

1 1.50 gallons per minute (“gpm”)/ service connection as directed by the TCEQ. In
2 making a determination, the following system components are considered:

- 3 1. High Service Pump Capacity. We verify that the existing pumping systems
4 can support the additional connection(s) and continue to comply with
5 minimum TCEQ high service and transfer pumping requirements.
- 6 2. Storage Tank (elevated, hydro-pneumatic and total) capacity. We verify
7 whether the existing water storage and pressure maintenance facilities can
8 support the additional connection(s) while maintaining a minimum operating
9 pressure of 35 pounds per square inch (“psi”) at each metered connection.
- 10 3. Pipe capacity. We will look at the number of connections currently served
11 by a given distribution line (or series of distribution lines) to verify they do
12 not exceed TCEQ standards. Additionally, we will look at anticipated flow
13 velocities to determine whether a distribution line is reaching its full flow
14 capacity.
- 15 4. Water production capacity. Generally, we just compare the number of
16 active and proposed connections with the maximum service capacity of
17 individual pressure planes and the system as a whole.

18
19 **Q. Did Crystal Bluff submit a request to Possum Kingdom for a new water service**
20 **investigation?**

21 **A.** Yes. Crystal Bluff witness Gary Ray included a Possum Kingdom Service
22 Application and Agreement and a New Service Request form for 1 meter on Lot 7,

Hummingbird West, that were submitted to Possum Kingdom in July of 2017. Possum Kingdom asked eHT to perform a service evaluation for just that one meter in July 2017 and eHT provided Possum Kingdom the Meter Request Evaluation report included as **JSH-2**. The eHT determination at that time was that Possum Kingdom could approve that meter. However, eHT did not opine on a specific service cost for that approval. Rather, eHT only opined that Possum Kingdom could serve Lot 7, Hummingbird West.

Q. Why didn't eHT perform any further analysis of the cost for Crystal Bluff to obtain water service from Possum Kingdom for Lot 7, Hummingbird West?

A. Water service feasibility requests do not include any cost analysis. We are simply determining, from a flow and pressure perspective per TCEQ guidelines, if Possum Kingdom can serve the proposed connection (as discussed in detail above). In special cases, eHT has performed more in-depth service cost analyses for non-standard service requests, but not for standard service requests since standard service connection costs do not usually vary as much as non-standard service requests. However, the initial service request Possum Kingdom asked eHT to review for Crystal Bluff Lot 7, Hummingbird West was treated as a standard service request since it was a single lot. For standard service requests, eHT would simply evaluate if Possum Kingdom had capacity available at an acceptable pressure. Then, the service applicant would pay the standard service fees. That is how Crystal Bluff's initial Possum Kingdom service request for Lot 7 was treated.

1 **Q. Was eHT asked by Possum Kingdom to evaluate any other water service**
2 **requests for the Crystal Bluff Hummingbird West subdivision property?**

3 **A.** Yes. In 2019, eHT was asked to evaluate a service request for Lot 5 of Crystal
4 Bluff’s Hummingbird West subdivision property. *See JSH-3 Meter Request*
5 Evaluation for Lot 5. This service request was handled the same way as Crystal
6 Bluff’s Lot 7 service request and was treated as a standard service request since it
7 was a single connection request from an individual property owner.

8

9 **Q. Would you characterize Crystal Bluff’s water service requests to Possum**
10 **Kingdom as standard service requests or non-standard service requests?**

11 **A.** Regardless of how Crystal Bluff’s service requests to Possum Kingdom were
12 handled at the time for Lots 5 and 7, with what we know now they must all be
13 considered as non-standard service requests because Crystal Bluff moved beyond
14 its initial Lot 7 service request and requested service to more lots within the same
15 subdivided 12-lot property.

16

17 **Q. Please explain why Crystal Bluff’s service requests past and present should**
18 **now all be considered non-standard water service requests from Possum**
19 **Kingdom?**

20 **A.** Possum Kingdom defines “Non-Standard Service” in Section E of its tariff as “any
21 service request which requires a larger meter service, service to a Master Metered
22 Account...or an addition to supply, storage and/or distribution/collection system.

1 Typically, this would include 5/8" by 3/4" or 3/4[""] sized water meter services set
2 on existing pipelines." Non-Standard Service is further defined by reference to
3 Section E's definition of Standard Service, which means that "service on an existing
4 pipeline where pipeline or service facility extensions are not required and special
5 design and/or engineering considerations are not necessary." Section E states that
6 the requirements of Section F of Possum Kingdom's tariff apply to non-standard
7 service requests.

8 Further, Section F of Possum Kingdom's tariff is titled, "Developer and Sub-
9 Division Non-Standard Service Requirements." Section B of Possum Kingdom's
10 tariff defines "Developer" as "Any person, partnership, cooperative corporation,
11 corporation, agency, or public or private organization who subdivides land or
12 requests more than 2 water or sewer service connections on a single contiguous tract
13 of land." This definition is consistent with that found in TWC § 13.2502(e).

14 The Hummingbird West subdivision has been subdivided into 12 platted lots.
15 See **TEL-7** Property Survey. Considering all these tariff provisions together, after
16 Crystal Bluff went beyond a single connection on its subdivided property Crystal
17 Bluff became a Developer owner of a subdivision property subject to the non-
18 standard service requirements in Section F of Possum Kingdom's tariff. See
19 **TEL-2** Possum Kingdom's Tariff Prior to 2023 and **TEL-4** Possum Kingdom's
20 Current Tariff.

1 **IV. POSSUM KINGDOM DEVELOPER SUBDIVISION COSTS**

2 **Q. Was eHT asked to evaluate the general cost for developers to obtain water**
3 **service from Possum Kingdom for subdivisions at any time from 2017 to the**
4 **present?**

5 **A. Yes. eHT was asked to prepare a cost estimate to expand the Possum Kingdom**
6 **water treatment plant (“WTP”) by 0.5 million gallons per day (“MGD”) in 2020.**
7 **That OPCC, including contingencies, was \$3,486,000. That project has been**
8 **completed. In 2021, eHT was asked to prepare a cost estimate to expand the**
9 **Possum Kingdom’s WTP by 0.5 MGD again. That cost estimate totaled**
10 **\$10,390,000 including contingencies. Then, in 2022, eHT was asked to update the**
11 **2021 OPCC due to ongoing inflationary impacts and concerns the costs may have**
12 **risen substantially. This most recent OPCC totaled to \$19,516,000 with**
13 **contingency dollars. All three (3) of these OPCCs are included as attachments to**
14 **this testimony. See JSH-4 2020 eHT OPCC; JSH-5 2021 eHT OPCC; and JSH-6**
15 **2022 eHT OPCC.**

16
17 **Q. What is the status of the water treatment plant expansion projects eHT has**
18 **recommended for Possum Kingdom from 2017 to the present?**

19 **A. The most recent water treatment plant expansion project is complete and takes the**
20 **finished water capacity to 2.5 MGD. No design work has been completed on the**
21 **2022 OPCC scope.**

1 **Q. Do you have an opinion about whether it is reasonable for Possum Kingdom to**
2 **charge developers CIAC to obtain non-standard water service from Possum**
3 **Kingdom?**

4 **A. Yes.**
5

6 **Q. What is your opinion about whether it is reasonable for Possum Kingdom to**
7 **charge developers CIAC to obtain non-standard water service from Possum**
8 **Kingdom?**

9 **A. I believe that Possum Kingdom's CIAC practice is reasonable. Possum**
10 **Kingdom's tariff includes a non-standard service agreement template that has**
11 **consistently stated that CIAC will be charged to developers as part of non-standard**
12 **water service request fulfillments. *See TEL-2 and TEL-4* at Section F. It is**
13 **considered standard industry practice to recoup costs from developers to service**
14 **new connections within new subdivisions. There is a reasonable relationship, or**
15 **rational nexus, between Possum Kingdom's CIAC amounts and the costs**
16 **associated with serving new developments via new capacity in Possum Kingdom's**
17 **water treatment plant.**

18

19 **V. CRYSTAL BLUFF SUBDIVISION SERVICE COSTS**

20 **Q. Are you familiar with the layout of the Crystal Bluff Hummingbird West**
21 **subdivision at issue in this matter?**

1 **A.** Yes. The Hummingbird West subdivision property is generally located southwest
2 of the intersection of Park Road 36 and FM 2353 (just to the south of Petey's RV
3 Park).

4
5 **Q.** Are the water treatment plant expansions eHT recommended to Possum
6 Kingdom from 2017 to the present considered on-site or off-site facilities in
7 relation to the Crystal Bluff subdivision property at issue in this matter?

8 **A.** Off-site.

9
10 **Q.** Was construction of any on-site or off-site facilities other than the water
11 treatment plant expansions eHT recommended to Possum Kingdom from 2017
12 to the present needed for Possum Kingdom to serve Lots 3, 5, and 7 of the
13 Crystal Bluff Hummingbird West subdivision property at issue in this matter?

14 **A.** No.

15
16 **Q.** Would construction of any on-site or off-site facilities other than the water
17 treatment plant expansions eHT recommended to Possum Kingdom from 2017
18 to the present be needed for Possum Kingdom to serve Crystal Bluff's other
19 lots within Crystal Bluff's Hummingbird West subdivision property?

20 **A.** We have only been asked to review two single lots within the Hummingbird West
21 subdivision, so I do not know for certain. If Crystal Bluff followed Possum

Kingdom's non-standard service request process, we would be asked to make that evaluation. But that has not yet occurred.

Q. If no on-site or off-site facilities other than the water treatment plant expansions eHT recommended to Possum Kingdom from 2017 to the present are needed to serve a subdivision property, is it still reasonable for Possum Kingdom to charge a developer CIAC for non-standard service?

A. Yes. These costs, outside of normal operating and maintenance costs, would be incurred in order to serve the subdivision property. It is reasonable that this developer should pay his fair share of these additional costs.

Q. Do you have an opinion about whether the CIAC amounts Possum Kingdom has sought to charge Crystal Bluff for service to its Hummingbird West subdivision property are clearly unreasonable?

A. Yes. In order to expand capacity at Possum Kingdom's WTP, it will require Possum Kingdom to spend significant capital improvement funds. The original plant has been expanded beyond the original design intent and, as reflected in the most recent OPCC, the facilities required to achieve this expansion are all new. While these costs are significant, they are consistent with what eHT has seen with similar projects recently. The WTP expansion costs are reasonable. Possum Kingdom's CIAC amounts derived directly from those costs are also reasonable.

1 **Q. Do you have an opinion about whether the CIAC amounts Possum Kingdom**
2 **has sought to charge Crystal Bluff for service to its Hummingbird West**
3 **subdivision property are just and reasonable?**

4 **A. Yes. Per the above response, I believe the costs are just and reasonable.**
5

6 **Q. Do you have an opinion about whether the CIAC amounts Possum Kingdom**
7 **has sought to charge Crystal Bluff for service to its Hummingbird West**
8 **subdivision property are unreasonably preferential, prejudicial, or**
9 **discriminatory?**

10 **A. Yes. Possum Kingdom’s CIAC amounts sought from Crystal Bluff for service to**
11 **its Hummingbird West subdivision property are fair and non-discriminatory as they**
12 **are requested from the same type and class of service applicant (*i.e.*, developers**
13 **making non-standard service requests) even though the amounts may change over**
14 **time as Possum Kingdom revises them to keep up with the required project costs**
15 **upon which they are based.**

16

17 **Q. Do you have an opinion about whether the CIAC amounts Possum Kingdom**
18 **has sought to charge Crystal Bluff for service to its Hummingbird West**
19 **subdivision property are sufficient, equitable, and consistent in application to**
20 **each class of customers?**

21 **A. Yes. For the same reason just discussed, Possum Kingdom’s CIAC amounts are**
22 **sufficient, equitable, and consistent in application to each class of customer.**

1

2 **Q. Do you have an opinion about whether future customers will benefit from the**
3 **water treatment plant expansion projects that form the basis for the CIAC**
4 **amounts Possum Kingdom has sought to charge Crystal Bluff for service to its**
5 **Hummingbird West subdivision property?**

6 **A.** Yes. Future customers will benefit from the water treatment plant expansion
7 projects that form the basis for Possum Kingdom's CIAC amounts it seeks from
8 Crystal Bluff in the same way customers within Crystal Bluff's Hummingbird West
9 subdivision will benefit. But if those customer connections result from a non-
10 standard service applications, the applicant (*i.e.*, the developer) will have to pay the
11 same amount per connection as Possum Kingdom seeks from Crystal Bluff or the
12 then-current CIAC amount if it is revised.

13

14 **Q. Do you have an opinion about whether Crystal Bluff's cost to obtain service to**
15 **its Hummingbird West subdivision should be reduced to reflect benefits that**
16 **inure to all Possum Kingdom customers from the water treatment plant**
17 **expansion projects that form the basis for the CIAC amounts Possum Kingdom**
18 **has sought to charge Crystal Bluff for that service?**

19 **A.** Yes. I do not believe it would be fair to spread the WTP expansion costs
20 necessitated by new development to existing customers and that is what would occur
21 if you were to reduce Crystal Bluff's cost to obtain service to its Hummingbird West

1 subdivision. That is true even though the WTP expansions will be utilized as part of
2 Possum Kingdom's public drinking water system as a whole.

3
4 **Q. Do you have an opinion about whether the amounts Possum Kingdom proposes**
5 **to charge Crystal Bluff to obtain water service for its Hummingbird West**
6 **subdivision property is part of a distribution-system upgrade that should be**
7 **reflected in other Possum Kingdom rates?**

8 **A.** Yes. I can confirm that there are no distribution system improvements proposed to
9 serve connections within Crystal Bluff's Hummingbird West subdivision property
10 and there are no costs related to such improvements included within the CIAC
11 amounts Possum Kingdom seeks from Crystal Bluff for its Hummingbird West
12 subdivision connections.

13
14 **Q. What is your opinion about whether Possum Kingdom should be required to**
15 **offer Crystal Bluff a cost to obtain service to its Hummingbird West**
16 **subdivision property based on CIAC charges in effect in 2017 as opposed to in**
17 **2021 or today?**

18 **A.** Crystal Bluff should pay the current CIAC price in effect at the time it applies for
19 non-standard service from Possum Kingdom for its Hummingbird West subdivision
20 property. To the best of my knowledge, Crystal Bluff has never executed a contract
21 with Possum Kingdom locking in the 2017 CIAC price.

1 **Q.** **Does this conclude your prefiled direct testimony?**

2 **A.** Yes, but I reserve the right to supplement my testimony as additional information
3 becomes available.

Jordan S. Hibbs, PE
Enprotec / Hibbs & Todd, Inc.

PROFESSIONAL EXPERIENCE

Mr. Hibbs has 15 years of experience in the design and management of water, wastewater, drainage and site development projects for municipal clients. He has experience designing and evaluating water treatment plants, water distribution systems, wastewater treatment plants, wastewater collection systems and storm drainage systems. Mr. Hibbs regularly coordinates with state and federal agencies for various projects. Mr. Hibbs currently serves as the Vice President of eHT managing many of the daily operations of the firm.

PROJECT EXPERIENCE

- **Cisco Lake Flooding, Expert Witness, Jackson Walker, LLP:** Expert witness for the City of Cisco lake flooding adverse take claims. Mr. Hibbs represented the City with sound engineering analysis of lake levels and historical rainfall information.
- **Water Treatment Plant, Phases I and II, City of Missouri City:** Project Manager for design and construction of a new regional surface water treatment plant to meet Fort Bend Subsidence District groundwater conversion requirements. The first phase was a 10 MGD facility and included features incorporated into the planning and design that allowed the plant to meet its second phase capacity of 20 MGD without constructing any major new structures. Increasing capacity to 20 MGD required the addition of a new raw water pump, additional membrane modules and a new high service pump – all to be located in Phase I structures without expansion. The project received the Environmental Project of the Year award from the Texas Chapter of the APWA and the Small Membrane Plant of the Year from SCMA.
- **Bailey Water Treatment Plant Improvements and Ground Storage Tank, City of Pearland:** Mr. Hibbs is providing project management, design, bidding support and construction administration for improvements to the Bailey Water Treatment Plant. The project includes an expansion of the WTP capacity and treatment capability to provide potable water for the City of Pearland up to 4.3 MGD. The project will combine the Magnolia Well and the Bailey Well at the Bailey WTP site to treat the combined flow. The project includes a 1,000,000-gallon prestressed concrete ground storage tank, site and civil design for the new tank foundation, drainage improvements, replacement of high service pumps with two transfer pumps, installation of a transmission pipeline from the existing Magnolia Well Site discharge to the WTP, installation of five aerolaters at the WTP for reduction of iron, manganese, and hydrogen sulfide from groundwater produced by the Bailey and Magnolia wells and electrical and SCADA work. The project also includes addition of a holding pond, demolition of an existing welded steel ground storage tank and addition of a new control building at the Bailey site.
- **Surface Water Treatment Plant, Phase I and II, City of Granbury:** Project Engineer for the planning, piloting, design and construction of the City's surface water treatment plant improvements, including construction of the first phase (2.5 MGD) and second phase (7.5 MGD). The project included innovative treatment technologies to adequately treat brackish water from Lake Granbury including a plate settler pretreatment system, microfiltration membrane filtration system and a reverse osmosis membrane system.



EDUCATION

Master of Science, Engineering and Technology Management, Colorado School of Mines, 2008

Bachelor of Science, Civil Engineering, Colorado School of Mines, 2008

REGISTRATIONS

Registered Professional Engineer – Texas #115729; Oklahoma #30274

PROFESSIONAL/CIVIC ORGANIZATIONS

American Water Works Association

Water Environment Federation

Abilene Heritage Square, Board Member, 2018-present

Abilene Airport Development, Board Member, 2019-present

United Way of Abilene, Loaned Executive, 2015

Leadership Abilene, 2014

Fairway Oaks Homeowner's Association, Former President, 2014-2016

eHT Leadership Development Program, 2013

PUBLICATIONS/PRESENTATIONS

Achieving 96 Percent Reverse Osmosis Recovery to Address Concentrate Disposal Challenges, Texas Water Conference, 2022

Emergency Response Planning, CWT Regional School, 2019

EXHIBIT
JSH-1



- **Grimes 24.0 MGD Water Treatment Plant Improvements, City of Abilene:** Project Engineer for this project to improve reliability of plant processes, and comply with TCEQ requirements, through enhancing filtration and chemical feed systems. Services include replacing filter media in gravity filters and modifying filter-to-waste piping. Process improvements include the installation of a new Ferrous Chloride bulk storage tank; new fiberglass building; day tank, transfer pump, and metering pumps; and new electric and control wiring and programming modifications.
- **Water Treatment Plant Improvements, City of Jacksboro:** Project Manager providing professional services to work with the City to identify suitable taste and odor control systems for the water treatment facilities.
- **Emergency Water Treatment Plant, City of Cisco:** The City of Cisco experienced devastating flooding that ultimately saw its entire water plant submerged under approximately 28-feet of water for several hours. Mr. Hibbs worked with City staff to first restore temporary treatment capabilities at the WTP through a massive 72-hour effort that included transport and installation of a temporary treatment membrane trailer and temporary power capabilities and is designing a new WTP for the City.
- **Water Treatment Plant and Master Plan, City of Richmond:** Project Manager for the planning, design and piloting services for a new surface water treatment plant to meet Fort Bend Subsidence District groundwater conversion requirements. It was determined that membrane filtration would provide the highest quality, efficiency and consistency of finished water quality in comparison to more conventional technologies. A piloting program was completed to satisfy regulatory requirements and to provide the City with sufficient operating time to become familiar with membrane filtration. The long-term conversion plan is for an ultimate plant capacity of 10 MGD constructed in two phases. Increasing the capacity from 5 MGD to 10 MGD will require the addition of a new raw water pump, additional membrane modules and a new high service pump, all to be located in Phase I structures without expansion. Additional components such as a raw water storage reservoir will be constructed in the final phase.
- **Hargesheimer Water Treatment Plant Expansion, City of Abilene:** Mr. Hibbs managed the design and construction management of water treatment plant improvements, including the following components: new pretreatment structure with cascade aeration, 3-stage flocculation, sedimentation via inclined plate settlers, sludge removal, and membrane feed pump station; new sludge holding tank with intermittent large bubble aeration; new solids handling building with 2 meter belt filter press and associated polymer feed system; addition of a second backwash recovery basin; upgrades to chemical feed facilities; two new membrane filter racks; a new, third-stage RO train to enhance recovery; 10 evaporators for concentrate disposal; and miscellaneous other electrical/control/SCADA improvements.
- **Northwest Water Reclamation Plant, City of Lubbock:** Project Engineer, as a subconsultant to APAI, providing process and mechanical design of a 6 MGD preliminary treatment unit with provision for future expansion to 15 MGD and the design of grading and drainage for the entire site.
- **2.0 MGD Water Treatment Plant Expansion, Possum Kingdom WSC:** Project Engineer for the planning, piloting, design and construction of a new master-planned regional water treatment plant utilizing RO technology for brackish surface water desalination.

PUBLICATIONS/PRESENTATIONS (CONT.)

Professional Development for Engineers, ACU Engineering, 2019

Membranes: Mystery to Mastery, SCMA Annual Conference, 2018

The Cisco Disaster Recovery Project, What to Do When your Only Water Plant is Completely Flooded, SCMA Annual Conference, 2018

Drought Response and Water Supply Diversity, Central West Texas Regional School, 2018

Expanding the Water Supply Portfolio in Abilene, Texas Water Conference, 2016

City of Missouri City, Regional Surface Water Treatment Plant, AMTA/SCMA Workshop, 2016

Importance of Planning Before, During and After Construction Projects, CWTWUA, 2015

Inherently Safer Technologies, AWWA Webcast, 2014

Removal of Contaminants with Reverse Osmosis using the TCEQ's New Modeling and Challenge Testing Approach, SCMA Conference, 2014

Sizing Criteria for Inclined Plate Settlers. Theory, Current TCEQ Rules and Full-Scale Operating Data, Texas Water, 2014

The Ground is Sinking! Missouri City's Approach to Reduce the Use of Groundwater, AMTA, 2013

AWARDS

20 Under 40, Abilene Young Professionals

PROFESSIONAL ENDEAVORS

Enprotec / Hibbs & Todd, Inc.
Vice President
Abilene, Texas
2009 - present

HDR Engineering, Inc.
Engineering Intern
Denver, Colorado
2007 - 2008

- **Water Treatment Plant Expansion and CT Study, City of Richmond:** Project Manager for expansion of the water treatment plant to increase the finished water flow capacity to approximately 2.2 million gallons per day (MGD) with addition of modules to the existing Pall microfiltration (MF) skids.
- **Tayman Water Treatment Plant Filter Upgrades, City of Midlothian:** Project Manager for a filter underdrain replacement and new media for all filters at the Tayman Water Treatment Plant (WTP).
- **Wastewater Treatment Plant Regionalization Plan, City of Missouri City:** Project Manager working with the City and multiple municipal utility districts (MUDs) in the area to determine feasible methods for wastewater treatment system regionalization. Mr. Hibbs is working with the City to develop detailed implementation plan alternatives for developing new regional treatment facilities at multiple site locations, as well as evaluating multiple process technologies such as SBR, MBR, CAS and extended aeration in order to identify realistic capital and O&M costs for a given regional facility site and selected process technology. MBR technology was selected by the City in order to maximize the effective treatment capacity at a given facility site to provide the greatest level of flexibility in phasing plant improvements, to exceed Type I reuse requirements and prepare for the potential of potable reuse in the future and to prepare for anticipated nutrient limits in the future.
- **Phase I Wastewater System Improvements Project, City of Granbury:** Mr. Hibbs provided engineering design for 3.0 MGD of MBR capacity added in the City of Granbury, including upgrade of the City's existing 2 MGD South WWTP facility, and parallel design and construction of a new 1 MGD East satellite WWTP facility at the same time. The project included flow equalization, BNR and "Flex MBR" hollow fiber processes.
- **Phase II Wastewater Treatment Facility Project, Town of Pecos City:** Mr. Hibbs provided project management, planning, design and permitting for a new 3.5 MGD MBR facility in West Texas including flow equalization and BNR and MBR processes in order to prepare for future DPR polishing processes.
- **Steep Bank / Flat Bank Wastewater Treatment Plant Improvements, City of Missouri City:** Mr. Hibbs provided project management for a preliminary engineering report to address ongoing issues at the WWTP. The report concluded that the existing Sienna North (SN) WWTP was at the end of its lifespan and was also reaching design capacity and needed to be replaced or regionalized. It was recommended that the City divert the SN flow to the Steep Bank / Flat Bank (SBFB) WWTP in a phased approach and expand the SBFB up to 5.0 MGD to accommodate the additional flows as well as the growing flows in the service area. A new 2.0 MGD dual Sequencing Batch Reactor (SBR) was recommended to provide the required additional capacity as well as prepare the WWTP for tightening permit limits.
- **AJ Brown Wastewater Treatment Plant Improvements, City of Huntsville:** Project Manager for improvements to the City's AJ Brown Wastewater Treatment Plant including pretreatment, secondary treatment, post-treatment, solids handling, electrical, SCADA and support systems, as well as a secondary treatment process. The project is an estimated \$20.5 million and will improve the consistency of plant performance, efficiency of overall plant performance and the effluent quality for discharge into a local creek, Parker Creek.
- **Wastewater Treatment Plant Expansion, Town of Lakewood Village:** Project Manager for expansion of the existing 0.1 million gallons per day (MDG) wastewater treatment plant (WWTP) to 0.3 MGD with a peak of 1.2 MGD to provide improved capacity. The project included secondary treatment, solids dewatering and discharge.
- **Wastewater Treatment Plant, Trophy Club Municipal Utility District:** Mr. Hibbs provided troubleshooting of the first Kubota-integrated MBR WWTP facility, when the facility as designed and constructed could not meet performance testing requirements in the contract. Mr. Hibbs provided technical design and commissioning support to CPY, Webber and Kubota to efficiently resolve the project issues to obtain the intended performance results, which allowed successful closeout of the project. The project included BNR and flat sheet MBR processes.
- **Wastewater Treatment Plant, Kubota Tractor Corporation:** Mr. Hibbs provided technical design support and QA/QC for the design of a new 50,000 gpd MBR WWTP constructed near the City of Grapevine. Kubota Tractor Corporation (KTC) relocated its North American headquarters to the DFW area and requested eHT's assistance to integrate an MBR-based non-potable reuse (NPR) program at their new facility, to maximize reuse of water used onsite.
- **East Wastewater Treatment Plant, City of Fulshear:** Project Manager to develop conceptual planning and preliminary design for a new wastewater treatment plant (WWTP). Initial planning included developing process alternatives and technology review. A Technical Memorandum was provided to the City.



INVOICE NUMBER: EN1708-007
PROJECT NUMBER: 3651B
INVOICE DATE: August 3, 2017

Possum Kingdom WSC

Ms. Sue Cathey
1170 Willow Road
Graford, Texas 76449

Re: Meter Request Evaluation

Analyses/additions and/or deletions of the following meters. Includes hydraulic analysis.

Larry & Shirley Glover, 2281 Sage Circle, Lot 1-D, 1 Meter, Phase I
CBGR, LLC, Lot 7, Hummingbird West, 1 Meter, Phase I

8/17	Meter Request	2 Ea.	\$ 125.00	\$ 250.00
Total Amount Due This Invoice				<u>\$ 250.00</u>



Remit to: ENPROTEC/HIBBS & TODD, INC.
P.O. Box 3097
Abilene, Texas 79604

Telephone: (325) 698-5560
Federal ID #75-2258512

THANK YOU

TERMS: Net due on receipt of invoice.

NOTE: Any amount left unpaid 30 days after billing date is subject to 1.5% per month late charge.

PKWSC 000714



August 2, 2017

Possum Kingdom Water Supply Corporation
1170 Willow Road
Graford, Texas 76449
Attn: Cathy Pearson

Re: Meter Request Evaluation

Dear Cathy:

We have performed a meter request evaluation for the new service meter request worksheets provided by PKWSC. Based on that analysis, the following meter **is approved** for addition to the PKWSC system:

1. Glover, Larry & Shirley, 2281 Sage Circle, Lot 1-D, 1 Meter, Phase 1
2. CBGR, LLC, Lot 7 Hummingbird West, 1 Meter, Phase 1

I appreciate the opportunity to be of service to the PKWSC. Please do not hesitate to call me at (325) 698-5560 if you have any questions.

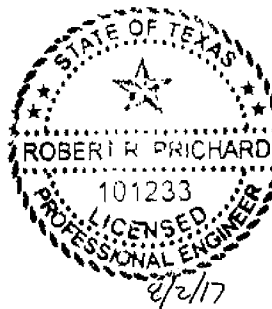
Sincerely,

Enprotec / Hibbs & Todd, Inc.

BJ Prichard, P.E.

BJP/jd

Enclosure: Invoice



c: Project File # 06-3651B

P:\Projects\Possum Kingdom\Meter Requests\2017 Meter Requests\20170802_Meter Response Letter (Glover-CBGR).docx

Environmental, Civil & Geotechnical Engineers

Abilene Office
402 Cedar
Abilene, Texas 79601
P.O. Box 3097
Abilene, Texas 79604
325.698.5560 | 325.691.0058 fax

Lubbock Office
6310 Genoa Avenue, Suite E
Lubbock, Texas 79424
806.794.1100 | 806.794.0778 fax

www.e-ht.com

Granbury Office
2901 Glen Rose Hwy, Suite 107
Granbury, Texas 76048
817.579.6791 | 817.579.8491 fax

PE Firm Registration No. 1151
PG Firm Registration No. 50103
RPLS Firm Registration Nos. 10011900 & 10007300

PKWSC 000715



INVOICE NUMBER: EN1901-010
PROJECT NUMBER: 3651B
INVOICE DATE: January 23, 2019

Possum Kingdom WSC

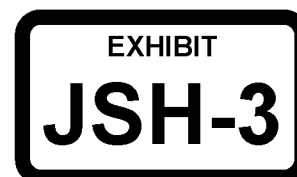
Ms. Cathy Pearson
1170 Willow Road
Graford, Texas 76449

Re: Meter Request Evaluation

Analyses/additions and/or deletions of the following meter. Includes hydraulic analysis.

Gary Ray, Lot 5 Hummingbird Lane, 1 Residential Meter, Phase I

1/19	Meter Request	1 Ea.	\$ 125.00	\$ 125.00
Total Amount Due This Invoice				<u>\$ 125.00</u>



Remit to: ENPROTEC/HIBBS & TODD, INC.
P.O. Box 3097
Abilene, Texas 79604

Telephone: (325) 698-5560
Federal ID #75-2258512

THANK YOU

TERMS: Net due on receipt of invoice.

NOTE: Any amount left unpaid 30 days after billing date is subject to 1.5% per month late charge.

PKWSC 000716



January 23, 2019

Possum Kingdom Water Supply Corporation
1170 Willow Road
Graford, Texas 76449
Attn: Cathy Pearson

Re: Meter Request Evaluation

Dear Cathy:

We have performed a meter request evaluation for the new service meter request worksheets provided by PKWSC. Based on that analysis, the following meter is **approved** for addition to the PKWSC system:

1. Gary Ray, Lot 5 Hummingbird Lane, 1 Residential Meter, Phase (1)

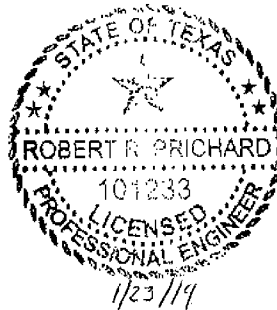
I appreciate the opportunity to be of service to the PKWSC. Please do not hesitate to call me at (325) 698-5560 if you have any questions.

Sincerely,

Enprotec / Hibbs & Todd, Inc.

BJ Prichard, P.E.

BJP/jd



Enclosure: Invoice

c: Project File # 06-3651B

P:\Projects\Possum Kingdom\Meter Requests\2019 Meter Requests\20190122_Meter Evaluation Response (Ray).docx

Environmental, Civil & Geotechnical Engineers

Abilene Office
402 Cedar
Abilene, Texas 79601
P.O. Box 3097
Abilene, Texas 79604
325.698.5560 | 325.690.3240 fax

Lubbock Office
6310 Genoa Avenue, Suite E
Lubbock, Texas 79424
806.794.1100 | 806.794.0778 fax

Granbury Office
1310 Weatherford Highway, Suite 116
Granbury, Texas 76048
682.498.6000 | 682.498.6293 fax

www.e-ht.com

PE Firm Registration No. 1151
PG Firm Registration No. 50103
RPLS Firm Registration Nos. 10011900 & 10007300

PKWSC 000717

POSSUM KINGDOM WATER SUPPLY CORPORATION

FACSIMILE TRANSMITTAL SHEET

TO:

B. J. PRICHARD

Cathy Pearson

COMPANY:

HIBBS & TODD

1/7/19

FAX NUMBER:

325-691-0058

TOTAL NO. OF PAGES INCLUDING COVER:

4

PHONE NUMBER:

SENDER'S PHONE NUMBER:

940-779-3100

RE:

SENDER'S FAX NUMBER:

940-779-3137

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

NEW SERVICE REQUEST

LOT 5 HUMMINGBIRD LANE

GARY RAY

6300 RIDGLEA PLACE #920

FORT WORTH, TX 76116

817-994-4617

1170 WILLOW ROAD, GRAFORD, TX 76449

PKWSC 000718

Possum Kingdom Water Supply Corporation

New Service Request

The Possum Kingdom Water Supply Corporation is a member owned, not for profit, public water provider. The regional system is being funded through Federal and State loans and grants. Bidding for the construction of the system was based upon the scope of the project as determined by the number of members who had joined as of August 31, 2002. Any system improvements for members wishing to be served by the system and who joined after that date are not included in the Federal and State funding.

In order for the PKWSC to determine whether a prospective member may be served by the system, a Service Investigation must be conducted by the Corporation's engineer. The Service Investigation will take into account whether a water distribution line is present to serve a particular site and whether an existing water line is of sufficient capacity to serve an additional connection. This will also identify costs associated with providing an additional water service line. Refer to the current rate chart for a detail of fees for a standard installation for new service. In addition, the new member must pay all costs to construct any improvements to serve a new connection. To initiate a Service Investigation, please fill out the form and return it along with a check for \$150.00 to the PKWSC. This cost is included in the total cost referenced on the rate sheet and is non-refundable. This form and all subsequent documentation related to this request are valid for 90 days. After the 90 days if new service is not activated, the "New Service Request" form and fees must be resubmitted.

Name GARY RAY (CBGR, LLC)
Billing Address 6300 Ridgely Place #920 Phone 817-994-4617
City, State, Zip Code Fort Worth TX 76116
Service Address Lot 5 Hummingbird Lane

Legal Description of Property (Include name of road, subdivision with lot and block number)

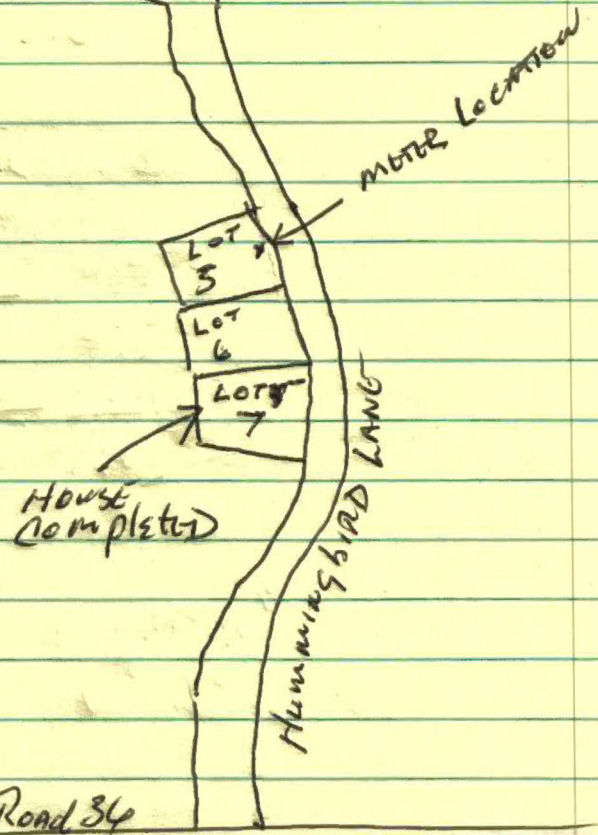
Lot 5 Hummingbird Hummingbird West Graham TX 76449
Note: Form must be completed by applicant only. A map of service location request must be attached.

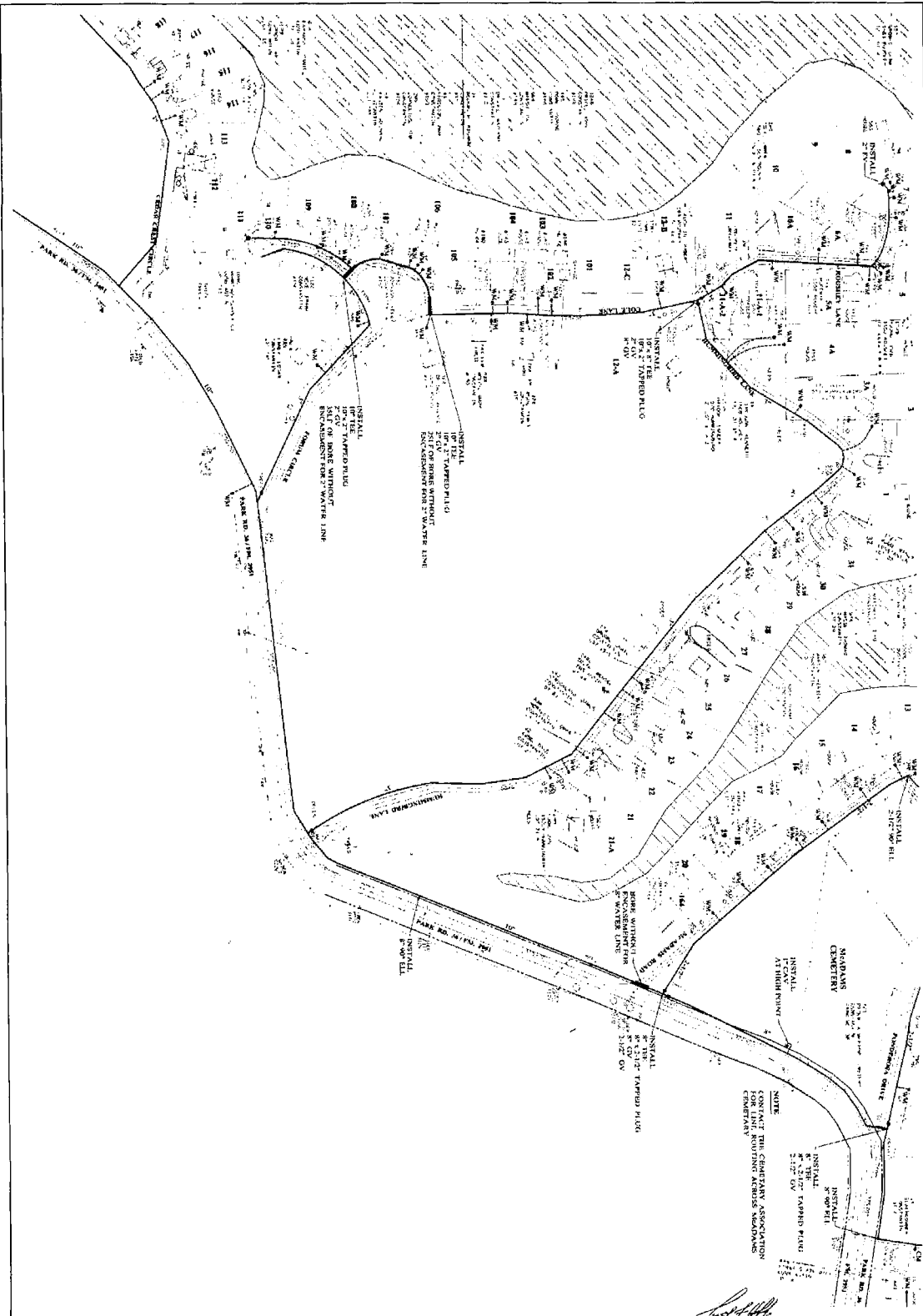
Please mail this form with a check for \$150.00 to:

Possum Kingdom Water Supply Corporation
1170 Willow Road
Possum Kingdom Lake
Graford, TX 76449

940-779-3100 Fax 940-779-3137 TDD 800-735-2989

GARY RAY
817-994-4617





AS-BUILT PK WATER SUPPLY CORP. PHASE I WATER DISTRIBUTION SYSTEM	
 HIBBS & TODD, INC. ENVIRONMENTAL AND CIVIL ENGINEERING 2000 South West 50th Ave. Arlington, Texas	
<p>THIS DRAWING IS THE PROPERTY OF HIBBS & TODD, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF HIBBS & TODD, INC.</p>	
<p>DATE: 10/1/00 DRAWN BY: JAV CHECKED BY: JAV IN CHARGE: JAV</p>	
<p>SCALE: 1" = 100'</p>	
<p>35 OF 51</p>	

PRELIMINARY

POSSUM KINGDOM WATER SUPPLY CORPORATION
WATER TREATMENT PLANT UPGRADE AND EXPANSION PROJECT

PRELIMINARY OPINION OF PROBABLE PROJECT COST

ITEM #	ITEM DESCRIPTION	UNIT PRICE		ESTIMATED QUANTITY		ESTIMATED COST
1	Raw Water Pump Station	\$483,000	/LS	1	LS	\$483,000
2	MF System (Build Out Pall AP8 Skid)	\$139,000	/LS	1	LS	\$139,000
3	New RO System	\$1,280,000	/LS	1	LS	\$1,280,000
4	Support Systems	\$12,000	/LS	1	LS	\$12,000
5	Chemical Systems Modifications	\$57,000	/LS	1	LS	\$57,000
6	Protective Coatings	\$44,000	/LS	1	LS	\$44,000
7	Electrical and SCADA Controls	\$452,000	/LS	1	LS	\$452,000
8	Mobilization, Bonds & Insurance, OHP	\$271,000	/LS	1	LS	\$271,000
9	Owner's Allowance	\$50,000	/LS	1	LS	\$50,000
CONSTRUCTION COST ESTIMATE						\$3,031,000
	Contingency	\$455,000	/LS	1	LS	\$455,000
CONSTRUCTION COST ESTIMATE WITH CONTINGENCY						\$3,486,000

DISCLAIMER: This Opinion of Probable Construction Cost is for internal use only and is not to be released outside of the organization without express written permission from the Project Manager.



PRELIMINARY

Possum Kingdom Water Supply Corporation						
0.5 MGD WTP Expansion at Existing WTP						
Item Description	Qty.	Unit	Unit Cost	% Mark-Up	Line Total	Subtotals
Raw Water Pump Station and Pipeline						
Additional Raw Water Pump	1	LS	\$180,000	20%	\$216,000	
Piping, Valves, Appurtenances	1	LS	\$40,000		\$40,000	
New Pipeline to WTP in original easement (if allowed)	8500	FT	\$150	20%	\$1,530,000	
Category Total						\$ 1,786,000
MF System						
New AP-6X Skid	1	LS	\$800,000	20%	\$960,000	
Piping and Valves	1	LS	\$40,000		\$40,000	
Misc. Metals Fabrication	1	LS	\$15,000		\$15,000	
Category Total						\$ 1,015,000
New RO System						
New RO System	1	LS	\$800,000	20%	\$960,000	
Piping and Valves	1	LS	\$50,000		\$50,000	
Misc. Metals Fabrication	1	LS	\$15,000		\$15,000	
Category Total						\$ 1,025,000
New MF Blend Pump Station						
New Pumps	1	LS	\$150,000	20%	\$180,000	
Piping, valves, appurtenances	1	LS	\$20,000		\$20,000	
Category Total						\$ 200,000
New Waste Processing Basin						
New Pumps	1	LS	\$100,000	20%	\$120,000	
Mixer	1	LS	\$20,000	20%	\$24,000	
Piping, valves, appurtenances	1	LS	\$15,000		\$15,000	
Category Total						\$ 159,000
New Building Addition						
150' long x 30' wide	4500	SF	\$250		\$1,125,000	
HVAC	1	LS	\$200,000		\$200,000	
Blend Pump Station Structure	1	LS	\$100,000		\$100,000	
Waste Processing Structure	1	LS	\$100,000		\$100,000	
Chemical/Plant Water System Upgrade	1	LS	\$20,000	20%	\$24,000	
Category Total						\$ 1,549,000
Chemical Systems Modifications						
Upgrade ClO ₂ Generator - Retrofit to Increase Capacity	1	LS	\$30,000	20%	\$36,000	
Upgrade NaClO ₂ System - Additional Storage Tote, Piping	1	LS	\$30,000	20%	\$36,000	
Upgrade Cl ₂ Gas Systems - Cylinders, Scales, Eductors,	1	LS	\$30,000	20%	\$36,000	
Upgrade LAS System - Tanks & Pumps	1	LS	\$35,000	20%	\$42,000	
Upgrade NaOH System - Tanks & Pumps	1	LS	\$20,000	20%	\$24,000	
Upgrade FeCl ₃ Coagulant System - Tanks & Pumps	1	LS	\$20,000	20%	\$24,000	
Category Total						\$ 198,000
Yard Piping	1	LS	\$5,932,000	7%	\$415,240	
Category Total						\$ 415,000
Protective Coatings						
Category Total	1	LS	\$6,347,000	1%	\$63,470	
						\$ 63,000
Site Work, Paving, SWPPP						
Site work, Paving, & SWPPP	1	LS	\$6,410,000	3%	\$160,000	
Category Total						\$ 160,000
Electrical and SCADA Controls						
Category Total	1	LS	\$6,570,000	25%	\$1,642,500	
						\$ 1,643,000
Mobilization, Bonds & Insurance, OHP						
	10%	JOB	\$8,213,000		\$821,300	\$ 821,000
BASE SUBTOTAL						
						\$ 9,034,000
CONTINGENCY						
				15.0%		\$ 1,356,000
CONSTRUCTION SUBTOTAL						
						\$ 10,390,000
DISCLAIMER: This opinion of probable project cost is released under the authority of Jordan S. Hibbs, Texas PE license number 115729, on January 12, 2021, and represents the design professional's best judgment. Enprotec / Hibbs & Todd, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market and industry conditions. Accordingly, Enprotec / Hibbs & Todd, Inc. cannot and does not guarantee that bids will not vary from this cost estimate.						

EXHIBIT
JSH-5

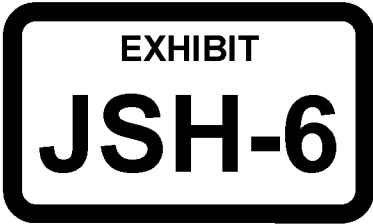
PRELIMINARY

OPINION OF PROBABLE CONSTRUCTION COST

POSSUM KINGDOM WATER SUPPLY CORPORATION							
New 0.5 MGD WTP Adjacent to Existing 2.5 MGD WTP							
Item	Item Description	Qty.	Unit	Unit Cost	% Mark-Up	Line Total	Subtotals
Raw Water Pump Station and Pipeline							
	Raw water intake pump station structure (triplex configuration for future buildout)	1	LS	\$475,000	20%	\$570,000	
	Raw water transfer pumps & VFDs (duplex VT pumps at 230 gpm/pump)	2	LS	\$110,000	20%	\$264,000	
	12-inch DR 18 (235 psi) PVC raw water transmission pipe (assume along existing pipelir	9,500	LF	\$175	20%	\$1,995,000	
	Trench safety plan	9,500	LS	\$0.75		\$7,125	
	Piping, valves, and appurtenances	1	LS	\$50,000		\$50,000	
	Category Total						\$ 2,886,000
MF System							
	New 0.63 MGD MF (one train including backwash, CEB, CIP equipment, air compressor, backwash and CIP pumps with VFDs, and control systems)	1	LS	\$998,000	20%	\$1,197,600	
	10,000-gallon HDPE MF/RO tank (installed inside treatment building)	1	LS	\$28,000	20%	\$33,600	
	Piping, valves, and appurtenances	1	LS	\$40,000		\$40,000	
	Misc. metals fabrication	1	LS	\$15,000		\$15,000	
	Category Total						\$ 1,286,000
RO System							
	New 0.15 MGD RO (two trains including low/high pressure RO feed pumps & VFDs, cartridge filters/vessels, antiscalant pump, instrumentation and control system, and assuming shared CIP with MF)	1	LS	\$945,000	20%	\$1,134,000	
	Piping, valves, and appurtenances	1	LS	\$50,000		\$50,000	
	Misc. metals fabrication	1	LS	\$15,000		\$15,000	
	5,000-gallon RO permeate storage for RO permeate flush	1	LS	\$20,000		\$20,000	
	Category Total						\$ 1,219,000
MF Blend Pump Station							
	MF blend pumps & VFDs (duplex setup, end-suction centrifugal at 35 gpm per pump)	2	LS	\$7,500	20%	\$18,000	
	Piping, valves, and appurtenances	1	LS	\$20,000		\$20,000	
	Category Total						\$ 38,000
Waste Processing Basin							
	Waste transfer pumps & VFDs (duplex setup, submersible at 55 gpm per pump)	2	LS	\$20,000	20%	\$48,000	
	Basin mixer (submersible Flygt with mast and hardware)	1	LS	\$20,000	20%	\$24,000	
	8-inch DR 25 (165 psi) PVC waste discharge line to PK (assume same outfall location)	4,000	LF	\$100	35%	\$540,000	
	Trench safety plan	4,000	LS	\$0.75	20%	\$3,600	
	Piping, valves, and appurtenances	1	LS	\$15,000		\$15,000	
	Category Total						\$ 631,000
Treatment Building							
	140' long x 60' wide	8,400	SF	\$275		\$2,310,000	
	HVAC	1	LS	\$250,000		\$250,000	
	Waste processing structure	1	LS	\$200,000		\$200,000	
	Category Total						\$ 2,760,000
Support Systems							
	ClO ₂ generator	1	LS	\$92,000	20%	\$110,400	
	NaClO ₂ system	1	LS	\$57,500	20%	\$69,000	
	Cl ₂ Gas system	1	LS	\$57,500	20%	\$69,000	
	LAS system	1	LS	\$46,000	20%	\$55,200	
	NaOH system	1	LS	\$46,000	20%	\$55,200	
	FeCl ₃ coagulant system	1	LS	\$57,500	20%	\$69,000	
	SBS system	1	LS	\$57,500	20%	\$69,000	
	Plant water system	1	LS	\$92,000	20%	\$110,400	
	0.5 MGD standby generator	1	LS	\$70,000	20%	\$84,000	
	Category Total						\$ 691,000
0.5 MG Welded Steel Finished Water Storage and Pumping							
		1	LS	\$850,000		\$850,000	
	Category Total						\$ 850,000
Yard Piping							
		1	LS	\$10,361,000	8%	\$828,880	
	Category Total						\$ 829,000
Protective Coatings							
		1	LS	\$11,190,000	1%	\$111,900	
	Category Total						\$ 112,000
Site Work, Paving, SWPPP							
	Site work, paving, & SWPPP	1	LS	\$11,302,000	5%	\$565,000	
	Category Total						\$ 565,000
Electrical and SCADA Controls							
		1	LS	\$11,867,000	30%	\$3,560,100	
	Category Total						\$ 3,560,000
Mobilization, Bonds & Insurance, OHP							
		10%	JOB	\$15,427,000		\$1,542,700	\$ 1,543,000
BASE SUBTOTAL							\$ 16,970,000
CONTINGENCY					15.0%		\$ 2,546,000
CONSTRUCTION SUBTOTAL							\$ 19,516,000

DISCLAIMER: This opinion of probable construction cost is released under the authority of Michael Wray, Texas PE license number 129846, on November 21, 2022, and represents the design professional's best judgment. Enprotec / Hibbs & Todd, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market and industry conditions. Accordingly, Enprotec / Hibbs & Todd, Inc. cannot and does not guarantee that bids will not vary from this cost estimate.

This document is issued for interim review by Michael Wray, P.E., Texas PE #129846, on November 21, 2022 and is not intended for construction, bidding, or permitting purposes.



PRELIMINARY

POSSUM KINGDOM WATER SUPPLY CORPORATION
NEW 0.5 MGD WTP ADJACENT TO EXISTING 2.5 MGS WTP

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST

ITEM #	ITEM DESCRIPTION	UNIT PRICE		ESTIMATED QUANTITY		ESTIMATED COST
1	Raw Water Pump Station and Pipeline	\$2,886,000	/LS	1	LS	\$2,886,000
2	MF System	\$1,286,000	/LS	1	LS	\$1,286,000
3	RO System	\$1,219,000	/LS	1	LS	\$1,219,000
4	MF Blend Pump Station	\$38,000	/LS	1	LS	\$38,000
5	Waste Processing Basin	\$631,000	/LS	1	LS	\$631,000
6	Treatment Building	\$2,760,000	/LS	1	LS	\$2,760,000
7	Support Systems	\$691,000	/LS	1	LS	\$691,000
8	0.5 MG Welded Steel Finished Water Storage and Pumping	\$850,000	/LS	1	LS	\$850,000
9	Yard Piping	\$829,000	/LS	1	LS	\$829,000
10	Protective Coatings	\$112,000	/LS	1	LS	\$112,000
11	Site Work, Paving, SWPPP	\$565,000	/LS	1	LS	\$565,000
12	Electrical and SCADA Controls	\$3,560,000	/LS	1	LS	\$3,560,000
13	Mobilization, Bonds & Insurance, OHP	\$1,543,000	/LS	1	LS	\$1,543,000
CONSTRUCTION COST ESTIMATE						\$16,970,000
Contingency		\$2,546,000	/LS	1	LS	\$2,546,000
CONSTRUCTION COST ESTIMATE WITH CONTINGENCY						\$19,516,000

DISCLAIMER: This opinion of probable construction cost is released under the authority of Michael Wray, Texas PE license number 129846, on November 21, 2022, and represents the design professional's best judgment. Enprotec / Hibbs & Todd, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market and industry conditions. Accordingly, Enprotec / Hibbs & Todd, Inc. cannot and does not guarantee that bids will not vary from this cost estimate.

This document is issued for interim review by Michael Wray, P.E., Texas PE #129846, on November 21, 2022 and is not intended for construction, bidding, or permitting

PRELIMINARY

POSSUM KINGDOM WATER SUPPLY CORPORATION
NEW 0.5 MGD WTP ADJACENT TO EXISTING 2.5 MGS WTP

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST - FIVE-YEAR INFLATION PROJECTIONS

Estimated Year-Over-Year Inflation, %					
2022	2023	2024	2025	2026	2027
n/a	8%	8%	6%	4%	3%

		Projected Costs with Inflation					
ITEM #	ITEM DESCRIPTION	2022	2023	2024	2025	2026	2027
1	Raw Water Pump Station and Pipeline	\$2,886,000	\$3,116,880	\$3,366,230	\$3,568,204	\$3,710,932	\$3,822,260
2	MF System	\$1,286,000	\$1,388,880	\$1,499,990	\$1,589,990	\$1,653,589	\$1,703,197
3	RO System	\$1,219,000	\$1,316,520	\$1,421,842	\$1,507,152	\$1,567,438	\$1,614,461
4	MF Blend Pump Station	\$38,000	\$41,040	\$44,323	\$46,983	\$48,862	\$50,328
5	Waste Processing Basin	\$631,000	\$681,480	\$735,998	\$780,158	\$811,365	\$835,706
6	Treatment Building	\$2,760,000	\$2,980,800	\$3,219,264	\$3,412,420	\$3,548,917	\$3,655,384
7	Support Systems	\$691,000	\$746,280	\$805,982	\$854,341	\$888,515	\$915,170
8	0.5 MG Welded Steel Finished Water Storage and Pumping	\$850,000	\$918,000	\$991,440	\$1,050,926	\$1,092,963	\$1,125,752
9	Yard Piping	\$829,000	\$895,320	\$966,946	\$1,024,962	\$1,065,961	\$1,097,940
10	Protective Coatings	\$112,000	\$120,960	\$130,637	\$138,475	\$144,014	\$148,334
11	Site Work, Paving, SWPPP	\$565,000	\$610,200	\$659,016	\$698,557	\$726,499	\$748,294
12	Electrical and SCADA Controls	\$3,560,000	\$3,844,800	\$4,152,384	\$4,401,527	\$4,577,588	\$4,714,916
13	Mobilization, Bonds & Insurance, OHP	\$1,543,000	\$1,666,440	\$1,799,755	\$1,907,741	\$1,984,050	\$2,043,572
CONSTRUCTION COST ESTIMATE		\$16,970,000	\$18,327,600	\$19,793,808	\$20,981,436	\$21,820,694	\$22,475,315
Contingency		\$2,546,000	\$2,749,680	\$2,969,654	\$3,147,834	\$3,273,747	\$3,371,959
CONSTRUCTION COST ESTIMATE WITH CONTINGENCY		\$19,516,000	\$21,077,280	\$22,763,462	\$24,129,270	\$25,094,441	\$25,847,274

DISCLAIMER: This opinion of probable construction cost is released under the authority of Michael Wray, Texas PE license number 129846, on November 21, 2022, and represents the design professional's best judgment. Enprotec / Hibbs & Todd, Inc. has no control over the cost of labor, materials, or equipment; over the Contractor's methods of determining bid prices; or over competitive bidding or market and industry conditions. Accordingly, Enprotec / Hibbs & Todd, Inc. cannot and does not guarantee that bids will not vary from this cost estimate.

This document is issued for interim review by Michael Wray, P.E., Texas PE #129846, on November 21, 2022 and is not intended for construction, bidding, or permitting