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**SOAH DOCKET NO. 473-20-1554.WS
PUC DOCKET NO. 49225**



**PETITION BY OUTSIDE CITY
RATEPAYERS APPEALING THE
WATER AND WASTEWATER RATES
ESTABLISHED BY THE CITY OF
CELINA**

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**PUBLIC UTILITY COMMISSION
OF TEXAS**

DIRECT TESTIMONY

OF

KEVIN CARLSON, P.E.

ON BEHALF OF OUTSIDE CITY RATEPAYERS / PETITIONERS

PETITIONERS' EXHIBIT 7

MAY 26, 2020

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SOAH DOCKET NO. 473-20-1554.WS**

**DIRECT TESTIMONY OF KEVIN CARLSON, P.E.,
WITNESS FOR OUTSIDE CITY RATEPAYERS / PETITIONERS**

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EXHIBITS

Exhibit KNC-1	Résumé
Exhibit KNC-2	Petitioners' Water System Map
Exhibit KNC-3	Petitioners' Sewer System Map

**DIRECT TESTIMONY OF
KEVIN CARLSON, P.E.,
WITNESS FOR OUTSIDE CITY RATEPAYERS / PETITIONERS**

I. INTRODUCTION, POSITION, AND QUALIFICATIONS

**Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND CURRENT
EMPLOYMENT POSITION.**

A. My name is Kevin Carlson. My business address is 1717 McKinney Avenue, Suite 1400,
Dallas, Texas 75202-1236. I am a vice president with Huitt-Zollars, Inc., a full service
architectural, engineering and consulting firm.

**Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND
PROFESSIONAL EXPERIENCE.**

A. I graduated from The University of Texas in Austin in 1995 with a Bachelor of Science in
Civil Engineering. That same year I took and passed the Fundamentals of Engineering
(FE) exam and became registered as an Engineer-in-Training in Texas. I worked for
approximately a year in Leesburg, Virginia for a private consulting engineering and
surveying firm called Bowers & Associates. In 1996 I returned to Texas and was employed
with the Texas Department of Transportation (TxDOT) in the Ellis County Area office of
the Dallas District. I worked for TxDOT for a little over a year before taking a position
with Huitt-Zollars, Inc. in Dallas, Texas in October of 1997. I have remained with Huitt-
Zollars, Inc. since leaving TxDOT. All of my employment experience post degree through
2001 was under the direct supervision of professional engineers. In 2001 I took and passed
the Principles and Practice of Engineering exam in Texas. I became a licensed professional
engineer in Texas in January 2002. Since graduation from The University of Texas in
Austin, I have worked on various civil engineering projects in many different roles. I have
been involved in design as well as project management. As my experience and knowledge
increased, I assumed roles with greater responsibility.

Q. WHAT ARE YOUR RESPONSIBILITIES IN YOUR CURRENT POSITION?

A. I am currently the leader of the Huitt-Zollars, Inc.'s land development departments in
Dallas and Fort Worth. I lead a team of approximately fifteen engineers and designers who

1 work on primarily private land development projects in and around the Dallas and Fort
2 Worth area. I am also the engineer for several local districts. I currently serve as the district
3 engineer for Denton County Development District No. 4 (DCDD No. 4), Denton County
4 Fresh Water Supply District No. 6 (DCFWSN No. 6), Denton County Fresh Water Supply
5 District No. 7 (DCFWSN No. 7), Denton County Fresh Water Supply District No. 10
6 (DCFWSN No. 10) and Collin County Municipal Utility District No. 1 (CCMUD No. 1).

7 **Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY BEFORE THE PUBLIC**
8 **UTILITY COMMISSION OF TEXAS (“PUCT” OR “COMMISSION”)?**

9 A. No.

10 **Q. WHAT EXHIBITS HAVE YOU PREPARED IN SUPPORT OF YOUR**
11 **TESTIMONY?**

12 A. My direct testimony and supporting exhibits, identified as Exhibit KNC-1 through Exhibit
13 KNC-3 were prepared by me or under my direction, supervision, or control and are true
14 and correct to the best of my knowledge.

15 **Q. WHAT HAVE YOU REVIEWED IN ORDER TO PREPARE YOUR TESTIMONY**
16 **AND RENDER YOUR OPINIONS?**

17 A. I have reviewed the development agreement between the City of Celina, CCMUD No. 1
18 and the developer(s). I have gone back through the various contracts for the major utility
19 infrastructure designed, bid, and constructed by CCMUD No. 1. I have reviewed initial
20 design reports and exhibits provided by Celina, which prescribed the sizing of the various
21 water and sewer system components to be constructed by CCMUD No. 1. Specifically,
22 early Celina water distribution and sewer master plans were reviewed concerning Celina’s
23 requirement for CCMUD No. 1 to oversize facilities to serve areas outside of CCMUD
24 No. 1.

25 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

26 A. I am testifying on behalf of the Outside City Ratepayers (collectively, “Petitioners”).

1 **II. PURPOSE OF DIRECT TESTIMONY**

2 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

3 A. The purpose of my testimony is to provide clarity on the water and sewer infrastructure
4 designed, bid, constructed, and paid by CCMUD No. 1 or the Light Farms developer to
5 serve both the District and the City of Celina.

6 **III. BACKGROUND OF WATER SYSTEMS**

7 **Q. WHO PROVIDES PETITIONERS' WATER SERVICE IN COLLIN COUNTY**
8 **MUNICIPAL UTILITY DISTRICT NO. 1 AKA LIGHT FARMS DEVELOPMENT**
9 **("LIGHT FARMS")?**

10 A. The City of Celina holds the Certificate of Convenience and Necessity ("CCN") for water
11 and sewer for the entirety of Light Farms.

12 **Q. PLEASE EXPLAIN WHAT CUSTOMERS YOU ARE REFERENCING WHEN**
13 **YOU USE THE TERM "LIGHT FARMS."**

14 A. The Light Farms Development is the area in which the out-of-City petitioners live. Light
15 Farms is located within the CCMUD No. 1.

16 **Q. PLEASE DESCRIBE THE WATER SYSTEM SERVING THE PETITIONERS.**

17 A. The City of Celina receives wholesale water at a specific delivery point located on the
18 Denton/Collin county line. The City of Celina then pumps water in a pipeline adjacent to
19 FM 428 to the Light Farms water system. The Light Farms water system stores and
20 conveys the water through a system of tanks, pumps and transmission mains to the
21 Petitioners. For Celina's in-city system, the City of Celina operates currently on two
22 pressure planes. There is a lower-pressure plane and a higher-pressure plane. Light Farms
23 is connected to the lower-pressure plane.

24 **Q. WHERE DOES THE CITY'S WATER COME FROM?**

25 A. The City receives their water primarily from Upper Trinity Regional Water District
26 ("UTRWD").

1 **Q. DOES THE UPPER TRINITY REGIONAL WATER DISTRICT (“UTRWD”)**
2 **ALSO PROVIDE TREATMENT AND IF SO, HOW?**

3 A. UTRWD treats water from surface water sources and sends the treated water to its members
4 or customers like the City of Celina through large transmission mains. UTRWD has
5 several large water treatment plants.

6 **Q. ARE YOU FAMILIAR WITH LIGHT FARMS INTERNAL WATER**
7 **DISTRIBUTION SYSTEM? PLEASE DESCRIBE.**

8 A. Yes. Light Farms is essentially a stand-alone water system. Light Farms constructed and
9 paid for the elevated water storage tank (“EST”) that serves all of Light Farms’ residents.
10 The Light Farms EST also provides pressure to the rest of the lower-pressure plane of the
11 City of Celina. This includes the downtown area. There are larger water transmission
12 mains within Light Farms, which move water to and from the EST as well as points beyond
13 the boundaries of Light Farms. CCMUD No. 1 also paid for an entire network of
14 distribution water mains, which provide water directly to the out-of-City customers from
15 the EST and the larger water transmission mains.

16 **Q. CAN YOU PROVIDE HISTORICAL CONTEXT FOR HOW THESE VARIOUS**
17 **WATER SYSTEMS CAME INTO EXISTENCE?**

18 A. The City of Celina’s water infrastructure did not exist anywhere near Light Farms when
19 the out-of-City development began. The closest City of Celina water infrastructure was
20 well north of the development along FM 428. As I mentioned before, the City of Celina
21 receives water from UTRWD at a delivery point generally at the intersection of Celina
22 Road and Legacy Drive. Historically, Celina stored water in a ground storage tank and
23 then pumped it through a transmission main east to an elevated water storage tank in
24 downtown Celina. CCMUD No. 1 designed, bid, constructed, and paid for an 18-inch
25 water transmission main that extended from the Celina line on the north side of FM 428
26 southward to Light Farms. At the same time, CCMUD No. 1 designed, bid, constructed,
27 and paid for the one million-gallon elevated water storage tank that serves both the out-of-
28 City customers in Light Farms and the City. As shown on my Exhibit KNC-2, that line
29 cost \$852,327.12, was constructed in 2009, and Light Farms uses 54.3% of the capacity in
30 that line. The City uses the remaining capacity in that line to serve in-City customers. The

1 Light Farms development designed, bid, constructed, and paid for various water
2 distribution mains to the newly constructed 18-inch transmission main to serve the
3 customers. As development continued over the years, CCMUD No. 1 built and paid for
4 additional water infrastructure to move water from the new EST to all reaches of Light
5 Farms and the City of Celina lower-pressure plain. At Celina's request, an additional 12-
6 inch water transmission main was designed, bid and constructed by CCMUD No.1 to
7 provide a secondary feed to the downtown area of Celina. My Exhibit KNC-2 shows the
8 costs, the contractors, the percentage of the capacity used for Light Farms versus the rest
9 of the City, and year of construction for all of the major infrastructure that serves the
10 Petitioners. CCMUD No. 1 or the developer paid for all of this infrastructure, not the City.

11 **Q. CAN YOU PROVIDE HISTORICAL CONTEXT FOR HOW THE CITY AND**
12 **PETITIONERS' WATER SYSTEMS COEXIST NOW?**

13 A. Once the newly constructed EST at Light Farms was operational, the City of Celina took
14 offline their existing EST that was located downtown. The lower-pressure plane in and out
15 of the City then relied on the Light Farms EST for pressure in the plane. In essence, the
16 water system within Light Farms, and the major water infrastructure designed, bid,
17 constructed, and paid for by Petitioners in CCMUD No. 1, became the heart of the City of
18 Celina's lower-pressure plane water system. The City's system is now dependent upon the
19 Light Farms system to provide service in the City. Except for the Celina pump station and
20 its line along FM 428, the Light Farms system operates independently from Celina's water
21 system.

22 **Q. WHO PAID FOR THE CONSTRUCTION AND INSTALLATION OF THE**
23 **PETITIONERS' INTERNAL WATER SYSTEM?**

24 A. The internal water system within Light Farms was all paid for by the developer. The
25 developer is subsequently reimbursed by CCMUD No. 1 for these expenditures through
26 Texas Commission on Environmental Quality (TCEQ) approved bond sales. Bonds are
27 then retired through the collection of taxes within CCMUD No. 1 paid by the Petitioners.

1 **Q. WHO PAID FOR THE CONSTRUCTION AND INSTALLATION OF THE**
2 **WATER LINES OUTSIDE OF LIGHT FARMS THAT EXTEND TO THE**
3 **PETITIONERS?**

4 A. These water transmission mains extended to and from Light Farms were paid for by the
5 developer. The developer is subsequently reimbursed by CCMUD No. 1 for these
6 expenditures through Texas Commission on Environmental Quality (TCEQ) approved
7 bond sales. Bonds are then retired through the collection of taxes within CCMUD No. 1
8 paid by the Petitioners.

9 **Q. WERE ANY ACCOMODATIONS MADE TO THE SIZE OF LINES OR OTHER**
10 **INFRASTRUCTURE FOR OTHER CUSTOMERS?**

11 A. The City of Celina and its consulting engineers required oversizing of the water mains and
12 the EST. The sizing was based on master plans for the future development of Celina.

13 **Q. ARE YOU FAMILIAR WITH THE CITY'S PUMP STATION ON CELINA ROAD**
14 **AND WHAT PURPOSE DOES THAT SERVE RELATIVE TO THE**
15 **PETITIONERS?**

16 A. Yes. The pump station near the intersection of Celina Road and Legacy Drive pushes water
17 delivered by UTRWD to the Light Farms EST and to another pump station in downtown
18 Celina. The pump station in downtown Celina pushes water to the higher-pressure plane
19 on the east side of Celina. The Light Farms EST provides pressure in the lower-pressure
20 plane for Light Farms and the City.

21 **Q. WHO PAID FOR OVERSIZING THE DISTRIBUTION SYSTEM AND OTHER**
22 **FACILITIES?**

23 A. The developer paid for all of the initial Light Farms major water infrastructure, which was
24 designed, bid and constructed by CCMUD No. 1. CCMUD No. 1 reimburses the developer
25 as stated before from bond proceeds that are paid through ad valorem taxes that are assessed
26 against the Petitioners. This included all oversizing.

27 **Q. DOES THIS INCLUDE THE ELEVATED STORAGE TANK IN LIGHT FARMS?**

28 A. Yes. The EST is significantly larger than would be required for just Light Farms. The
29 entire EST project was designed, bid, and constructed by CCMUD No. 1. The developer

1 paid for the entire project. CCMUD No. 1 reimbursed the developer for the cost(s) with
2 proceeds from bond sales.

3 **Q. WHAT IS YOUR UNDERSTANDING OF CONTRIBUTED CAPITAL FROM**
4 **DEVELOPERS AND CUSTOMERS?**

5 A. The developer either directly funded or financed the water infrastructure projects with the
6 understanding that CCMUD No. 1 would reimburse the developer. The bond sales
7 reimburse the developer for all TCEQ-approved expenditures including interest. Bonds
8 are then retired through taxes collected from the Petitioners who reside within CCMUD
9 No. 1. Through payment of their property taxes, the customers in Light Farms eventually
10 are paying for the water infrastructure.

11 **Q. CAN YOU EXPLAIN HOW THAT FUNCTIONS IN AN ENGINEERING SENSE?**

12 A. From an engineering standpoint, the major water infrastructure projects were designed and
13 submitted to the City of Celina for approval. Plans were also submitted to TCEQ for review
14 and approval. The construction documents were then publicly bid according to State rules.
15 Once the bids were opened and tabulated, a recommendation for award was made to the
16 board of directors for CCMUD No. 1. Once the board approved the award, contracts were
17 prepared for execution by CCMUD No. 1 and the contractor. The developer was a
18 signatory on the contracts as well. The developer was the guarantor of payment. As the
19 engineer for the District, we assisted with management of the contract and processing of
20 pay applications and change orders through construction. We reviewed and approved pay
21 requests for payment by the developer. During board meetings, the developer would
22 submit "developer advances," which would make the board aware of the funding that was
23 taking place for the various contracts. All of this documentation was used to substantiate
24 future bond sales and the reimbursement agreement between the developer and CCMUD
25 No. 1.

26 **Q. DO YOU AGREE WITH THE CITY'S TESTIMONY THAT IT HAS "INVESTED**
27 **HEAVILY ("MILLIONS") IN THE INFRASTRUCTURE NEEDED TO PROVIDE**
28 **RELIABLE, SAFE AND HIGH-QUALITY DRINKING WATER AND FIRE**

PROTECTION TO THE RESIDENTS OF LIGHT FARMS BASED ON THE CITY'S CONTRACTUAL OBLIGATION TO PROVIDE THE SERVICE"?

A. No. The City may have invested millions of dollars to serve its in-City customers. I do not believe that they have invested millions of dollars to serve the residents in Light Farms. In fact, the water infrastructure funded by the developer and CCMUD No. 1 has significantly reduced the City's overall water system capital cost. Not just for Light Farms but for the City's entire lower-pressure plane including the City's internal water system. The Light Farms funded water system improvements have enabled significant development around Light Farms that is all within City limits.

Q. THE CITY SAYS IT ASSUMED A SIGNIFICANT LEVEL OF RISK TO SERVE AND SUPPORT LIGHT FARMS – DO YOU AGREE?

A. No. The developer and CCMUD No. 1 assumed a significant level of risk. The City's credit rating was not at risk for the debt that resulted from the infrastructure installed by the developer and CCMUD No. 1. CCMUD No. 1 has its own credit rating concerns and depends on tax revenue within the District to pay back bonds for water infrastructure which is clearly serving Light Farms and the rest of Celina's lower-pressure plane.

Q. THE CITY PARTICULARLY EMPHASIZES RISK TAKEN FOR THE SAKE OF LIGHT FARMS IN THE PLANNING AND CONSTRUCTION PHASES – DO YOU AGREE?

A. No. Again, this risk was born by the developer and CCMUD No. 1. The City had limited if any risk and much to gain by the risk assumed by the developer and CCMUD No. 1. The water infrastructure installed has allowed not just Light Farms to develop but also areas around Light Farms that are within the City limits. The City has received a significant benefit from infrastructure that the Petitioners pay for through their own property taxes paid to CCMUD No. 1.

1 **Q. DO YOU AGREE WITH THE CITY'S TESTIMONY THAT ITS WATER SYSTEM**
2 **IS AN INTERCONNECTED AND INTERDEPENDENT RETAIL WATER**
3 **SYSTEM?**

4 A. No. As I said earlier, the Light Farms system is essentially a stand-alone system. The City
5 of Celina's in-City system, however, is dependent on the Light Farms system. The major
6 water infrastructure in Light Farms is an integral part of the City's overall system. Since
7 the EST in downtown Celina has been taken out of service, the lower-pressure plane is
8 highly dependent upon the Light Farms system.

9 **Q. WOULD YOU ALSO CHARACTERIZE IT AS AN INTERCONNECTED /**
10 **INTERDEPENDENT "SPIDER WEB" AS THE CITY HAS?**

11 A. No.

12 **Q. DO YOU AGREE WITH THE CITY'S STATEMENT THAT "ALL PARTS OF**
13 **THE CELINA SYSTEM, INCLUDING THE INFRASTRUCTURE WHICH**
14 **SERVES LIGHT FARMS, ARE USED BY AND USEFUL TO AL OTHER PARTS**
15 **OF THE (WATER) SYSTEM"?**

16 A. No. None of the City's upper pressure plane is or could be used and useful to the Light
17 Farms system. As I mentioned before, the Light Farms system runs independently of the
18 City's system, except for the one pump station at the county line and the line along FM 428.

19 **IV. BACKGROUND OF SEWER SYSTEMS**

20 **Q. WHO PROVIDES PETITIONERS SEWER SERVICE IN THE LIGHT FARMS**
21 **DEVELOPMENT ("LIGHT FARMS")?**

22 A. The City of Celina holds the CCN for sewer for the entirety of Light Farms. UTRWD
23 owns and operates the permitted wastewater treatment facility. The developer of Light
24 Farms and CCMUD No. 1 paid for the wastewater system.

25 **Q. PLEASE DESCRIBE THE CITY'S SEWER SYSTEM.**

26 A. The City of Celina historically relied on a single sewer treatment plant just northwest of
27 downtown Celina to accept and treat collected wastewater. The drainage basin for this
28 plant was limited to the downtown area and Carter Ranch. Carter Ranch for many years

1 sent collected wastewater to Celina's treatment plant via a couple of lift stations. All other
2 areas of Celina historically relied on septic systems for handling wastewater.

3 Today, in addition to that old treatment plant, the Doe Branch sewer trunk main handles
4 the wastewater from Light Farms and much of Celina. The Doe Branch sewer trunk main
5 conveys wastewater from many parts of Celina, both inside and outside of the normal
6 drainage basin of Doe Branch, southwest to an UTRWD point of delivery and meter. This
7 point of delivery is generally located at the intersection of Parvin Road and Good Hope
8 Road. UTRWD then conveys flows to a regional sewer treatment plant.

9 **Q. WHERE IS THE PETITIONERS' WASTEWATER TREATED?**

10 A. Petitioners' wastewater is treated by UTRWD at its regional treatment plant.

11 **Q. DESCRIBE THE WASTEWATER TREATMENT SYSTEM SERVING**
12 **PETITIONERS.**

13 A. UTRWD operates several regional wastewater treatment plants. They have recently started
14 operating the Doe Branch plant and are already working to expand its capacity. Before the
15 Doe Branch plant came online, UTRWD pumped wastewater that flowed down through
16 the Doe Branch basin to their Riverbend Plant.

17 **Q. ARE YOU FAMILIAR WITH LIGHT FARMS INTERNAL SEWER**
18 **COLLECTION SYSTEM? PLEASE DESCRIBE.**

19 A. Yes. Light Farms has a system of gravity sewer collection pipes throughout the
20 development that vary in size from 8-inch in diameter up to 15-inch in diameter. These
21 pipes receive wastewater flow directly from homes, schools, and businesses within
22 CCMUD No. 1. The internal pipe network is primarily within street right-of-way and is
23 connected by manholes at changes in direction, slope, or points of confluence. These pipes
24 collect and convey flow by gravity to the Doe Branch sewer trunk main. The collection
25 system pipes connect to the Doe Branch sewer trunk main at various locations.

1 **Q. CAN YOU PROVIDE HISTORICAL CONTEXT FOR HOW THESE VARIOUS**
2 **SEWER SYSTEMS CAME INTO EXISTENCE?**

3 A. One of the initial projects of CCMUD No. 1 was the construction of the Doe Branch sewer
4 trunk main. The project consisted of several miles of large diameter gravity sewer pipe
5 from Light Farms' eastern boundary southwest to the UTRWD delivery point. CCMUD
6 No. 1 split the overall project into two pieces. The western portion was in Denton County
7 and the eastern portion was in Collin County. Easements were acquired and the sewer
8 trunk main was designed, constructed, and paid for by CCMUD No. 1 or the Light Farms
9 developer. The system is shown on my Exhibit KNC-3. This critical piece of
10 infrastructure, paid for by Petitioners, provides the entire Doe Branch basin within the
11 Celina retail service area, including Light Farms, with sewer service. Today, this sewer
12 trunk main provides sewer service for areas outside of the Doe Branch natural drainage
13 basin.

14 **Q. CAN YOU PROVIDE HISTORICAL CONTEXT FOR HOW THE CITY AND**
15 **PETITIONERS' SEWER SYSTEMS COEXIST NOW?**

16 A. The City now sends the vast majority of all of its wastewater through the Doe Branch sewer
17 trunk main. Light Farms was at the highest point of the Doe Branch system when it was
18 first constructed. Light Farms was also the only contributor of flow initially. Today, the
19 Doe Branch system extends east all the way to Preston Road and wastewater from the
20 Wilson Creek basin is lifted or pumped west to discharge into the Doe Branch sewer trunk
21 main. The City also has areas downstream of Light Farms that now contribute flows to the
22 sewer trunk main. The Doe Branch sewer trunk main has enabled development throughout
23 the natural basin and points beyond.

24 **Q. WHO PAID FOR THE CONSTRUCTION AND INSTALLATION OF THE**
25 **PETITIONERS' INTERNAL SEWER SYSTEM?**

26 A. The internal sewer system within Light Farms was paid for by the developer. With very
27 few exceptions, there was no compensation for oversizing of internal sewer mains. The
28 developer is subsequently reimbursed by CCMUD No. 1 for these expenditures through
29 TCEQ-approved bond sales. Bonds are then retired through the collection of taxes within
30 CCMUD No. 1, which are levied against Petitioners' properties.

1 **Q. WHO PAID FOR THE CONSTRUCTION AND INSTALLATION OF THE**
2 **SEWER LINES OUTSIDE OF LIGHT FARMS THAT EXTEND TO THE**
3 **PETITIONERS?**

4 A. The initial offsite Doe Branch sewer trunk main that extends from the point of delivery to
5 the east side of Light Farms was paid for by the developer. The developer was
6 subsequently reimbursed by CCMUD No. 1 for these expenditures through TCEQ-
7 approved bond sales. Bonds are then retired through the collection of taxes within
8 CCMUD No. 1, which are levied against Petitioners' properties.

9 **Q. WERE ANY ACCOMODATIONS MADE TO THE SIZE OF SEWER LINES OR**
10 **OTHER INFRASTRUCTURE FOR THE PETITIONERS OR OTHER**
11 **CUSTOMERS?**

12 A. The City's consulting engineer dictated the size of the Doe Branch sewer trunk main, which
13 was designed to handle Light Farms generated flows and roughly half of the remaining
14 Doe Branch sewer basin. The sewer trunk main was not centered within the acquired
15 easement so that an additional line could be built in the future parallel to the line that serves
16 Petitioners. The wastewater from Petitioners in Light Farms at full buildout will utilize
17 only half of the existing Doe Branch sewer trunk main capacity.

18 **Q. WHO PAID FOR OVERSIZING THE COLLECTION SYSTEM AND OTHER**
19 **FACILITIES?**

20 A. All oversizing of the initial major sewer system was paid for by the developer and CCMUD
21 No. 1. This includes the acquisition of an extra wide easement to handle a future parallel
22 trunk main. More recently, some small portions of the sewer system have had some
23 contributions from the City for oversizing. However, these system pieces are all upstream
24 of the initial Doe Branch sewer trunk main.

25 **Q. THERE WAS CONTRIBUTED CAPITAL BY DEVELOPERS AND CUSTOMERS**
26 **RELATIVE TO THE CITY'S SEWER SYSTEM?**

27 A. Yes. Nearly all capital for the infrastructure to serve Petitioners was contributed by the
28 developer and CCMUD No. 1.

1 **Q. SIMILAR TO ITS CHARACTERIZATION OF ITS WATER SYSTEM, DO YOU**
2 **AGREE WITH THE CITY’S TESTIMONY THAT ITS SEWER SYSTEM IS**
3 **INTERCONNECTED AND INTERDEPENDENT, A “SPIDER WEB”?**

4 A. No. The system is more like a tree with a trunk and many branches that come off the trunk.
5 The Doe Branch sewer trunk main is the tree trunk. It stands with or without the many
6 branches that contribute wastewater flow. In no way is the sewer system downstream
7 dependent upon the system upstream. Just the opposite. The upstream sewer system
8 branches depend on the trunk to operate. In other words, the City system outside of the
9 Doe Branch sewershed is unrelated and not connected in any way. Moreover, the system
10 that serves Petitioners was paid for by Petitioners, not the City.

11 **Q. SIMILAR TO ITS CHARACTERIZATION OF ITS WATER SYSTEM, DO YOU**
12 **AGREE WITH THE CITY’S TESTIMONY THAT IT TOOK ON FINANCIAL**
13 **RISKS TO INVEST HEAVILY IN SEWER INFRASTRUCTURE FOR THE SAKE**
14 **OF PETITIONERS IN LIGHT FARM?**

15 A. No. Since there was no capital spent on the trunk sewer by the City, it is hard to see how
16 they would have been financially at risk. The developer financed the facilities with the
17 understanding that they would be reimbursed by CCMUD No. 1 if and when the success
18 of the development and subsequent generated tax revenue would support a bond issue. It
19 seems to me the risk was first on the developer and now CCMUD No. 1 and the Petitioners
20 that live within the district. If anything, the City gained a financial windfall from the
21 installation of the trunk sewer. The Doe Branch sewer trunk main enabled development in
22 Celina that would otherwise not have occurred.

23 **Q. DO YOU AGREE WITH THE CITY’S STATEMENT THAT “ALL PARTS OF**
24 **THE CELINA SYSTEM, INCLUDING THE INFRASTRUCTURE WHICH**
25 **SERVES LIGHT FARMS, ARE USED BY AND USEFUL TO ALL OTHER PARTS**
26 **OF THE SEWER SYSTEM”?**

27 A. No. The upstream collection sewer system branches within individual subdivisions, which
28 serve only those customers directly adjacent to the system, are of no value or use to the
29 sewer system components downstream. In a gravity sewer system, only portions upstream
30 are dependent upon portions downstream. The reverse is not a true statement.

1 **Q. DO YOU AGREE WITH THE CITY'S STATEMENT THAT "THE ENTIRE**
2 **(SEWER) SYSTEM IS USED BY AND USEFUL TO ALL OF THE RATEPAYERS**
3 **THAT ARE CONNECTED TO IT"?**

4 A. No.

5 **Q. DO YOU AGREE WITH THE CITY'S STATEMENT THAT "THERE IS NO PART**
6 **OF THE CITY'S SYSTEM THAT WILL NOT BE USED TO REACH OUTSIDE**
7 **CUSTOMERS"?**

8 A. No. There are certainly portions, or branches, of the sewer system which will serve the
9 City and not reach outside customers.

10 **Q. WHAT IS THE TYPICAL PERCENTAGE OF INFLOW AND INFILTRATION**
11 **FOR A NEW SEWER SYSTEM?**

12 A. According to 30 Tex. Admin. Code Section 217.57(a)(2)(A), for collection systems, typical
13 inflow and infiltration ("I/I") for a new sewer system is approximately 10 GPD per inch
14 diameter of pipe per mile of length. Depending on the pipe size, this ranges generally from
15 1% to 5% of capacity for a new system.

16 **V. CONTRIBUTED CAPITAL**

17 **Q. HOW MUCH CAPITAL HAVE THE PETITIONERS, EITHER THROUGH THE**
18 **DEVELOPER OR THROUGH CCMUD NO.1, CONTRIBUTED TO THE CITY**
19 **WATER AND SEWER SYSTEMS THAT SERVE PETITIONERS?**

20 A. For water, the capital contribution is \$6,054,200. For sewer, the capital contribution is
21 \$4,188,896. While there has been a very small amount of contribution for oversizing of
22 facilities, I believe those numbers are more than offset by the costs for easement
23 acquisition, interest on debt, and engineering costs, which are not included in my numbers
24 above. Those expenses are eligible for reimbursement from bonds. Thus, the total amount
25 of contributed capital is higher than my values above.

26 **Q. WHAT IS THE RELATIONSHIP BETWEEN THE LIGHT FARMS**
27 **INFRASTRUCTURE SHOWN ON YOUR EXHIBITS KNC-2 AND KNC-3 AND**

1 **THE EXHIBITS FOR THE TCEQ BOND ORDER, THE DISTRICT'S OFFICIAL**
2 **STATEMENT, AND THE INFRASTRUCTURE CONVEYANCE DOCUMENTS?**

3 A. Those facilities shown on Petitioners' Exhibit 1, Petitioners' Exhibit 2, Petitioners'
4 Exhibit 3 and Petitioners' Exhibit 4 are the same facilities as shown in my Exhibit KNC-2
5 and Exhibit KNC-3.

6 **VI. CONCLUSION**

7 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

8 A. For now. Additional discovery or other information may be received between now and the
9 hearing on the merits. I reserve the right to amend, modify, or supplement my testimony
10 if additional data or information becomes available.

KEVIN CARLSON, PE*Vice President/Project Manager*

Kevin Carlson has more than 24 years of design and project management experience in the fields of transportation, public works, and land development. He has provided civil engineering design and project management for a wide range of projects. Work has included preliminary planning, environmental assessments, surveys, cost estimating, preliminary design, and final design for both public and private projects. Responsibilities have included the design of culverts, low-water crossings, roadways, water and wastewater lines, private utility lines, storm sewer systems, and storm sewer retention/detention structures. Carlson is proficient in the use of Autodesk AutoCAD design software and MicroStation with GEOPAK in accomplishing design and production objectives. He is also familiar with HEC-RAS and other hydrology and hydraulics software packages utilized by TxDOT and other various agencies.

RELEVANT PROJECT EXPERIENCE**LAND DEVELOPMENT****Lake Forest Subdivision – Dallas, Texas**

Carlson served as Design Engineer for the Lake Forest Subdivision project, providing preliminary and final design for the multi-phase subdivision in north Dallas. Lake Forest is an exclusive single-family community established around the site of the Compucom Building, formerly the E.D.S. headquarters building, at the corner of Forest Lane and Hillcrest Drive. The project entailed providing lot grading, utilities, retaining wall, street, and alley design. The work also involved extensive coordination with the Developer, surrounding site engineers, and city reviewers. AutoCAD and Autodesk civil design software was used in the design of this project.

Oak Forest Estates – Dallas, Texas

Carlson served as Design Engineer for the Oak Forest Estates project, a small subdivision in north Dallas. The project entailed providing public utilities and street design for an eight-lot subdivision off Forest Lane. The work required extreme care in order to avoid the loss of trees and a 75-foot aerial crossing of a wastewater line over a creek. AutoCAD and Autodesk civil design software were used in this design.

Lakeview Ranch – Denton, Texas

Carlson served as Design Engineer for the Lakeview Ranch project, a Phase 1A community located in Denton, Texas. Carlson assisted in the redesign and earthwork analysis of several aspects of the project. Work involved the calculation of earthwork quantities beginning at the start of construction for the entire project. Redesign was performed where directed by the client. This redesign included roadway design and storm sewer relocation and replacement. Earthwork quantities were again calculated for the redesigned sections.

Lantana – Argyle, Texas

Carlson served as Design Engineer and Project Manager for the Lantana project, a master-planned community located in Argyle, Texas. Work included all aspects of land development from planning through the construction phases of the project. The overall project included an 18-hole golf course with club house, an extensive water and wastewater system which included several lift stations and force mains, several detention structures, roadway bridges, and thousands of single-family residential homes. Carlson currently serves as the District Engineer for Denton County Fresh Water Supply District No. 6 & 7 that overlay Lantana.

Light Farms – Celina, Texas

Carlson continues to serve as Design Engineer and Project Manager for the Light Farms project, a master-planned community located in the E.T.J. of Celina, Texas. Work includes all aspects of land development from planning through

the construction phase of each specific project. The overall project will include more than 3,000 single-family homes, two elementary schools, retail/commercial tracts and abundant amenities/trails. The project has involved major water and wastewater infrastructure improvements for the City of Celina including a one million gallon elevated storage tank and miles of trunk sewer main. Major floodplain reclamation was accomplished which involved lowering of several tributaries. Carlson worked closely with consultants on the USACE and FEMA permitting necessary for the development within mapped flood zones and jurisdiction waters. Numerous drainage structures, roadway bridges, and multi-lane divided roadways were designed and constructed within Light Farms. Carlson currently serves as the District Engineer for Collin County Municipal Utility District No. 1 which overlays Light Farms.

Light Farms Doe Branch Interceptor, Collin County MUD No. 1 – Celina, Texas

Carlson served as the Project Manager for design and construction documents for the Collin County Municipal Utility District No. 1. The project consisted of a major sewer interceptor extension from the Light Farms master-planned development within the ETJ of the City of Celina to a connection point at Upper Trinity Regional Water District's transmission main near the intersection of Parvin Road and Good Hope Road in Denton County. The project included approximately 30,000 linear feet of sanitary sewer main ranging in sizes from 30 inches in diameter to 48 inches in diameter. Carlson proposed the preliminary alignment and worked with the City of Celina to obtain easements from multiple property owners and ultimately finalize the alignment. The alignment ran through a portion of Collin County and Denton County and required coordination with several municipalities, public agencies, and numerous property owners for the easement acquisition. Care was taken to limit easement requirements, protect trees and other surface features and to minimize the construction disturbance within the easement. Carlson prepared bid packages and assisted CCMUD No. 1 with the selection of qualified contractors. Carlson assisted CCMUD No. 1 with construction administration and observation for the two separate contracts. The two projects were completed on schedule and came in under the engineers estimate. The projects were also under the budget of CCMUD No. 1.

Phillips Creek Ranch – Frisco, Texas

Carlson served as Project Manager for the Phillips Creek Ranch project in Frisco, Texas. Phillips Creek Ranch is a 950-acre master planned community which includes more than 100 acres of green space, lakes, an extensive creek system, hike and bike trails, parks, and various additional amenities. There are approximately 3,700 homes in Phillips Creek Ranch. Carlson has been responsible for delivering road and utility infrastructure, processing of USACE 404 permits, FEMA floodplain mapping as well as design and layout of the community and amenities. Work has included a close working relationship with the City of Frisco at all levels.

Walsh Ranch – Fort Worth, Texas

Carlson serves as the Project Manager for the Walsh Ranch Quail Valley project, a master-planned community located in the E.T.J. of Fort Worth, Texas. Walsh Ranch Quail Valley is a 1,700-acre master-planned community that spans Tarrant and Parker counties within the E.T.J. of Fort Worth, Texas. It will eventually have nearly 3,000 single-family residential homes including a large amenity complex and three elementary schools. Huitt-Zollars has been responsible for all aspects of engineering to make Quail Valley a reality. Work has included providing complete utility design, arterial and collector roadway design, on- and off-site water and wastewater main design, existing and proposed system capacity analysis, drainage and storm water detention design, floodplain reclamation and re-mapping studies, water rights permitting and TCEQ dam permitting, irrigation design and landscape architecture.

PUBLIC WORKS**Bridge Rehabilitation and Replacement – Ellis County, Texas**

Carlson served as Engineer's Assistant for investigating, surveying, and analyzing several small bridges in Ellis County as part of TxDOT's bridge rehabilitation and replacement plan. The individual projects were studied for environmental and hydraulic impacts of rehabilitation and/or replacement. Carlson used TxDOT software including HEC-RAS to

determine the hydrology and hydraulics specific to each site. Detailed reports were created to support the necessary actions to improve the sites. Carlson then worked to create detailed plans and specifications for the construction of the improvements.

Walnut Hill Lane 48-Inch Water Main, Dallas Water Utilities – Dallas, Texas

Carlson served as Design Engineer, responsible for the horizontal and vertical design of approximately 20,000 linear feet of 48-inch water line in the middle of a six-lane divided thoroughfare. During the design, every effort was made to minimize construction impacts to existing utilities, traffic, trees, local residents, businesses, and civil services. Carlson investigated the existing utilities known to be in the roadway and worked closely with city officials to design a suitable alignment for the water line. Final plans were completed in six weeks. During construction, alterations due to unexpected sub-surface discoveries were performed in a timely manner to allow the contractor to complete the work with minimal delays. MicroStation and GEOPAK were utilized extensively in the design of this project.

Dallas Water Utilities Wastewater Replacement – Dallas, Texas

Carlson served as Design Engineer, assisting with the design and drafting, for the replacement of existing lines that, in some cases, were over 100 years old. In the design of the replacement lines, consideration was given to improvements to nearby water utilities, streets and alleys, and service lateral replacements for residences and businesses.

TRANSPORTATION**Love Field Modernization Program Apron and Roadway Improvements, City of Dallas, Texas**

Carlson is currently serving as the Deputy Project Manager for the Love Field Modernization Program Apron and Roadway projects. The apron project includes the removal and replacement of approximately 60 acres of apron and associated utilities and fuel lines. Glycol collection and storage facilities are included with the aircraft apron. This airside project includes the demolition, grading, jointing, striping, drainage, and other related civil plans. The roadway landside project involves widening and changing of the vertical alignment of the main feeder road into the airport. Carlson is working closely with a team of subconsultants involved with various aspects of the program to successfully bring the civil components together on schedule and within budget.

Runway 18R Extension – Dallas/Fort Worth International Airport, Texas

Carlson worked on the plans and specifications for the extension of Runway 18R at DFW Airport. The project included the extension of the runway and adjacent taxiways, modification and improvements to the storm drainage system, the relocation and extension of water mains, relocation and improvements of the airfield navigational aids, and improvements to a high-speed exit ramp. Facilities include glycol collection and storage system on the holding apron. Carlson worked closely with a large and varied design team to see the overall design come together and be issued for bids. This involved close coordination with DFW Airport staff and the Federal Aviation Administration (FAA). Ultimately the project was awarded and constructed. Throughout the construction Carlson assisted with required field changes and other design support related activities as needed.

DART Phase 2 Light Rail Extension, Line Section NW-3 – Dallas and Farmers Branch, Texas

Carlson served as Assistant Project Manager for the Dallas Area Rapid Transit (DART) Phase 2 light rail extension of the northwest corridor line section NW-3, working closely on the plans and specifications of the project. The project entailed the civil and structural design for approximately five miles of dual-track, light rail from approximately Northwest Highway in Dallas to Valley View Lane in Farmers Branch. The project included aerial guideway and at-grade track as well as three light rail stations. The project utilized several design subconsultants to accomplish various aspects of the design. Close coordination was required with DART, subconsultants, city and state agencies, and the overall general engineering consultant to make sure the project remained on schedule and met the design objectives. Carlson worked with MicroStation with GEOPAK and several other design-specific software packages as needed.