Ballard (Exhibit 10). The 6" line was only $0.01 different from that listed on the price quote. This is the highest bidder. I do recognize that this bid did include installation services as well, however, I did not find any documentation which indicated quotations for pipe installation services separately. As a result, I cannot ascertain whether the current price per linear foot assumed by Ms. Harkins is a reasonable price to utilize, and there were no other quotes for services which included installation and there were no other quotes for installation only. Additionally, I found several invoices for installation of pipe which were for between $1.00 and $2.00 per linear foot (Exhibits WBSR-32 through WBSR-47) at the time of actual installation. Based on the foregoing, the utilization of the highest bid in this case does not appear to be a reasonable standard. If the highest bid was utilized in the determination of the cost of the assets, then the trended costs could be overstated as well.

Q. DO YOU HAVE OTHER CONCERNS WITH THE CURRENT COST OF ASSETS UTILIZED TO TREND?

A. Yes, I do. My second concern pertains to the price assumed for the 8" pipe of $15.41 per linear foot. Review of Table 14 above illustrates that 8" pipe materials alone cost substantially more than 6" pipe; Ms. Harkins is assuming a price for 8" pipe that is only $0.01 per linear foot more than the 6" pipe. The price quotation from Thurman/Ballard, Exhibit 10, states a price per linear foot for the 8" pipe of $21.83. As Ms. Harkins appears to have utilized this price quotation for the 2" and 4" line, and the 6" price quotation is only $0.01 different, I am concerned that the cost for the 8" pipe she had intended to use was $21.83, not $15.41.