COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF HARDIN)COUNTY WATER DISTRICT NO. 1 FOR A)DECLARATORY ORDER REGARDING THE)APPLICABILITY OF KRS 278.020(1) TO)PROPOSED IMPROVEMENTS TO)MULDRAUGH WATER TREATMENT PLANT)

CASE NO. 2020-00344

VERIFIED APPLICATION

Pursuant to KRS 278.020 and 807 KAR 5:001, Sections 15 and 19, Hardin County Water District No. 1 ("Hardin District") applies to the Kentucky Public Service Commission ("Commission") for a declaratory order that proposed improvements to the Muldraugh Water Treatment Plant do not require a certificate of public convenience and necessity ("Certificate").

In support of its Application, Hardin District respectfully states:

A. Applicant

1. The full name and post office address of Hardin District is: Hardin County Water District No. 1, 1400 Rogersville Road, Radcliff, Kentucky 40160. Its e-mail address is: shogan@hcwd.com.

2. Copies of all orders and pleadings related to this proceeding should be directed to:

Stephen Hogan General Manager Hardin County Water District No. 1 1400 Rogersville Road Radcliff, Kentucky 40160 shogan@hcwd.com (270) 351-3222 David T. Wilson II Skeeters, Bennett, Wilson & Humphrey 550 W. Lincoln Trail Boulevard Radcliff, Kentucky 40160 (270) 351-4404 david.wilson@sbwhlaw.com

Gerald E. Wuetcher Stoll Keenon Ogden PLLC 300 West Vine Street, Suite 2100 Lexington, Kentucky 40507 gerald.wuetcher@skofirm.com (859) 231-3017

3. Hardin District is not a corporation, limited liability company or limited partnership. It has no articles of incorporation or partnership agreements.

4. Hardin District is a water district created under the provisions of KRS Chapter 74 and is a political subdivision of the Commonwealth of Kentucky.

5. Hardin County Court created Hardin District pursuant to an order entered August 20, 1952. A copy of this Order and subsequent Orders modifying Hardin District's territory are attached at **Tab 1** of this Application.

6. Hardin District owns and operates facilities that provide, as of December 31, 2019, retail water service to approximately 10,395 customers in Hardin County, Kentucky and wholesale water service to Meade County Water District and the cities of Vine Grove, Hardinsburg, and West Point.¹

7. Hardin District also owns and operates facilities that provide, as of December 31,

2019, sanitary sewer service to approximately 9,016 customers in Hardin County, Kentucky, primarily in the city of Radcliff.²

¹ Annual Report of Hardin County Water District No. 1 to the Public Service Commission of the Commonwealth of Kentucky for the Calendar Year Ended December 31, 2019 ("2019 Annual Water Report") at Ref Pages 27 and 29.

² Annual Report of Hardin County Water District No. 1 to the Public Service Commission of the Commonwealth of Kentucky for the Calendar Year Ended December 31, 2019 ("2019 Annual Sewer Report") at Ref Page 8.

8. Hardin District owns and operates the water treatment and distribution system that serves the Fort Knox Military Installation,³ as well as the sanitary sewer and storm water drainage systems⁴ that serve that installation.

B. The Fort Knox Water System and The Contract to Provide Water Service

9. The Fort Knox Military Installation is situated in Bullitt, Hardin, and Meade Counties, Kentucky and covers approximately 109,000 acres. It has an on-post population of 11,613 and a daytime population of over 23,000 persons.

10. The Fort Knox Military Installation's water production and treatment facilities consist of 13 groundwater wells, two raw water intake structures, a low-lift pump station, 48,700 linear feet of raw water main, two water treatment facilities, three clear wells, two high lift pump stations, one booster pump station, eight elevated storage tanks, and approximately 857,726 linear feet of distribution main. These facilities are located entirely within the Fort Knox Military Installation and serve only the military installation.

11. Pursuant to 10 U.S.C § 2688, the Department of Defense ("DoD") in 2008 issued a solicitation for proposals for the privatization of the Fort Knox water treatment and distribution system and the provision of water service to the military installation. Hardin District submitted a proposal in response to this solicitation and subsequently engaged in negotiations with the Department of Defense. On September 30, 2011, it executed Contract No. SP0600-11- 8271 ("the Contract") with the Defense Logistics Agency Energy ("DLAE") for which provided for the

³ Application of Hardin County Water District No. 1 for Approval of a Contract with the United States Army to Provide Water Service to the Fort Knox Military Installation, Case No. 2011-00416 (Ky. PSC Jan. 27, 2012).

⁴ Application of Hardin County Water District No. 1 for Approval to Transfer Ownership of the City of Radcliff, Kentucky Sanitary Sewer System, Assume Existing Debt, and For Proposed Tariff to Provide Sewer Services to the City of Radcliff, Case No. 2008-00074 (Ky. PSC Apr. 23, 2008); Application of Hardin County Water District No. 1 Requesting A Certificate of Public Convenience and Necessity to Own and Operate A Sewer Utility and Approval of Initial Rates, Case No. 2004-00422 (Ky. PSC Dec. 1, 2004).

transfer of ownership of the military installation's water treatment and distribution system to Hardin District and required Hardin District to provide potable water service to the military installation for 50 years.⁵ A copy of the Contract has previously been filed with the Commission.⁶

12. The Contract established a purchase price of \$8,903,000 for the water treatment and distribution system. Hardin District was to pay this amount though a monthly credit of \$85,968 on DoD's monthly bill for the first ten years of the Contract.⁷

13. The Contract authorized Hardin District to assess a Monthly Utility Service Charge, which was intended to recover operation and maintenance costs and to provide for "renewals and replacements" of the water treatment and distribution system.⁸ It defined "renewals and replacements" as "investments in the utility system to renew or replace system components that fail or reach the end of their useful life.⁹

14. The Contract also authorized the assessment of three surcharges: Transition Surcharge, Purchase Price Recovery Surcharge and Initial System Deficiency Correction ("ISDC") Surcharge. The one-time Transition Surcharge of \$592,318 was intended to compensate Hardin District for costs expended during the transition period that were necessary and reasonable for its assumption of ownership and responsibility for the system. A monthly Purchase Price Recovery Surcharge of \$85,968 was to be assessed for the first 10 years of the Contract to compensate Hardin District for the water system's purchase cost. An ISDC Surcharge of \$473,831 was to be assessed monthly for the first five years of the Contract to compensate Hardin District for the estimated cost

⁵ At the end of the Contract's term, the United States has the option of repurchasing the water systems. *See* Contract at § H.7.

⁶ See https://psc.ky.gov/tariffs/Water/Districts,%20Associations,%20%26%20Privately%20Owned/Hardin%20 County%20Water %20 District%20Number%201/xContracts/Defense%20Logistics%20Agency%20Energy/2012-02-01_Contract.pdf.

⁷ Contract at § F.1.

⁸ *Id.* at § B.2.2.1.

⁹ *Id.* at § C.11.2.3.

of improvement projects whose purpose was to correct critical deficiencies present in the water system at the time of transfer.

15. The Contract identified 23 improvement projects to ensure that the Fort Knox water treatment and distribution systems remained in compliance with all applicable regulatory requirements.¹⁰ These projects, whose estimated total cost was \$28,429,860, were to be completed within five years of the Contract's start date. The Contract provided that the cost of these projects was to be paid with ISDC Surcharge proceeds.¹¹

16. The Contract also specified that Hardin District maintain a separate fund to account for all revenues and expenses related to the water system's operation to prevent any crosssubsidization with Hardin District's other operations. Hardin District's rate for service was to recover only its direct costs, plus general and administrative costs, for owning and operating the Fort Knox water system.¹² Any revenues in excess of those costs must "remain within the separate account for future use on the Fort Knox potable water utility system only."¹³

17. On October 13, 2011, Hardin District applied to the Commission for a Certificate to acquire and operate the Fort Knox Military Installation water treatment and distribution systems and approval of the rates and charges for service set forth in the Contract.¹⁴ After reviewing Hardin District's application, the Commission determined that no Certificate was required and approved

¹⁰ *Id.*, Exhibit JE4-1.

¹¹ *Id.* at § B.2.2.3.

¹² *Id.*, Preamble at \P 6.

¹³ *Id.* The Commission had previously required Hardin District to maintain separate funds for its Fort Knox operations. *See, e.g., Application of Hardin County Water District No. 1 Requesting A Certificate of Public Convenience and Necessity To Own and Operate A Sewer Utility and For Approval of Initial Rates, Case No. 2004-00422 (Ky. PSC Dec. 1, 2004) (requiring Hardin District to maintain separate accounts for its water, wastewater and storm water operations and prohibiting Hardin District from entering any arrangements for financing its wastewater or storm water operations that would permit a creditor upon default to have recourse to the assets of its water operations). In its Order of January 27, 2012 in Case No. 2011-00416, in which it approved the Contract, the Commission restated its requirement that Hardin District to maintain separate funds for each of its operations.*

¹⁴ Application of Hardin County Water District No. 1 for Approval of a Contract with the United States Army to Provide Water Service to the Fort Knox Military Installation, Case No. 2011-00416 (Ky. PSC filed Oct. 10, 2011).

the provisions of the Contract regarding Hardin District's rates and service, including the ISDC Surcharge. In its Order of January 27, 2012, the Commission also found that KRS 278.020(1) required a Certificate for each project identified as an "initial system deficiency correction" that involved a significant capital outlay.¹⁵

18. Hardin District subsequently petitioned for rehearing of the Order of January 27, 2012 on the need for a Certificate for any of the projects list in the Contract. On December 4, 2012, the Commission clarified its earlier order, stating that "only projects involving the construction of facilities and a substantial capital outlay that might materially affect the financial condition of the water district require[d] a Certificate"¹⁶ and identifying seven of the 23 projects as possibly requiring a Certificate.

19. After Hardin District assumed responsibility for the water system's operations, DoD officials subsequently expressed concerns regarding certain aspects of the Fort Knox Military Installation's water treatment and distribution systems, specifically water pressure, water taste and general water quality. In response to these concerns, Hardin District in 2014 retained Stantec Consulting Services, Inc. ("Stantec") to update the hydraulic distribution system model and develop a capital improvements plan. This work and a preliminary capital improvements plan were submitted to DoD officials in mid-2015. After review of this submittal, the DLAE requested that Hardin District submit a proposal for modifications to the initial plan of improvements.

20. On September 4, 2015, Hardin District submitted a Technical Proposal Submittal. A copy of this Submittal is attached at **Tab 2** of this Application. In this Submittal, Stantec reported the results of its studies and proposed 18 capital improvement projects to be substituted for the projects set forth in the Contract that had not yet commenced. Stantec found that the Fort

¹⁵ Case No. 2011-00416, Order of Jan. 27, 2012 at 13.

¹⁶ Case No. 2011-00416, Order of Dec. 4, 2012 at 4.

Knox water distribution system experienced widespread areas of low water pressure that caused inadequate fire flows and increased public safety risks. It further found the system's water storage tanks could not maintain a regular fill-and-empty cycle but were forced to operate within 10 to 15 feet of tank top, resulting in greater purchased power expense. This condition, Stantec noted, prevented the system from maintaining adequate chlorine residuals and lowered water quality. These proposed projects would correct these conditions and eliminate the need for the remaining projects in the original plan of improvements.

21. Hardin District subsequently submitted to DLAE a Firm Fixed Price Proposal Submittal regarding the cost of the 18 projects identified in the Technical Proposal Submittal. A copy of the final version of this Proposal, dated June 1, 2016, is attached at **Tab 3** of this Application. In this proposal, Hardin District estimated the total cost of these 18 projects at \$16,456,000. Hardin District proposed that these projects be financed with unused IDSC Surcharge proceeds and other funds in its Fort Knox Water Service Fund. None of the proposed improvements would be financed through a change in existing rates.

22. On August 10, 2016, Hardin District and DLAE executed Contract Modification P00029 to modify the terms of the Contract. A copy of Contract Modification P00029 is attached at **Tab 4** of this Application. The Modification provided that: (A) The ISDC would not be renewed and would terminate upon the fifth anniversary of the Contract's execution; (B) The list of capital projects listed in the Contract as necessary to correct system deficiencies was modified to substitute the projects set forth in Hardin District's Firm Fixed Price Proposal Submittal for those in the original Contract; and (C) Hardin District was authorized to use IDSC Surcharge proceeds to fund the projects on the modified project list.

23. On February 1, 2017, Hardin District and DLAE executed Contract Modification P00033 to modify the terms of the Contract to eliminate one of the proposed projects and to reduce the total number of projects to 17 and the total estimated cost to \$16,293,000. A copy of Contract Modification P00033 is attached at **Tab 5** of this Application.

C. Case No. 2019-00067: Request for Declaratory Order

24. On February 26, 2019, Hardin District applied to the Commission for a declaratory order that each of proposed projects was an extension in the ordinary course of business and did not required a Certificate. The Commission docketed the application as Case No. 2019-00067.¹⁷ On May 30, 2019, after reviewing the application, the Commission entered an order in which it declared that 16 of the 17 projects were extensions in the usual course of business and did not require a Certificate. In reaching its decision, it relied upon past Commission precedent that "proposed extensions necessary to serve a large, sophisticated customer and wholly funded by that customer pursuant to an agreement with that customer do not require a CPCN [certificate of public convenience and necessity], in part because they will not affect the financial condition of the utility and will not result in an increase in charges to other customers."¹⁸ The critical factors noted in its decision were that the total cost of the 16 projects did not exceed the amount of unused ISDC Surcharge proceeds and, therefore, would not materially affect Hardin District's existing financial condition or result in increased charges to Hardin District's other customers.

25. In its Order of May 30, 2019, the Commission declined to rule on whether proposed improvements to the Muldraugh Water Treatment Plant required a Certificate. It was unable to determine whether the proposed project would materially affect Hardin District's existing

¹⁷ Application of Hardin County Water District No. 1 for a Declaratory Order that Proposed Waterworks Improvements to Maintain Adequate and Reliable Water Service to the Fort Knox Military Installation Do Not Require A Certificate of Public Convenience and Necessity, Case No. 2019-00067 (Ky. PSC filed Feb. 26, 2019).

¹⁸ Order of May 30, 2019 at 13. In its Order, the Commission cautioned that its findings regarding the 16 projects were based upon the existing record and could be affected by any material changes to those projects. Hardin District is not aware of any material change in those projects since May 30, 2019.

condition "because neither the scope and cost of that project is sufficiently defined" and Hardin District lacked an agreement with DoD for the project's increased scope and cost.¹⁹

D. Muldraugh Water Treatment Plant Improvements Project

26. The Fort Knox Military Installation presently has two water treatment plants: the Central Water Treatment Plant and the Muldraugh Water Treatment Plant. In its 2015 Study, Stantec assessed the condition and operating characteristics of these plants and determined that the Muldraugh Water Treatment Plant offered greater redundancy, greater treatment capacity, greater room for expansion, and better water circulation and water quality through the military installation.²⁰ It recommended several improvements to the Muldraugh Water Treatment Plant and the decommissioning of the Central Water Treatment Plant. With the execution of Contract Modification P00029, DLAE and Hardin District modified the Contract to accept these improvements as to an initial system deficiency correction project.

27. Hardin District proposes the following improvements to the Muldraugh Water Treatment Plant: (1) replacement of existing high service pumps to ensure compatibility and maximum effectiveness with new water storage tanks and the addition of a fourth high service pump; (2) chemical feed system improvements and redundancy; (3) rehabilitation of filter gallery piping; (4) air scour and surface wash; (5) main treatment plant building rehabilitation and new control room and water quality laboratory; (6) SCADA improvements; (7) installation of gridbased backwash supply; (8) concrete rehabilitation; (9) perimeter fencing and security enhancements; (10) regrading and paving of parking and delivery areas; (10) conversion of water

¹⁹ Order of May 31, 2019 at 13-14.

²⁰ For the comparison of the two water treatment plants, see Stantec Consulting Services Inc., *Technical Proposal Submittal UP Contract No.: SPOG00-11-C-8270 - Revised ISDC Projects and Revised Capital Improvement Program Potable Water Utility System at Fort Knox Army Installation, Kentucky* (Sept. 4, 2015) (Tab 2) at 3.

disinfection to chloramines; and (11) influent piping improvements to allow both treatment trains to operate simultaneously, thus increasing treatment plant capacity from 4.5 MGD to 7.0 MGD.

28. Hardin District advertised for bids on the proposed Muldraugh Water Treatment Plant Improvements Project and received two responsive bids. On September 30, 2020, Hardin District opened these bids. As both exceeded the total project funding level of \$16,000,000, Hardin District entered negotiations with each bidder and requested reductions for the removal of certain proposed improvements. After evaluation of the revised bids, Stantec, the project engineer, advised Hardin District that that the bid of \$15,273,526.50 from Dugan & Meyers LLC, of Louisville, Kentucky was the lower bid and recommended its acceptance. A copy of the bid tabulation is attached at **Tab 6.** A copy of Stantec's recommendation is attached at **Tab 7**.

29. On October 19, 2020, Hardin District's Board of Commissioners awarded the contract for the Muldraugh Water Treatment Plant Improvements Project to Dugan & Meyers LLC. The Notice of Award and the minutes of the Board of Commissioners' meeting of October 19, 2020 are attached at **Tab 8** and **Tab 9** respectively.

30. Hardin District will finance the cost of the Muldraugh Water Treatment Plant Improvements Project with funds from the Fort Knox Water Reserve Fund. As of September 30, 2020, the fund had a cash balance of \$17,189,743, which is adequate to meet the proposed construction costs. Moreover, Hardin District has modeled its total revenues and expenses during the construction period and has determined that the Fort Knox Water Reserve Fund will have adequate cash reserves to meet all operating expenses and capital improvement expenditures without any adjustment in customer rates, the issuance of any debt instrument or any reduction in the quality of its service to the Fort Knox Military Installation or other Hardin District customers. Upon completion of the proposed project in March 2022, Hardin District estimates that the balance of the Fort Knox Water Reserve Fund will be approximately \$1.18 million will A copy of Hardin District's cash flow model of the Fort Knox Water Reserve Fund is attached at **Tab 10** and an Excel version of the model is embedded in the electronic version of this Application.

31. Hardin District is not required to obtain additional DLAE concurrence with the Muldraugh Water Treatment Plant Improvements Project's current scope or cost. With the execution of Contract Modifications P0029 and P0033, DLAE has concurred with the proposed improvements. Moreover, the existence of adequate funds in Fort Knox Water Reserve Fund to finance the Project eliminates any need to modify the Contract for additional funding. While DLAE's concurrence is not required, Hardin District has advised DLAE of its plans and DLAE has advised that it has no objections to Hardin District's proposed course of action. A copy of DLAE's concurrence is attached at **Tab 11**.

E. Applicable Law

32. KRS 278.020(1) (a) provides:

No person, partnership, public or private corporation, or combination thereof shall commence providing utility service to or for the public or begin the construction of any plant, equipment, property, or facility for furnishing to the public any of the services enumerated in KRS 278.010, except:

- 1. Retail electric suppliers for service connections to electricconsuming facilities located within its certified territory and ordinary extensions of existing systems **in the usual course of business**; or
- 2. A water district created under KRS Chapter 74 or a water association formed under KRS Chapter 273 that undertakes a waterline extension or improvement project if the water district or water association is a Class A or B utility as defined in the uniform system of accounts established by the commission according to KRS 278.220 and:

a. The water line extension or improvement project will not cost more than five hundred thousand dollars (\$500,000); or

b. The water district or water association will not, as a result of the water line extension or improvement project, incur obligations requiring commission approval as required by KRS 278.300.

In either case, the water district or water association shall not, as a result of the water line extension or improvement project, increase rates to its customers;

until that person has obtained from the Public Service Commission a certificate that public convenience and necessity require the service or construction.

33. 807 KAR 5:001, Section 15(3) provides:

Extensions in the ordinary course of business. No certificate of public convenience and necessity will be required for extensions that do not create wasteful duplication of plant, equipment, property or facilities, or conflict with the existing certificates or service of other utilities operating in the same area and under the jurisdiction of the commission that are in the general area in which the utility renders service or contiguous thereto, and that do not involve sufficient capital outlay to materially affect the existing financial condition of the utility involved, or will not result in increased charges to its customers.

34. KRS 278.020(1) and 807 KAR 5:001§15(3), when viewed together, "clearly

identify those facilities for which a Certificate of Public Convenience and Necessity is not required."²¹ Distilling the requirements of KRS 278.020(1) and 807 KAR 5:001, Section 15(3) to their essentials, the Commission has held that a Certificate is not necessary "for facilities that do not result in the wasteful duplication of utility plant, do not compete with the facilities of existing public utilities, and do not involve a sufficient capital outlay to materially affect the existing financial condition of the utility involved or to require an increase in utility rates." ²²

²¹ The Application of Northern Kentucky Water District (A) For Authority to Issue Parity Revenue Bonds in the Approximate Amount of \$16,545,000; and (B) A Certificate of Convenience and Necessity for the Construction of Water Main Facilities, Case No. 2000-481 (Ky. PSC Aug. 30, 2001) at 4 (referring to \$15(3) prior to revisions in 807 KAR 5:001 resulted in renumbering).

²² The Application of Northern Kentucky Water District (A) For Authority to Issue Parity Revenue Bonds in the Approximate Amount of \$16,545,000; and (B) A Certificate of Convenience and Necessity for the Construction of Water Main Facilities, Case No. 2000-481 (Ky. PSC Aug. 30, 2001) at 4 ("When viewed together, KRS 278.020(1) and Administrative Regulation 807 KAR 5:001, Section 9(3) clearly identify those facilities for which a Certificate of Public Convenience and Necessity is not required.") (referring to \$15(3) prior to revisions in 807 KAR 5:001 that resulted in renumbering).

35. "Wasteful duplication" is defined as an "excess of capacity over need" and "an excessive investment in relation to productivity or efficiency."²³ A proposed facility does not constitute wasteful duplication unless an "existing facility is reasonably available for the present and future needs of those who will be served by it."²⁴

36. To determine if a proposed facility's construction materially affects a utility's financial condition, the Commission has considered three factors: the level of capital investment; the issuance of debt to finance the construction; and the effect of the proposed facility's construction upon the utility's rates and charges.

a. <u>Capital Outlay.</u> In determining whether a proposed facility was an ordinary extension in the usual course, the Commission has compared the cost of the proposed facility to the present value of the utility's existing facilities. It has declared:

In assessing whether a proposed project is a system extension in the ordinary course of business, Kentucky courts have traditionally looked to the size and scope of a project in the context of the monetary cost involved. The Commission has similarly adopted this method and likewise looks to the scale of a proposed project in relation to the relative size of the utility and its present facilities.²⁵

The Commission, however, has not stated a specific level of capital outlay at which a project will cease to be in the usual course. Instead it has stated that "[e]ach project must be addressed on its particular facts" and that a "determination of whether a proposed project will have a material effect on a utility depends upon the circumstances of the project and the utility."²⁶

The amount of capital investment has little or no significance, however, if the proposed project is funded in its entirely by the customer for whom the project is intended to

²³ Kentucky Utilities Co. v. Pub. Serv. Comm'n, 252 S.W.2d. 885, 890 (Ky. 1952).

²⁴ Covington v. Board of Commissioners, 371 S.W.2d 20, 23 (Ky. 1963)

²⁵ Application of Northern Kentucky Water District for Approval of Dixie Highway Water Main Improvements, Issuance of a Certificate of Convenience and Necessity and Approval of Financing, Case No. 2014-00171 (Ky. PSC Aug. 6, 2014) at 4.

²⁶ Northern Kentucky Water District, Case No. 2000-481 (Ky. PSC Oct. 8, 2001) at 2.

benefit. In Case No. 2014-00368,²⁷ the Commission found that a gas utility's proposed construction of a six-inch gas main to serve a new customer, the cost of which was equal to approximately 55 percent of the gas utility's net plant and which the customer agreed to pay, was in the ordinary course of business and did not require a Certificate.²⁸ Similarly, in Case No. 2019-00067, which addressed proposed improvements to the Fort Knox water system funded through Hardin District's Fort Knox Water Reserve Fund, the Commission declared that proposed improvements "necessary to serve a large, sophisticated customer and wholly funded by that customer pursuant to an agreement with that customer do not require a CPCN [Certificate], in part, because they will not affect the financial condition of the utility."²⁹

b. <u>Issuance of Debt.</u> The Commission has noted the absence of the issuance of any debt instruments as a significant factor in determining whether a project is in the ordinary course. In Case No. 2007-00014, it found a water district's proposed project was not in the ordinary course in part because the project would be financed through the issuance of debt and that the issuance of such debt materially affected the water district's financial condition.³⁰ In Case No. 2015-00108,³¹ in which it issued a Certificate for a project representing less than one percent

²⁷ Valley Gas, Inc. Request for Approval of a Special Contract with Mago Construction Company and A Deviation from the Gas Cost Adjustment Clause, Case No. 2014-00368 (Ky. PSC Oct. 28, 2014).

²⁸ Id. at 3. The Commission found that cost of the improvement would be recorded by the utility as a contribution in aid of construction and thus not increase the amount of plant in service on the utility's balance sheet. See also The Filing of a Special Contract by Natural Energy Utility Corporation, Case No. 2018-00164 (Ky. PSC Sept. 6, 2018) at 5 ("The Uniform System of Accounts requires customer contributions to be recorded as a credit to the cost of construction of the gas plant, so the plant construction funded by those contributions will not be recovered from NEUC's other customers."). The Commission has made a similar finding when the cost of the improvement was recovered from the rate assessed solely to the customer for whose benefit the improvement was constructed. See Application of East Kentucky Power Cooperative, Inc. for An Order Declaring the Glasgow Landfill Gas to Energy Project to Be an Ordinary Extension of Existing Systems in the Usual Course of Business and a Joint Application of Farmers Rural Electric Cooperative Corporation and East Kentucky Power, Case No. 2014-00292 (Ky. PSC Apr. 2, 2015).

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³⁰ Application of the Big Sandy Water District for an Order Approving the Issuance of Securities Pursuant to KRS 278.300, Case No. 2007-00014 (Ky. PSC April 3, 2007) at 3.

³¹ Application of Northern Kentucky Water District for Approval of the Fort Thomas Treatment Plant Basin Improvements, Issuance of a Certificate of Convenience and Necessity and Approval of Financing, Case No. 2015-00108 (Ky. PSC May 21, 2015).

of net utility plant, the utility's issuance of debt to finance the project appears to have led to a different conclusion from that reach just eight months earlier involving the same utility and a similar project whose cost was less than one percent of net utility plant.³² In Case No. 2002-00350, it noted the use of internal funds to finance a project as a basis for determining the project would not materially affect the utility's finances.³³ Similar findings have been found in Commission Staff opinions.³⁴

c. <u>Increased Charges to Customers.</u> The Commission has found that if the construction of a proposed facility is likely to result in future rate increases or increase the likelihood that the requesting utility would at some juncture seek recovery of the project's costs through rates, the project will have a materially effect on a utility's financial condition and is not in the ordinary course. In Case No. 2000-481, the Commission emphasized the significance of any subsequent rate increase due to a project, stating that "[r]egardless of the source of funding, if the proposed construction will require the utility to seek a rate adjustment...the utility still must obtain a Certificate."³⁵

The Commission has applied this approach inversely to find a project designed to serve new customers was in the ordinary course even though it represented a significant addition to the utility's plant because its revenue impact was neutral or favorable to the utility. The proposed construction of a gas line to a large federal government customer was held to be in the ordinary course because no debt would be issued to finance the project, project construction costs would be financed through the revenues generated by sales to the new customer, and no increase

³² Northern Kentucky Water District, Case No. 2014-00171 (Ky. PSC Aug. 6, 2014).

³³ Natural Energy Utility Corporation, Case No. 2002-00350 (Ky. PSC Oct. 25, 2002).

³⁴ See, e.g., PSC Staff Opinion 2012-011 (May 21, 2011) ("[A] as the funding for the proposed construction will require the issuance of additional debt, the proposed construction appears to materially affect McLean District's existing financial condition.").

³⁵ Northern Kentucky Water District, Case No. 2000-481 (Ky. PSC Aug. 30, 2001) at 5, fn. 11.

in rates would occur. ³⁶ Similarly, the proposed extension of a gas main was declared in the ordinary course because the "extension will not require a rate increase and that it will be financed internally...service will provide [the utility] with annual revenues of \$114,000, which should cover the \$180,000 estimated cost of the project."³⁷

F. The Proposed Muldraugh Water Treatment Plant Improvements Project Is an Ordinary Extension in the Usual Course of Business

37. The proposed Muldraugh Water Treatment Plant Improvements Project meets the definition of an extension in the ordinary course of business as set forth in 807 KAR 5:001, Section 15(3). It will not result in the wasteful duplication of utility plant or compete with the facilities of existing public utilities or involve a sufficient capital outlay to materially affect Hardin District's existing financial condition or require an increase in Hardin District's rates.

38. <u>No Wasteful Duplication of Facilities.</u> The proposed Muldraugh Water Treatment Plant Improvements Project does not duplicate existing Hardin District facilities but is necessary to enable the plant to serve newly constructed water storage tanks, increase the water treatment plant's capacity and improve and upgrade the plant's existing equipment and operating systems. The proposed project when combined with the other projects will result to greater operating efficiencies.

The circumstances surrounding the proposed project further support the project's need. The proposed project is a critical element of plan initially developed at the request of DLAE and

³⁶ The Petition of Kentucky-Ohio Gas Company for Approval of Special Contract with General Services Administration and Certificate of Convenience and Necessity to Construct Pipeline Facilities to Serve the Federal Correctional Institute, Case No. 92-317 (Ky. PSC Sept. 22, 1992).

³⁷ Application of Natural Energy Utility Corporation to Extend Existing Line to Provide Service to the Ramey-Estep Home in Boyd County, Kentucky, Case No. 2002-00350 (Ky. PSC Oct. 25, 2002) at 2-3. See also Valley Gas, Inc. Request For Approval of a Special Contract With Mago Construction Company and A Deviation From the Gas Cost Adjustment Clause, Case No. 2014-00368 (Ky. PSC Oct. 28, 2014) (the construction of a gas main whose cost was equal to 55 percent of a utility's existing net plant was declared in the ordinary course since the new customer who was to be served by the pipeline was paying the cost of the pipeline and expected sales to this customer would aid the utility's financial condition and delay any need for a rate adjustment).

Fort Knox officials to correct water pressure and water quality problems. Its scope was the subject of lengthy negotiations between Hardin District and federal government officials. The entity that ultimately pays for the project – DLAE – has concurred in the need for the project.

39. <u>No Competition with Existing Facilities of Other Public Utilities.</u> The proposed Muldraugh Water Treatment Plant Improvements will not compete with the facilities of other existing public utilities. They are intended solely to maintain and improve the quality and reliability of water service to the Fort Knox Military Installation.

40. <u>No Material Effect on Existing Financial Condition.</u> The proposed improvements will not materially affect Hardin District's financial condition.

a. The total estimated cost of proposed Muldraugh Water Treatment Plant improvements is \$15,273,526.50. Hardin District will use internal funds, consisting of surcharge proceeds and excess revenues, from its Fort Knox Water Service Fund to finance the projects' cost. These funds may be used only for improvements to the Fort Knox water system and requires DoD authorization. Their use for the proposed Muldraugh Water Treatment Plant improvements represents no change in Hardin District's financial condition. By using these funds for a purpose consistent with the Contract and with DoD's approval, Hardin District is merely extinguishing a liability with available funds.

b. The proposed projects will not affect Hardin District's rates. No rate adjustment will be required to finance the proposed projects. Monies from the Fort Knox Water Service Fund will be used to finance the proposed projects. Hardin District proposes no increase to its rates to DoD to finance the construction. The rates that Hardin District assesses its other customers will not be affected. No funds from Hardin Districts other operations will be used to finance the projects. As the use of funds in Fort Knox Water Service Fund are restricted to the Fort Knox water system, use of these funds will not deprive Hardin District's other operations of funds to finance improvements or meet operating expenses to avoid increases in the rates for service that those operations provide.

c. The proposed Muldraugh Water Treatment Plant Improvements Project represents a capital outlay that will not materially affect Hardin District's financial condition. "[P]roposed extensions necessary to serve a large, sophisticated customer and wholly funded by that customer pursuant to an agreement with that customer do not require a CPCN [certificate of public convenience and necessity], in part because they will not affect the financial condition of the utility and will not result in an increase in charges to other customers." The project before the Commission is such a project. Its costs will be borne by the customer the project is intended to serve. No adverse effect on the utility's financial condition or need to increase rates is expected to result from it.

G. The Proposed Project Involves the Construction of Facilities Within the Water Improvement Exception of KRS 278.020(1)

41. KRS 278.020(1)(a)2b exempts a Class A water district from the requirement to obtain a Certificate for any improvement project whose construction will not result in an increase in the water district's rates or incur obligations requirement Commission authorization.

42. The proposed Muldraugh Water Treatment Plant Improvements Project meets these criteria.

a. Hardin District is a Class A utility. The Commission's Uniform System of Accounts defines a Class A utility as a utility having annual water operating revenues of \$750,000 or more.³⁸ For the year ending December 31, 2019, Hardin District had water operating revenues of \$9,497,537.³⁹

³⁸ Kentucky Public Service Commission, Uniform System of Accounts for Class A/B Water Districts and Associations (2002) at 14.

³⁹ 2019 Water Annual Report at Ref Page 11.

b. The proposed Muldraugh Water Treatment Plant Improvements Project will not require Hardin District to adjust its rates or to issue evidences of indebtedness that require Commission authority. It will be financed solely through internal funds from the Fort Knox Water Service Fund. The Fund contains more than adequate funds to meet the total estimated project cost of all projects.

c. The proposed Muldraugh Water Treatment Plant Improvements Project is a system improvement project designed to correct an existing deficiency and to improve service quality. While the exception set forth in KRS 278.020(1)(a)2b was enacted into statute in 2017, a similar exception is found in most Biennial Budget Acts enacted since 2004.⁴⁰ The Commission has interpreted "water line extension or improvement project" to include projects that involve system improvements other than water mains. In Case No. 2005-00278,⁴¹ the Commission found that proposed improvements to a water treatment plant qualified for the exception. Similarly, in Case No. 2017-00270,⁴² the Commission found a proposed project for which 42 percent of the construction costs were related to improvements other than water mains, including a pumping station and a water storage facility, qualified for the exception and did not require a Certificate.

⁴⁰ See, e.g., 2005 Ky. Acts Chapter 173; 2006 Ky. Acts Chapter 252; 2010 Ky. Acts 1st Spec. Sess. Ch. 1; 2012 Ky. Acts Ch. 144; 2014 Ky. Acts Ch. 117; 2016 Ky. Acts Ch. 149.

⁴¹ The Application of Sandy Hook Water District for a Certificate of Public Convenience and Necessity to Construct an Improvements Project Pursuant to KRS 278.020, Case No. 2005-00278 (Ky. PSC Aug. 11, 2005).

⁴² Application of the Breathitt County Water District for the Issuance of a Certificate of Public Convenience and Necessity to Construct a Water System Improvements Project Pursuant to the Provisions of KRS 278.020 and 807 KAR 5:001, Case No. 2017-00270 (Ky. PSC Aug. 16, 2017). But see Application of Beech Grove Water System, Inc. to Incur Indebtedness of \$125,251.00 for the Purchase of a Metering System, Case No. 2016-00255 (Ky. PSC Aug. 3, 2016) (asserting that the purchase of a metering system is not exempt from the requirement for a Certificate because "the proposed installation of the new metering system is not 'a waterline extension or improvement project,' as it does not extend or improve an existing waterline."). Little weight should be afforded to Beech Gove Water System as precedent since the water association never asserted the exemption and, as the water association was issuing an evidence of indebtedness to finance the improvement, the exemption was not applicable regardless of the nature of the water improvement.

H. Request for Expedited Decision

43. Hardin District requests that the Commission expedite its review of this Application and issue a declaratory order within 30 days of the filing of this Application. A limited window of time exists for Hardin District to complete the proposed project without adversely affecting military training on the Fort Knox Military Installation. The proposed project is estimated to require six to nine months to complete. During this time, the Muldraugh Water Treatment Plant will be off-line and Hardin District must rely upon the Central Water Treatment to meet the military installation's water needs. On July 1, 2021, approximately 20,000 Army personnel are scheduled will report to Fort Knox for extended summer training. This surge in military personnel will increase on-post demand for water by an estimated 2.5 million gallons daily. If the Muldraugh Water Treatment Plant has not resumed operations by that date, this training may be adversely affected.

I. Conclusion

44. The present case presents identical facts and issues as those the Commission addressed in Case No. 2019-00067. In that proceeding, a water utility and a sophisticated and well-informed customer - each possessing equal bargaining power – entered into an agreement for the construction of waterworks improvements necessary to provide adequate and reliable service to the customer. That customer agreed to finance the cost of the proposed improvements in their entirety. The construction of those improvements would not affect the water utility's financial condition or the rates or quality of service of the water utility's other customers. The Commission found that the proposed improvements were extensions in the ordinary course of business and did not require a Certificate. The same is equally true of the proposed Muldraugh Water Treatment Plant Improvements Project.

WHEREFORE, Hardin District respectfully requests that the Commission:

1. Place this Application at the head of its docket and enter a decision on this Application within 30 days of its filing;

2. Incorporate by reference the record of Case No. 2019-00067 into the record of this proceeding;

3. Enter an Order declaring Hardin District's proposed improvements to the Fort Knox Military Installation's water treatment and distribution systems as identified in this Application is an ordinary extension in the usual course of business and does not require a Certificate; and

4. Grant all other appropriate relief.

Dated: November 3, 2020

Respectfully submitted,

hotelon

GERALD E. WUETCHER Stoll Keenon Ogden PLLC 300 West Vine Street, Suite 2100 Lexington, Kentucky 40507 (859) 231-3017 Fax: (859) 231-3517 gerald.wuetcher@skofirm.com

DAVID T. WILSON, II Skeeters Bennett Wilson & Humphrey 550 W. Lincoln Trail Boulevard Radcliff, Kentucky 40160 (270) 351-4404 Fax: (270) 352-4626 david.wilson@sbwhlaw.com

Counsel for Hardin County Water District No. 1

VERIFICATION

COMMONWEALTH OF KENTUCKY)) SS

COUNTY OF HARDIN

The undersigned, Stephen Hogan, being duly sworn, deposes and states that he is the General Manager of Hardin County Water District No. 1, the Applicant in the above proceedings; that he has read this Application and understands its contents; that the same is true of his own knowledge, except as to matters which are therein stated on information or belief, and as to those matters, he believes same to be true.

)

Stephen Hogan

General Manager Hardin County Water District No. 1

Subscribed and sworn to before me by Stephen Hogan, General Manager, Hardin County Water District No. 1, on this November 3^{\prime} , 2020.

Notary Public 22 22 My Commission Expires: Notary ID: 59

INDEX

Tab

Document

1 Orders of Hardin County Fiscal Court Creating and Establishing the Boundaries of Hardin County Water District No. 1

Stantec Consulting Services Inc., Technical Proposal Submittal UP Contract No.:

2 SPOG00-11-C-8270 - Revised ISDC Projects and Revised Capital Improvement Program Potable Water Utility System at Fort Knox Army Installation, Kentucky (Sep. 4, 2015)

Stantec Consulting Services Inc., Technical Proposal Submittal UP Contract No.:

- 3 SPOG00-11-C-8270 Revised ISDC Projects and Revised Capital Improvement Program Potable Water Utility System at Fort Knox Army Installation, Kentucky (June 1, 2016) (Revised and Final Proposal)
- 4 Modification No. P00029 to Contract No. SP600-11-C-8271 (Aug. 8, 2016)
- 5 Modification No. P00033 to Contract No. SP600-11-C-8271 (Feb. 1, 2017)
- 6 Bid Tabulation
- 7 Project Engineer's Recommendation Regarding Bid Award (Oct. 8, 2020)
- 8 Notice of Award (Oct. 19, 2020)
- 9 Minutes of Special Meeting of Hardin County Water District No. 1 Board of Commissioners Held on October 19, 2020
- 10 Cash Flow Model of Fort Knox Water Reserve Fund (Excel Version embedding in Electronic Version of Application

E-mail from Carl Silverstone, Contracting Officer, Defense Logistics Agency Energy,

11 to Daniel Clifford, Engineering Manager, Hardin County Water District No. 1, Subj: Muldraugh Water Treatment Plant Improvements Project (Oct. 30, 2020)

TAB 1

ORDERS Book 12 Maye 114 COURT

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1			HARDI I CO	WTY CO IN	C	
			SPACIAL T	HE, JULY	15, 1952	
			P.LES. HO	s. La	DIG. JUDGE	
Y	Pursuant to a roo	quest filed wit	h me as Co	unty Judge	by Fete Ker	sey,
Consta	ble in Pistrict For	ur 0 , Hardin Cou	intv, on ac	count of !	his not being	eligible
to act	in the said Distri	ict, the said H	ete Kersey	roquested	i me to accep	t his
resign	ation as such. Th	merefore, it is	ordered th	it the sai	d resignatio	n be,
and it	is, accepted, and	the said appoin	tment shal	l stand fo	or naught and	that
the sa	id Pete Kersey is a	now relieved of	any furth	er officie	al capacity i	n said
distri	ct.					
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ofers,	a IIISI Sectionsi	c was citts day	re corned,	tired, and	1 1810 OVER.	
Y	In the mat er of	the estate of	William T.	Srown, as	n inventory a	nd
apprai	sement was this day	y return d, fil	od, and or	dered reco	orded.	
-						
MERMAN	C. DAVIS, ET AL				PETITION RS	6 (
	1	PETITION				
EX PAR	TE					
	We the undersign	ed state that w	are resid	ent free	holders of a	proposed
water	district, hereinaf	ter described,	that we de	sirs the (County Court	to
establ	ish a water distri-	ct and appoint	water comm	issioners	for the purp	to e co
furnis	hing a water supply	y to the unders	irned and	other rest	idents and ci	tizens
of the	territory hereina.	fter described;	, and we fu	rther stat	te the establ	lshmont
of suc	h district is reas	onably necessar	ry for the	public her	alth, conveni	ence, fire
protec	tion and comfort of	f the residents	; that sai	d proposed	d district is	described
as fol	lows:		×			
	"Hardi	n County Water	District'N	0.1"		
	Beginning at a p	oint in the sou	theasterly	boundary	of the Port.	Knox
Milita	ry Reservation whe	re it intersect	ts the cent	er line of	f V. S. Kentu	icky
Highwa	y 31 W, approximat	ely one mile n	orth of the	intersec	t on of Wilso	n Road
and Hi	ghway 31W which is	known as Rade:	liff and ru	nning 500	feet on each	side of
Highwa	y 31W for a distan	ce of approxim	ately 5,280	feet to	the intersect	ion of
Wilson	Road and U. S. Hi	ghway 310; the	nce, 500 fe	et west o	f the conter	line of
Wilson	Moad, in a northe	rly direction	along wilso	n Road ap	proximately 5	,400 feet
to the	intersection of t	he Southern Bo	undary of t	he Fort K	nox Hilitary	Reservat on
and th	e center line of "	ilson "oad; fr	om the inte	resction	of Red Hill "	toad and
U.S. 3	1% 500 feet each s	ide of Red Hil	1 Road and	running a	long Red Hill	L stord
in a w	esterly direction	5000 feet to a	point of e	nding; fr	om the inter	section
of Wil	son Road and Highw	ay 314, 500 fe	et each sid	e of wils	on Road and	running
in a s	outheasterly direc	tion along Wil	son iload 7,	500 feet	to the inter	section of
Kentuc	ky Highway 64 and	"ilson Hoad wh	ich is know	n as Vine	Grove Junct:	ion; thence
500 fe	et each side of Ke	ntucky Highway	64 running	in a wes	terly direct:	ion along
Aantuc	ky Highway 64 arpr	oximately 7,85	O feet to a	point of	onding; from	m the

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1988-04 T Road running in a southerly direction along wilson Road approximately 4,200 feet to the intersection of Wilson Road and Mill Creek Mosd which is known as Rogersville; thence 500 feet each side of Eill Creek Road running in a north easterly direction along Will Creek Road approximately 5,200 feet to the intersection of the center line of Mill Creek Hoad and the southern boundary of the Forst Anox Military Reservation; from the intersection of Hill Creek doad and Wilson Road 500 feet west and 1500 feet east of the center line of Wilson Hoad running in southerly direction along Wilson Road approximately 3,500 feet to a point of ending, as per attached map.

J. L. McCoy		Red	Hili	Road	4		
Lee Stephens		0		17			
Clifford J. Decker		n		n			
Russell S. Martin		н	a.	n			
Hubert C. Martin			71	n			
H. C. Davis		Rad	clifi	c l			
Church at Mill Creek							
C. W. Yates	Right	Mil	1 Cr	eek			
Denver Jones		n	n				
Raymond C. Jones	н	n	н				
Henry G. Neely	Left		u				
Forrest D. Pesch		H	**				
R. O. Hargan	n	n					
Vernon L. Jones	Richt	u	н				
Wallace J. Winfrey		н	n				
Homer G. Hinor (N	ev Dixi	e'lRog	ersv	1110			
Chas. R. Rogers		Rog	ersv	lle	Inn		
James H. Young	Left	¥11	1 Cr	eek			
Jimmie Cralle	Right	n		ε			
Walter E. Johnson	Right	. 10			\mathbb{R}^{2}		
C. E. Bennett	Richt	17			Road		
Joseph B. Hutcherson		• 11			п	15	
Robert G. Sherrard		n	11				
J. G. Drakos by wife	Left	11	п				
Reinhold Schneider	n	́п	n				
Theo. E. Johnson	Right	u			n		
Mrs. Walter Smith		80 	D. 1	E.D	enson		
Frank E. Bewley			Mr.	and	Mrs.	с. и.	Coffman
Mrs. E. K. Hand			Hrs	. w.	M. 1	ogsdor	1
Joceph R. Cissell			Mr.	and	ilrs.	Irwin	Shields
Mr. & Mrs. Reathel T.	Haven		She	ilds	and	Haven	Apt.
Mr. and Mrs. Angel Yt	urralde		Nr.	and	Ers.	Cyril	Durbin
Mrs. Sarah B and Joe	Vick		Mr.	& 13	rs. C	eo. R.	Jenkins
Mr. & Mrs. william T.	Pierce		Mr.	& 14	rs. D	elbert	. N. Gaby
Mrs. & Mys. T. Brown	Logadon	i i	Mr.	& M	rs. C	lenn !	. Cornetet
Mr & Mrs. James P. Gr	cenwell		Ray	mond	R. 1	awley	

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1	John H. Nuhl	herr	Ron	ersville		
	John Muhlhor	r	-	12		
1	Ers. Curtis	C. Graham		17		
1	Mrs. Ich Van	ileter		u:		
	John v. dore			49		ł
1	James R. Sim		Rad	1110		
	N. Dirie	Cnl. Augu	stus Freens	n	M H. Glanna	1
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1	N. Dixie	PT0A0 100	Tes		Mattle Shelto	
1	N. Dixie	Carrol Gi			James Shelton	
1	N. Dixie	Bol	ing, Sr.			
Male	a R Vine Grove H 2					ļ
1	Mrs. James C. Armstron	g, 01d 31 W				1
1	Charles L. Fox, Route :	#2, Vine Cro	ve, Ky.			
	Felix G. Black, Route :	2, VineGrove	, ку.			
1	Warren G. Hansen, RR #	2 Vine Grove	, Ky.,			
	Gerald heatly "					
	W. P. McCollum, R#2 Vi	ne Grove, Ky	., Route #6	4		1
	W. M. Brown, R#2, Vine	Grove, Ky.	logersvill	•		
1	Brown & New, B#2, Vine	Grove, Ky.				
	Harry Corum, Rogersvil	le, X y .				1
1	Richard H. Maurer, Rog	ersville, Rt	. Vine		7	
	Burton Raine, Vinc Gro	ve Junction	8		0.5	
	Paul Trustman, Vine Gr	ove Junction		us ogenese		
	H. L. Froman, Vine Cro	ve	Ψ.	C. Sten	e, Vinc Crove !	2
	John A. Mather, Vine'r	ove R2	Ne]	son Rob	inson, Vine Gro	vo R2
-	Chas. B. Deaton, Vine	Grove R2	Diz	ie-Thri	t-Way Service S	lation
	Simon Bros., Paul Simo	n, Vine Grov	e Jct. Joe	S. Tar	pley, El'zabat:	town, Ky.
1	H. C. Drane		Rut	y Zwick	er, Radcliff	
1	Mrs. D. L. Hargan, Rad	cliff	L.	H. Caud	le, Radcliff, H	у.
1	Edward Hairy, Racliff	*"	Alt	ert L.	Gojmerac, Radel	.iff
1	Anthony Keits, Radclif	f ·		ber 4.	Perry, Radelifi	
1	J. H. Blackville, Gmee	n Gables Tou	rst, Vine (rove, K	y. R#2	
1	E. T. Murphy		Edi	th Fayn	e Store	
1	Earl Brown at Bromms S	tore	Mai	y i4. Br	own, Radeliffe	
1	Will Sattles, Radcliff	e	Eb	ner L. H	argan, Radelifi	e
1	Binkman. dingfield, Rad	cliffe	Kate	Gray,	Radcliffe	
1	Fred Skaggs, Radcliffe		Pa	J. Er	own, dadcliffe	
31W	-N Burton Davis Wil	lie Atcher	H. J. Wa	làman	W. R. Kunneck	ce, Jr.
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On the motion of J. Genry Clark it is ordered that T. C. Mell, H. E. McCullum, Sr., T. O. Gatton, or any two of them after first being duly sworn be, and they are, hereby appointed the appraisers of the estate of H. B. (Hilary B.) Clark.

20

Day.

JUDGMENT

HERMAN C. DAVIS, ET AL

PETITIONERS

EX PARTE

It appearing to the ^Court that ^Aerman ^C. ^Davis and more than 75 other resident freeholders of the district hereinafter described did on July 15, 1952, file their petition herein and that notice of the filing of said petition was published in three issues of the ^Slizabethtown News and three issues of the Hardin County Enterprise, both newspapers of general circulation in this county, and it further appearing that no objection or exception has been filed herein, and oral proof having been heard by the court, and the ^Court being advised, it is now ordered and adjudged by this ^Court as follows:

1. The establishment of the following described water district is reasonably necessary for the public health, convenience, fire protection and comfort of the residents, and a suitable name and number for such district is "Hardin County Water District No. 1". Said district is more completely described by mame and number and boundary as follows:

"Hardin County "ater District No. 1"

Beginning at a point in the southeasterly boundary of the fort Knox Military deservation where it intersects the center line of U.S. Kentucky Highway 31W, approximately one mile north of the intersection of "ilson Road and "ighway 31 W which is known as "adeliff and running 500 feet on each side of highway 31 W for a distance of approximately 5,280 feet to the intersection of Wilson "oad and U.S. Highway 31W; thence, 500 feet west of the center line of Wilson "oad, in a northerly direction along Wilson "cad approximately 5,400 feet to the intersection of the Southern Boundary of the Fort Enox Military Reservation and the center line of "ilson "oad; from the intersection of Red Hill Moad and U.S. 31W 500 feet each side of Hed Hill Moad and running along Red Hill "oad in a westerly direction 5000 feet to a point of ending; from the intersection of Wilson "oad and Highway 31W, 500 feet each side of "ilson "oad and running in a southeasterly direction along "ilson Road 7,500 fest to the intersection of Sentucky Highway 64 and Wilson Road which is known as Vine Grove Junction; thence 500 feet each side of Aentucky Highway 64 running in a westerly direction along Mentucky Highway 64 approximately 7,850 feet to a point of ending; from the intersection of Mentucky Highway 64 and Wilson Moad, 500 feet each side of Wilson ford running in a southerly direction along Wilson ford approximately 4,200 feet to the intersection of Wilson "oad and Mill Creek "oad which is known as "ogersville; thence 500 fest each side of Mill Creek "oad running in a north easterly direction along Mill Creek Hoad approximately 5,200 feet to the intersection of the center line of Mill Creek "oad and the southern boundary of the

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of wit Cou	"ated this 18th In the matter o ly, a periodical set In the matter o Arvin, a periodical s Game William P. the U. S. Army, and e the C. B. Jeffries as s Game William F.	a day of August, of Rosalyn J. 'en lement was this of the ^r irst Hard settlement was th Barrett, minist secuted bond in surety. Barrett and too mamonwealth of Ka	1952. Try, ^U uari day retu: day retu: din Nation his day retu: the penal ok the cal entucky.	dian for file rned, file nal ^p ank, sturned, s o ^p piscop l sum of o th as requ	Consthy C. and ed, and laid of Committee for filed, and laid al Church and Cons hundred (10 uired by law to	Aay G. ver. William d over. Chaplain DO) dollars o perform
bon mar Cou Sai the the	Came Charles B d in the penal sum of Came Charles B riage rites in the Co rt now adjourned. Came Louella A writing purporting to d will was proven in subscribing witnesse other subscribing wi	. Whitmen, minis one hundred (10 . Whitman and to mmonwealth of "e th, widow of be the last wi due form of law s thereto, who these thereto,	HARI SPEC PRES of the o	DIN COUNTY CIAL TERM, S. HON. W. he Methods rs with W. ath as red with as red DIN COUNT OFAL TERM S. HON. W. th, and p. stament of ath of El: the signa	COURT AUGUST 21, 14 S. LONG, JUDO Lat Church, and S. Long, as a quired by law COURT AUGUST 22, 14 S. LONG, JUDO roduced an ins f P. Keith, izabeth Ditto, ture of ^A orace me was establi	552 SE A executed surety. to perform _Judge 952 SE trument decedsed. one of B. Tabb, shed and

COURT Day. SPECIAL Term. Day of 19 52 AUGUST Came Eugene Fatterson and took the oath as required by law as a notary public for Hardin County. Said commission expires August 27, 1956. Court now adjourned. cuq Judge HARDIN COUNTY COURT SPECIAL TERM, AUGUST 27, 1952 PRES. HON. W. S. LONG, JUDGE In the matter of the first Hardin "ational Pank, Guardian for wanda Joyce Born Odom, a final settlement was this day returned, filed, and laid over. In the matter of the First Hardin "ational Bank, Guardian for Shirley June Horn Morehead, a final settlement was this day returned, filed, and laid over. Came Walter J. Vrudny and executed bond in the penal sum of one hundred (100) dollars with W. S. Long as surety to perform marriage rites in the Commonwealth of Kentucky. Came Walter J. Vrudney, Lutheran minister, and took the oath as required by law to perform marriage rites in the Commonwealth of Mentucky. Court now adjourned. Judge HARDIN COUNTY COUNTY SPECIAL TERM, ACOUST 29, 1952 PRES. HON. W. S. LONG, JUDGE In the matter of the estate of J. P. Keith, an inventory and appraisement was this day returned, filed, and ordered recorded. In the atter of the First Hardin Mational Bank, Trustee for Trs. Aatherine Q. Montgomery, a periodical settlement was this day returned, filed, and laid over . Court now adjourned. HARDIN COUNTY COURT SPECIAL TERN, AUGUST 30, 1952 PRES. HON. W. S. LONG, JUDGE Came W. d. Brown, H. T. Logsdon, Berman C. Davis, duly appointed water commissioners for Hardin County/District 1, and executed bond in the penal sum of one thousand (1000) dollars each as follows: W. M. Brown with H. T. Logsdon as surety. H. T. Logsdon with ". M. Brown as surety Herman C. Davis with W. M. Brown as surety. Came W. M. Brown, H. T. Logsdon, Herman C. Davis and took the oath as required by law as the Water Commissioners for Hardin County Water District One. In the matter of the First Hardin National Bank, Trustee for the Clendale Christian Church, a periodical settlement was this day returned, filed, and laid over.

ORDERS

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 T		HARDIN COUNTY COURT	
	2	SPECIAL TERM, OCTOBER 22,	1954
		PRES. HON. J.R.TERRILL, J	UDGE
In the matter of the	estate of Dorothy Ma	e Lockard, an inventory and	
appreisement was this day	returned, filed and	ordered recorded.	1
To the method of the	antenna off Tenna Mark		
In the matter of the	estate of James Mich	sel whalen, an inventory and	-
appreisement was this day	returned, filed and	ordered recorded.	
In the matter of the	Appointment of a Gua	rdian for Raymond Dowdell:	
This day came Raymon	d Dowdell, a minor ch	ild of Erma K. Dowdell and (father
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his Guardian, and the cou	rt being sufficiently	advised. it is ordered and	happut he
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BK0007PG0259

EXECUTIVE ORDER 2012-002

This matter has been brought before the Hardin County Judge/Executive upon application of the Hardin County Water District No. 1 to expand its boundaries;

Notice of the Petition has been published in The News-Enterprise on 15 February 2012;

The Judge/Executive having considered the request and conducted a public hearing finds said request to be reasonable, and hereby approves the extension of the boundaries of the Hardin County Water District No. 1 in order to facilitate the acquisition and operation of water production and treatment facilities located within the boundaries of the Fort Knox Military Installation. Henceforth the boundaries of the Hardin County Water District No. 1 shall extend into and encompass all of that portion of Hardin County, Kentucky, which lies within the Fort Knox Military Installation and as more specifically identified in attached Exhibit A.

Harry L. Berry Hardin County Judge/Executive

ATTESTED:

moth tradis Click by Distat, D.C. Kenneth L. Tabb Hardin County Clerk



EXPANSION OF WATER DISTRICT NO. 1 EXPANSION OF WATER TERRITORY PRIVATIZATION OF FORT KNOX WATER UTILITY PSC ORDER 2011-00416

TAB 2

Technical Proposal Submittal

UP Contract No.: SP0600-11-C-8270

Revised ISDC Projects and Revised Capital Improvement Program Potable Water Utility System at Fort Knox Army Installation, Kentucky





Stantec Consulting Services Inc. Design with community in mind www.stantec.com Prepared for: Defense Logistics Agency Energy

4 September 2015

Hardin County Water District No. 1

Serving Radcliff and Hardin County for Over 60 Years

1400 Rogersville Road Radcliff, KY. 40160

September 4, 2015

Mr. Carl Silverstone Contracting Officer Defense Logistics Agency Energy 8725 John J. Kingman Road Fort Belvoir, VA 22060-6222

Technical Proposal Submittal - UP Contract No.: SP0600-11-C-8270 SUBJECT: Revised ISDC Projects and Revised Capital Improvement Program Potable Water Utility System at Fort Knox Army Installation, Kentucky

Mr. Silverstone;

The Hardin County Water District No. 1 (HCWD1) is pleased to submit this Technical Proposal to the Defense Logistics Agency Energy (DLA) in response to DLA's request for proposal issued by electronic mail on 14-August-2015. This proposal outlines the approach, methodology and study used to develop a revised list of Initial System Deficiency Corrections and a Capital Improvement Plan to make significant improvements to the quality, quantity and reliability of the Ft. Knox Water System (FKWS).

By implementing this proposal, HCWD1 believes this will provide more value and wiser spending of Department of Defense budget dollars. The proposed projects would also provide a noticeable and measureable improvement to the FKWS which will benefit the soldiers, military families, Government employees and contractors which work and live on post daily.

This Proposal remains a valid offer until December 31, 2015, and we are prepared to work with you to extend this period should it be required. As you proceed with your final assessment and review of our Technical Proposal, I invite you to contact me should you have any questions or need any additional information.

Thank You

Ji Blue MBruce, General Manager

Encl.

www.HCWD.com
Preamble:

Hardin County Water District No. 1 (HCWD1) submits this proposal to the Defense Logistics Agency Energy (DLA) in response to DLA's request for proposal (RFP) issued by electronic mail on 14-August-2015. The original RFP required a submittal deadline of 28-August-2015. An extension date was approved by DLA by electronic mail on 24-August-2015, with new deadline of 4-September-2015. Further clarification to the proposal requirements was provided to HCWD1 by DLA on 21-August-2015.

HCWD1 proposes to partially modify the list of current approved and funded Initial System Deficiency Corrections (ISDC) in accordance with section C.11.2.5 of its Utility Privatization (UP) contract with the Government. Since HCWD1 obtained the Ft. Knox Water System (FKWS) in 2012, it has completed extensive study of the system, and has obtained a significant amount of knowledge about the current deficiencies of the FKWS since beginning operations.

HCWD1's operating partner, the Louisville Water Company (LWC) have also found significant differences between the two water treatment plants (WTP) and raw water sources on Ft. Knox. Along with the completion of the recent Water Quality Modeling & CIP Development project by Stantec Consulting Services, HCWD1 believes its proposed projects will significantly improve water quality, water pressure, fire flows and WTP capacity and WTP reliability and resiliency, if the proposed CIP (Capital Improvement Plan) changes are approved by DLA.

As requested in the RFP, HCWD1 has also calculated a reduction to its current Utility Service Charge. This revision is provided for in section G.4 of the UP contract, as well as under FAR 52.241-7. HCWD1 also believes that by implementing its proposal, several of the currently planned ISDC projects will no longer be needed and those funds can be re-directed to the proposed ISDC projects.

By implementing this proposal, HCWD1 believes this will provide more value and wiser spending of DoD budget dollars. The proposed projects would also provide a noticeable and measurable improvement to the FKWS which will benefit the soldiers, military families, Government employees and contractors which work and live on post daily.

Technical Proposal Submittal – UP Contract No.: SP0600-11-C-8270

Revised ISDC Projects and Revised Capital Improvement Program Potable Water Utility System at Fort Knox Army Installation, Kentucky

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1. Executive Summary

In 2012, Hardin County Water District No. 1 (HCWD1), under a partnership effort with Louisville Water Company (LWC), was granted a 50-year privatization contract to operate the Fort Knox Water System (FKWS). The contract required several studies and improvements, known as Initial System Deficiency Corrections (ISDCs), to be implemented during the first five years of the contract. Funding for those ISDCs is potentially available to be reallocated for alternate projects that may yield greater benefit to the FKWS.

HCWD1 retained Stantec Consulting Services Inc. (Stantec) to perform hydraulic and water quality modeling and to develop a Capital Improvements Plan (CIP) for their Fort Knox water distribution system. Stantec was issued notice to proceed on the project on June 26, 2014.

Stantec updated HCWD1's existing hydraulic model for FKWS, developed a water quality model, and performed intensive field testing to calibrate and validate the models. Those models were utilized to identify a series of current and future system deficiencies.

Collaboratively, HCWD1, LWC, and Stantec developed a CIP that addresses several system objectives including improvements to water quality, water quantity (fire flow), and system pressures.

The resulting CIP generally includes:

- Upgrading the Muldraugh Water Treatment Plant (WTP) to meet its rated capacity of 7.0 million gallons per day (MGD), convert disinfection to chloramines, and other reliability upgrades. It was determined through the study that Muldraugh was a better WTP option than keeping and upgrading the Central WTP;
- Construct two new 1.5 million gallon (MG) elevated storage tanks at a hydraulic grade line (HGL) elevation of 901 feet, or 40 feet higher than the 8 existing tanks, which are recommended to be decommissioned or demolished;
- Construct water line improvements and check valves to improve system circulation and minor line improvements for improved fire flow; and
- Install water quality flushing units at three locations if demands persist at about 1 MGD or less and water quality issues are observed.

The estimated cost opinion, proposed invoice schedule, and ISDC reallocation recommendations for the proposed CIP is included in our *Firm Fixed Price Proposal*, dated September 4, 2015.

2. Introduction

In general, the Water Quality and CIP Development project objective was to develop a CIP capable of improving the system while considering and balancing the following goals:

- <u>Water quality</u>: tank turnover, improved circulation and water age, and maintaining disinfectant residuals at 0.7 milligram per liter (mg/L) or higher (matches LWC's water quality goal);
- <u>Water pressures</u>: achieve minimum of 40 pounds per square inch (psi) in the system (requirement based on Unified Facilities Criteria, or UFC) with a goal of meeting 50 psi or greater system wide;
- <u>Water supply</u>: identify most appropriate supply and treatment alternative based on stakeholder input and system needs;
- Fire flow capabilities: meet UFC regulations¹ (flow rate requirement varies by building-type) system wide and maintain or improve existing fire flow capability at every location within the system;
- <u>Resiliency/sustainability</u>: maintain onsite water supply and consider interconnections for redundancy/backup water source;
- <u>Demand flexibility</u>: design a CIP flexible enough to meet varying demands from 0.7 MGD (million gallons per day) to 5 MGD based upon on-going Fort Knox activities (e.g., training missions, troop influx or reductions); and
- Operations and Maintenance: minimize long-term costs and resource needs as appropriate.

3. Existing Water System

Fort Knox is an Army post located south of Louisville and north of Radcliff in Kentucky. The 170 square mile base covers portions of Bullitt, Hardin, and Meade Counties. The existing Fort Knox Water System is generally comprised of:

- Approximately 163 miles of pipelines;
- Generally, pipes are oversized allowing for adequate fire flow transmission and minimizing head losses across the system;
- 8 elevated storage tanks totaling 3.55 million gallons of elevated storage (uniform overflow elevation of approximately 861 feet);
- Due to low pressures in areas of the system, tanks are generally only operated within the top 10 to 15 feet;
- Two treatment facilities, Central and Muldraugh, with rated capacities of approximately 3.5 and 7 MGD, respectively; and
- A highly fluctuating demand due to significant population variances over time associated with the Army Base's needs, but generally in the range of about 2 MGD.

¹ UFC 3-600-01 Fire Protection Engineering for Facilities and UFC 3-230-01 Water Storage, Distribution and Transmission

Figure 1 depicts the distribution map for the existing water system. **Figure 2** illustrates the daily demands for the FKWS for January 2014 through May of 2015, estimated as the total WTP production minus the water sold to external customers through interconnections (those interconnections are anticipated to no longer be utilized following completion of HCWD1's interconnection project with LWC in 2016). A comparison of the Muldraugh and Central WTPs is presented in **Table 1** below.

Item	Central WTP	Muldraugh WTP
Sources	West Point groundwater (3 wells) and McCracken Spring surface water	West Point groundwater (12 wells)
Drought Tolerance	McCracken Spring summer flows can be limited or non-existent (Well-field okay)	No issues with West Point groundwater
Quality	Surface source is very poor during high runoff periods; Potential chloride Intrusion in wells	Potential chloride intrusion
Capacity (Current)	2.5 MGD (Cannot meet max day demands)	4.5 MGD
Capacity (Potential)	3.0 (With upgrades)	7.0 (With upgrades)
Redundancy	Single Treatment Train	Dual Treatment Trains
Geographic Expansion Area	Very Limited, middle of post	Sufficient land, outside cantonment
Distance to Purchased Water Source	6,000 feet away	On Site (24-inch main)
Distribution / Circulation	Poor water circulation throughout post/demand areas degrading water quality and higher risk of non-compliance	Best water circulation and water quality throughout post
Upgrade Cost Opinion	\$8.4 Million	\$4.8 Million

Table 1.	WTP Con	nparison
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4 September 2015



Figure 2. FKWS Demand/WTP Production History

4. Modeling and Field Testing

4.1. Original Model Data Provided

At the project onset, HCWD1 provided Stantec with the following data to support the validation and calibration of the existing hydraulic model:

- Previous hydraulic modeling report, prepared by HDR, Inc.;
- Initial Distribution System Evaluation (IDSE) study;
- Geographic Information System (GIS) files representing the distribution system, including the locations of pipes with diameters, tanks, water treatment plants (WTP), pump stations, known valves and hydrants (the majority of this information was collected and mapped by HCWD1 within the last two years);
- WTP production records;
- Pipe break information;
- Complaints lists, including reported water quality and pressure concerns;
- Information regarding possible future population trends indicating an anticipated minimum population of approximately 5,000 persons on base, a current typical population of 10,000 to

20,000 persons depending upon training schedules, and a potential fluctuation of over 20,000 persons within a 48-hour period depending upon Army activity and needs; and

 Available Supervisory Control and Data Acquisition (SCADA) data which includes tank levels, chlorine data, pump discharge pressures, and pump on/off cycles.

4.2. Field Testing

Field sampling was performed to provide additional calibration data for the hydraulic model and to collect water quality data to support the development, calibration, and validation of the water quality model. Stantec prepared a field testing plan and coordinated with LWC and HCWD1 staff prior to the testing. Field testing for water quality parameters was performed by Stantec, HCWD1, and LWC personnel on August 4, 2014 through August 7, 2014. To minimize the number of variables affecting the testing results, only the Central WTP was operated during the testing period (Muldraugh WTP would have to start/stop during the testing period and was therefore placed off-line during the testing). Eleven (11) sites were selected for water quality sampling. Highlights of the types and quantity of testing performed include the following:

- 11 fire flow tests were performed by HCWD1 on July 29, 2014 at each of the 11 water quality testing locations;
- Four fire flow tests were performed with nearby tank off-line, including Site 3 with the Old Ironsides Tank off-line, Site 5 with the HRC Tank off-line, Site 9 with the Fort Knox HS Tank off-line, and Site 10 with the Prichard Tank off-line;
- Drawdown tests were performed for the high-service pumps at the Muldraugh WTP;
- Field Sampling for Water Quality Parameters (8/4/14 8/7/14, 11 Sites):
 - Approximately 70 field fluoride measurements;
 - Approximately 50 Central WTP and approximately 30 Muldraugh WTP fluoride lab measurements. (Fluoride lab measurements utilized for calibration of hydraulic/age model);
 - 47 free chlorine samples;
 - 14 pH samples; and
 - 14 heterotrophic plate count (HPC) samples.
- 5-day simulated distribution system (SDS) testing performed for Central WTP and for Muldraugh WTP to determine chlorine decay rates for finish water leaving each WTP. An additional 10-day SDS test was performed for Muldraugh WTP to verify the results and gather additional information.

The accuracy associated with the free chlorine analyzer is: ± 5 % or ± 0.03 mg/L (ppm), whichever is greater.

4.3. Hydraulic Model

Stantec performed a technical review of the existing hydraulic model and performed validation of model elements and additional calibration based on the provided information discussed in Section 4.2. Field Testing. The KY-PIPE hydraulic model software was utilized to analyze fire flow requirements on this project. The remaining hydraulic modeling was performed utilizing EPANET 2.0,

developed by the U.S. Environmental Protection Agency's (EPA) National Risk Management Research Laboratory.

Specific activities performed on the hydraulic model to improve the model accuracy include the following:

- Updated connectivity problems from a 16-inch water line to a 14-inch line just east of the airfield;
- Where regional flow demands had been consolidated to single node(s), demands were
 redistributed to provide a better overall representation;
- Updated demand at Wilson Road Pump Station. An average demand of 72.5 gallons per minute (gpm) was previously placed at this location. This demand was updated to 800 gpm and assigned a diurnal curve that better simulates the actual pumping from the Wilson Road Pump Station;
- Reduced demand in vacant residential areas located in the west and south areas of the system. The demands were originally distributed by counting structures and assigning an average demand per structure, resulting in artificially high demands when structures are vacant;
- Added demand for the Muldraugh/Carpenter area based on Fluoride and Chlorine Calibration Data;
- Updated base elevations of the tanks and included typical volume curve for each tank;
- Updated pump curve information based on SCADA data (Central WTP) and drawdown tests (Muldraugh WTP);
- Added additional 12-inch diameter line and 8-inch line for the new construction near Van Voorhis Tank;
- Inserted resistance (acts as partially closed valve) into Old Ironsides tank to better match SCADA data; and
- Altitude valves appear to prevent the HRC and Fort Knox High School tanks from draining below a certain elevation, therefore simple rules were placed in the model that would close a pipe when each tank reached a certain elevation to simulate the altitude valve.

4.4. Water Quality Model

A water quality model was developed using the EPANET 2.0 software. The purpose of the model was to identify current and future water quality deficiencies such as high water age areas and low chlorine residuals, assist HCWD1 in developing their CIP, and update IDSCs, as appropriate.

The model was generally developed based on the following information. Calibration and validation of the model is discussed in the following section.

- Field fluoride testing to identify the duration for water to reach various parts of the system, i.e., a tracer analysis;
- SDS testing identified the natural chlorine decay rate from each WTP;
- Temperature data to identify tank stratification and areas of increased chlorine decay; and

 Field chlorine levels were utilized to determine the decay rate attributed to the pipe walls throughout the system.

4.5. Model Calibration/Validation

Calibration and development of the water quality model was performed utilizing the collected field data from the 11 sites while the Central WTP was in operation. Model validation was performed using the chlorine SCADA data provided by HCWD1 with the Muldraugh WTP in operation. This was performed to further calibrate and validate the hydraulic and water quality performance of the model while the Muldraugh WTP was in operation, since the field testing was performed while operating the Central WTP.

Our calibration targets included the following recommendations for calibration of the chlorine residual for a majority of the sites:

- For water age ≤1-day old, the average chlorine residual over the last 24-hours of the simulation to be within 0.15 mg/L of the average recorded chlorine residual;
- For water age between 1-day and 3-days old, the average chlorine residual over the last 24hours of the simulation to be within 0.2 mg/L of the average recorded chlorine residual; and
- For water age ≥3-days old, the average chlorine residual over the last 24 hours of the simulation to be within 0.25 mg/L of the average recorded chlorine residual.

The general trends of the model calibration results indicate the predicted head for each tank is generally within about 1 psi, or 2.3 feet, and the modeled chlorine and fluoride levels are generally within 0.2 mg/l for most of the sites. A few sites did not meet the specified calibration targets; however, this was generally a result of time-specific minor hydraulic inconsistencies that does not have a significant impact on the overall model performance or suitability for this study. Calibration results and the digitial model files are available in Stantec's **Water Quality Model and Capital Improvements Plan (CIP) Development Report**, dated August 31, 2015. Both the hydraulic and water quality models appear to be of sufficient accuracy to support the development and analyses of the CIP alternatives for the FKWS.

5. Existing Conditions Results

Based upon the calibrated models, Stantec performed a series of model simulations at varying demands ranging from 0.7 MGD to 5.0 MGD to identify water quality, quantity, and pressure deficiencies. General overall findings based on the analyses include:

- <u>Source</u>: Muldraugh WTP offers superior source water quality and additional treatment capacity;
- <u>Pressure</u>: Low system pressures not meeting UFC regulations, and requiring tanks to generally operate within the top 10 to 15 feet of the tank to maintain pressure;
- Fire flow: isolated areas of limited fire flow due to water main configurations. Predominant fire flow concern is due to low pressures rather than lack of available flow; and
- <u>Water quality</u>: poor system circulation and limited tank turnover results in areas of poor chlorine residuals, particularly during low demands.

Results of the analyses are depicted in the following figures:

- Figure 3 Peak Hour Pressures;
- Figure 4 Fire flow results depicting the flow rate at each location in the system while maintaining 20 psi throughout the system;
- Figure 5 Fire flow results depicting the flow rate above or below the UFC regulation while maintaining 20 psi throughout the system. UFC requirements were estimated for each area/building type by reviewing aerial photography to determine required fire flow;
- Figure 6 Minimum chlorine residual with only the Central WTP operating (assumes 1 MGD demand);
- Figure 7 Minimum chlorine residual with only the Muldraugh WTP operating (assumes 1 MGD demand);
- Figure 8 Average chlorine residual with only the Central WTP operating (assumes 1 MGD demand); and
- Figure 9 Average chlorine residual with only the Muldraugh WTP operating (assumes 1 MGD demand).





4 September 2015





4 September 2015





4 September 2015





4 September 2015



Figure 7. Existing Conditions Minimum Chlorine Residual (Muldraugh WTP)

4 September 2015









4 September 2015

6. Recommended Capital Improvements

6.1. CIP Development Process

Stantec identified system deficiencies at various locations within the system as discussed in Section 5. Various project elements were analyzed with the model to determine the benefits to the system, specifically considering the balance between water quantity (fire flow), quality, and pressures, as well as additional considerations discussed in Section 2.

Project elements considered included a new pressure zone in the northern part of the base cantonment area, various pressure reducing valves and check valves to drive circulation in more desirable patterns for water quality, as well as water main and tank improvements. Project elements and scenarios were discussed and evaluated collaboratively through a series of workshops with HCWD1, Louisville Water Company, and Stantec on:

- July 8, 2014 project kickoff meeting/general system operation improvements;
- August 21, 2014 model results workshop and initial CIP recommendations;
- September 25, 2014 CIP development workshop;
- October 20, 2014 CIP development workshop;
- November 25, 2014 CIP development workshop;
- April 8, 2015 finalize CIP for presentation to Fort Knox and stakeholders; and
- May 21, 2015 tour of the Muldraugh WTP to review recommended improvements and assist LWC with cost opinions.

6.2. Stakeholder Presentations

Following the development of the CIP, meetings were held with the Fort Knox stakeholders on:

- April 16, 2015 at Fort Knox with Fort Knox engineering officials; and
- July 16, 2015 web meeting with Fort Belvoir contracting personnel and local Fort Knox stakeholders.

6.3. Proposed CIP Projects Summary

Brief descriptions and project-specific benefits of the recommended CIP projects are included in the following narrative. Graphical depictions of the proposed CIP benefits are provided in Figures 12 to 14 following the narratives. These projects are depicted geographically on the Proposed CIP Overview Plan at the end of this proposal in Figure 15.

Project 1) Muldraugh WTP Improvements:

This project involves general upgrades to the WTP for long-term reliability. General project requirements include:

- Replacing high service pumps to meet the proposed new HGL of about 901 feet (versus current tank overflow elevation of about 861 feet);
- Chemical feed system improvements and redundancy;
- Filter gallery piping rehabilitation;
- Air scour and surface wash;
- Main treatment plant building rehabilitation and new control room and water quality laboratory;
- SCADA improvements;
- Installation of grid-based backwash supply;
- Concrete rehabilitation;
- Perimeter fencing and security enhancements;
- Regrading and paving of parking and delivery areas;
- Conversion of disinfectant to chloramines; and
- Influent piping improvements to allow both treatment trains (4.5 MGD and 2.5 MGD, currently at separate influent elevations) to operate simultaneously, thereby increasing capacity from 4.5 MGD to 7.0 MGD.

Projects 2 and 3) Two New 1.5 Million Gallon Tanks:

Installing two new 1.5 MG tanks with an overflow elevation about 40 feet higher than the existing tanks (901 feet versus 861 feet existing). One tank is to be placed near the existing Old Ironsides Tank. The other proposed location is in the vicinity of the existing Educational Center Tanks. These tanks form the backbone of the CIP in terms of improved pressure and appropriate circulation in the system to improve water quality. Based on feedback from project stakeholders, the proposed locations may alter slightly during project implementation.

Based on feedback to date, this proposal assumes the location of the tanks to be:

- The New Old Ironsides Tank will be just south of Frazier Road across from the existing Frazier Tank (37.923^oN, 85.950^oW). This location will include about 500 linear feet of additional 16inch water main in conjunction with the tank project; and
- The New Education Center Tank will be located along the 12-inch main about 1,000 feet south of Gold Vault Road near Estrada Avenue (37.880^oN, 85.953^oW). This location will include about 800 linear feet of additional 16-inch water main in conjunction with the tank project.

<u>Pressure:</u> The new overflow elevation can increase pressures in the system by about 18 psi. Currently about 12-percent of the system is not meeting the required pressure regulations of 40 psi. These areas are generally in the northeast and near the Gold Vault. **Table 2** illustrates the before and after summary of pressures within the FKWS.

Pressure Conditions	Existing Conditions (%)	Proposed CIP (%)
Percent of System Below 40 psi (UFC Regulation)	12	0
Percent of System Below 50 psi (Pressure Goal)	45	1
Percent of System Between 60 and 80 psi (Ten States Standards Recommendation)	22	67

Table 2. Pressure Results with Proposed	CIP
---	-----

<u>Fire Flow:</u> The current system generally has adequately sized lines and/or looping to provide the required fire flow from any location in the distribution system without significant friction losses. Therefore, increasing pressures in the system result in greater fire flows and pressures during fire events. Increased pressure also provides sufficient pressure for sprinklers in several locations that previously would not have had sufficient pressure for sprinkler operation.

<u>Water Quality:</u> Existing tank levels are generally kept at least 75-percent full due to low pressure problems, which does not allow for good tank turnover and results in "recycled" water in the tanks. The location of some tanks, combined with poor tank turnover and mixing, leads to stratified zones of poor chlorine residual. Figure 10 demonstrates what is happening in several of the existing tanks in the distribution system (particularly the Van Voorhis, Frazier, and HRC/WWTP Tanks). The two new proposed 1.5 MG tanks will have mixers installed and be built in preferred locations to prevent "recycled" water.



Figure 10. Stratification Occurring in Several Existing Tanks

If water demand continues to decrease at Fort Knox these water quality deficiencies will become more significant. Water quality concerns will be most notable when the system demand falls below 1.5 MGD for an extended period of time. **Table 3** indicates the results of the water quality model for different demand conditions for existing versus the proposed CIP scenarios (results include all proposed CIP projects, not just the tanks). The reported residuals are at the tank, but it should be noted that the chlorine residual continues to decrease by about 0.1 to 0.4 mg/L as it travels from the tank to the customer.

Demand	Current	System	Proposed CIP		
Condition (gal/day)	Tank Name	Min Residual (mg/L)	Tank Name	Min Residual (mg/L)	
	Edu. Center 1	1.12	Prop. Tank (Ironsides)	1.28	
	Edu. Center 2	1.07	Prop. Tank (Edu Ctr)	1.09	
	HRC/WWTP	1.01			
700.000	Ironsides	1.15			
700,000	Van Voorhis	0.81			
	Frazier	0.83			
	FK High School	0.90			
	Prichard	0.97			
	Edu. Center 1	1.32	Prop. Tank (Ironsides)	1.34	
	Edu. Center 2	1.21	Prop. Tank (Edu Ctr)	1.20	
	HRC/WWTP	1.12			
1 000 000	Ironsides	1.30]		
1,000,000	Van Voorhis	0.98]		
	Frazier	0.83	1		
	FK High School	1.06			
	Prichard	1.14			
	Edu. Center 1	1.24	Prop. Tank (Ironsides)	1.38	
	Edu. Center 2	1.16	Prop. Tank (Edu Ctr)	1.27	
	HRC/WWTP	1.17			
1 500 000	Ironsides	1.34]		
1,500,000	Van Voorhis	1.04]		
	Frazier	0.85	1		
	FK High School	1.16			
	Prichard	1.23]		

Table 3.	Water Quality Results with Pronosed ('IP
	The second of the second	

<u>Operations and Maintenance Impacts</u>: The overall operations and maintenance costs associated with the two large tanks will be significantly less than the maintenance of the existing 8 tanks, particularly considering the painting costs. The proposed tanks are anticipated to be composite tanks (steel bowl supported by a concrete column or pedestal). Composite tanks offer significant operations and maintenance cost reduction because only the bowl requires painting.

<u>System Flexibility</u>: The current operations require that the elevated storage tanks remain relatively full for all different types of demand conditions to maintain adequate pressures in the system. For low demand conditions, this causes an excessive amount of elevated storage and resulting detriment to water quality. The proposed tanks will increase the pressures, allowing for the operating levels of the tank to be adjusted to coincide with the anticipated daily demand. This can lead to optimizing energy costs and water quality within the system.

Tank Height Concerns: One concern relating to the proposed tanks is the additional 40 feet in height for the proposed tanks, specifically related to the nearby airfield. Figure 11 includes tank geometry

for a composite tank to assist in determining the potential highest elevation of the proposed tank(s). Lighting and cell antenna(s) are also anticipated to be placed on top of the tank. Ground elevations at the Old Ironsides and Education Center Tanks' locations are about 758 feet and 745 feet, respectively.



Figure 11. Example Tank Geometry and Resulting Top Elevation

Project 4) Park Road 14" Main Extension:

This project involves extending approximately 1,200 linear feet of the existing 14-inch line along Park Road to connect to the existing 16-inch line, which runs to the new proposed 1.5 MG Tank located in the vicinity of the existing Education Center Tanks. This project will provide a more direct flow path to the new proposed tank to maintain similar tank levels in both proposed tanks and provide fresh water for improved tank turnover.

<u>Fire Flow:</u> The improvement will allow a direct line from the proposed storage tank to the western side of the system, helping improve fire flows at every location in the system. **Table 4** depicts the anticipated fire flow improvements as a result of this project.

% of System	Additional Fire Flow (gpm)
20	30 - 300+
25	10 - 30
55	<10

Table 4	Fire	Flow	Results	with	Proposed	CIP	Project
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<u>Water Quality:</u> The 14-inch line extension allows fresher water (i.e., with a better residual) to enter the tank, thus improving the overall residual in the tank. **Table 5** indicates the model-predicted water quality improvements attributed to the project.

Demand	With 14" Extension	Without 14" Extension				
Conditions (gal/day)	Residual in Tank (mg/L)	Residual in Tank (mg/L)				
700,000	1.17	1.09				
1,000,000	1.27	1.21				
1,500,000	1.34	1.28				

Table 5. Water Quality Results with Proposed CIP Project

Projects 5, 14, and 15) Automatic Flushers at Dietz, Van Voorhis, and Prichard Areas:

These projects include the installation of automatic hydrant flushers at the select areas that may be prone to water quality concerns if low demand scenarios persist. These areas are recommended to be monitored and if low chlorine residuals are present, automatic flushers may be installed to improve water quality in the areas. **Table 6** depicts the potential benefit at each location for three low-demand scenarios. The analysis is based upon the hydrant flushing 5,000 gallons once every three days. The flush volume may be modified based on field observations.

Table 6.	Water Quality	Results with Prop	posed Flushers (5	5,000 gallons/3 days)
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	Lower D	lietz	Van Voo	orhis	Prichard		
Demand Condition (gal/day)	With Flusher Average Residual (mg/L)	Without Flushing Residual (mg/L)	With Flusher Average Residual (mg/L)	Without Flusher Residual (mg/L)	With Flusher Average Residual (mg/L)	Without Flushing Residual (mg/L)	
700,000	0.85	0.65	1.05	1.00	0.96	0.88	
1,000,000	0.96	0.85	1.18	1.14	1.12	1.04	
1,500,000	1.12	1.00	1.20	1.20	1.24	1.14	

Projects 6, 7, and 8) Isolated Fire Flow Line Improvements:

These projects are designed to convey sufficient fire flow capacities to selected areas not meeting current UFC fire flow regulations. Specific areas include:

- <u>Project 6 Gold Vault Area:</u> Install about 600 linear feet of 8-inch water line parallel to the existing 6-inch line to the Gold Vault. The proposed CIP increases available fire flow at the Gold Vault from 590 gpm to 2,120 gpm.
- Project 7 North of Frazier Tank/Wilson Road: Install about 200 linear feet of 8-inch water line under Wilson Road to provide an additional loop to increase the available fire flow for the storage areas and buildings located along Wilson Road. There are several hydrants in this area which have about 1,000 gpm of available fire flow under existing conditions. Hydrants located on the existing 8-inch line in this area increase in fire flow availability by approximately 450 gpm. Hydrants located along the existing 6-inch lines in the area increase by about 200 to 400 gpm.
- <u>Project 8 7th Armor Division Cut-Off Road</u>: Install about 1,500 linear feet of 6-inch water line along the Road to increase fire flow and connect two dead end lines. Looping the system

also provides a secondary water quality benefit. Fire flow at specific buildings along the road are increased as follows:

- From 940 gpm to 1,530 gpm at Building 7241;
- From 850 gpm to 1,460 gpm at Building 7238;
- From 940 gpm to 1,450 gpm at Building 7234; and
- From 1,530 gpm to 2,030 gpm at Building 7232.

Project 9) Decommission Central WTP and Large Diameter Mains from Service:

This project will involve decommissioning the existing Central WTP and extraneous large mains in the area. Taking these facilities out of service should only be done after improvements to the Muldraugh WTP have been completed so that the Muldraugh WTP can meet the water supply needs of the post. The project is considered low priority and does not significantly affect system pressures or water quality. Taking the facilities out of service presents operations and maintenance savings, as only one WTP would require operation.

Leaving the facility in place may result in additional system resiliency should the need to restart operation of the WTP occur in the future. For the purposes of this proposal, it is assumed that this project will include the removal/decommissioning of:

- Exterior tankage, including dewatering and backfill;
- Generator and generator building;
- Exterior electrical facilities and minor appurtenances; and
- Ancillary buildings (not including main plant building).

The main plant building at the Central WTP will not be decommissioned, other than to remove specific water treatment equipment such as pumps, chemical feed equipment, SCADA, and instrumentation. Fort Knox will retain ownership and responsibility for the building and its internal structures and systems.

Project 10) Installation of Check Valves near New Education Center Tank:

This project involves installing three check valves on lines exiting the proposed Education Center Tank. The check valves will be placed on existing 12-, 8-, and 6-inch water lines. The check valves provide a minor improvement to water quality for low demand, or less than 1 MGD, conditions. The check valves direct water away from the proposed Education Center Tank which prevents water from "recycling" in the tank. The check valves decrease water age in the southern part of the Post by up to one day for low demand conditions.

Projects 11, 12, 13, 16, and 17) Remove Elevated Storage Tanks:

These projects include removal of existing tanks no longer in service (due to the construction of the two proposed tanks) and can be performed independent of the remaining CIP projects. Removal of these tanks may be cost-neutral depending upon current scrap metal prices. Removal of these tanks also presents long-term operations and maintenance savings, especially with respect to painting costs. It is assumed that the existing Education Center Tanks and Old Ironsides Tank will be removed during construction of the new tanks at or near those sites. The remaining tank removal projects include:

 <u>Project 11 – Frazier Tank:</u> Remove 500,000 gallon elevated storage tank at 2797 Frazier Road; tank height is about 100 feet;

- <u>Project 12 Van Voorhis Tank:</u> Remove 500,000 gallon elevated storage tank at 5899 Jamison Street; tank height is about 103 feet;
- <u>Project 13 Prichard Tank:</u> Remove 500,000 gallon elevated storage tank at 4773 8th Armored Division Drive; tank height is about 145 feet;
- Project 16 HRC Tank (also known as WWTP Tank): Remove 500,000 gallon elevated storage tank at 7101 9th Cavalry Regiment Avenue; tank height is about 183 feet; and
- <u>Project 17 Fort Knox High School Tank:</u> Remove 500,000 gallon elevated storage tank at 7561 Dixie Street; tank height is about 141 feet.

6.4. Proposed CIP Implementation

Upon approval of their CIP, HCWD1 anticipates completing all 17 CIP projects within a three year design and construction period. Due to the raised hydraulic grade line across post, many projects are required to be implemented in parallel. **Table 7** on the following page identifies these specific parallel or predecessor projects along with the proposed CIP implementation schedule. Table cells shaded in red indicate the duration of engineering/design services and those shaded in blue indicate the construction/installation services associated with each project.

Project Nos.	Project Name	Yei	ar 1	Yei	ar 2	Yei	ar 3	Sequencing Comments
1	Muldraugh WTP Improvements	Design	Design	Construction	Construction	Construction	Construction	High-service pumps must be complete prior to new tanks (Projects 2 &3); Remaining upgrades prior to Decommissioning of Central WTP
2, 3	Two New 1.5 Million Gallon Tanks		Des.	Constru	Constr.			In parallel with Muldraugh WTP upgrades
4	Park Road 14" Main Extension		Des.	Constr.	Constr.			Completed in parallel with new tank (Project 3) to promote desired circulation
5, 14, & 15	Installation of Three Automatic Flushers					Constr.	Constr.	Near end of CIP to assess and validate low-demand water quality concerns
6, 7, & 8	Isolated Fire Flow Line Improvements		Design	Constr.	Constr.			Not dependent upon other projects, but should be completed early to meet fire flow requirements
9	Decommission Central WTP				Des.	Con	Con	After primary reliability upgrades are complete at Muldraugh WTP (Proj. 1)
10	Installation of Check Valves near New Education Center Tank		Dissign	Constr.	Conste.			Completed in parallel with new tank (Project 3) to promote desired circulation
11, 12, 13, 16, & 17	Remove Elevated Storage Tanks				Design	Constr.	Constr.	Must remain until new tanks are constructed (Projects 2 &3)

TUDIE /. TOPOSCU ON SENSANG UNA SCAUCHEINE	Table 7.	Proposed	CIP Sched	lule and Seq	uencing
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6.5. Proposed CIP Benefits (Before vs. After Figures)

The water quality, fire flow, and pressure benefits attributed to the proposed CIP presented in Section 6.3. are depicted on **Figures 12 through 14** on the following pages. Each figure includes the existing conditions, or "before CIP", results on the left of the page and the proposed conditions, or "after CIP", results on the right.



4 September 2015





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Pressure Improvements with Proposed CIP

Figure 13.



4 September 2015

Figure 14. **Fire Flow Improvements with Proposed CIP**

Technical Proposal Submittal – UP Contract No.: SP0600.11-C-8270 Revised ISDC Projects and Revised Capital Improvement Program Potable Water Utility System at Fort Knox Army Installation, Kentucky



Figure 15.

Proposed CIP Overview Plan

TAB 3



() Stantec

Stantec Consulting Services Inc. Design with community in mind www.stantec.com

Firm Fixed Price Proposal Submittal

UP Contract No.: SP0600-11-C-8270

Revised ISDC Projects and Revised Capital Improvement Program Potable Water Utility System at Fort Knox Army Installation, Kentucky

Revised submittal to reflect initial negotiations presented in the Initial Negotiation Message dated February 3, 2016. *All revisions to the document are highlighted in red text.*

Second Revision per the negotiation letter received on 16 February 2016. Changes in this second revision are highlighted in blue text.

Third Revision per negotiation e-mail received on 24 March 2016. *Changes are highlighted in green text.* Fourth Revision per funding availability

discussion in May 2016. Changes are highlighted in orange text. Prepared for:

Defense Logistics Agency Energy 17 February 2016 25 March 2017 10 February 2016 1 June 2016 4 September 2015

- 1 June 2016

Preamble:

Hardin County Water District No. 1 (HCWD1) submits this proposal to the Defense Logistics Agency Energy (DLA) in response to DLA's request for proposal (RFP) issued by electronic mail on 14-August-2015. The original RFP required a submittal deadline of 28-August-2015. An extension date was approved by DLA by electronic mail on 24-August-2015, with new deadline of 4-September-2015. Further clarification to the proposal requirements was provided to HCWD1 by DLA on 21-August-2015.

HCWD1 proposes to partially modify the list of current approved and funded Initial System Deficiency Corrections (ISDC) in accordance with section C.11.2.5 of its Utility Privatization (UP) contract with the Government. Since HCWD1 obtained the Ft. Knox Water System (FKWS) in 2012, it has completed extensive study of the system, and has obtained a significant amount of knowledge about the current deficiencies of the FKWS since beginning operations.

HCWD1's operating partner, the Louisville Water Company (LWC) have also found significant differences between the two water treatment plants (WTP) and raw water sources on Ft. Knox. Along with the completion of the recent Water Quality Modeling & CIP Development project by Stantec Consulting Services, HCWD1 believes its proposed projects will significantly improve water quality, water pressure, fire flows and WTP capacity and WTP reliability and resiliency, if the proposed CIP (Capital Improvement Plan) changes are approved by DLA.

As requested in the RFP, HCWD1 has also calculated a reduction to its current Utility Service Charge. This revision is provided for in section G.4 of the UP contract, as well as under FAR 52.241-7. HCWD1 also believes that by implementing its proposal, several of the currently planned ISDC projects will no longer be needed and those funds can be re-directed to the proposed ISDC projects.

By implementing this proposal, HCWD1 believes this will provide more value and wiser spending of DoD budget dollars. The proposed projects would also provide a noticeable and measurable improvement to the FKWS which will benefit the soldiers, military families, Government employees and contractors which work and live on post daily.

Phone 1-270-351-3222

1 June 2016

www.HCWD.com

FAX: 1-270-352-3055

Firm Fixed Price Proposal Submittal – UP Contract No.: SP0600-11-C-8270

Revised ISDC Projects and Revised Capital Improvement Program Potable Water Utility System at Fort Knox Army Installation, Kentucky

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1. Price Proposal

1.1. Introduction

Hardin County Water District No. 1 (HCWD1), under a partnership agreement with Louisville Water Company (LWC), was granted a 50-year privatization contract to operate the Fort Knox Water System (FKWS) under Contract SP0600-11-C-8270. This agreement establishes the methodology for recouping costs associated with both required capital improvements and ongoing maintenance and replacement costs.

The original price proposal submitted by HCWD1 was based upon a pre-determined list of capital projects known as the Initial System Deficiency Correction (ISDC) projects. Pricing models were developed based upon these projects, with an associated fixed 60-month equal payment schedule to cover the capital expenditures. These funds would then be used by HCWD1 to pay for the improvements as they were constructed over the initial 5-year period of the agreement.

HCWD1 retained Stantec Consulting Services Inc. (Stantec) in 2014 to review and update the FKWS hydraulic distribution system model with a focus on system water quality. The results of that modeling process have led to a revision of the proposed ISDC projects to further enhance system water quality, pressure, and fire flow capabilities. A complete listing and discussion of these proposed project revisions can be found in the accompanying Technical Proposal.

The revised set of proposed projects will require a modification of the pricing models and reallocation of funds for both the capital costs and monthly service charge components of the agreement. This Pricing Proposal sets forth the proposed changes and describes the methodologies used to determine the associated costs.

1.2. Methodologies

The Price Proposal submitted as part of the original solicitation described in detail the various methodologies used to determine costs and to distribute those costs across the 50-year agreement horizon. The general approach uses experience gained from multiple sources in managing similar capital construction projects in this geographic area.

Most of those same methodologies are still being followed in this Price Proposal, with a few notable clarifications:

- The construction cost estimates for the two proposed 1.5 million gallon (MG) elevated water storage tanks were developed through conversations with multiple tank contractors who perform this type of work in Kentucky.
- Capital construction projects were estimated assuming that they would be competitively bid on an individual basis.
- Potential reduction in cost for the two proposed 1.5 MG elevated water storage tanks, if packaged together into a single bid offering, was not considered. HCWD1 will solicit bid proposals from qualified tank contractors that will include multiple pricing options.
- 4. Recent bid prices in the Kentucky area on projects managed by Stantec were included in the cost evaluation for comparison purposes.
- Construction cost estimates are based upon the year that project bidding is anticipated to occur.

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1.3. Pricing Approach

HCWD1 proposes that various projects from the original ISDC list be replaced with those projects identified in the accompanying Technical Proposal, as summarized in **Table 1**. Funding for the replaced projects in the amount of \$12,208,104 would be reallocated for use on the projects identified in the Technical Proposal. The additional unfunded capital cost for the proposed projects, in the amount of **\$4,367,896**, would be added to the agreement and repaid over a mutually

agreeable period. \$4,247,896 is available for the completion of the CIPs in their entirety utilizing HCWD1's Fort Knox Water Fund reserves. These funds are available through savings on prior ISDCs and other Fort Knox Water projects previously Table 1. List of Current and Proposed Re-Use of ISDC Projects

completed. This	ISDC Number	ISDC Budget \$	Project Description	Initial Purpose	Reason for Proposed Re-Use of Funding
available budget includes the remaining ISDC payments to HCWD1	6	\$1,912,680	Add 16" Raw Main from MWTP to CWTP	Since was assumed MWTP could be closing as a treatment point, would need to be able to transport well field raw water from the current MWTP site (high service pumps) to the CWTP	HCWD1 proposes to keep MWTP in service and close CWTP. This provides several benefits to Ft. Knox. By keeping MWTP as the primary treatment source / location, there is no reason to transport well field water from MWTP to CWTP, since CWTP would no longer be a treatment location
through anuary 017.	8	\$106,920	Muldraugh High Svc Pump Station Improvements	Was intended to replace doors, windows and roof on the HSLP building at MWTP	HCWD1 proposal to upgrade and improve MWTP could include these improvements. The planned funding was not for essential components and could be better used for other more critical upgrades at the WTP
	11-3 \$557,336 Fire H Year		Fire Hydrants Year 3 - 2015	Gost required ISDC to	HCWD1 has replaced all the non-functioning hydrants on post.
	11-4 \$654,329 Fire Hydrants Year 4 - 2016 hydrants (of 1,100 total	industry standards would use existing hydrants as long as parts available, are still functional and provide useable fire protection HCWD1 will still be resonable to maintain receiver replace al			
	11-5	\$477,377	Fire Hydrants Year 5 - 2017	hydrants)	hydrants as needed throughout UP contract period
	15	\$1,743,268	Repl 16" Raw Main from Otter Creek PS to CWTP	Replace the 16" CI main with DIP that brings raw water from McCracken Spring / Otter Creek Pump Station to the CWTP	HCWD1 believes the well field source is more than adequate for future source needs for Ft. Knox. The McCracken Spring source has a very low safe yield during a severe drought, and in some years, has had zero yield. If the CWTP is closed, there is also no need for this main in the future as it only transports the spring source to the CWTP. Also, the existing main has no history of breakage or failures and the internal pressures are very low so the existing pipe is still reliable and dependable
	20	\$1,094,155	Replace 23,642- LF of ACP - North Dietz	Replace existing AC / Transite mains in North Dietz housing area with DIP	AC pipe continues to be reliable, failure free. Standard industry practice would be to extend life of AC pipe, as is durable and reliable. Special precautions will be taken when repairing or disposing of sections of AC pipe. HCWD1 will still be responsible to maintain, repair or replace this pipe throughout UP contract period
	21-2 \$1,490,921		Replace 36,500- LF - Van Voorhis	Replace all DIP water mains within Van Voorhis housing neighborhood	There have been almost no breaks or failures in this area. Also, about 42% of the old pipe has already been replaced as part of a new housing project since 2012. Industry standards would use
	23-1	\$1,490,921	Replace 36,500- LF - Van Voorhis	Replace all CI water mains within Van Voorhis housing neighborhood	existing DIP pipe as long as it is not having frequent breaks or service interruptions. HCWD1 will still be responsible to maintain, repair or replace all mains as needed throughout UP contract period
j (23-5	\$1,828,256	Replace 136,000 LF CI Pipe	Replace existing CI pipe with DIP throughout post	HCWD1 believes this portion of ISDC 23 would be better spent on the new CIP plan and proposed projects. The funding available with 23-3 and 23-4 (\$4,736,512) should be enough to fund future pipe replacements where needed throughout post

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ISDC Number	ISDC Budget \$	Project Description	Initial Purpose	Reason for Proposed Re-Use of Funding
18	\$196,535	Water Storage Tank No. 7 (High School)	Partially repaint this storage tank	The second se
24	\$23,978	Water Storage Tank No. 1 (Education, small)		The proposed CIP creates a higher pressure zone, requiring new tanks. Also, the current demand on post does not require as much stored water, and the current excess stored water is degrading water quality. The proposed new tanks at higher elevation will still
25	\$23,978	Water Storage Tank No. 2 (Education, large)	Inspect, clean & minor repairs as needed to this tank	meet or exceed all DoD fire protection regulations. The money to continue to paint and service numerous older tanks would be better spent on newer, fewer tanks which will improve water pressure,
26	\$44,850	Water Storage Tank No. 4 (Brave Rifles)		water quality and save the Government money over time
9	\$487,600	Decommission MWTP	The cost to demolish / scrap MWTP after being decommissioned	This funding could be re-directed to decommission the CWTP facility after closure, or, if the Government wanted to keep the CWTP (for historic reasons) some of this funding could be used to "mothball" the existing CWTP and the balance to upgrade and improve the MWTP
35	5 \$75,000 Chemical Feed Systems		Add redundancy and remove single point vulnerabilities from MWTP chemical feed systems	HCWD1 proposal plan to upgrade and improve MWTP would include these improvements.
\$12,	208,104	<<< TOTAL		

HCWD1 is willing to be flexible on the schedule for repayment of the costs associated with the proposed capital projects. The existing agreement calls for repayment of the original ISDC project costs over a 5 year period from the initial date of execution. One possible approach would be to continue with that repayment schedule for the amount associated with the original ISDC projects, with an additional adjusted amount reflecting the unfunded project costs noted above to be repaid either within the current 5-year window or over a separate 3 to 5-year period. Various repayment alternatives are summarized in Table 4 in Section 2.2 of this Proposal.

Due to the fact that several elevated storage tanks will no longer be part of the water system, associated future maintenance costs such as repainting will be eliminated from the original monthly charge calculations. Alternately, several projects identified as part of the original ISDC, but eliminated as described in the Technical Proposal, will now have a Renewals and Replacements (R&R) component that must be factored into the monthly service charge. The spreadsheets used to develop the proposed monthly charge have been updated to reflect these changes. Similarly, the monthly charge calculations have also been revised to reflect the fact that the Muldraugh WTP will now be used in lieu of the Central WTP going forward.

1.4. Assumptions and Qualifiers

Since the realignment of capital projects will result in certain reuse or demolition of existing facilities, a number of assumptions and qualifiers have been made, and are included in this Price Proposal:

 Decommissioning of the existing Central WTP and elevated storage tanks will be coordinated with Fort Knox leadership. Line items for these decommissioning projects have been included in the Price Proposal based upon customary costs for similar projects, but may need to be adjusted based upon final disposition of the assets as directed by post leadership.

- 2. This Price Proposal includes the following costs for decommissioning the Central WTP:
 - a. Exterior tankage, including dewatering and backfill;
 - b. Generator and building;
 - c. Exterior electrical facilities;
 - d. Minor appurtenances; and
 - e. Ancillary buildings (not including main plant building).
- The main plant building at the Central WTP will not be decommissioned, other than to remove specific water treatment equipment such as pumps, chemical feed equipment, SCADA, and instrumentation. Fort Knox will retain ownership and responsibility for the building and its internal structures and systems.
- Demolition of the existing elevated storage tanks includes the following:
 - a. Dewatering;
 - Removal of all appurtenances such as cell phone equipment, ladders, hatches, and lighting;
 - c. Abandonment of valve vaults and overflow structures; and
 - d. Complete removal and disposal of the tank from the site.
- 5. If Fort Knox wishes to retain one or more tanks in place for historical purposes, they will assume all ownership and responsibility for future maintenance. Similarly, HCWD1 will not be responsible for any historical evaluation or mitigation associated with the decommissioning of either the Central WTP or the elevated storage tanks.
- Projects that were originally identified in the ISDC list, but were subsequently removed as part of the reallocation of funds, may still be done at some future date, if necessary, for the proper functioning of the water system.

2. Capital Improvements Plan

HCWD1 retained Stantec in 2014 to review and update the FKWS hydraulic distribution system model with a focus on system water quality. The results of that modeling process have led to a revision of the proposed ISDC projects to further enhance system water quality, pressure, and fire flow capabilities. The capital improvement projects identified by the study are listed in **Table 2**, with additional detail shown in **Table 3** and **Figures 1 through 17** at the end of Section 2.

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	Project Name	Total Project Cost	
1	Muldraugh WTP Improvements	\$4,845,000	
	1.5 MG Old Ironsides Tank	\$5,130,000	\$5,054,000
:	1.5 MG Education Center Tank	\$5,180,000	\$5,060,000
1	Park Road 14" Main Extension	\$290,000	

Table 2. Summary of Recommended Capital Improvements

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7. It is assumed that Fort Knox officials will be provided a 30-day review and comment period for the proposed projects following final design and prior to bidding. Any requested changes by Fort Knox after this period that affect the construction cost may necessitate additional funding from Fort Knox.

No.	Project Name	Total Project Cost
5	Automatic Flusher Installed in Dietz Area	\$13,000
6	Line Improvements – Gold Vault Area	\$163,000
7	Line Improvements – North Frazier Area	\$30,000
8	Line Improvements – 7th Armor Division Cut-off Road	\$143,000
9	Decommission Central WTP and Large Diameter Mains	\$322,000
10	Installation of Check Valves Near Education Center Tank	\$70,000
11	Remove Frazier Tank	\$76,000
12	Remove Van Voorhis Tank	\$60,000
13	Remove Prichard Tank	\$76,000
14	Automatic Flusher Installed in Van Voorhis Area	\$13,000
15	Automatic Flusher Installed in Prichard Area	\$13,000
16	Remove HRC Tank	\$76,000
17	Remove Fort Knox High School Tank	\$76,000
	Total CIP Cost	\$16,576,080
		\$16,456,000
18	Remove Old Ironsides Tank	\$76,000

Table 2. Summary of Recommended Capital Improvements

2.1.

Cost Estimating

All projects in the capital improvements plan include engineering, design, permitting, construction and inspection. The estimates for construction costs for the projects were based on similar projects in the Fort Knox, Kentucky region (including Louisville Water Company projects in Louisville, Kentucky and HCWD1 projects in Radcliff, Kentucky).

Engineering basic design and inspection services were estimated using cost curves from the US Rural Development Utility Program. General and Administrative (G&A) costs were set at 4.4% of construction cost to match previous submittals. Prevailing wages will be in effect when applicable.

The construction cost estimates assume that projects will be competitively bid, with reasonable times to prepare the bids and to perform the actual construction, and that contractors, their subcontractors, and their suppliers will have access to job sites with no undue delays or unreasonable restrictions.

Replacement materials will be equal to, or better than, existing materials and will follow HCWD1's design standards. For example, ductile iron pipe is used for lines that are replaced on post.

The number of existing hydrants and mainline valves will be appropriate for fire protection and line isolation, and pipe installations will predominantly occur in soil adjacent to roadways.

There are no allowances for easements, land acquisition, legal fees, cultural or environmental remediation, electricity, energy or other utilities.

2.2. Project Descriptions and Costs

Table 3 below provides additional information for each project, along with a breakdown of the costcomponents. For further detail on individual projects, please refer to the factsheets in Figures 1through 17.

No.	Project Name	G&A (\$)	Engineering (\$)	Inspection (\$)	Construction (\$)	Total Project Cost (\$)
1	Muldraugh WTP Improvements New HS pumps, SCADA, conversion to chloramines, improved softening abilities, filter piping rehab, expanded capacity, and additional security measures.	\$183,887	\$287,114	\$194,753	\$4,179,246	\$4,845,000
2	1.5 MG Old Ironsides Tank New 1.5 MG composite concrete elevated tank. Includes demolition of existing 0.5 MG tank, about 500 linear feet of 16" water mains, electrical work, telemetry, fittings, valves, site restoration, roadway patching, etc.	\$194,024 -\$196,569 -	\$297,031 \$305,128	\$153,310 \$160,829	\$4,409,635 \$4,467,474	\$5,054,000 \$5,130,000
3	1.5 MG Education Center Tank New 1.5 MG composite concrete elevated tank. Includes demolition of existing 0.25 MG tank and existing 0.5 MG tank, about 800 linear feet of 16" water mains, electrical work, telemetry, fittings, valves, site restoration, roadway patching, etc.	\$198,485 \$195,340	\$308,102 \$300,875	\$162,397 \$158,587	\$4,511,016 \$4,405,198	\$5,180,000 \$5,060,000
4	Park Road 14" Main Extension 1,200 LF of 14" water main, 80 LF of steel encasement pipe bored under railroad, fittings, valves, and connections to existing 14" and 16" water mains.	\$10,103	\$27,140	\$23,145	\$229,612	\$290,000

Table 3.	Cost Details of	Recommended Capital	Improvements

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Table 3. Cost Details of Recommended Capital Improvements

No.	Project Name	G&A (\$)	Engineering (\$)	Inspection (\$)	Construction (\$)	Total Project Cost (\$)
5	Automatic Flusher Installed in Dietz Area	\$548	\$0	\$0	\$12,452	\$13,000
6	Line Improvements – Gold Vault Area 600 LF of 8" water main, connections to existing 10" and 6" water mains.	\$5,505	\$16,941	\$15,439	\$125,115	\$163,000
7	Line Improvements – North Frazier Area 200 LF of 6" water main, connections to existing 8" and 6" water mains.	\$1,005	\$3,196	\$2,968	\$22,831	\$30,000
8	Line Improvements – 7 th Armor Division Cut-off Road 1,500 LF of 6" water main, connections to existing 8" and 6" water mains.	\$4,806	\$15,074	\$13,884	\$109,235	\$143,000
9	Decommission Central WTP and Large Diameter Mains Remove exterior tankage, including dewatering and backfill, generator and building, exterior electrical facilities, minor appurtenances, and ancillary buildings (not including main plant building).	\$11,407	\$28,518	\$22,815	\$259,259	\$322,000
10	Installation of Check Valves Near Education Center Tank 12", 8" and 6" check valves and fittings	\$2,344	\$7,458	\$6,925	\$53,273	\$70,000
11	Remove Frazier Tank Demolition of existing 0.5 MG tank and site restoration	\$2,545	\$8,097	\$7,519	\$57,839	\$76,000
12	Remove Van Voorhis Tank Demolition of existing 0.3 MG tank and site restoration	\$2,009	\$6,393	\$5,936	\$45,662	\$60,000
13	Remove Prichard Tank Demolition of existing 0.5 MG tank and site restoration	\$2,545	\$8,097	\$7,519	\$57,839	\$76,000
14	Automatic Flusher Installed in Van Voorhis Area	\$548	\$0	\$0	\$12,452	\$13,000

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7

Firm Fixed Price Proposal Submittal – UP Contract No.: SP0600-11-C-8270 Revised ISDC Projects and Revised Capital Improvement Program

\$7,519	\$57,839	\$76,000
	\$7,519	\$7,519 \$57,839

Table 3. Cost Details of Recommended Capital Improvements

No.	Project Name	G&A (\$)	Engineering (\$)	Inspection (\$)	Construction (\$)	Total Project Cost (\$)
15	Automatic Flusher Installed in Prichard Area	\$548	\$0	\$0	\$12,452	\$13,000
16	Remove HRC Tank Demolition of existing 0.5 MG tank and site restoration	\$2,545	\$8,097	\$7,519	\$57,839	\$76,000
17	Remove HRC Tank Ft Knox HS Demolition of existing 0.5 MG tank and site restoration	Tank \$2,545	\$8,097	\$7,519	\$57,839	\$76,000
	Total CIP Cost					\$16,576,000
-	-54,247,896	-				\$16,456,000

As discussed in Section 1.3, ICWD1 is flexible with respect to potential payment terms for the unfunded portion of the CIP, £4,367,896. The entire CIP is anticipated to be complete in about three to four years following acceptance and approval of the CIP. Three potential repayment options are presented in Table 4 below. Because of the short duration of the CIP and because most or all of the CIP projects are expected to be bid in year one of the CIP (year five or six of the Privatization contract), inflation rates and interest income or debt service was not factored into the monthly rates.

-Instead, the total unfunded capital cost was divided evenly amongst the proposed durations.

Option No.	Option Description	Duration for Proposed Rates	New CIP Surcharge Monthiny Rate	Updated ISDC Surcharge Rate
1	Include the unfunded portion of the CIP in the ISDC surcharge (CLIN 0002) for the final year of the ISDC term	12 months (contract year 5)	\$0. [∞]	\$837,832 \$827,832.33
2	Create a new surcharge monthly rate spread over three years following the expiration of the ISDC surcharge	36 months (contract years 6 to 8)	\$117,997.11 \$121,330 \$119,997	\$473,841.°°
3	Create a new surcharge monthly rate spread over five years following the expiration of the ISDC surcharge	60 months (contract years 6 to 10)	\$72,798 \$70,798.27	\$473,841.∞

Table 4. CIP Repayment Options

Project 1: Muldraugh WTP Improvements

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Stantec

\$ 4,179,246
\$ 764,797
\$ 740,126
\$ 345,392
\$ 345,392
\$ 246,709
\$ 518,088
\$ 98,683
\$ 34,539
\$ 345,392
\$ 350,326
\$ 98,683
\$ 256,577
\$ 34,539
\$ 183,887
\$ 287,114
\$ 194,753
\$ 4,845,000
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Location Map



-25 March-2016 1 June 2016

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Project 2: New 1.5 Million Gallon Tank (Old Ironsides)

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System * This page was replaced as part of the 25 March 2017 revision.





Opinion of Probable Costs:	
Construction	\$ 4,409,635
Mobilization/Demolition	\$ 102,302
New Tank	\$ 3,847,119
Hydrant, Fittings, Valves, 16" line	\$ 218,051
Electrical/Telemetry	\$ 192,356
Other Site Work	\$ 49,806
General & Administrative (G&A)	\$ 194,024
Engineering/Design	\$ 297,031
Construction Inspection	\$ 153,310
Total Capital Cost:	\$ 5,054,000



Project Description:

Location Map

New 1.5 MG composite concrete elevated tank. Includes 16" connection to existing water main, electrical work, telemetry, fittings, valves, site restoration, roadway patching, etc.



* This page was replaced as part of the 10 February 2016 Revised submittal.

Stantec

Project 3: New 1.5 Million Gallon Tank (Education Center) Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System

Opinion of Probable Costs:	\$ 4,405,198
Construction	\$ 4,405,198
Mobilization/Demolition	\$ 103,698.06
New Tank	\$ 3,784,806
Hydrant, Fittings, Valves, 16" line	\$ 278,454
Electrical/Telemetry	\$ 189,240
Other Site Work	\$ 49,000
General & Administrative (G&A)	\$ 195,340
Engineering/Design	\$ 300,875
Construction Inspection	\$ 158,587
Total Capital Cost:	\$ 5,060,000



Water

District

Mardin County

Project Description:

Location Map

New 1.5 MG composite concrete elevated tank. Includes about 800 linear feet of 16" water main, electrical work, telemetry, fittings, valves, site restoration, roadway patching, etc.



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Project 4: Park Road 14" Main Extension

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Opinion of Probable Costs:		11.0
Construction	\$ 229,612	Γ
Mobilization	\$ 14,128	1
14" Main + Connections	\$ 146,086	
Fittings, Valves	\$ 28,256	
Encasement Pipe	\$ 27,013	r
Other Site Work	\$ 14,128	
General & Administrative (G&A)	\$ 10,103	K
Engineering/Design	\$ 27,140	
Construction Inspection	\$ 23,145	
Total Capital Cost:	\$ 290,000	



Project Description:

Project includes extending approximately 1,200 linear feet of an existing 14" main along Park Road and connecting to an existing 16" inch main which runs to the new tank at the Education Center.



Project 5: Automatic Flusher Installed in Dietz Area

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Opinion of Probable Costs:	
Construction	\$ 12,452
Mobilization	\$ 5,534
Installation of Automatic Flusher	\$ 6,918
General & Administrative (G&A)	\$ 548
Engineering/Design	\$ -
Construction Inspection	\$ -
Total Capital Cost:	\$ 13,000



Location Map

Project Description:

Project includes installing an automatic flusher on a hydrant located at the end of the Dietz Neighborhood.



-25-March 2016 1 June 2016

Project 6: Line Improvements to Gold Vault

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System

\$ 125,115
\$ 13,719
\$ 63,381
\$ 6,859
\$ 41,156
\$ 5,505
\$ 16,941
\$ 15,439
\$ 163,000
\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$





Location Map

Project Description:

Project includes running an additional 600 linear feet of 8" main to the Gold Vault Area parallel to the existing 6" main.



-25-March-2016 1 June 2016

Project 7: Line Improvements to Area North of Frazier Tank

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System

Opinion of Probable Costs:	
Construction	\$ 22,831
Mobilization	\$ 3,024
6" Main	\$ 9,979
Connections	\$ 4,536
Other Site Work	\$ 5,292
General & Administrative (G&A)	\$ 1,005
Engineering/Design	\$ 3,196
Construction Inspection	\$ 2,968
Total Capital Cost:	\$ 30,000





Location Map

Project Description:

Project includes installing about 200 linear feet of 6" main to provide a loop in the area north of Frazier Tank.



15

Project 8: Line Improvements Along 7th Armor Division Cutoff Road

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System

Opinion of Probable Costs:	
Construction	\$ 109,235
Mobilization	\$ 13,740
6" Main	\$ 68,015
Connections/Valves/Fittings	\$ 13,740
Other Site Work	\$ 13,740
General & Administrative (G&A)	\$ 4,806
Engineering/Design	\$ 15,074
Construction Inspection	\$ 13,884
Total Capital Cost:	\$ 143,000



Water District Stantec

Hardin County

Location Map

Project Description:

Project includes installing about 1,500 linear feet of 6" main to provide a loop along 7th Armor Division Road.



-25-March 2016 1 June 2016

Project 9: Demolition and Removal of Central WTP and Extraneous Large Diameter Mains

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System

County		0	Stantor
	Water	0	Stanteo
	District		

\$ 259,259
\$ 12,346
\$ 246,913
\$ 11,407
\$ 28,518
\$ 22,815
\$ 322,000
\$ \$ \$ \$ \$ \$ \$



Project Description:

Location Map

Remove exterior tankage, including dewatering and backfill, generator and building, exterior electrical facilities, minor appurtenances, and ancillary buildings (not including main plant building).



25-March-2016 1 June 2016

Project 10: Installation of Check Valves near New Education Center Tank

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System

Ptar	din all	
Coun		
		trict
-	manufa Crostily Allan	. 1227

Stantec

Opinion of Probable Costs:		
Construction	\$ 53,273	, and
Mobilization	\$ 7,477	th
Check Valves	\$ 15,888	
Fittings	\$ 14,954	
Sitework	\$ 14,954	
General & Administrative (G&A)	\$ 2,344	
Engineering/Design	\$ 7,458	
Construction Inspection	\$ 6,925	
Total Capital Cost:	\$ 70,000	

Location Map

Project Description:

Project includes installation of 3 check valves on existing 12", 8" and 6" mains leaving the proposed new tank at the Education Center (locations may vary depending upon final tank location).



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Project 11: Demolition of Frazier Tank

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Opinion of Probable Costs:	
Construction	\$ 57,839
Mobilization/Demobilization	\$ 13,347
Demolition & Sitework	\$ 44,492
General & Administrative (G&A)	\$ 2,545
Engineering/Design	\$ 8,097
Construction Inspection	\$ 7,519
Total Capital Cost:	\$ 76,000



Project Description:

Remove 0.3 MG steel tank.

Remove Frazler Tank FRAZIER RD 199.1.199 Water Lines 12" 1' 14" 6" 16" 8" Source, Fail, Dialleleteba, Geolys, Forbail, USD2, USG3, AEX, Getneroung, Asroyid, JSN, JSP, sylwetepo, and the GIS User Community 0 150 300 10" 24" Feet

-25-March-2016 1 June 2016

Project 12: Demolition of Van Voorhis Tank

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Opinion of Probable Costs:	
Construction	\$ 45,662
Mobilization/Demobilization	\$ 13,506
Demolition & Sitework	\$ 32,156
General & Administrative (G&A)	\$ 2,009
Engineering/Design	\$ 6,393
Construction Inspection	\$ 5,936
Total Capital Cost:	\$ 60,000



Project Description:

Remove 0.3 MG steel tank.

Location Map



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Project 13: Demolition of Prichard Tank

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Opinion of Probable Costs:	10.000	
Construction	\$	57,839
Mobilization/Demobilization	\$	13,347
Demolition & Sitework	\$	44,492
General & Administrative (G&A)	\$	2,545
Engineering/Design	\$	8,097
Construction Inspection	\$	7,519
Total Capital Cost:	\$	76,000



Project Description:

Location Map





Project 14: Automatic Flusher Installed in Van Voorhis Area

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Stantec

Opinion of Probable Costs:

Construction	\$
Mobilization	\$
Installation of Automatic Flusher	\$
General & Administrative (G&A)	\$
Engineering/Design	\$
Construction Inspection	\$
Total Capital Cost:	\$



Project Description:

Project includes installation of an automatic flusher on a hydrant located at the end of the Van Voorhis Neighborhood.

12,452 5,534 6,918 548

13,000



Project 15: Automatic Flusher Installed in Prichard Area

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Opinion of Probable Costs:	
Construction	\$ 12,452
Mobilization	\$ 5,534
Installation of Automatic Flusher	\$ 6,918
General & Administrative (G&A)	\$ 548
Engineering/Design	\$
Construction Inspection	\$ -
Total Capital Cost:	\$ 13,000



Location Map

Project Description:

Project includes installation of an automatic flusher on a hydrant located at the end of the Prichard Neighborhood.



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Project 16: Demolition of HRC Tank

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Opinion of Probable Costs:	
Construction	\$ 57,839
Mobilization/Demobilization	\$ 13,347
Demolition & Sitework	\$ 44,492
General & Administrative (G&A)	\$ 2,545
Engineering/Design	\$ 8,097
Construction Inspection	\$ 7,519
Total Capital Cost:	\$ 76,000



Project Description:

Location Map

Remove 0.5 MG steel tank.



Project 17: Demolition of Fort Knox High School Tank

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Opinion of Probable Costs:	
Construction	\$ 57,839
Mobilization/Demobilization	\$ 13,347
Demolition & Sitework	\$ 44,492
General & Administrative (G&A)	\$ 2,545
Engineering/Design	\$ 8,097
Construction Inspection	\$ 7,519
Total Capital Cost:	\$ 76,000



Project Description:

Location Map

Remove 0.5 MG steel tank.



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* This page was added as part of the 25 March 2017 revision.

Project 18: Demolition of Old Ironsides Tank

Water Quality Model and Capital Improvements Plan Fort Knox Water Distribution System



Opinion of Probable Costs:	
Construction	\$ 57,839
Mobilization/Demobilization	\$ 13.347
Demolition & Sitework	\$ 44,492
General & Administrative (G&A)	\$ 2,545
Engineering/Design	\$ 8,097
Construction Inspection	\$ 7,519
Total Capital Cost:	\$ 76,000



Location Map

Project Description:

Remove 0.5 MG steel tank.



-25 March 2016 1 June 2016

3. Monthly Service Charge Update

3.1. Summary of Changes

HCWD1 anticipates an updated Monthly Service Charge as a result of the proposed CIP and partial reallocation of funding for some of the ISDC projects. This price proposal reflects the changes to the Final Proposal Revision (FPR) submittal for the Privatization of the Potable Water Utility System at Fort Knox Army Installation, dated June 1, 2011.

The monthly service charge is depicted in Schedule B-1 of the FPR, identified as CLIN 0001, or Tariff Rate. The service charge is comprised of:

- 1) Operations and Maintenance (O&M) and General and Administrative (G&A) Expenses.
 - O&M includes labor and benefits, purchased water costs (\$0 for the FPR and this proposal), and other operating expenses;
 - b. G&A is assumed to be 4.4% of the O&M costs per the methodology in the FPR;
 - c. O&M/G&A costs remain constant through the first five years of the contract (without annual inflation increases); and
 - d. O&M/G&A costs are depicted on Table 8 and remain unchanged from the FPR for this proposal.
- 2) Capital Costs, which consist of the renewals and replacement (R&R) costs.
 - a. R&R costs are provided by asset on Table 9, by asset and 50-year schedule/residual value on Table 10, and as a 50-year cash flow on Table 11. These tables follow the same format as Tables IV-2 through IV-4 in the FPR and have been updated to reflect the proposed CIP; specific assumptions/updates are included below.

3) Federal Income Taxes.

a. Assumed to be \$0 for the FPR and this proposal.

The monthly service charge for CLIN 0001 for years one and two of the contract was \$246,172.00. Beginning in year three, the service charge was predicted to escalate by an inflationary rate of 1.752678% for contract years three through fifty; however, HCWD1 has elected to not increase rates to date (through year four of the contract).

The assumptions, methodologies, and spreadsheet calculations from the FPR were utilized for this proposal. Specific changes to and/or assumptions within the spreadsheets as a result of the new CIP are provided below.

- The first four years of the contract were locked into the current monthly service charge of \$246,172 per month, of which \$117,687 is for Capital Costs.
- There appears to be a formula error in the FPR's 50-year R&R schedule for 2" transite distribution pipe resulting in -\$5 in residual value; this value was corrected for this proposal.
- Updated Table IV-2, R&R Inventory, which updates the 50-year R&R schedule. Updates include:
 - Decommissioning of Central Water Treatment Plant (WTP) and the associated raw water source assets (e.g. McCracken Spring Intake and Otter Creek Pump Station);

- Additional Muldraugh WTP elements that were previously proposed to be decommissioned in the FPR. Existing service life was estimated based on similar system assets in the FPR;
 and transferring ownership of the two
- Decommissioning of eight elevated storage tanks, four of which were estimated for replacement and all were estimated for rehabilitation during the 50-year contract term (prior to 2061). The two proposed tanks were not added to the R&R because their service life is anticipated to exceed the contract term; however, painting costs (rehabilitation) for two tanks in year 2036 are included in the R&R at an estimated cost of \$250,000; and
- Updated the distribution (by percentage) of capital costs for fire hydrants and distribution mains to be performed through R&R versus Initial System Deficiency Corrections (ISDC) to reflect the proposed reallocation of ISDC funds per our Price Proposal. Table 5 below indicates this new distribution that is reflected in Table 9.

Project Name	ISDC Reference Number	ISDC Cost from Table IV- 5 in FPR	Proposed Reallocation Budget	% ISDC Funded	% R&R Funded
Fire Hydrants ¹	11	\$1,923,900	\$1,689,042	26% ¹	74% ¹
Distribution Pipe & Valves – Transite ²	20	\$1,094,155	\$1,094,155	0%	0% ²
Distribution Pipe & Valves – DIP ³	21	\$2,981,841	\$1,490,921	50%	8% ³
Distribution Pipe & Valves - CIP	23	\$6,504,769	\$3,319,177	49%	51%

Table 5. ISDC Reallocation Summary

Of the 600 hydrants in the ISDC, the actual number of fire hydrants replaced to date is 156 since 2012, or 26%.

² Water mains in the North Dietz area have been replaced by others as part of housing project.

³ About 42% of ductile iron pipe has already been replaced by others as part of housing project (in areas of projects 21-2 and 23-1).

No update to the pricing model spreadsheets is required to address the 3.2. Revised Cost Tables requested changes per the 2016-02-01 Initial Neg Letter. Monthly Service Charge and other rates/surcharges remain the same as those in the 2015-09-03 Price Proposal. Table 6 includes a summary of the updated rates and surcharges as a result of this proposal. The revised CLIN 0001 for Schedule B-1 is provided in Table 7 and reflects the proposed update to the Monthly Service Charge, \$245,094 for the first year, or year five of the contract (the prior anticipated FPR charge for year five was \$260,422).

The following pages include **Tables 8 through 11** (updates to Tables IV-1 through IV-4 in the FPR) to support the revised monthly service charge calculation. Items highlighted in yellow in **Tables 8 through 11** reflect items that have been revised for this proposal.

No.	Rate or Surcharge	Existing Monthly Rate	Proposed Monthly Rate	Duration of Monthly Rate ¹
1	Monthly Service Charge (CLIN 0001)	\$246,172	\$245,094	50 years
2	ISDC Surcharge (CLIN 0002) ²⁻	\$473,841	\$473,841	60 months
3	Transition Surcharge (CLIN 0004)	\$592,518	\$592,518	1 month
4	Purchase Price Recovery Surcharge (CLIN 0003)	\$85,968	\$85,968	120 months
5	Credit as Payment of Purchase Price (reduces net charge)	\$85,968	\$85,968	120 months
6	Proposed CIP Surcharge ²	\$0	\$0.00 \$121,330 \$117,997.11	35 months (contract years 6 to 8)

Table 6. Rates, Surcharges, and Monthly Charges

¹ Durations begin at contract onset in 2011 unless otherwise noted.

² The proposed ISDC Surcharge or a new surcharge may vary due to various CIP payment options, see Table 4.-

-N/A

0

SCHEDULE 8-1 REGULATED TARIFF[®] Payment by the Government for Utility Service (Nominal Dollars)

CLINs 0001 Ap	tility System [#] : <u>Ft. H</u> pplicable Tariff(s) [#] (S Nata/led, Year by Yea	(nox	Water Util	lity		9.92															
0001 Ap	pplicable Tariff(s)* (S letailed, Year by Yea																	00			
0001 Ap	pplicable Tariff(s) [#] (5 letailed, Year by Yea	_				_	Sup	nlia	Rendres	-		-		_	2200	_		_	TariffiSci	hered	e/Rate
6	etailed, Year by Yea	Loo F	8.5.1 Mon	the l	Service Ch	arma	Componer		- Call House			-	_		10000			_	Turki/Ju	Person	07FNaku
	the second se	r Cl	hanges:	and .		aigo	Composed	4													
	Year	T	1		2	<u> </u>	3		4	1	5	100	6		7		8	-	9		10
	O&M/G&A Expenses	\$	128,484	\$	128,484	\$	128,484	\$	128,484	\$	128,484	\$	132,182	\$	134,499	\$	138,856	\$	139,255	\$	141,695
	Capital Costa	5	117,687	\$	117,687	5	117,687	\$	117,687	\$	116,610	5	118,653	\$	120,733	\$	122,849	\$	125,002	\$	127,193
	Federal Income Taxes	\$		\$		\$		\$		\$		\$		\$		\$		\$		\$	
	Tartil Rate	\$	246,172	\$	246,172	\$	246,172	\$	246,172	\$	245,094	\$	250,835	\$	255,232	\$	259,705	\$	264,257	\$	268,888
	Year		11		12		13		14		15		16		17		18		19	-	20
_	O&M/G&A Expenses	\$	144,179	\$	146,706	\$	149,277	\$	151,893	\$	154,556	\$	157,265	5	160,021	\$	162,826	\$	165,679	\$	168,583
	Capital Costa	\$	129,422	5	131,691	\$	133,999	\$	136,347	5	138,737	\$	141,169	\$	143,643	\$	146,161	5	148,722	\$	151,329
	Federal income Taxes	15	-	\$		5		\$	-	\$		5		\$		S	-	5	-	\$	
	1917 108	15	2/3,601	3	278,397	18	283,276	\$	288,241	5	293,293	15	298,433	5	303,664	\$	303,956	5	314,402	\$	319,912
_	Year	-	21	-	22		23		24	-	25	-	26	-	27	-	28	-	29		30
-	DAMGAA Expenses	13	1/1,538	3	174,344	13	177,604	3	160,716	3	183,884	3	187,107	3	190,386	5	193,723	13	197,118	5	200,573
-	Cepta Cons	12	103,901	2	100,000	1	159,420	3	102,220	2	100,004	2	107,997	3	170,900	2	1/3,890	3	1/6,944	3	180,045
-	Tacif Rate	1 è	325 519	ŝ	331 224	1	337.030	÷	342 937	ł	148 947	12	355 083	3	351 285	2	367 614	12	374 062	2	180 618
	Yest	۲ř-	31	-	32	<u>۲</u>	23	-	14	۲.	25	۴	16	-	37	r.	28	-	20	-	40
	OAMGEA Expenses	s	204 088	5	207 665	5	211 305	s	215 009	\$	218 777	5	222 512	\$	226 513	5	230 483	5	234 523	5	238 633
-	Capital Costs	15	183,200	\$	186,411	5	189,678	\$	193.003	\$	196,386	Š	199.828	s	203.330	s	205.894	s	210.520	ŝ	214,210
	Federal Income Taxes	5		5		5		\$	-	5		5		5		S		5		s	
	Tarriff Rate	\$	387,289	\$	394,077	\$	400,984	\$	408,012	\$	415,163	\$	422,439	\$	429,843	\$	437,377	8	445,043	\$	452,843
	Year		41		42	1	43		44		45		46		47		48	1	49	J	50
	O&MG&A Expenses	\$	242,816	\$	247,072	8	251,402	\$	255,808	\$	260,292	5	264,854	\$	269,496	\$	274,219	5	279,025	\$	283,918
	Capital Costs	\$	217,964	\$	221,784	\$	225,671	\$	229,627	\$	233,651	5	237,746	\$	241,913	5	246,153	5	250,468	5	254,858
	Federal Income Taxes	\$	-	5		\$	-	\$	-	\$	-	\$	•	\$	-	5		\$	-	\$	
	Tan# Hate	\$	450,780	\$	468,856	\$	477,973	\$	485,435	\$	493,943	\$	502,600	5	511,629	5	520,373	\$	529,483	\$	538,773
Ma	kenthly Credit as Pay	in an	f for Purcha	ise P	hipe (See E	1.5.2									5	Pund	tose Price.	5	8,903,000		
5	85,968	Mo	rithy Credit																		
-	120	11	months																		
	3.0%	In	torest Rate																		
0002 Int	utual System Delicien	CY C	ontections /	Cor	weblan Ch	aroe	s (3.	and B 7.4 (2	Schu	vitule: 31	-				_				_	
10	tes amount should no	at the	included in	the	price offere	ad lice	IN	5.1	2010.08					(First	£ 60 Months	One	eh:	5	473,841		
0003 14	ECOVERSENT Portion O	Pu	rohaise Pro	et (:	see 8.5.4 a	ind B	7.5 (507)0	oute		_	-	_						\$	85.958		
5h	his amount should or	d tae	inducted in	the last	noce offers	id .		65						Fre	t Month	0	de l			en Se	hork de d
0004 Yrs	ransdan Penod				Printer offering			1.1.1						0.00			501	3	592 518	10.00	HUDDED 4
														it	A March Cha	<u>a</u>		-	000.00		and and a
	200 N. 1996											_		11,913	a man an off	11				or or	SCULLE 3

Table 7. Schedule B-1 Regulated Tariff

⁵ CLINs 0002 and 0003 are required <u>only</u> if family provides for <u>separate</u> identification of connection charges and the recoverable portion of the purchase price. If separate identification is not provided, it will be assumed the tariff rate includes these costs.

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NOTES: 1. The Purchase Price. Recoverable Portion of the Purchase Price, interest rate and amortization period are proposed by the Offeror. 2. Tariff rates presented in CLIN 0001 are nominal doltar values. Both Nominal and Constant 2011\$ tariffs are presented in the applicable J45 schedule.

Table 8. O M Costs (Table IV-1 in FPR)

Table IV-1 Annual O&M Costs for Planned Operational Phases for Water Utility Service at Ft. Knox

	T	ransition	Year 1	Years 2-5	Years 6-50
Dollar Basis, Cost Components		Period			
Constant 2011 Dollars					
Labor and Benefits	\$	80,296	\$1,054,993	\$1,054,993	\$ 974,152
Purchased Water		•		-	-
Other Operating Expenses	I	487,250	384,767	382,927	382,927
Total Direct Costs	\$	567,546	\$1,439,760	\$1,437,920	\$1,357,079
General and Administrative Cost		24,972	63,349	63,268	59,711
Total (Annual)	\$	592,518	\$1,503,109	\$1,501,188	\$1,416,790
Total (Monthly)	\$	49,377	\$ 125,259	\$ 125,099	\$ 118,066
Constant 2009 Dollars (for Input to RFP Schedul	e 5)				
Labor and Benefits	\$	77,554	\$1,018,961	\$ 1,018,961	\$ 940,881
Purchased Water	\$	-	\$ -	\$ -	\$ -
Other Operating Expenses	\$	470,609	\$ 371,626	\$ 369,849	\$ 369,849
Total Direct Costs	\$	548,163	\$1,390,587	\$1,388,810	\$1,310,730
General and Administrative Cost	_	24,119	61,186	61,108	57,672
Total (Annual)	\$	572,282	\$1,451,773	\$1,449,918	\$1,368,402
Total (Monthly)	\$	47,690	\$ 120,981	\$ 120,826	\$ 114,034
Constant 2012-13 Dollars*					
Labor and Benefits	\$	80,296	\$ 1,082,850	\$ 1,082,850	\$ 999,874
Purchased Water	\$	-	\$ -	\$ -	\$ -
Other Operating Expenses	\$	487,250	\$ 394,927	\$ 393,038	\$ 393,038
Total Direct Costs	\$	567,546	\$1,477,776	\$1,475,888	\$1,392,912
General and Administrative Cost	_	24,972	65,022	64,939	61,288
Total (Annual)	\$	592,518	\$1,542,799	\$1,540,827	\$1,454,200
Total (Monthly)			\$ 128,567	\$ 128,402	\$ 121,183

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Well No. 1. Pump/Controls - 750 gpm, 125 MP
Well No. 2. Pump/Controls - 750 gpm, 125 MP
Well No. 5. Pump/Controls - 750 gpm, 125 MP
Well No. 6. Pump/Controls - 750 gpm, 125 MP
Well No. 7. Pump/Controls - 750 gpm, 125 MP
Well No. 7. Pump/Controls - 750 gpm, 125 MP
Well No. 1. Pump/Controls - 750 gpm, 125 MP
Well No. 1. Pump/Controls - 750 gpm, 125 MP
Well No. 1. Pump/Controls - 750 gpm, 125 MP
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Well No. 1. Pump/Controls - 750 gpm, 125 MP
Well No. 1. Pump/Controls - 750 gpm, 125 MP
Clarkfer No. 2. 2. 0 MG
Mult Audarugh WTP (Facility No. 3009) - 7.0 MGD
Mult Audarugh Ellatres - 1 MGD
Filter Back Wash Tank - 150,000 galions
Clarkfer Weil - 1.0 MG Pump No. 4 - 1,200 gpm, 150 MP Pump No. 9 - 2,100 gpm, 230 MP Pump No. 10 - 2,100 gpm, 230 MP Emergency Generator - 350 KW Ci Lins to Central WTP (Facility No. 1205) - 3.5 MOD Central WTP (Facility No. 1205) - 5.5 MOD Central WTP (Facility No. 1205) - Structure Chamical Feed Systems Ciear Weil No. 2 - 2 MG - 1945 Central WTP High Lift Pump No. 1 & Controls - 4,859 gpm, 250 MP Pump No. 2 & Controls - 1,000 gpm, 70 MP Pump No. 3 & Controls - 1,400 gpm, 60 MP Filler Back Weih Pump & Controls - 5,400 gpm Emergency Generator - 280 KW West Point Weil Field McCracken Spring Intate CI Line to Otter Creek PS - 16" Otter Creek PS (Facility No. 9213) - Structure Intake /Mechanical Screen **Renewal and Replacement Schodule** 20115) Table IV-2 VAW WATER SOURCES his table generally follows the format included in RFP Schedule 2-Renewata and Replacements--50 YEAR SCHEDULE koles. For each inventory component/itam isted in the applicable Jeaction inventory, dearly show the Svalue of the planned R&R (If any) for each year 1-00 Filter Back Wash Tank - 150,000 gallons Clear Well No. 1 - 0.5 MG Multi-Media Filters - 1 MG Clarition - 3.5 MG Pump Controts tern and Size 15840 14860 1963 3960 6799 2500 A 4 4 4 4 14 4 Each ŝ CAR Approx IN SUM BOO 1996 1997 1997 1997 1970 1984 1984 1984 1937 1937 1937 1937 1937 1983 1983 1983 1983 1983 1983 Service Replacement Exteting 22258 38388 15 85888889333 De commission De commission Decominisation Decommissio Decommissio Decommissio Decontratalo Decommutatio Decominussion Decommission Decommutation De com militsio De commise lo Openini milazio Decommutatio Decommissio o committa lo 0 00/11/11/10/01 a down unit ap los 2081 2081 2072 2053 2053 2016 First Table 9. R R Inventory (Table IV-2 in FPR) Number of Years to Replace # >1 1900 Ra # Same as existing Ducitie Iron Pipe Same as existing Same as existing Same as existing Ductile Iron Pipe Same as outsting Same as outsting Same as existing Same as existing Same as existing Seme Same as existing a as existing as existing New New Service 75575 75 \$5,750,000 \$2,300,000 \$376,050 \$747,500 \$1,150,000 \$66,125 \$66,25 \$3,450,000 \$376,050 \$747,500 \$287,500 \$1,150,000 \$17,500 \$18,100 \$13,800 \$72,300 \$100,000 \$23,000 \$105 \$23,000 \$24,500 \$34,500 \$34,500 \$37,500 \$57,500 \$57,500 \$57,500 RCN Se \$5,750,000 \$2,300,000 \$2,632,350 \$747,500 \$1,150,000 308,125 596,12 \$3,450,000 \$1,128,150 \$747,500 \$287,500 \$1,150,000 \$23,000 \$282,500 \$78,246 \$23,000 \$103,500 \$34,500 \$54,500 \$57,500 \$104,545 \$1,256,115 RCN \$57,500 \$16,100 \$13,800 \$72,300 \$100,000 \$543,920 Cost Expected Subsequent Rehab Second Third Fourth Year R&R R&R R&R Decommission Decommission Decommission Decommission Decom mission Decom mission

Even E and Price Propositiousmittal – UP Constact No.: SP0400-11-C-8270 Resisted SDC Propositional Review Capital Improvement Program Postable Water Urbins System at Fast Knoz Army Installation, Warnacky

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тист (ниед Рискулароза) Submittal — UP Contract No., SP0560-11-C-42.70 Rechived SDC Properts and Revised Capitral издочетия и Program издочетия Water Utality System at Fort Know Amy installution. Remarcy

Table 9. R R Inventory (Table IV-2 in FPR)

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Table IV-2 Renewal and Replacement Schedule

otes: For each inventory component/item listed in the applicable J-ei	clion inventory, deany and	TAR BUIL MC	No or the pa	017100 707 17 01	ALL UNLESS AND ALL ALL	NO-1-20		11.1					100000	
		Approv	Extating	First	Number of	*	*		New	Una	New		Re	ected Subsu placement D
litern and Saza	Ouant Una	Year	Service	Replecement Date	Years to Replace d >1	ISDC	R&R	New	Service	RCN	RCN	Cost Ye	hab Second	R&R
Studge Lagoons	4 Eact	1978	40	2018				_	20	\$17,250	\$69,000		203	3 2058
uldraugh Kligh Lift (Facility No. 3008) - Structure Pume A & Controls - 3.500 apr. 250 KP	1840 SF	1984	83	2052				Same as existing	75 25	\$115.000	\$317,400		2031	
Pump 8 & Controla - 4,850 gpm, 350 MP	1 Eacl	1970	1	2014				Same as existing	25	\$154,100	\$154,100		2031	40
Pump C & Controls - 2,209 gpm, 150 HP	1 Eac	1984	8	2014				Same as existing	25	\$75,900	\$75,900		203	0
Emergency Generator - 600 KW	1 Eac	1990	8	2025					35	\$184,000	\$184,000			
Line to Cantonment Area - 24 Inch	10449 LF	1941	82	2023					50	\$381	\$3,977,412			
75"	3 Eact	1935						noluced with pipe						
	28 680	1930						noluded with pipe						
	1.3 EAC	1958						notuded with pipe						
4 ·	51 Eacl	1935						noluged with pipe						
· · ·	117 Eac	2005						notuded with pipe						
	33 Eacl	1908						notuded with pipe						
	1 Euc	2007						noluded with pipe						
21	15 Eacl	1935						notuded with pipe						
	61 Eact	1935						included with pipe						
	76 Eacl	1935						included with pipe						
	2 Eac	1994						included with pipe						
0	15 Eacl	2008						included with pipe						
	2 Eac	1835						included with pipe						
	63 Eac	1058						included with pipe						
	5 Eac	2003						included with pipe						
	13 Fact	2004						included with pipe						
	381 Eact	1936						ncluded with pipe						
	39 Eact	1958						ncluded with pipe						
	12 Eac	1994						ncluded with pipe						
	9 Eacl	2008						ncluded with pipe						
	108 Eact	1935						ncluded with pipe						
	10 Each	2007						included with pipe						
	52 Eact	1935						notuded with pipe						
	5 Eac	1968						included with pipe						
	31 200	1035						netwood with pipe						
	15 Each	1935						ncluded with pipe						
								and a state of the second seco						
		1940						ncluded with pipe						

-25 March 2016 Livine 2016

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i izm i bardi Pirce Piropotal Submittal — UP Contract No. - SP0400-11-C-42 70 Revised SDC Pirce thi and Revised Cabral Imponement Program Piolock Water Ullury Syntem ar Leit Scion Almy Installation, Reinsloy

Table 9. R R Inventory (Table IV-2 in FPR)

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Table IV-2 Renewal and Replacement Schedule (20115)

$ \begin{array}{ $	Notes: For each inventory component/item listed in the applicable J-ection (me	ntory, de	But Auto	Approx	Lue of the Existing	Pirst Expected Replacement	any) for each y Number of Years to	aer 1-50	₽ ¥	Naw	New	New Una	Now	Rahab	ehab Sacca	opected Sut
Image: constraint of the second of	Item and Size	Quant	Una	Yeor Instate	d Life	Replacement	Years to Reptace if >1	ISDC	R&R	Naw	Service	Cost RCN	RCN	Cost R	ehab Seco fear R&F	R
Cross Proper View 1 Description Description <thdescription< th=""> Description <t< td=""><th>11</th><td></td><td>Each</td><td>1997</td><td></td><td></td><td></td><td></td><td></td><td>Included with pipe Included with pipe</td><td></td><td></td><td></td><td></td><td></td><td></td></t<></thdescription<>	11		Each	1997						Included with pipe Included with pipe						
$ \begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $	1.5		Finch	1997						Included with pipe						
Por Ray . Yook 2 Por Second Physics		z .	Each	2002						Included with pipe						
Partner Marching Valvar2Earl1000010001000 <t< td=""><th>Yano Range - Valves</th><td>4</td><td>Enct</td><td>1990</td><td></td><td></td><td></td><td></td><td></td><td>Included with pipe</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Yano Range - Valves	4	Enct	1990						Included with pipe						
Marey Termer Faith Ray Correr Faith 	Pressure Reducing Valves	63.1	Each	1990						Included with pipe						
Bahari Corret - Name20.0 <th< td=""><th>Meter a Meter a</th><td>50</td><td>8</td><td>1998</td><td>25</td><td>2023</td><td></td><td></td><td></td><td>Same at existing</td><td>20</td><td>\$2,620</td><td>\$131,000</td><td></td><td>8</td><td>ā</td></th<>	Meter a Meter a	50	8	1998	25	2023				Same at existing	20	\$2,620	\$131,000		8	ā
Baim of Corver - Back Parwerser 2 0 <t< td=""><th>Bashern's Corner - Meters</th><td>4</td><td>8</td><td>2004</td><td>26</td><td>2029</td><td></td><td></td><td></td><td>Same all existing</td><td>S S</td><td>\$2 620</td><td>\$5 240</td><td></td><td>8</td><td>R</td></t<>	Bashern's Corner - Meters	4	8	2004	26	2029				Same all existing	S S	\$2 620	\$5 240		8	R
Bankaria Control Contro Control Control <t< td=""><th>Basham's Corner - Back Flow Preventers</th><td></td><td></td><td></td><td>3</td><td></td><td></td><td></td><td></td><td></td><td>3</td><td></td><td></td><td></td><td>}</td><td></td></t<>	Basham's Corner - Back Flow Preventers				3						3				}	
Pressure Reducing Balon 1 0 0000 1 0 0000 1 0 0000 1 0 0000 1 0 0000 1 0 0000 1 0 0000 1 0 0000 1 0 0000 1 0 0000 1 0 0000 1 0 0000 1 0	Pressure Reducing Station		90	-	-	a vary				Autowo as mine	80	1.000	poor ab		2	3
SALMSameNon-IntegrationSame setting settingSame setting settingSame setting settingSame setting 	Pressure Reducing Station	-	2	2003	25	2028				Bame as externe	20	\$4,500	\$4,500		22	SG
Automatic Transfer ShiftingIntell subtractIntell subtractIn	SCADA SCADA (Pump Controls) New SCADA System	- 14	8 8	1995 ISDC	1 1	In New Boads 2037		100%		Same as existing Same as existing	25	\$330,000	\$330,000		i.	
Meil Control System I	Automstic Transfor Switches Install switches at Otter creek PS, Central WTP and Muldraugh HLPS		- 20	2011	26	2036				Samo as existing	25	\$22,500	\$22,500			
Vary Vocume Dr. Server.use 100 9F 105 1 2070 Same as soliding pump No. 16 Pressure Tank - 175 gpm, 10 Mp 1 a 100 2070 Same as soliding same as soliding 21 31,04 31,04 31,04 32,040 <t< td=""><th>Weil Control System Weil Control System Weil Control System</th><td>2</td><td>05</td><td>1995</td><td>20</td><td>2020</td><td></td><td></td><td></td><td>Seme as existing</td><td>25</td><td></td><td></td><td></td><td>20</td><td>45</td></t<>	Weil Control System Weil Control System Weil Control System	2	05	1995	20	2020				Seme as existing	25				20	45
Pump No. 1 & Pressure Tank. 175 gpm, 10 MP 1 all 100 20 2020 Same as eviding 25 Same as eviding 26 Same as eviding 26 Same as eviding 26 Same as eviding 27 Same	Van Voorhis BPS - Structure	1000	6	1995	75	2070				Same as existing	75	062	\$120,000			
Fund No. 2 A Pressure Fund. 173 gpm. 10 PF 1 0 1000 0 2 2000	Pump No. 1 & Pressure Tank - 175 gpm, 10 HP		2	1980	20	2020				Same as existing	20	\$3,943	\$3,943		28	45
Fire Protection (Dised Fasted) - 2,00 gpn 125 MP 1 Is 1001 30 2025 Same as existing 30 \$7,550 <th\$< th=""><th>Pump No. 3 & Pressure Tank - 175 gpm, 10 MP</th><th></th><th>2 3</th><th>5081 CAAL</th><th>10</th><th>2020</th><th></th><th></th><th></th><th>Outside ee existing</th><th>20</th><th>\$3,940</th><th>87,949 870,000</th><th></th><th>20 20</th><th>A NO</th></th\$<>	Pump No. 3 & Pressure Tank - 175 gpm, 10 MP		2 3	5081 CAAL	10	2020				Outside ee existing	20	\$3,940	87,949 870,000		20 20	A NO
Tark No. 1 & cathodic protection - 250,000 galiers 23000 Gel 1933 94 Decommission Tark No. 2 & cathodic protection - 250,000 galiers 1937 50000 Gel 1933 94 Decommission Tark No. 2 & cathodic protection - 250,000 galiers 1937 500000 Gel 1933 94 Decommission Tark No. 3 & cathodic protection - 250,000 galiers 1941 500000 Gel 1937 92 Decommission Tark No. 4 & cathodic protection - 250,000 galiers 1941 500000 Gel 1941 94 Decommission Tark No. 5 & cathodic protection - 250,000 galiers 1943 1941 1940 1940 200000 Gel 1941 500000 Same as existing 75 52 \$1,035,000 230,000 Decommission Tark No. 5 & cathodic protection - 500,000 galiers 1950 75 Decommission Same as existing 75 52 \$1,035,000 S30,000 Decommission Tark No. 5 & cathodic protection - 500,000 galiers 1950 75 Decommission Same as existing 75 </td <th>Fire Protection (Dieset Fushed) - 2,000 gpm, 125 MP Elevated Storace Tanka (Steel) Repairs</th> <td>-</td> <td>8</td> <td>1995</td> <td>30</td> <td>2025</td> <td></td> <td></td> <td></td> <td>Same as existing</td> <td>30</td> <td>\$7,550</td> <td>\$7,550</td> <td></td> <td>20</td> <td>55</td>	Fire Protection (Dieset Fushed) - 2,000 gpm, 125 MP Elevated Storace Tanka (Steel) Repairs	-	8	1995	30	2025				Same as existing	30	\$7,550	\$7,550		20	55
Tark No. 2 & cathodic protection - 500,000 galions - 1941 500000 Gal 1937 12 Decommission Tark No. 4 & cathodic protection - 500,000 galions - 1941 500000 Gal 1947 12 Decommission Same as existing 75 52 \$1,035,000 530,000 Decommission Tark No. 5 & cathodic protection - 500,000 galions - 1941 500000 Gal 1947 14 Decommission Same as existing 75 52 \$1,035,000 530,000 Decommission Tark No. 5 & cathodic protection - 500,000 galions 1984 500000 Gal 1987 76 Decommission Same as existing 75 52 \$1,035,000 530,000 Decommission Tark No. 7 & cathodic protection - 500,000 galions 1980 76 Decommission Same as existing 75 52 \$1,035,000 530,000 Decommission Tark No. 7 & cathodic protection - 500,000 galions 500000 Gal 1987 76 Decommission Same as existing 75 52 \$1,035,000 \$20,000 \$20,000 \$20,000 \$20,000	Tank No. 1 & cathodic protection - 250,000 gallens	250000	8	1935	2	Decommussion	2			Same as extailing	75	\$2	\$517,500	\$185,000 D	500 mimissio	5
Tark No. 2.4 Cathodic protection - 500,000 gallora - 1941 500000 Gall 1941 B Decommasion Same as suiting 7.5 S2 \$1,035,000 S300,000 Decommasion Tark No. 5.5 cathodic protection - 500,000 gallora 1893 300000 Gall 1996 7.7 Decommasion Same as suiting 7.5 S2 \$1,035,000 \$300,000 Decommasion Tark No. 7.6 acthodic protection - 500,000 gallora 500000 Gall 1996 7.7 Decommasion Same as suiting 7.5 S2 \$1,035,000 S300,000 Decommasion Tark No. 7.6 acthodic protection - 500,000 gallora 500000 Gall 1997 7.5 Decommasion Same as suiting 7.5 S2 \$1,035,000 S300,000 Decommasion Tark No. 7.6 acthodic protection - 500,000 gallora 500000 Gall 1997 7.5 Decommasion Same as suiting 7.5 S2 \$1,035,000 S20,000 S20,000 S20,000 S20,000 S20,000 S20,000 S20,000 S20,000	Tank No. 2 & cathodic protection - 500,000 gallons -1931 Tank No. 3 & cathodic protection - 500,000 gallons -1941	500000	6	2009	73 82	Decommission	23			Same as existing	75	10 K	\$1,035,000	\$390,000 D	ocommissio	5 5
Tark No. 5 a cuthodic protection : Source generation : Source accurate protection : Source accurate protectio	Tank No. 4 & cathodic protection - 500,000 gallons - 1941	500000	28	1941	1 8	Decommission				Same as existing	15	5 83	\$1,035,000	\$390,000 D	accommissio	5
Tark No. 7 & exhodic protection - 500,000 galions 500,000 g	Tank No. 5 & catholic protection - 300,000 gations	500000	ଜୁଜୁ	1995	75	De com missio i				Same as existing	75	13 K	\$1,035,000	\$ 390,000 D	NOD ITATINESS IO	5 5
Distribution PPE - CAST IROM (12° and Over Replaced with DIP) 120 17 140 141 15 04 100% PVC 50 527 50 527 155 15 15 15 15 15 11% 88% PVC 50 527 50 527 50 527 143.5 16 193.5 79 2014 15 11% 88% PVC 50 527 50 <th>Tank No. 7 & cathodic protection - 500,000 galions</th> <td>500000</td> <td>202</td> <td>1997</td> <td>75</td> <td>Decommusion</td> <td></td> <td></td> <td></td> <td>Samo as existing</td> <td>75</td> <td>5 83</td> <td>\$1,035,000</td> <td>\$250,000 20</td> <td>337</td> <td></td>	Tank No. 7 & cathodic protection - 500,000 galions	500000	202	1997	75	Decommusion				Samo as existing	75	5 83	\$1,035,000	\$250,000 20	337	
Uktnown Olameter/ 0.75" (NA - DiP starts at 4" Olameter/ 1.50" (NA - DiP	I TARK NO. 9 & CARDONE PROVIDED - SWU, UNV GRADING DISTRIBUTION PIPE - CAST IRON (12" and Over Replaced with DIP)	00000	6	IRAL	10	Creature of the other				Same as existing	10	ĸ	000,620,16	2700,000 50	100	
D/35" (MA - Dip starts at 4" Diameter) 115 LF 1935 79 2014 15 0% PVC 50 \$20 \$23,703 1.25" (MA - Dip starts at 4" Diameter) 443 LF 1935 79 2014 15 11% 89% PVC 50 \$20 \$23,703 1.25" (MA - Dip starts at 4" Diameter) 13/27 LF 1935 79 2014 15 11% 89% PVC 50 \$22 \$23,54 1.5" (MA - Dip starts at 4" Diameter) 13/27 LF 1935 79 2014 15 1% 89% PVC 50 \$22 \$23,54 25" (MA - Dip starts at 4" Diameter) 13/25 LF 1935 79 2014 15 3% 9% PVC 50 \$22 \$23,54 25" (MA - Dip starts at 4" Diameter) 14/25 LF 1935 79 2014 15 3% 9% PVC 50 \$22 \$23,54 25" (MA - Dip starts at 4" Diameter) 1935 LF 1935 79 2014 15 8% 9% PVC 50 \$22 \$23,54 25" (MA - Dip starts at 4" Diameter) 4785 LF 1935 79 2014 15 8%	Unknown Diameter (assume 6")	1420	5	1935	87	2014	15	9	100%	PVC	50	\$37	\$52,540			
1.25" (MA - DIP starts at 4" Diameter) 4207 LF 1936 70 2014 15 11, 90, 9VC 50 522 \$82,554 1.5" (MA - DIP starts at 4" Diameter) 12470 LF 1935 70 2014 15 3%, 9VC 50 \$22 \$82,554 25" (MA - DIP starts at 4" Diameter) 28450 LF 1935 70 2014 15 3%, 9VC 50 \$22 \$82,73,340 25" (MA - DIP starts at 4" Diameter) 28450 LF 1935 70 2014 15 6%, 9VC 50 \$22 \$82,74,340 25" (MA - DIP starts at 4" Diameter) 28450 LF 1935 70 2014 15 6%, 9VC 50 \$22 \$82,74,340 25" (MA - DIP starts at 4" Diameter) 28450 LF 1935 70 2014 15 6%, 9VC 50 \$22 \$82,74,340	0.75" (NA - DIP starts at 4" Diameter) 1" (NA - DIP starts at 4" Diameter)	1155	55	1935	22	2014	55	0%	100%	PVC	50	\$20	\$23,100			
Char (MA - Dip starts at 4" Diamoteor) 184/10 LF 1935 79 2014 15 3% 9/4% PVC 50 \$22 \$24/2,084 25" (MA - Dip starts at 4" Diamoteor) 4785 LF 1935 79 2014 15 5% 54% PVC 50 \$22 \$26/2,084 25" (MA - Dip starts at 4" Diamoteor) 4785 LF 1935 79 2014 15 5% 50 \$22 \$19,025	1.25" (NA - OIP starts at 4" Olameter)	4207	5	1936	33	2014	101	i,	1486	PVC	55	\$22	\$92,554			
	27° (NA - DIP starts at 4° Diamotor) 25° (NA - DiP starts at 4° Diamotor)	28836	555	1935	233	2014 2014	8 8 8	6% 6%	88×	PVC	500	\$24 \$24	\$692,064 \$119,625			

-25 March 2016 1 June 2016

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Finn fuiled Price Proposal Subwittal – UP Contract No. – SP0600–11-C-42.10 Revived SDC Projects and Revised Capital improvement Program Possible Water Utality System at Fest System American Environ

Table S. R R Inventory (Table IV-2 in FPR)

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Table IV-2 Renewal and Replacement Schedule (20115)

	The state a state of the state	LINE L' MARTI	Y DINNE Y	THE & THINE	CT 1170 - CT	THAT DOLL	THE R. LOU MANAGE AND	00-1-00										
		_	1	Approx	Existing	First	Number of	*	\$		New	Una	New			Expec	cement De	tes
				Year	Service	Replacement	Years to	ISDC	RAR	New	Service	Cost	liem	Rehab	Rehab	Second	Third	Fourth
	3" (NA - DIP starts at 4" Diameter)	9504	CF L	1835	200	2014	10	22%	78%	PVC	50	325	\$237,600	Const.	1.000	1	CMC 1	CIMICI
		13331	5	1935	3:	2014	ឥ	IAN I	100	PVC	50	\$28	\$366,603					
	5" (NA Pipe diameters even numbers - use 6")	410	5	1935	8	2014	6	9%	100%	PVC	50	\$37	\$15,170					
	9	216645	5	1936	3	2014	16	14%	86%	PVC	50	\$37	\$8,015,865					
	8	1 58064	5	1935	8	2014	16	12%	88%	PVC	50	SUG	\$6,006,432					
	8" - HR Center	4237	5	1935	78	2013	15	100%	9%	PVC	50	\$38	\$161,006					
	10"	46690	5	1835	84	2014	15	18%	82%	PVC	50	366	\$3,081,540					
	17. 17.	30122	5	1935	78	2014	6	7%	83%	Ductile Iron	50	374	\$2,229,028					
Operation Operation <t< th=""><th>14.</th><td>16393</td><td>5</td><td>1935</td><td>62</td><td>2014</td><td>6</td><td>5%</td><td>85%</td><td>Ductile Iron</td><td>80</td><td>584</td><td>\$1,377.012</td><td></td><td></td><td></td><td></td><td></td></t<>	14.	16393	5	1935	62	2014	6	5%	85%	Ductile Iron	80	584	\$1,377.012					
	191	3820	5	1835	8	2014	ġ,	0#	100%	Duotile Iron	50	392	\$380,840					
	24"	10060	5	1935	3	2014	15	0%	100%	Ductile (ron	50	\$181	\$1,911,360					
	DISTRIBUTION PIPE - DUCTILE IRON																	
Construction Construction<	1" (NA - DIP starts at 4" Diameter)	180	5	1958	S	2013	18	50%	9%	PVC	50	12	\$3,780					
Torus Construction Constru	1.25" (NA - DIP starts at 4" Diameter)	7076	5	1858	8	2013	10	50%	8%	PVC	80	502	\$158,672					
	1.5" (NA - DP starts at 4" Diamotor)	4200	1	1905	88	2013	ä	2075	10.47	TVC	200	K	300,730					
		dist.	i 4	10081	A 0	2012	Å Ö	500	101		5 6	100	278 408					
	6" of the second s	26835	5	1858	6	2013	1	51	BM	PVC	50	537	\$955,895					
	8 7	18035	5	1868	55	2013	ŝ	50%	0%	PVC	50	\$36	\$685,330					
1 1	61	4118	5	2007	8	2067	15	0%	100%	PVC	50	\$38	\$156,484					
		100	55	1050	- 0	2013	ō	55	100		5 0	100	200,000					
Ideal 101 102 102 103 </th <th>12</th> <td>9185</td> <td>5</td> <td>1994</td> <td>88</td> <td>2044</td> <td>5 i</td> <td>0%</td> <td>100%</td> <td>Ductile Iron</td> <td>50</td> <td>574</td> <td>\$679,542</td> <td></td> <td></td> <td></td> <td></td> <td></td>	12	9185	5	1994	88	2044	5 i	0%	100%	Ductile Iron	50	574	\$679,542					
CIRTURIUTION RPE TRANNETE Represent with C-000/PVC seth 601 1	4	192	5	1956	8	2015	t	50%	9%	Ductile iron	50	\$84	\$16,128					
1-1 1-1 <th>DISTRIBUTION PIPE - TRANSITE (Replaced with C-900/PVC sch 80)</th> <td></td> <td>ř.</td> <td></td> <td>ł</td> <td></td>	DISTRIBUTION PIPE - TRANSITE (Replaced with C-900/PVC sch 80)		ř.		ł													
1.5 1.5 <th></th> <td>834</td> <td>5</td> <td>1935</td> <td>78</td> <td>2013</td> <td>5</td> <td>0%</td> <td>150</td> <td>PVC</td> <td>50</td> <td>\$21</td> <td>\$17,514</td> <td></td> <td></td> <td></td> <td></td> <td></td>		834	5	1935	78	2013	5	0%	150	PVC	50	\$21	\$17,514					
1 2 1	15	1955	5	1830	78	2013	10	0%	0%	PVC	00	\$72	\$43,738					
Operation Addition	Z	3720	5	1930	10	2013	ō	0%	0%		200	520	P2W RDC					
Inc. Mark Mark <th< th=""><th></th><td>100</td><td>5</td><td>1000</td><td>ia</td><td>2012</td><td>ŝ</td><td></td><td></td><td></td><td>5 8</td><td>6.46</td><td>812.8 E47</td><td></td><td></td><td></td><td></td><td></td></th<>		100	5	1000	ia	2012	ŝ				5 8	6.46	812.8 E47					
Inc. Signal Inc. Signal Inc. Signal		44.37	5	101R	10	2012	i		2 2		5 2	200	450 2 FCS					
Distribution PIPE - PVC (Replaced with C-900/PVC ach 60) 1600 LF 2005 50 2005 10 1000 52 530	101	5927	59	1835	78	2013	61 6	0.8	0%	PVC	50	200	\$391,182					
Mail Mail <th< th=""><th>DISTRIBUTION PIPE - PVC (Replaced with C-900/PVC ach 80)</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>-</th><th></th><th></th><th></th><th>14</th><th></th><th></th><th></th><th></th><th></th></th<>	DISTRIBUTION PIPE - PVC (Replaced with C-900/PVC ach 80)								-				14					
47 47<	1.5"	16608	5	2005	8	2055	15	0%	100%	PVC	50	\$23	\$381,984					
4.7 4.7 <th>2</th> <th>96.001</th> <th>5</th> <th>2008</th> <th>8</th> <th>2056</th> <th>10</th> <th>140</th> <th>100%</th> <th>PVC</th> <th>50</th> <th>524</th> <th>\$256,752</th> <th></th> <th></th> <th></th> <th></th> <th></th>	2	96.001	5	2008	8	2056	10	140	100%	PVC	50	524	\$256,752					
4 20 </th <th>4</th> <th>473</th> <th>5</th> <th>2007</th> <th>8</th> <th>2057</th> <th>15</th> <th>0%</th> <th>100%</th> <th>PVC</th> <th>8</th> <th>\$25</th> <th>\$11,825</th> <th></th> <th></th> <th></th> <th></th> <th></th>	4	473	5	2007	8	2057	15	0%	100%	PVC	8	\$25	\$11,825					
Ar Solution S	ų	603	5	2008	8	2058	15	0%	100%	PVC	8	\$25	\$15,075					
4.4 4.3 4.7 2003 50 2054 15 0.4 100% PVC 50 52.8 \$12.133 4.4 4.4 4.7 2003 50 2054 15 0.4 100% PVC 50 \$2.8 \$12.133 6 76.40 1.7 2003 50 2054 15 0.4 100% PVC 50 \$2.8 \$12.133 6 76.40 1.7 2003 50 2054 15 0.4 100% PVC 50 \$2.8 \$17.5,120 6 76.40 1.7 2003 50 2055 15 0.4 100% PVC 50 \$2.8 \$17.5,120 6 76.40 1.7 2003 50 2053 15 0.4 100% PVC 50 \$2.8 \$17.5,120 6 70.7 1.6 0.3 2057 1.5 0.4 100% PVC 50 \$3.7 \$2.82,260 \$3.7 \$2.82,260 \$3.7 \$2.82,764 \$3.7 \$3.65,744 \$3.8		24	5	1997	8	2047	16	0%	100%	PVC	8	\$28	5680					
Ar Ar Ar 4.4	1	334	5	2005	8	2055	đ	0%	100%	PVC	8	\$28	\$9,185					
Sec. Li 1004 1004 PVC 500 53.7 53.17.51.50 Sec. Li 1094 500 2044 15 0.% 100% PVC 500 53.7 53.17.51.50 Sec. Li 2005 50 2044 15 0.% 100% PVC 500 53.7 53.17.51.50 Sec. 27.2 Li 2005 50 2044 15 0.% 100% PVC 500 53.7 53.17.51.50 Sec. 27.2 Li 2005 50 2045 15 0.% 100% PVC 500 53.7 53.17.51.50 Sec. 2017 Li 2007 50 2045 15 0.% 100% PVC 50 53.7 53.17.51.50 Sec. 1011 Li 2007 50 2047 15 0.% 100% PVC 50 53.7 53.23.784 Sec. 145.22 169.7 <th></th> <td>443</td> <td>5</td> <td>2007</td> <td>8</td> <td>2067</td> <td>10</td> <td>0%</td> <td>100%</td> <td>PVC</td> <td>8</td> <td>\$25</td> <td>312,183</td> <td></td> <td></td> <td></td> <td></td> <td></td>		443	5	2007	8	2067	10	0%	100%	PVC	8	\$25	312,183					
6 762.0 LF 2003 50 2044 15 0.% 100% PVC 50 53.7 52.2.680 6 764.0 LF 2003 50 2044 15 0.% 100% PVC 50 53.7 52.2.680 6 6 6.7 2012 LF 2003 50 2055 15 0.% 100% PVC 50 53.7 52.2.680 6 6.7 50.3.2.1 2.007 50 2057 15 0.% 100% PVC 50 53.7 52.2.680 6 6.7 50.3.2.1 2.1 2.008 50 2057 15 0.% 100% PVC 50 53.7 52.2.680 6 10.2.1 1.1 2.008 50 2057 15 0.% 100% PVC 50 53.7 53.6.764 6 145.27 1.1 1.99.4 50 204.7 15 0.% 100% PVC 50 53.8 53.6.018 6 145.27 1.1 <th></th> <td>6368</td> <td>5</td> <td>2008</td> <td>8</td> <td>2058</td> <td>15</td> <td>0%</td> <td>100%</td> <td>PVC</td> <td>8</td> <td>\$25</td> <td>\$175,120</td> <td></td> <td></td> <td></td> <td></td> <td></td>		6368	5	2008	8	2058	15	0%	100%	PVC	8	\$25	\$175,120					
Gr 2812 LF 2003 50 2053 10 0% 100% PVC 50 53.7 \$107,744 Gr 63.72 LF 2007 50 2057 15 0% 100% PVC 50 \$3.7 \$3.27,744 Gr 102.11 LF 2004 50 2047 15 0% 100% PVC 50 \$3.7 \$3.235,764 Gr 102.11 LF 1994 50 2047 15 0% 100% PVC 50 \$3.7 \$3.235,764 Gr 102.11 LF 1994 50 2047 15 0% 100% PVC 50 \$3.37 \$3.235,764 Gr 145.22 LF 1997 50 2047 15 0% 100% PVC 50 \$3.38 \$3.84,078 Gr 145.22 LF 1997 50 2047 15 0% 100% PVC 50 <	0:	8224	5	1894	8	2044	ö	0%	100%	PVC	8	\$37	\$341,288					
Gr 637 LF 2007 50 2057 15 0% 100% PVC 50 \$37 \$235,744 Gr 6372 LF 2007 50 2057 15 0% 100% PVC 50 \$37 \$235,764 Gr 10211 LF 2008 50 2057 15 0% 100% PVC 50 \$337 \$235,764 Gr 10211 LF 1994 50 2044 15 0% 100% PVC 50 \$337 \$166,221 Gr 14522 LF 1994 50 2044 15 0% 100% PVC 50 \$338 \$388,018 Gr 14822 LF 1997 60 2044 15 0% 100% PVC 50 \$338 \$388,018 Gr 14822 LF 1997 80 2045 15 0% 100% PVC 50 \$348	9	7640	5	2003	8	2063	5	0%	100%	PVC	8	537	\$282,680					
Gr State St	9	2912	5	2005	8	2065	0	0%	100%	PVC	8	\$37	\$107,744					
Gr 102 31 LF 120 43 50 2004 15 0% 100% PVC 50 53.4 53.6 53.4 53.6 53.7 53.6 53.6 53.6 53.6 53.6 53.6 53.6 53.6 53.7 <th>9</th> <td>6372</td> <td>5</td> <td>2007</td> <td>8</td> <td>2057</td> <td>18</td> <td>0%</td> <td>100%</td> <td>PVC</td> <td>8</td> <td>537</td> <td>\$235,784</td> <td></td> <td></td> <td></td> <td></td> <td></td>	9	6372	5	2007	8	2057	18	0%	100%	PVC	8	537	\$235,784					
BT 102 11 LF 1994 90 2044 15 0% 100% PVC 90 \$38 \$398,018 BT 145 22 LF 1697 80 2047 15 0% 100% PVC 50 \$38 \$351,838 BT 18915 LF 2005 80 2055 15 0% 100% PVC 80 \$38 \$718,770	0	50 33	5	2008	8	2058	6	0%	100%	PVC	8	\$37	\$186,221					
o HID ZZ LF HID ZZ LF ID V/M HID ZZ LF O SU ADD SU		10211	5	1994	88	2044		07	1007		5 8	100	3388,018					
		18045	5	1 AAL	5 8	2044			100m		5 8	200	8718 770					
		10010		a series of	2	a tener		4 72	AL AND L		-	100	A LUMBER OF					

H.
Fem Exeed Priped Proposal Submittal – UP Constract No. 5P0600-114, 42.70 Resisted SDC Progicts and Revided Casital Improvement Program Posade Water Units System at Fort Knov Amy Installution, Aemuscy

Table 9. R R Inventory (Teble IV-2 in FPR)

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Table IV-2 Renewal and Replacement Schedule (20115)

SO YEAR SCHEDULE

the second provide the second se			An			COLUMN TRADITION OF A DESCRIPTION OF A D	1.87										
	ALL	ALTELE ALL	TOTA & BATT	Existino	First Control of	ALLMONT ALL	100			New	New				Expec	ed Subset	Juent
			Amorox	Item	Presetad	Number of	£	¢		line of	Ling	Networ			Reola	Cement D.	21 AS
			- Yaar	Sandoo	Heolacoment	Years to	Soc 2	PAR	New	Sarvina		1 term	Retab	Rehab	Second	Third I	Fourth
Item and Size	Quant	Gus	In stated	Life	Date	Replace # >1	1.12210122017	CONCOMP.	Item	Life	RCN	RCN	Cost	Year	R&R	R&R	RAR
8"	2223	5	2007	50	2057	10	10%	100%	PVC	50	803	584,474			Contraction of the	All the second second	100000
0."	4044	9	2006	영	2058	10	94	100%	PVC	50	508	\$178,472					
6r	1555	5	1894	8	2044	đ	2	100%	PVC	50	566	\$102,630					
10"	106	5	2005	쭝	2055	10	0%	100%	PVC	50	506	868, 98					
421	100.0	'n	1004	S	2014			- Sec			976	8440 700					
	ORAL	9	1 PROF	90	1044	10	074	100M	UNDER 180 F	00	016	9198,700					
Zussman Range (Mt.Eden) - Pipe Material - PVC																	_
	110	5	1997	8	2047	15	0%	100%	PVC	50	\$24	\$2,657					
	383	5	2002	8	2052	18	0%	100%	PVC	50	\$2A	\$9,249					11-
1.5	60	5	2002	8	2002	ä	9	100%	PVC	50	\$26	\$1,587					
*	30177	F	1997	8	2047	18	0%	100%	PVC	50	\$28	\$829,868					
Zuasman Range (McEden) - Pipe Moterial - PE																	
	1111	5	2002	8	2052	10	0%	100%	PVC	50	\$2.4	\$26,831					
*	13668	5	2002	8	2002	ĩ	0%	100%	PVC	50	\$28	\$375,870					
Yano Range - Pipe Material - PVC																	
	2500	ç	1990	8	2040	16	0%	100%	PVC	50	\$28	\$69,000					
Basham's Corner - Pipe Material - PVC																	
1.25"	72	5	2004	8	2054	18	0%	100%	PVC	50	\$25	\$1,822					
21	08	5	2004	8	2054	18	2	100%	PVC	50	\$28	\$1,658					
e	256	5	2004	8	2054	16	160	100%	PVC	50	\$37	\$9,472					_
FIRE HYDRANTS																	
Fire Hydrants	000	Each	1935	40	2015	10	1.92	74%	Same as existing	25	\$3,207	\$1,923,900			2040		
Fire Hydrants	122	Each	1936	40	2014	6	0%	100%	Seme as existing	20	\$2,915	\$355,630			2039		
Fire Hydrants	68	Each	1926	40	2014	10	9	100%	Seme as existing	25	\$2,915	\$241,945			2039		
Fire Hydranta	14	Each	1997	ð	2022	10	9#	100%	Same as existing	25	\$2,915	\$40,810			2047		
Fire Hydrants	_	Each	0061	\$	2015	10	0%	100%	Same as existing	25	\$2,915	\$2,915			2040		
Fire Hydrants	N	Each	2004	8	2029	10	0%	100%	Same as existing	25	\$2,915	\$5,830			2054		2
Fire Hydrants	54	Each	2005	ð	2030	10	9%	100%	Same as existing	126	\$2,915	\$157,410			2055		
Operation & Maintenance Building	_	ea		75	2012		0%	100%	Same as existing	75	\$425,000	\$425,000					
Vehicles/Equipment					2012				Same as existing	7		\$180,000			2019	2026	2033
Water Lab Equipment + Backhoe					2012				Same as additing	10		\$117,300			2022	2032	2042
Tools, and Furniture					2012				Some as existing	18		\$85,600			2027	2042	2057
Admin Equipment, Power Equipment					2012				Samo as outsing	CR.		\$56,350			2017	2022	2027

25 March 2016 Laure 7016

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Chark Vol Provide and Voluma Part Notational Voluma 1/1 0/11 1/1 0/11 1/1 0/11				1000	AU. NN BUTT	In the sent Jak	21000 BING ING ING	NUMBI VOINUN	1 800 19-3	IN FPR						
And Markan Markaneo Anit Anit </th <th>Table IV-3</th> <th></th>	Table IV-3															
	and Residual Values															
Numerical Status 1,1 2,1	(2011 Dollars except where noted)															
Mark Wards Bundless No. Cansel Spring Mark No. Cansel Sprin Mark No. Cansel Spring Mark	liem and Stre	2012	2013	2014	2015	2018	2017	201	8	019	8020	2021	2022	2023	2024	2025
Chronomy ensative Chronopy ensative Pare Network N119: Since	RAW WATER SOURCES															
Clur bench By Fight Manual National System Signal Manual System Signal Manua System Signal Manual System	McCracken Sprng Intake	50	SO	50	50	-	8	\$0	\$0	\$0	\$0	\$0	05	8	\$0	
The Characterian Science of Control of	CI Line to Otter Creek PS - 16"	58	50	50	SC		>0	50	50	50	8	SO SO	50	38	50	
Braine Control Singe Contro Singe Control Singe Co	Uter Creek PS (Facily No. 8213) - Structure Intake /Machanical Screen	22	88	OS De	0S		50	50	88	20	20	50	So	88	88	
Charpin No. 1.7.100 ppm. (10) + Diametry (1,1) Diametry (1,1) <thdiametry (1,1)<="" th=""> Diametry (1,1)</thdiametry>	Pump Controls	81	8	S	S		61	50	8	8	8	SO	\$0	8	\$0	
Para No. 12, 200 pm, 201 p Solution Sol	Pump No. 4 - 1,200 gpm, 150 HP	50	\$ 0	50	SC	-	8	So	\$0	\$0	08	50	50	5	\$0	
End No. V. Z. (Un gen, Saver- land, No. Z. (Un gen, Saver- land, Na P, Facially No. 126). J. K MOD So of a bit of a	Pump No 8 - 2,100 gpm, 230 HP	So	8	\$0	50			8	8	8	8	50	50	18	50	
Clare of Control WTP FredBoy Status Status <td>Fump No. 10 - 2,100 gpm, 250 HP</td> <td>5 6</td> <td>5 8</td> <td>3 2</td> <td></td> <td></td> <td>5 6</td> <td>5 6</td> <td>5 2</td> <td>5 8</td> <td>5 2</td> <td>5 6</td> <td>5</td> <td>58</td> <td>5 8</td> <td></td>	Fump No. 10 - 2,100 gpm, 250 HP	5 6	5 8	3 2			5 6	5 6	5 2	5 8	5 2	5 6	5	58	5 8	
Concerv (VTP Fredity No (126); -L14MO 10	Ci Line In Central WTP - 16-Inch	50	5	so	S		8	SO		50	8	50	50	8 8	50	
Contain Virp F (ability No. 136) - Student 100 10	Central WTP (Facility No 1205) - 3.5 MGD	\$0	50	SO	\$0	40	8	5	\$	8	\$0	\$0	\$0	8	\$0	
Characteristic System SD SD </td <td>Central WTP (Facility No. 1205) - Structure</td> <td>50</td> <td>\$0</td> <td>0.5</td> <td>50</td> <td></td> <td>8</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>50</td> <td>8</td> <td>50</td> <td></td>	Central WTP (Facility No. 1205) - Structure	50	\$0	0.5	50		8	\$0	\$0	\$0	\$0	\$0	50	8	50	
Automatic Journal -	Chemical Feed Systems	SO	\$0	SO			50	50	6 6	50	50	50	50	\$ 8	50	
Care Main Trans. TS0000 enform Sin S	Multi-Media Filters - 1 MG	50	50	S	80		6	5	88	88	50	8	\$0	8	50	
Class Work No. 1 - 0.5 MG S0	Filter Back Wash Tank - 150,000 gallons	50	8	0\$	\$0	4	8	\$0	8	80	\$0	\$0	\$0	5	50	
Clar. Work No. 2 Control No. 489 (pt. 2 State No. 4	Clear Well No. 1 - 0.5 MG	50	50	\$0	SC		0	So	\$0	50	50	\$0	50	18	50	
Parameters 11 Controls - 1400 gptm 70 HP 51 50 51 50 51 50 51 50 <td>Cietar Weil No. 2 - 2 MG - 1945</td> <td>50</td> <td>50</td> <td>\$0</td> <td>24</td> <td></td> <td>0</td> <td>ě</td> <td>80</td> <td>D6</td> <td>0¢</td> <td>*</td> <td>U.S.</td> <td>*</td> <td>Ue</td> <td></td>	Cietar Weil No. 2 - 2 MG - 1945	50	50	\$0	24		0	ě	80	D6	0¢	*	U.S.	*	Ue	
Princ No. 2 & Controls - 1,000 gem 70 HP S0 S0 <td>Pump No. 1 & Controls - 4,850 gpm, 250 HP</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td></td> <td>8</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>80</td> <td>\$0</td> <td>\$0</td> <td>8</td> <td>0\$</td> <td></td>	Pump No. 1 & Controls - 4,850 gpm, 250 HP	\$0	\$0	\$0	\$0		8	\$0	\$0	\$0	80	\$0	\$0	8	0\$	
Pump Not 3A Concents - 1400 gpm. 30 UPP 50 <td>Pump No. 2 & Controls - 1,000 gpm, 70 HP</td> <td>\$0</td> <td>50</td> <td>SO</td> <td>SC</td> <td></td> <td>0</td> <td>S</td> <td>\$0</td> <td>50</td> <td>8</td> <td>\$0</td> <td>50</td> <td>18</td> <td>\$0</td> <td></td>	Pump No. 2 & Controls - 1,000 gpm, 70 HP	\$0	50	SO	SC		0	S	\$0	50	8	\$0	50	18	\$0	
Charle Galaxy Wash Fully So Curulus - Soury Park Soury So	Pump No. 3 & Controls - 1,400 gpm, 50 mm	5 2					50	52	5				-	3 8	5 8	
Wear Point Wear Prior Wear Point Wear Prior State	Emansancy Generator - 280 KW	88	80	So	5		90	20 02	88	So	S a	50	88	8 1	\$0	
Wei No. 1 Pump/Controls - 750 gpm, 125 HP \$0	West Point Well Field	-						1	;	;						
Weil No. 2. Pump/Controls - 750 gpm, 125 HP \$0	Well No. 1. Pump/Controls - 750 gpm, 125 HP	S 0	\$0	\$0	SC		8	8	\$0	8	50	\$0	\$0	\$66,125	50	
Wall No. 3. Pump/Controls - 750 gpm, 125 HP \$0	Well No 2 Pump/Controls - 750 gpm, 125 HP	8	8	\$0	SC		8	8	\$0	8	8	50	50	18	50	
Well No. 5. Pump/Controls - 750 gpm, 125 HP S0	Wet No. 3. Pump/Controls - 750 gpm, 125 HP	\$0	50	SO	50		00	50	50	50	3 23	50	50	5 8	5 6	
Well No. 7 Pump/Controls - 750 gpm, 125 HP \$86,125 \$30	Weil No 5, Pump/Controls - (50 gpm, 125 HP		8 8	50	20	0 4	50	50	8 8	5	8 8	50	202	88	50	\$4
Wei No. 8. Pump/Controls - 750 gpm, 125 HP \$0<	Well No 7 Pump/Controls - 750 gpm 125 HP	\$86.125	SO	SO	SC		0	8	\$0	5	So	08	\$0	8	08	1
Weil No. 9. Pump/Controls - 750 gpm, 125 HP \$0	Well No. 8. Pump/Controls - 750 gpm, 125 HP	\$0	\$0	\$0	SC		0	50	\$0	\$0	\$0	\$0	\$0	\$65,125	\$0	
Wear No 110 Pump/Controls -730 gpm, 125 HP 500 5	Well No. 9 Pump/Controls - 750 gpm, 125 HP	5	5 5	50	sc		00	5 8	50	5 8	5 5	50	50	\$66,125	S00	
Weil No 12A. Pump/Controls 750 gpm 125 H 500 50	Well No. 11. Pump/Controls - 750 gpm, 125 HP	5 6	S ac	50			00	5	88	5	88	So	88	88	50	\$66
Weil No. 12: Pump/Controls - 750 gpm, 12:5 H \$0 \$	Weil No 12A, Pump/Controls - 750 gpm, 125 H	\$88,125	SO	\$0	SC		0	50	80	\$ 0	8	50	50	8	05	
Weil Field Header 16-http S0 S0 <ths0< th=""> S0 S</ths0<>	Well No. 12B. Pump/Controls - 750 gpm, 125 H	\$	50	\$0	50			8	50	\$0	8	\$0	\$0	18	50	
Operation State	Well No 13, Pump/Controls - 750 gpm, 125 HP	5 2				8 44	906	120	6	5 8	5 8	5 6	5 6	5 8	5 8	
Muldraugh WTP (Facility No. 3009) - 7.0 MGD \$0	Ci Line to Muldraugh WTP - 24 Inch	88	so	50	50		00	80	\$0 \$2	987.040	88	\$0	\$0	81	50	
Muldraugh WTP (Facility No. 3009) - Structure \$0 \$0 \$0 \$1,307,120 \$0	Muldraugh WTP (Facility No. 3009) - 7.0 MGD	80	\$0	\$0	50	64	0	8	\$0	\$0	\$0	\$ 0	08	8	\$0	
Chemical Feed Systems (value included in WTF \$0 \$	Muldraugh WTP (Facility No. 3009) - Structure	\$0	\$0	0\$0	SC	\$1,307.12	0	80	\$0	\$0	50	SO	\$0	8	50	
Clanifiar No. 1 - 51 MGD \$0 \$	Chemical Feed Systems (value included in WTF	50	SO	50	30		0	8	50	50	8	50	50	18	50	
	Clantier No. 1 - 5,0 MG		5 8				50	58	58	58	5 2	5 20	5 6		5	
	MultiMada Fitara - 1 MGD	88							ę	2			5 6			

Fiter Back Wash Pump & Controls - 5,400 gpm Emergency Generator - 280 KW West Point Well Field Well No. 2 Pump/Controls - 750 gpm, 125 HP Well No. 3 Pump/Controls - 750 gpm, 125 HP Well No. 6 Pump/Controls - 750 gpm, 125 HP Well No. 6 Pump/Controls - 750 gpm, 125 HP Well No. 9 Pump/Controls - 750 gpm, 125 HP Well No. 9 Pump/Controls - 750 gpm, 125 HP Well No. 9 Pump/Controls - 750 gpm, 125 HP Well No. 10 Pump/Controls - 750 gpm, 125 HP Well No. 12A, Pump/Controls - 750 gpm, 125 HP Well No. 12B, Pump/Controls - 750 gpm, 125 HP Well No. 12B, Pump/Controls - 750 gpm, 125 HP Weil Field Header - 16-Inch Cri Line to Mudraugh WTP - 24 Inch Muldraugh WTP (Facility No. 3009) - 7.0 MGD Muldraugh WTP (Facility No. 3009) - Structure Chemical Feed Systems (value included in WTF Emergency Generator - 350 KW CI Line to Central WTP - 16-inch CI Line to Otter Creek PS - 16" Otter Creek PS (Facility No. 9213) - Structure Central WTP (Facility No 1205) - 3.5 MGD RAW WATER SOURCES (2011 Dollars except where noted) Contral WTP High Life McCracken Spring Intake Renewals and Replacement Costs Table IV-3 and Residual Values Pump No. 1 & Controls - 4,850 gpm, 250 HP Pump No. 2 & Controls - 1,000 gpm, 70 HP Pump No. 3 & Controls - 1,400 gpm, 60 HP em Fixed Proposal Submittal – UP Constatt No. SP0600-11-C-d2 P0 fexised SDC Protects and Revised Capital Improvement Program rotable Water Uriett System at Fort Knox Army Instaliation, Kentucky Multi-Media Filters - 1 MG Filter Back Wash Tank - 150,000 gallons Clear Well No. 1 - 0.5 MG Clear Well No. 2 - 2 MG - 1945 Pump No. 4 - 1,200 gpm, 150 HP Pump No. 8 - 2,100 gpm, 230 HP Pump No. 10 - 2,100 gpm, 250 HP Clarifier No. 1 - 5.0 MG Clarifier No. 2 - 2.0 MG Well No. 13. Pump/Controls - 750 gpm, 125 HP Clarifler - 3.5 MG Chemical Feed Systems Central WTP (Facility No. 1205) - Structure Pump Controls Multi-Media Filters - 1 MGD Intake /Mechanical Screen 2026 2027 \$66 \$\$ \$ \$ \$ \$ \$ \$ \$ \$ 2028 288 Fable 10. R R 50-year Cost Schedule and Residual Values (Table IV-3 in FPR 2029 \$86. \$ \$ \$ \$ \$ \$ \$ 2030 ******************* **** **************** 203 888888 2032 888888 2033 \$ 2034 *********************** \$ \$ \$ \$ \$ \$ ********************* 2035 2036 888888 2037 868 \$66 ******************************* **** ***************** 2038 \$ \$ \$ \$ \$ \$ 2039

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Distriction Distriction <thdistriction< th=""> <thdistriction< th=""></thdistriction<></thdistriction<>	Charakara Table Name Stand Kaland Muasa Name Name <th< th=""><th></th><th></th><th></th><th>Table</th><th>10. RR 50-ye</th><th>ar Cost Sched</th><th>ulo and Rest</th><th>dual Values (1</th><th>able IV-3 In F</th><th>122)</th><th></th><th></th><th></th><th></th><th></th><th></th></th<>				Table	10. RR 50-ye	ar Cost Sched	ulo and Rest	dual Values (1	able IV-3 In F	122)						
Under National Vision Not National Vision Vision	Under National Section 1 (2010) Section 1 (2010) Section 1 (2010)	Table IV-3															
Call Dolar Analysis and olds: Dolar Dolar <thdolar< th=""> <th< th=""><th>Name Case No No</th><th>and Residual Values</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<></thdolar<>	Name Case No	and Residual Values															
Name of Source Source <th< th=""><th>Interdist 10 00 00 10 00 <</th><th>(2011 Dollars except where noted)</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>	Interdist 10 00 00 10 00 <	(2011 Dollars except where noted)															
Nucley Nucley Subjects Nucley Nucley Subjects Nucley Nucl	Nortwick Standwick Standwick <th< th=""><th>liem and Size</th><th>2040</th><th>2041</th><th>2042</th><th>2043</th><th>2044</th><th>2045</th><th>2048</th><th>2047</th><th>-</th><th>048</th><th>2049</th><th>2050</th><th>2051</th><th>2052</th><th>_</th></th<>	liem and Size	2040	2041	2042	2043	2044	2045	2048	2047	-	048	2049	2050	2051	2052	_
		RAW WATER SOURCES	Ē	;						:	:	•	;		,		1
Charlender Der Kenzen Statution Statution <td>Der Der Conserver, N. 127, Shurver, 139, Shurver, 13</td> <td>McCracken Spring Intake</td> <td>8</td> <td>So</td> <td>so</td> <td>80</td> <td>18</td> <td></td> <td>\$0</td> <td>50</td> <td>\$0</td> <td>\$0</td> <td>80</td> <td>\$8</td> <td>8</td> <td>50</td> <td>1</td>	Der Der Conserver, N. 127, Shurver, 139, Shurver, 13	McCracken Spring Intake	8	So	so	80	18		\$0	50	\$0	\$0	80	\$8	8	50	1
The Characteristic Floring Francisco, Floring		CI Line to Otter Creek PS - 16	18	s	50	50	18		50	50	8	8	8	50	8	50	-
Party Control Party (S. 4. 1.00 pm, 2010) Party	Pane Derivative Pane Der	Inter Creek PS (Facility No. 9213) - Structure Inteka Machanical Screen	5 2	50	20	80	5 5			50	58	800	6 6	6 6	88	5	
Dravis No. 1: J.20 gan. 130 /- Paran No. 1: J. 2.100 gan. 130 /- Example No. 2: J.100 gan. 130 /- Example No. 1: J.200 gan. 130 /- Example No.		Pump Controls	81	So	So	So	81		Sol	50	S	81	51	\$0	51	50	20
Drug No. 2. VIG gan. 2010 ¹ Statute St	Dray, No. 1.2, XI Gen, 2001 Diama Diama <thd< td=""><td>Pump No. 4 - 1,200 gpm, 150 HP</td><td>\$0</td><td>SO</td><td>SO</td><td>50</td><td>8</td><td></td><td>\$0</td><td>\$0</td><td>S</td><td>80</td><td>50</td><td>\$0</td><td>8</td><td>\$0</td><td>70</td></thd<>	Pump No. 4 - 1,200 gpm, 150 HP	\$0	SO	SO	50	8		\$0	\$0	S	80	50	\$0	8	\$0	70
Chan No. 1.9. 2.100 gan. 230 M Sol 1 <	Charlow ND, - 2,100 Jan, 2,300 Jan, 3,300 Jan, 3,300 Jan, 3,300 Jan, 3,300 Jan, 3,300 Jan, 3,300 J	Pump No. 9 - 2,100 gpm, 230 HP	\$0	80	0\$	80	18		50	\$0	80	\$0	\$0	8	18	50	-
Chronic With Private Vision Construction State Stat	Same Mark Press Same Mark	Fump No. 10 + 2,100 gpm, 450 mm	5		20		3 #				5 2	5 2	56	5	3 2		
Consist With Ty Facality, Inc. Statut Statut<	Suberiv NYP Final No.	Cilling to Control WTD - 12 Jonn	5 2	50			5 5		5 6	6	5 8	5 8	5 8	5	5 8	5	
Chana (WTP) Facial (No. 126) - Structure Stru	Consist Vite // Energies Vot. 12(5) - Structure	Central WTP (Facility No 1205) - 3.5 MGD	88	5	20		6 8		53		50	8 8	8 8	50	88	5	
Channel Freid Symin Si Si <td>Channel Field System: Sol Sol</td> <td>Central WTP (Facility No. 1205) - Structure</td> <td>8</td> <td>S</td> <td>50</td> <td>50</td> <td>81</td> <td></td> <td>8</td> <td>81</td> <td>81</td> <td>8</td> <td>8</td> <td>81</td> <td>81</td> <td>50</td> <td></td>	Channel Field System: Sol	Central WTP (Facility No. 1205) - Structure	8	S	50	50	81		8	81	81	8	8	81	81	50	
Classifier - 15:MO SI	Currenter - 15 MG Sin	Chemical Feed Systems	80	50	S0	S0	8		SO	8	8	8	S	\$0	8	50	
Mukukasi Flere, - I.M2 S0 S0<	Mukukan Files: - 1 MO Signal	Clarifier - 3.5 MG	50	S 0	\$0	30	8	-	\$0	\$0	50	8	\$0	8	8	\$0	-
Fire Body Wash Tank. 19000 gebons 50	Fire Back Wash Tran. : 10000 gelon: 5000 gelon: 500 gelon	Multi-Media Filters - 1 MG	\$0	0\$	00	50	8	-	\$0	\$0	\$0	\$0	\$0	\$0	8	\$0	-
Clear Work No. 1 - 0.5 MG S0	Colum Wirk No. 1 - 0.5 MG S0	Filter Back Wash Tank - 150,000 gations	\$0	00	0\$	SO	8	-	\$0	30	\$0	\$0	\$0	80	8	\$0	Ĩ
Calar With Mg, 12, 2, 2, Mid Store Store <th< td=""><td>Construction No. 2. 2 (No. 1-No. No. <th< td=""><td>Clear Well No. 1 - 0.5 MG</td><td>8</td><td>50</td><td>30</td><td>So</td><td>18</td><td></td><td>\$0</td><td>50</td><td>8</td><td>8</td><td>\$0</td><td>50</td><td>8</td><td>50</td><td>-</td></th<></td></th<>	Construction No. 2. 2 (No. 1-No. No. No. <th< td=""><td>Clear Well No. 1 - 0.5 MG</td><td>8</td><td>50</td><td>30</td><td>So</td><td>18</td><td></td><td>\$0</td><td>50</td><td>8</td><td>8</td><td>\$0</td><td>50</td><td>8</td><td>50</td><td>-</td></th<>	Clear Well No. 1 - 0.5 MG	8	50	30	So	18		\$0	50	8	8	\$0	50	8	50	-
Pump No. 1 & Controls - ABS0 gpm. 250 HP 50 <td>Purpose 1 & Constant - AddS genr 250 kP 50<td>Clear WEINO 2 - 2 MG - 1945</td><td>De la</td><td>50</td><td>De</td><td>De la</td><td>*</td><td></td><td>20</td><td>90</td><td>90</td><td>SU</td><td>Su</td><td>26</td><td>20</td><td>36</td><td>107</td></td>	Purpose 1 & Constant - AddS genr 250 kP 50 <td>Clear WEINO 2 - 2 MG - 1945</td> <td>De la</td> <td>50</td> <td>De</td> <td>De la</td> <td>*</td> <td></td> <td>20</td> <td>90</td> <td>90</td> <td>SU</td> <td>Su</td> <td>26</td> <td>20</td> <td>36</td> <td>107</td>	Clear WEINO 2 - 2 MG - 1945	De la	50	De	De la	*		20	90	90	SU	Su	26	20	36	107
Punp No. 2 A Controls - 1400 gbm, 70 HP 50 <td>Partin No. 2 & Controls - 1400 gim, 70 MP Sol Sol</td> <td>Pump No. 1 & Controls - 4,850 gpm. 250 HP</td> <td>80</td> <td>SO</td> <td>\$0</td> <td>SO</td> <td>18</td> <td></td> <td>30</td> <td>50</td> <td>So</td> <td>S0</td> <td>SO</td> <td>\$0</td> <td>8</td> <td>50</td> <td>1</td>	Partin No. 2 & Controls - 1400 gim, 70 MP Sol	Pump No. 1 & Controls - 4,850 gpm. 250 HP	80	SO	\$ 0	SO	18		30	50	So	S 0	SO	\$0	8	50	1
Pump No. 3 & Controls - 1400 gpm (30 µP 50 <td>Partic No. 3 & Controls -1400 gam. (30 HP) Signal Participantial Society (2000) Signal Participantial Participantinal Participantial Participantial Participantial Parti</td> <td>Pump No. 2 & Controls - 1,000 gpm. 70 HP</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td>SO</td> <td>8</td> <td></td> <td>\$0</td> <td>\$0</td> <td>so</td> <td>SO</td> <td>S0</td> <td>\$0</td> <td>8</td> <td>50</td> <td>200</td>	Partic No. 3 & Controls -1400 gam. (30 HP) Signal Participantial Society (2000) Signal Participantial Participantinal Participantial Participantial Participantial Parti	Pump No. 2 & Controls - 1,000 gpm. 70 HP	\$0	\$0	\$0	SO	8		\$0	\$0	so	SO	S 0	\$ 0	8	50	200
File: Back Wash Pump & Control: - 5400 gpm S400 gpm S0 <	File Back Wash Pump & Controls - 5400 gpm 5400 gpm 50 5	Pump No. 3 & Controls - 1,400 gpm, 60 HP	80	0	0\$	So	18		8	\$0	\$0	\$0	\$0	05	8	50	-
Enrogram, Generality, 280 KW Weat Point Weit Field Weit No. 1. Pump/Controls - 750 gpm, 125 HP Weit No. 2. Pump/Controls - 750 gpm, 125 HP Weit No. 2. Pump/Controls - 750 gpm, 125 HP Weit No. 3. Pump/Controls - 750 gpm, 125 HP Weit No. 3. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP Weit No. 4. Pump/Controls - 750 gpm, 125 HP S0	Energyney Genetic - 280 KW Mas Point Vol 1 Punp/Controls - 750 gpm, 125 HP Vel No. 1 Punp/Controls - 750 gpm, 125 HP Vel No Punp/Controls - 75	Filter Back Wash Pump & Controls - 5,400 gpm	8	So	50	SO	8	ſ	\$0	\$0	8	8	\$0	\$0	18	50	4104
Wile No. 17 PumpControls - 750 gpm, 125 HP \$1 \$1 PumpControls - 750 gpm, 125 HP \$1 \$1 PumpControls - 750 gpm, 125 HP \$1 \$1 \$1 PumpControls - 750 gpm, 125 HP \$1 \$1 \$1 PumpControls - 750 gpm, 125 HP \$1	Wile No. 1, PumpControls - 750 gpm, 125 HP \$1 \$1 \$1000000000000000000000000000000000000	Emergency Generator - 280 KW	50	Su	30	30	8		50	50	30	50	50	50	5	30	1
Weil No. 2. Pump/Controls - 750 gpm, 125 HP S0	Weil No. 2 PumpContreta -750 ppm, 125 HP 50	Wall No. 1. Pump/Controls - 750 com, 125 HP	\$0	\$0	\$0	\$0	50		sn	\$0	\$0	\$86.125	50	50	80	50	1
Weil No. 3 Pump/Controls -750 gpm, 125 HP 50 </td <td>Wei No. 3 Pump/Controls - 750 gpm, 125 HP S0 S0</td> <td>Well No 2 Pump/Controls - 750 gpm, 125 HP</td> <td>81</td> <td>so</td> <td>08</td> <td>S</td> <td>81</td> <td></td> <td>S</td> <td>50</td> <td>81</td> <td>\$0</td> <td>So</td> <td>\$0</td> <td>81</td> <td>50</td> <td></td>	Wei No. 3 Pump/Controls - 750 gpm, 125 HP S0	Well No 2 Pump/Controls - 750 gpm, 125 HP	81	so	08	S	81		S	50	81	\$0	So	\$0	81	50	
Weil No. 5. Pump/Controls - 750 gpm, 125 HP \$0	Weil No. 5 Pump/Controls - 750 gpm, 125 HP \$10	Well No. 3. Pump/Controls - 750 gpm. 125 HP	80	S	\$0	SO	10		SO	SO	\$0	So	50	SO	8	\$0	50
Weil No. 6. Pump/Controls - 500 gpm, 75 HP \$0<	Wiel No. 6. PumpiContreds - 500 gpm, 75 HP \$0<	Well No. 5. Pump/Controls - 750 gpm, 125 HP	80	8	\$0	0\$	10		SO	50	S	8	\$0	\$ 0	8	\$66,125	21
Weil No. 7. Pump/Controls - 750 gpm, 125 HP \$0	Weil No. 7. Pump/Controls - 750 gpm, 125 HP \$0	Well No. 6. Pump/Controls - 500 gpm, 75 HP	\$0	ŝ	0\$	\$0	5		SO	\$0	5	So	8	\$46,575	8	50	20
Weil No. B. Pump/Controls - 750 gpm, 125 HP \$0 \$0 \$0 \$10 \$20 gpm, 125 HP \$0	Weil No. B. Pump/Controls - 750 gpm, 125 HP \$0	Well No 7 Pump/Controls - 750 gpm, 125 HP	\$0	0\$	0\$	\$0	8	-	\$0	50	50	SO	\$0	\$0	18	50	
Weil No. B. Pump/Controls - 750 gpm, 125 HP \$0	Weil No. G. Pump/Controls - 750 gpm, 125 HP \$0	Weil No. 8. Pump/Controls - 750 gpm, 125 HP	\$0	\$0	\$0	80	55		08	\$0	\$0	\$66,125	SO	\$ 0	8	\$0	199
Weil No. 10. Pump/Controls - 750 gpm, 125 HP \$0 </td <td>Weil No. 10. Pump/Controls - 750 gpm, 125 HP \$0<!--</td--><td>Weil No. 9, Pump/Controls - 750 gpm, 125 HP</td><td>8</td><td>0\$</td><td>0\$</td><td>0\$</td><td>8</td><td></td><td>80</td><td>\$0</td><td>\$0</td><td>\$86,125</td><td>\$0</td><td>\$</td><td>8</td><td>\$0</td><td>1</td></td>	Weil No. 10. Pump/Controls - 750 gpm, 125 HP \$0 </td <td>Weil No. 9, Pump/Controls - 750 gpm, 125 HP</td> <td>8</td> <td>0\$</td> <td>0\$</td> <td>0\$</td> <td>8</td> <td></td> <td>80</td> <td>\$0</td> <td>\$0</td> <td>\$86,125</td> <td>\$0</td> <td>\$</td> <td>8</td> <td>\$0</td> <td>1</td>	Weil No. 9, Pump/Controls - 750 gpm, 125 HP	8	0\$	0\$	0\$	8		80	\$0	\$0	\$86,125	\$0	\$	8	\$0	1
Wait No. 11. Pump/Controls - 750 gpm, 125 HP \$0 \$	Wall No. 11. Pump/Controls - 750 gpm, 125 HP \$0 \$	Well No. 10, Pump/Controls - 750 gpm, 125 HP	\$0	50	0\$	\$0	8		20	80	80	\$0	\$66,125	0\$	8	\$0	1
Weil No. 12X. Pump/Controls - 750 gpm, 125 H 50 </td <td>Weil No. 12X. Pump/Controls - 750 gpm, 125 H 50<!--</td--><td>Well No. 11. Pump/Controls - 750 gpm, 125 HP</td><td>50</td><td>50</td><td>50</td><td>5</td><td>19</td><td></td><td>SO</td><td>50</td><td>\$0</td><td>8</td><td>50</td><td>\$66,125</td><td>8</td><td>50</td><td>1</td></td>	Weil No. 12X. Pump/Controls - 750 gpm, 125 H 50 </td <td>Well No. 11. Pump/Controls - 750 gpm, 125 HP</td> <td>50</td> <td>50</td> <td>50</td> <td>5</td> <td>19</td> <td></td> <td>SO</td> <td>50</td> <td>\$0</td> <td>8</td> <td>50</td> <td>\$66,125</td> <td>8</td> <td>50</td> <td>1</td>	Well No. 11. Pump/Controls - 750 gpm, 125 HP	50	50	50	5	19		SO	50	\$0	8	50	\$66,125	8	50	1
Weak No. T.ZE. PumpiControls -r50 gpm, 12:5 H S0 S0 <td>Well No. 12: Pump/Controls -750 gpm, 125 H 50<td>Wes No. 12A. Pump/Controls - rou gpm, 12a H</td><td>96</td><td>-</td><td>96</td><td>80</td><td>12</td><td></td><td>30</td><td>80</td><td>8</td><td>50</td><td>50</td><td>80</td><td>18</td><td>90</td><td></td></td>	Well No. 12: Pump/Controls -750 gpm, 125 H 50 <td>Wes No. 12A. Pump/Controls - rou gpm, 12a H</td> <td>96</td> <td>-</td> <td>96</td> <td>80</td> <td>12</td> <td></td> <td>30</td> <td>80</td> <td>8</td> <td>50</td> <td>50</td> <td>80</td> <td>18</td> <td>90</td> <td></td>	Wes No. 12A. Pump/Controls - rou gpm, 12a H	96	-	96	80	12		30	80	8	50	50	80	18	90	
Weit Fried Header 1- 16-Inch S0 <	Aver Frier No. 12 Funity-control Frank No. 12 Funity-contro Frank No. 12 Funity-control	Weil No. 128, Pump/Controls - 750 gpm, 125 H	52	56	800 AC		5 8		56		3	2		5	5 8		
Cil Line to Muldraugh WTP (Facility No. 3009) - 7.0 MGD S0 S0 <ths0< th=""> S0 S0</ths0<>	Cillaniar Ion Mudraugh WTP - 24 Inch 50 5	Wet Field Header - 16-inch	5	5	100		51			200	5	58		5 6	51	5 5	
Muldraugh WTP (Facility No. 3009) - 7.0 MGD 50	Jaukdraugh WTP (Facility No. 3009) - 7.0 MGD 50 5	CI Line to Muldraugh WTP - 24 Inch	5	8	50	20	61		8	20	50	5	50	8	6 1	5	50
Muldraugh WTP (Facility No. 3009) - Structure \$0	Muldraugh WTP (Facility No. 3009) - Structure \$0	Buildraugh WTP (Facility No. 3009) - 7.0 MGD	SO	SO	50	50	6		8	So	5	5	50	5	8	S	
Chemical Feed Systems (value included in WTF S0 \$	Chemical Feed Systems (value included in WTF S0 S	Muldraugh WTP (Facility No. 3008) - Structure	8	50	\$0	50	81		0	88	so	So	S	so	8	50	
Clarifier No. 1 - 5.0 MG \$0 \$	Clarifler No. 1 - 5.0 MG \$0 \$	Chemical Feed Systems (value included in WTF	S 0	80	50	05	10		50	080	\$0	50	50	80	8	0\$	1
Clarifier No. 2 - 2.0 MG \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Clarifier No. 2 - 2.0 MG \$0 \$	Clarifler No. 1 - 5.0 MG	50	\$0	\$0	\$0	8		8	\$0	80	50	50	50	8	30	1
	Multi-Media Filters - 1 MGD 50 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Clarifier No. 2 - 2.0 MG	8	\$0	\$0	0\$	18		\$0	\$0	\$0	\$0	\$0	\$0	8	\$0	

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25 March 2016 | June 2016

Central WTP High Lift Pump No. 1 & Controlis - 4.850 gpm, 250 HP Pump No. 2 & Controlis - 1,000 gpm, 70 HP Pump No. 2 & Controlis - 1,000 gpm, 60 HP Filter Back Wash Pump & Controlis - 5,400 gpm Emergency Generator - 280 KW West Point Well Field Viell No. 3 Pump/Controlis - 750 gpm, 125 HP Well No. 3 Pump/Controlis - 750 gpm, 125 HP Well No. 5 Pump/Controlis - 750 gpm, 125 HP Well No. 6 Pump/Controlis - 750 gpm, 125 HP Well No. 6 Pump/Controlis - 750 gpm, 125 HP Well No. 7 Pump/Controlis - 750 gpm, 125 HP Well No. 8 Pump/Controlis - 750 gpm, 125 HP Well No. 9 Pump/Controlis - 750 gpm, 125 HP Well No. 10 Pump/Controlis - 750 gpm, 125 HP Well No. 11 Pump/Controlis - 750 gpm, 125 HP Well No. 128 Pump/Contro Weil Field Header - 18-Inch Ci Line to Muldraugh WTP - 24 Inch Muldraugh WTP (Facility No. 3009) - 7.0 NGD Muldraugh WTP (Facility No. 3009) - Structure Chemical Feed Systems (value included in WTF Chemical Feed Systems Clarifler - 3.5 MG Multi-Media Filters - 1 MG Filter Back Wesh Tank - 150,000 ga Clear Weil No. 1 - 0.5 MG Clear Weil No. 2 - 2 MG - 1945 Emergency Generator - 350 KW CI Line to Central WTP - 16-Inch McCracken Spring Inlaks CI Line to Otter Creek PS - 16 Otter Creek PS (Facility No 9213) - Structure Central WTP (Facility No 1205) - 3.5 MOD RAW WATER SOURCES (2011 Odians except where noted) Renewals and Replacement Costs Table IV-3 and Residual Values Clarifier No. 1 - 5.0 MG Clarifier No. 2 - 2.0 MG Pump No. 4 - 1.200 gpm, 150 HP Pump No. 9 - 2,100 gpm, 230 HP Pump No. 10 - 2,100 gpm, 250 HP Multi-Media Filters - 1 MGD Pump Controls Intake /Mechanical Screen Central WTP (Facility No. 1205) - Structure gallona 43 \$\$\$\$\$\$ Table 10. R.R. 50-year Cost Schedulo and Residual Values (Table IV-3 in FPR 2055 \$ 45 ******************* 46 2058 \$\$\$\$\$\$\$\$\$\$\$<mark>5</mark>\$\$\$\$\$\$\$\$\$\$\$\$\$ 48 2080 \$\$\$\$\$\$ \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ 505 of R&R in 2011 \$ R&R in Nominal \$ \$31,740 \$47,810 \$47,810 \$26,082 \$26,082 \$26,082 \$27,840 \$32,845 \$31,740 \$31,740 \$31,740 \$31,740 \$31,740 \$31,740 \$31,740 \$31,740 \$31,805 \$31,000 \$31,740 \$31,0000\$31,00 \$546,84 \$69,328 \$98,770 \$98,770 \$4,797 \$50,476 \$59,328 \$59,328 \$59,328 \$59,328 \$59,328 \$59,328 \$59,328 \$59,328 \$59,328 \$518,054 \$588,200

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Furni Fued Price Proposal Subbititat – UP Constant, No. 540500-11-2-4270 Revised SDC Properts and Revised Capital Improvement Program Posable Water Utern system at Join Anny Installation, Lenductry Posable Water Utern system at Join Anny Installation, Lenductry

Table 10. R R 50-year Cost Schedula and Rasidual Values (Tabla IV-3 in FPR)

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Table IV-3 Renewals and Replacement Costs and Residual Values (2011 Dotas except where noted)

(rear or														
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Eliter Back Wash Tank - 150 000 millions	1 1	2	5 1		8	02	5	80	02	50	50	2	02	14 50
Clear Well - 1.0 MG	8	\$0	8	50	81	\$0	50	50	50	\$0	\$0	S0	\$0	\$0
Studge Lagoons	\$0	\$0	\$0	\$0	8	\$0	000,602	8	\$0	50	\$8	\$0	\$0	\$0
Structure	8	\$0	30	SO	\$0	\$0	\$0	8	0\$0	50	0\$	\$0	\$0	\$0
Pump A & Controls - 3,500 gpm, 250 HP	8	So	\$115,000	\$0	\$0	\$0	50	8	\$0	\$0	\$0	\$0	\$0	\$0
Pump B & Controls - 4,850 gpm, 350 HP	8	\$ 0	\$154,100	80	\$0	\$0	50	\$0	\$0	\$0	8	\$0	\$0	SO
Pump C & Controls - 2,200 gpm, 150 HP	\$0	0\$	\$75,900	8	\$0	\$0	\$ 0	\$0	0\$	\$0	5	\$0	\$0	\$0
Filter Backwash Pump & Controls - 5,400 gpm	\$0	\$0	\$0	8	\$ 0	\$0	\$0	\$0	0\$	0\$	8	0\$	\$0	8
Emergency Generator - 600 KW	\$0	\$0	\$0	8	\$0	0\$	8	\$0	\$0	\$0	\$0	\$0	\$0	\$184,000
CI Line to Cantonment Area - 24 inch	\$0	S 0	20	\$0	\$0	\$0	8	\$0	\$0	\$0	SO	\$3,977,412	\$0	8
Valves		1		6	l	1					1			
0.75*	\$0	SO	50	\$0	18	\$0	50	50	50	50	50	8	50	50
	\$0	50	00	20	15	50	05	\$ 0	50	50	50	8	50	50
1.25"	\$0	50	\$0	0\$	8	\$0	S 0	\$0	\$0	\$0	\$0	8	08	\$0
1.25*	\$	\$0	20	\$0	5	\$0	SO	50	20	\$0	50	8	SO	\$0
1.5"	\$0	\$0	\$0	\$0	8	\$0	\$0	\$0	0\$	\$0	\$0	8	0\$	50
15	\$0	05	50	0\$	8	50	05	\$0	30	30	SO	8	50	50
2"	\$0	0\$	\$0	\$0	8	\$0	\$0	50	SO	30	\$0	8	\$0	\$0
2*	\$0	\$0	\$0	\$0	8	\$0	50	\$0	0\$	\$0	50	8	50	\$0
2"	\$0	50	50	SO	8	50	50	50	\$0	50	so	8	\$0	\$0
12	\$0	50	50	\$0	18	50	50	50	00	SO	10	18	50	SO
2 5			50		3 2		3			5 2	5	3 2		
2 6		-			58		5 6		A 10	200	8 6	5 2	5 2	5
A . C	5	800		50	6 1	5	50	5	50	50	50	81	50	88
A.,	80	\$0	\$0	80	8	80	8	50	80	50	\$0	8	\$0	\$0
4	\$0	0\$	\$0	\$0	8	50	\$0	\$0	\$0	80	SO	8	\$0	50
A.	03	\$0	80	\$0	18	SO	\$0	08	\$0	\$0	\$ 0	8	\$0	\$0
<u>o</u> *	\$ 0	280	20	30	8	\$0	\$0	os	30	\$0	SO	8	\$0	\$0
6*	0\$	0\$	\$0	\$0	8	\$0	\$0	50	0\$	20	\$0	8	50	\$0
8-	0\$	\$0	0\$	\$0	8	50	80	80	\$0	\$0	\$0	8	\$0	\$0
6.	80	\$0	80	\$0	8	50	80	50	\$0	08	\$0	8	\$0	\$0
6	\$0	\$0	\$0	\$0	15	50	50	50	\$0	\$0	50	8	50	SO
6*	\$0	\$0	30	00	8	\$0	\$0	50	8	50	50	18	50	So
8	50	080	50	30	12	50	8	50	10	50	50	8	10	50
8	\$0	30	20	50	11	10	\$0	50	50	80	50	18	50	S
8	30	08	50	50	8	50	50	50	50	\$0	10	18	50	50
8 ^{**}	\$0	\$0	\$0	50	8	50	\$0	0\$	\$0	50	\$0	18	50	50
8	\$0	50	50	20	8	05	50	50	50	\$0	50	18	50	50
10"	\$0	\$0	\$0	\$0	8	\$0	30	\$0	\$0	SO	\$0	8	\$0	50
10.	\$0	\$0	\$0	\$0	8	\$0	30	30	0\$	\$0	\$0	8	\$0	\$0
10"	\$0	\$0	\$0	50	8	50	\$0	80	30	\$0	\$0	8	\$0	50
12*	20	\$0	\$0	\$ 0	8	\$0	\$0	50	\$0	\$0	\$0	8	\$0	\$0
12*	\$0	\$0	\$0	20	8	50	\$0	50	50	SO	0	18	50	50
12	\$0	00	50	50	18	50	50	50	50	50	50	8	50	SO
14"	\$0	0\$	50	\$0	5	50	50	\$0	50	50	50	50	\$0	\$0

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Tabin 10. R R 50-year Cost Schodule and Residual Values (Table IV-3 in FPR)

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Table IV-3 Renewals and Replacement Costs and Residual Values (2011 Dolars except where noted)

And In some something and the second second														
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Filter Back Wash Tank - 150.000 callons	02	02	10	10 10	8	20	21	22	43 L	4	05	8	1 17	28
Clear Well - 1.0 MG	\$0	SO	\$0	SO	8	\$0	\$0	\$	\$8	5	\$8	8	\$0	8
Sludge Lagoons Muldraugh High Lift (Facility No. 3003) -	\$0	\$0	SO	\$0	\$0	\$0	\$0	8	\$0	\$0	\$0	S0	\$69,000	\$0
Structure	8	0\$	\$0	20	50	\$0	so	8	\$0	0\$	\$0	\$0	\$0	0
Pump A & Controls - 3,500 gpm, 250 HP	8	SO	\$0	\$0	\$0	\$0	\$0	8	\$0	0\$	8	0\$	\$0	\$115,000
Pump B & Controls - 4,850 gpm, 350 HP	8	S 0	\$0	5	30	30	20	S 0	\$ 0	S 0	18	\$0	\$0	\$154,100
Pump C & Controts - 2,200 gpm, 150 HP	\$0	20	20	쓩	\$0	\$0	0\$	0\$	0\$	50	8	\$0	\$0	\$75,900
Filter Backwash Pump & Controls - 5,400 gpm	\$0	\$0	\$0	8	SO	\$0	50	\$120,750	80	\$0	8	0\$	08	8
Emergency Generator - 600 KW	\$0	50	so	8	50	80	3 18	8	50	8	50	8	50	8
Ci Line di Candinnieni Area - 24 inch	De la	oe	Ue Ue	0¢	De la	90	2	ue Ue	De	0e	96	06	De la	8
raivan	80	ŝ	*	5	80	5	5	69	60	*	60	6	*	s
	50	20	50	30	so	\$0	SO	8	02	8	50	8	50	50
1 25"	\$0	50	8	\$0	50	50	50	SO	50	8	So	SO	\$0	\$0
1.25"	\$ 0	\$0	18	\$0	\$0	\$0	so	0\$0	\$0	8	8	50	8	\$0
15"	\$0	\$0	8	\$0	\$0	8	\$0	0\$	\$0	\$0	\$0	\$0	8	0\$
3.5	50	SO	50	50	50	8	50	50	\$0	50	50	50	8	50
	20			30			20		58		50	20	200	50
2°	50	88	50	500	5	50	80	500	88	50	500	88	88	30
2"	\$0	8	\$0	\$0	50	50	50	SO	8	\$0	\$0	8	\$0	\$0
2.5*	So	8	\$0	\$0	8	08	30	\$0	\$0	\$0	\$0	8	\$0	\$0
24 24	5		56	56	5 15	58	50	58	66	66	66	5 8	40	58
A."	S0	\$0	50	\$0	20	50	\$0	8	\$0	\$0	\$0	\$0	\$0	\$0
A.	8	0\$	\$0	\$0	\$0	0\$	0\$	8	\$0	\$0	\$0	\$0	\$0	0\$
A.,	3 18	50	\$0	80	5 65	50	5 6	5 18	50	50	5 8	50	50	50
2.1	5 8	80		5 8	50		5	5 6	5 6	5 8	5 2	5	5 8	5 8
<u>o</u> ,)	\$0	50	50	8	80	\$0	8	50	\$0	\$0	8	\$0	SO	8
6	\$ 0	0\$	0\$	\$ 0	\$0	50	8	\$0	\$0	50	00	S 0	\$0	8
0	50	50	\$0	50	50	50	8	\$0	\$0	50	00	So	\$0	50
ν . σ	55	50	58		50	50	5 2	5 2	58	9 8	58		56	56
	\$0	S 0	81	50	\$0	so	50	50	8	81	80	\$0	88	\$0
8.	\$0	\$0	8	\$0	\$0	8	\$0	\$0	\$0	\$0	\$0	\$0	50	\$0
	\$0	50	50	50	\$0	8	10	50	\$0	80	50	SO	8	50
0.0	02	So	80	80	5 6	50	88	5 2	8 2	80 80	30	88	80	50
10"	50	8	\$0	So	08	50	5	\$0	8	80	SO	S 0	SO	80
10"	80	8	\$ 0	\$ 0	50	\$0	50	50	8	3	\$0	8	0\$	50
10"	\$0	8	\$0	\$0	8	\$0	\$0	\$0	\$0	\$0	\$0	8	\$0	\$0
12	50	50	50	50	8	50	50	50	SO	50	\$0	8	50	SO
12.			800		58		5 2	5 2		5	58	5 6	5	
14.	8	\$0	50	50	50	\$0	80	81	\$0	\$ 5	\$0	\$0	\$0	50 50
	<u> </u>	1000	ŝ	1. L	ŝ			1000	10000	in the second seco	1000	1	3	the state

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Table 10. RR 50-year Cost Schedule and Residual Values (Table IV-3 in FPR)

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Table IV-3 Renewals and Replacement Costs and Residual Values (2011 Dollars except where noted)

Item and Size	2040 29	2041 30	2042 31	2043 32	2044 33	2045 34	2046 35	2047 36	2048 37	2049 38	2050 39	s––	2051 40	2051 2052 40 41 41
Filter Back Wash Tank - 150,000 gallons	8	\$0	SO	05	8	\$0	50	50	SC	-	0 \$0	30 30	30 30 30	30 30 30 30
Clear Well - 1.0 MG	8	88	58	50	3 8	38	88	38		58	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0
Muldraugh High Lift (Facility No. 3008) -	÷		90		5	42	ě	ź		e	ec ac	au au	90 90	of De De
Structure	8	8	8	50	8	8	8	8		\$0	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$317.400
Fump A & Convois - 3,500 gpm, 450 mm	3 2			5	52	5 2		5 2		10				
Pump C & Controls - 4,000 gpm, 300 nm	8 8	80	50	8 2	202	50	8 2	50		5 6	02 02 06 06	02 02 06 06	05 05 05 05 05 05 05 05 05 05 05 05 05 0	05 05 05 05 05 05
Filter Backwash Pump & Controls - 5,400 gpm	S 0	\$0	50	8	\$0	\$0	\$0	SO		S	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0
Emergency Generator - 600 KW	\$0	\$0	\$0	8	\$0	50	80	SO		\$0	S0 S0	SO SO SO	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0
Ci Line to Cantonment Area - 24 inch	SO	50	50	50	\$0	\$0	8	05		0\$	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0
Valves														
0.75"	50	\$0	50	\$0	08	\$0	8	25	-	\$0	\$0 \$0	02 00 05	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0
-	SO	\$0	8	0\$	\$0	\$0	\$0		ö	0 \$0	0 30 30	0 30 30 30	10 \$0 \$0 \$0 \$0	10 \$0 \$0 \$0 \$0 \$0
1.25"	\$0	\$0	5	SO	\$0	SO	\$0		SO	02 OS	CC 05 05	05 05 05 05	\$0 \$0 \$0 \$0 \$0	0\$ 0\$ 0\$ 0\$ 0\$ 0\$
1.25*	S 0	\$0	8	\$0	\$0	\$	\$0		8	\$0 \$0	0\$ 0\$ 0\$	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	02 03 05 05 05 05 05
15	\$0	0\$	80	\$0	\$0	8	0\$		so	S0 S0	SO SO SO	S0 S0 S0 S0	\$0 \$0 \$0 \$0 \$0	50 50 50 50 50 50 50 50 50 50 50 50 50 5
1.5"	80	\$0	\$0	30	\$0	8	\$0		50	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	02 05 05 05 05 05	SO SO SO SO SO SO
	\$0	50	\$0	\$0	\$0	8	0\$		\$0	\$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 S0	\$0 \$0 \$0 \$0 \$0 \$0
	8	8	50	50	\$0	\$0	\$0		so	8	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	
	50	6 8	50	50	50	SD SD	200		5 8	50 50	02 02 05 05 05 05 05 05 05 05 05 05 05 05 05		05 05 05 05 De De De	05 05 05 05 05 05 05 05
2.5	50	5	50	\$0	8	\$0	80		\$0	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0
	S	10	\$0	\$	8	\$0	\$0		8	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0
	5 8	50		5 6	5 8		50		38	58	50 50 50 50	50 50 50 50 50 50 50 50 50 50 50 50 50 5	50 50 50 50 50 50	50 50 50 50 50 50
	81	50	5	51	so	\$0	\$0		81	So	50 S0 S0	50 50 50	50 50 50 50 50	50 50 50 50 50 50
	8	\$ 0	\$0	\$0	\$0	\$0	\$0		8	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0
	50	\$0	\$0	8	\$0	\$0	\$0		\$0	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0
	50	5	140	88		1	\$0		8	\$0	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0
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•	\$ 0	50	\$0	\$0	\$0	\$0	\$0		8	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	50 50 50 50 50 50
-	\$0	50	8	\$0	50	\$0	\$0		\$0	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0
	50	5 5	5 8	5 5	56	55	50		8	50	\$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0		
	88	88	88	50	8 8	8 8	88		88	\$0 \$0	30 30 30 30 30	30 30 30 30 30 30 30 30 30 30 30 30 30 3	02 02 02 05 05 05 05	02 03 03 05 05 05 04 04 04 04 04 04
	\$0	50	SO	50	50	8	\$0		8	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0
	50	50	50	8	8	\$0	50		\$0	\$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0
	50	5 5	50	50	5 5	\$ 50	80 50		5 6	5 5 5	20 50 50 50	50 50 50 50 50 50	\$0 \$0 \$0 \$0 \$0 \$0 \$0	20 20 20 20 20 20 20 20 20 20 20 20 20 2
	\$0	8	\$0	\$0	8	\$0	SO		8	\$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0
	50	50	50	50	8	\$0	\$0		50	50 50	\$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0
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rem rued vice Proposal submittat – UP Contract No. 3 P0600-11-C-82 20 8 ecsed (SDC Projects and Revised Capatal Improvement Projivam voltable water Utaty 3v3tam at fort Snok Army installation, technology

Pump A & Controls - 3,500 gpm, 250 HP Pump B & Controls - 4,650 gpm, 360 HP Pump C & Controls - 2,200 gpm, 150 HP Filler Backwesh Pump & Controls - 5,400 gpm Emergency Generator - 600 KW Ci Lune to Centonment Area - 24 Inch Valves 0,75° Structure Sludge Lagoons Mukaraugh High Lift (Facility No. 3008) tem and Size Filtor Back Wash Tank - 150,000 gations Clear Well - 1.0 MG (2011 Dollars except where noted) **Renewals and Replacement Costs** Tabla IV-3 and Residual Values 2054 5555 Table 10. R R 50-year Cost Schedule and Residual Values (Table IV-3 in FPR) 2055 $\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & & \\$ 88888888 5500 2056 \$\$\$\$\$\$\$\$\$\$ 888 2057 \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ 50 S S \$0 \$0 \$120,750 \$0 \$0 \$0 2058 888 000 SO 48 8888 ****** 2060 888 2061 888 of R&R in 2011 \$ 0 \$667,767 \$279,312 \$13,800 \$18,492 \$9,108 \$106,260 -\$5,257 \$954,578 \$58,650 Residual Value of R&R in Nominal \$ 7 \$1,361,459 \$559,659 \$22,061 \$29,561 \$14,560 \$236,308 \$236,308 \$1,155,623 \$130,430

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item and Size 16° 20° 24 24 24 24 1° Van Voorhis BPS - Structure Pump No. 1 & Pressure Tank - 175 gpm, 10 HP Pump No. 2 & Pressure Tank - 175 gpm, 10 HP Pump No. 3 & Pressure Tank - 175 gpm, 10 HP Fire Protection (Dised Fuelds) - 2.000 gpm, 121 Elevated Storage Tanks (Steel) Repairs Tank No. 1 & cathodic protection - 500.000 gaik Tank No. 2 & cathodic protection - 500.000 gaik Tank No. 3 & cathodic protection - 500.000 gaik Tank No. 4 & cathodic protection - 500.000 gaik Tank No. 5 & cathodic protection - 500.000 gaik Tank No. 5 & cathodic protection - 500.000 gaik Tank No. 5 & cathodic protection - 500.000 gaik Tank No. 6 & cathodic protection - 500.000 gaik Tank No. 8 & cathodic protection - 500.000 gaik Tank No. 8 & cathodic protection - 500.000 gaik Tank No. 8 & cathodic protection - 500.000 gaik SCADA SCADA (Pump Controls) New SCADA System 4 7 7 Renewals and Replacement Costs and Residual Values Unknown Dlameter (assume 6") Basham's Corner - Back Flow Preventers Basham's Corner - Back Flow Preventers Pressure Reducing Station Pressure Reducing Station Well Control System Wei Control System Van Voorhis BPS (Facility No. 5898) Yano Range - Valves (2011 Dollars except where noted) rstall switches at Otter creek PS, Central WTP an 0 Maters Neters Pressure Reducing Valves able IV-3 Aeters saham's Comer - Meters utomatic Transfer Switches 0 2012 8 -88 8 8 8 * 88 88888 8888 DIP 2013 50 8 * 88 8 8 8 8 88 2014 \$3,503 8 8 88 8 50 8 8 38 ***** 2015 \$3,503 80 -88 8 S 8 ** ****** 8 2018 \$3,503 ***** ********* 18 g 88 18 8 8 8 ** 2017 \$3,503 8 -** 8 5 5 * 88 SSSSSS SSS 2018 \$3,503 SSSSSSSS SSSSS 8 8 88 5 8 8 8 88 **** 888 2019 \$3,503 8 8 88 -8 8 8 38 88888 888 2020 \$3,943 \$3,949 \$3,949 \$0 \$3,503 ***** 8 -** 3 8 88888 888 * * ** 1021 \$3,503 8 -** \$\$\$ \$\$\$\$\$\$ \$\$\$\$ 5 * -8 11222 \$3,503 ******************* -58 8 -38888 555 8 8 8 \$131,000 2023 \$3,503 ********* 8 8 38 8 8 8 88 88888 888 13 \$3,503 \$9,000 ******** 8 8 5 88 8 8 ** \$\$\$\$\$ \$\$\$ 14 2025 \$7,550 \$0 \$3,503 ***** 8 8 88 8 8 8 -8888888 \$ \$ 5

Example of the eProposal Submittal – UP Contract No. SPUBOD-11-C-8270 Revised SDC Projects and Revoed Capital Improvement Program Possible Water Utwith System at Fort Knox Amity Installation, Remucky Possible Water Utwith System at Fort Knox Amity Installation, Remucky

able 10. R R Sowear Cost Schedule and Residual Values (Table IV-3 in FPR)

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Elevated Storage Tanks (Steel) Repairs Tank No. 1 & cathodic protection - 250,000 galk Tank No. 2 & cathodic protection - 500,000 galk Tank No. 3 & cathodic protection - 500,000 galk Tank No. 5 & cathodic protection - 500,000 galk Tank No. 5 & cathodic protection - 300,000 galk Tank No. 5 & cathodic protection - 500,000 galk Tank No. 7 & cathodic protection - 500,000 galk Tank No. 7 & cathodic protection - 500,000 galk Tank No. 7 & cathodic protection - 500,000 galk Tank No. 7 & cathodic protection - 500,000 galk Tank No. 7 & cathodic protection - 500,000 galk Tank No. 7 & cathodic protection - 500,000 galk Unknown Diameter (assume 6") 4 5 16 20 24 Van Voorhis BPS (Facility No. 5698) Van Voorhis BPS - Structure Pump No. 1 & Pressure Tank - 175 gpm, 10 HP Pump No. 2 & Pressure Tank - 175 gpm, 10 HP Pump No. 3 & Pressure Tank - 175 gpm, 10 HP SCADA (Pump Controls) New SCADA System Basham's Corner - Back Flow Preventers Pressure Reducing Station Pressure Reducing Station Yano Range - Valves Zussman Range (Mt.Edon) - Valves Table IV-3 Renewals and Replacement Costs and Residual Values Well Control System Well Control System (2011 Dollars except where noted) nstall switches at Otter creek PS, Central WTP and 0 SCADA Meters Jasham's Comer - Back Flow Preventers **Jasham's Comer - Meters** leters. hassure Reducing Valves eters stomatic Transfer Switches Fire Protection (Diesel Fueled) - 2,000 gpm, and Size 12 0 0 2026 \$3,503 888888888 5055 50 \$0 S S \$0 8 \$0 5 SS ***** 2027 \$3,603 SSSS<mark>S</mark>SSSS 88888 50 So 50 50 50 50 SO 88 \$\$\$\$\$\$ 500 2028 \$3,603 \$4 500 ******** \$\$\$\$\$\$ 55 8 80 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ 50 50 8 * 18 \$5,240 8888888<mark>88</mark>8 -88 50 -5 88888 888 888888 5 500 8 2030 -5 50 38 so 50 80 5 800 566556 888 203 500 ********* 388888 8 8 88 50 \$0 5 \$0 50 888888 2 2032 8888888888 \$\$\$\$\$\$\$ -88 88 \$0 80 88 \$\$\$\$\$\$ 555 18 8 8 8 2033 SO \$0 88 S 50 50 50 88 88888 885 8 2034 \$0 \$0 88888<mark>8</mark>88 888888 50 88 ŝ 50 \$0 10 10 00 \$ 8 2035 \$\$\$\$\$\$ \$\$\$ S 5 88 22 8 8 12 8 12 2036 \$22,500 88888 \$ \$ \$ S 5 888888888 888888 S 88 -8 \$0 50 88 \$000,000 2037 \$250 \$250 000 5 5 5 5 5 5 5 ***** 3 -3 5 -58 **** 888 80 2038 88 **** \$ 5 5 8 50 8 88 8 5 5 3 2039

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Table 10. R R 50-year Cost Schodule and Residual Values (Table IV-3 in FPR

Table 10, RR SU-year Cost Schooline i

Lem Fued Processissubmittal – UP Contract No. SV0600-11-C42.70 Revised GDC Proy os and Revoed Capital Inprovement Program Hostolic Water Villers Syntem at Lori Kolar Army Initialiation, Kensony

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Pump No. 1 & Pressure Tank. - 175 gpm, 10 HP Pump No. 2 & Pressure Tank. - 175 gpm, 10 HP Pump No. 3 & Pressure Tank. - 175 gpm, 10 HP Fire Protection (Diesel Fuelac) - 2.000 gpm, 121 Elevated Storage Tanks (Steel) Repairs Tank No. 1 & cathodic protection - 250,000 gaik Tank No. 2 & cathodic protection - 500,000 gaik Tank No. 2 & cathodic protection - 500,000 gaik Tank No. 5 & cathodic protection - 500,000 gaik Tank No. 5 & cathodic protection - 500,000 gaik Tank No. 5 & cathodic protection - 500,000 gaik Tank No. 5 & cathodic protection - 500,000 gaik Tank No. 5 & cathodic protection - 500,000 gaik Tank No. 5 & cathodic protection - 500,000 gaik Tank No. 8 & cathodic protection - 500,000 gaik Tank No. 8 & cathodic protection - 500,000 gaik Tank No. 8 & cathodic protection - 500,000 gaik Item and Size 16" 20" 24" 4 5 Yano Range - Valves Unknown Diameter (assume 6") Well Control System Van Voorhis BPS (Facility No. 5898) Install switches at Otter creek PS, Central WTP and SCADA (Pump Controls) New SCADA System Basham's Corner - Back Flow Preventers Basham's Corner - Back Flow Preventers Pressure Reducing Station Meters Meters Zussman Range (Mt.Eden) - Valves (2011 Dotars except where noted) SCADA Pressure Reducing Station Meters Basham's Comer - Meters Pressure Reducing Valves Renewals and Replacement Costs Vell Control System **Automatic Transfer Switches** and Residual Values Van Voorhis BPS - Structure \$0 -\$0 \$0 88888 888 -\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$ SSSSS SSS -* \$8,000 88888 8888 \$3,943 \$3,949 \$3,949 \$3,949 \$0 \$0 S -\$ \$ 50 *** ****** **** ********* * * \$131,000 曾 * \$0000 \$000 So \$ 8 \$\$\$\$\$\$ \$0 \$0 영 g s \$ \$ 5 \$ 888888 8888 SO \$ \$ \$ \$ <mark>\$ \$</mark> \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$0 营 SO \$ 5 5 5 \$4,500

able 10. R R 50-year Cost Schedule and Residual Values (Table IV-3 in FPR

Table IV-3

ham Fued Proposal Submittal – UP Contract No. SP0600-11-C-82.20 Reviseo GDC Projects and Revoed Capital Improvement Program Rouble Water Utitity System at Fort Moor Amily Institution. Sensucry

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Pump No. 1 & Pressure Tank - 175 gpm, 10 HP Pump No. 3 & Pressure Tank - 175 gpm, 10 HP Pire Protection (Diesel Fueld) - 2000 gpm, 12! Elevated Storage Tanks (156e) Repetite Tank No. 3 & esthodic protection - 250,000 gelit Tank No. 3 & cathodic protection - 500,000 gelit Tank No. 3 & cathodic protection - 500,000 gelit Tank No. 3 & cathodic protection - 500,000 gelit Tank No. 4 & cathodic protection - 500,000 gelit Tank No. 5 & cathodic protection - 500,000 gelit Tank No. 6 & cathodic protection - 500,000 gelit Tank No. 6 & cathodic protection - 500,000 gelit Tank No. 7 & cathodic protection - 500,000 gelit Tank No. 7 & cathodic protection - 500,000 gelit Tank No. 7 & cathodic protection - 500,000 gelit Tank No. 7 & cathodic protection - 500,000 gelit Unknown Diameter (assume 5°) Rem and Size 16° 20° 24° Zuseman Range (Mt.Eden) - Velves 1° SCADA (Pump Controls) New SCADA System * * <u>-</u> -Well Control System Van Voorhis BPS (Facility No. 5898) Automatic Transfer Services Install switches at Ottor crook PS, Contral WTP and 0 Basham's Comer - Back Flow Preventers Pressure Reducing Station Meters Metors Yano Range - Valves Table IV-3 SCADA Pressure Reducing Station Basham's Corner - Back Flow Preventers Basham's Corner - Motors Pressure Reducing Valves (2011 Dollars except where noted) **Renewals and Replacement Costs Well Control System** Motors and Residual Values Van Voorhis BPS - Structure 0 43 \$5.240 8 8 8888888<mark>88</mark> 888888 5 8 5 5 88 **** 888 2055 \$0 \$0 \$7,660 8888888888 888888 5000 8 8 8 88 g 8 8 8 88 2056 8 ********** \$60 \$60 \$60 5 8 50 8 ŝ 8 S 88 \$\$\$\$\$\$ *** 2087 8 8 s 30 S 80 \$0 50 30 \$0050 500 2058 ***** 8 SSSSSSSS SSSSS 8 8 88 50 50 80 8 85 8888 2058 8 8 5 88 8 5 8 \$0 **** 888 88 2080 888<mark>8</mark>88888 \$\$\$\$\$\$ 80 5 **88** 8 8 8 80 8 S 888888 \$0 \$0 18 2061 ********* \$ 8 ** 5 8 8 8 50 ***** 2 5555 of R&R in 2011 \$ R&R in Nominal \$ \$10,508 \$1,419 \$1,422 \$1,422 \$6,040 \$13,200 \$1,350 \$3,773 \$62,880 \$3,060 \$ \$0 \$117,534 \$2,519 \$2,522 \$2,522 \$12,750 \$12,287 \$20,381 \$7,827 \$6,239 \$2,354

Firm Fayed Proposal Submittal – UP Constract No. 5190600-11-C-8270 Revised GDC Progetts and Revoce Capital Improvement Program Reliable water Unitery System at Fort Knox Army Installation, Venucky

rable 10. R R 50-year Cost Schedule and Residual Velves (Table IV-3 in FPR)

i um i used Ince Proposal Submital – UP Contract No. 540602-31-C-8470 Rich ved SDC Programs and Rennes Capital Improvement Program Possble Watter Unkin Stytem at Fort Xoos Amy Installation Kamaday

Table 10. R R 50-year Cost Schedulg and Rosidual Valuos (Table IV-3 in FPR)

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Table IV-3 Renewals and Replacement Costs and Residual Values (2011 Dolars except where noted)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1 1	2	3	4	6	8	7	8	1 8	10	11 1	12	13	14
		31,540	31,040	31,040	31,040	31,040	31,040	31,540	31,540	\$1,540	31,340	\$1,540	\$1,540
1	30	35,561	190,05	35,581	\$5,561	199'55	\$5,561	\$5,561	35,581	\$5,561	30,561	\$5,561	\$5,561
		30,120	30.120	30,120	30,120	30,120	30,120	30,120	30,126	30,120	30,120	30,120	30,120
30	50	\$17.741	\$77.741	\$17,741	517,741	\$17,741	\$17,741	\$17,741	\$17,741	\$17,741	\$17,741	\$17,741	\$17,741
\$0	SO	\$43,369	\$43,369	\$43,389	\$43,369	\$43,388	\$43,368	\$43,369	\$43,369	\$43,369	\$43,369	\$43,369	\$43,369
\$0	\$0	\$7,576	\$7,576	\$7,576	\$7,576	\$7,578	\$7.576	\$7,576	\$7,576	\$7,576	\$7.576	\$7,576	\$7,576
\$0	0\$	\$12,355	\$12.355	\$12,355	\$12,355	\$12,355	\$12,355	\$12,355	\$12,355	\$12,355	\$12,355	\$12,355	\$12,355
\$0	\$0	\$21,018	\$21,019	\$21,019	\$21,019	\$21,018	\$21,019	\$21,019	\$21,019	\$21,019	\$21,019	\$21,019	\$21,019
\$0	\$0	\$1,011	\$1,011	\$1,011	\$1,011	\$1,011	\$1,011	\$1,011	\$1,011	\$1,011	\$1.011	\$1,011	\$1,011
\$ 0	\$0	\$459,576	\$459,576	- \$459,576	\$458,576	\$458,578	\$459,576	\$459,576	\$458,576	\$459,576	\$459,576	\$459,576	\$459,576
\$0	\$0	\$352.377	\$362.377	\$352.377	\$352,377	\$352,377	\$352,377	\$352,377	\$352.377	\$352,377	\$352.377	\$352,377	\$352,377
\$0	\$0	\$0	\$0	8	\$0	\$0	\$0	\$0	\$0	\$0	8	\$0	\$0
\$0	\$0	\$168,458	\$168,458	\$168,458	\$168,458	\$168,458	\$168,458	\$168,458	\$168,458	\$168,458	\$168,458	\$168,458	\$168,458
0\$	S 0	\$138,200	\$138.200	\$138,200	\$138,200	\$138.200	\$138,200	\$138,200	\$138.200	\$138,200	\$138,200	\$138,200	\$138,200
8	\$0	\$87,211	\$87.211	\$87,211	\$87,211	\$87,211	\$87,211	\$87,211	\$87,211	\$87,211	\$87,211	\$87,211	\$87,211
8	\$0	\$24,043	\$24,043	\$24,043	\$24,043	\$24,043	\$24,043	\$24,043	\$24,043	\$24,043	\$24,043	\$24,043	\$24,043
8	\$0	\$127,424	\$127.424	\$127,424	\$127.424	\$127,424	\$127,424	\$127,424	\$127,424	\$127.424	\$127.424	\$127,424	\$127.424
5 3									1/1-110 - 1				
8	\$20	\$20	(20)	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20	\$20
8	\$830	\$830	\$830	\$830	\$830	5830	\$830	\$830	\$830	\$830	\$830	\$830	\$830
18	\$527	\$527	\$527	\$527	\$527	\$627	\$527	\$527	\$527	\$527	\$527	\$527	\$527
58	31,404	31,404	31,404	31,404	90A 16	\$1,404	31,404	31,404	31,404	31,404	31,404	31,464	37.464
8 2	3148	3148	3149	STAB	3148	2148	3148	3148	3148	3149	3148	3149	3149
58	40,000	22000	40,000	40,000	80,000	83 AAA	50,000	80,000	83 AAA	40,000	40,000	40,000	40,000
8	50	50	SO	50	50	50	8	50	SO	80	\$0	50	08
8	\$1,846	\$1,846	\$1,846	\$1,646	\$1,848	\$1,648	\$1,648	\$1,648	\$1,646	\$1,646	\$1,646	\$1,846	\$1.646
18	\$354	\$354	\$354	\$354	\$354	\$364	\$354	\$354	\$354	\$354	\$354	\$354	\$354
8	08	50	50	50	50	50	8	\$0	\$0	8	50	50	50
5	985	206	996	985	200	580	280	386	286	986	286	286	386
C-900/PVC ac	n 80)	9	5	5	5		5	8	S	5	5	5	5
51	200	5 6	5 8	5 6	5 6	58	56	5 6	5 8	5 8	5 8	5 8	5
	50		5 1	so		5		5	88	88	50	50	88
S	30	50	So	\$0	50	8	8	S	30	S	8	8	8
So	SO	SO	30	SO	50	8	8	So	S	SO	\$0	SO	8
50	0.8	\$0	\$0	80	So	8	\$0	\$	8	\$0	\$0	\$0	\$0
\$0	50	50	\$0	50	So	\$0	80	\$0	10	\$0	\$0	\$0	05
IPVC ach 80)				6							1211111	8.1	5
50	SO	18	50	50	50	50	50	50	8	\$0	50	18	0
80	30	18	90	50	90	90	50	3	12	2	2	8 2	
20	20	50	\$0	50	18	50	50	50	50	50	50	8	30
0\$0	00	\$0	\$0	SO	8	\$0	50	\$0	\$0	\$0	\$0	8	\$0
\$0	S 0	08	\$0	\$0	8	50	\$0	8	\$0	\$0	\$0	\$0	08
30	18	50	\$0	30	so	5	5	8	50	50	so	50	50
	5 8							5 18	5 6	58	3 8	56	5 8
90	ž	SC OS	20	90	au Ue	50	90	90	90	90	z	90	30
	2012 1 1 50 50 50 50 50 50 50 50 50 50 50 50 50	2012 2013 1 2 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 51 50 51 50 51 50 51 50 51 50 51 50 51 50 51 50 51 50 51 50 51 50 51 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50	2012 2013 2014 1 2 3 1 2 3 50 50 51 50 50 51 50 50 51 50 50 51 50 50 50 51 50 50 50 51 51 50 50 50 50 51 50 50 50 51 51 50 50 51 50 51 50 50 50 51 51 50 51 50 51 51 50 51 50 51 52 50 51 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50 50	2012 2013 2014 2014 2015 1 2 3 4 3 4 1 2 3 4 3 4 1 2 3 4 3 4 1 2 3 4 3 4 1 2 3 3 4 3 3 3 3 3 4 3	2012 2013 2014 2015 2014 2015 2016 1 2 3 3 4 8 8 1 2 3 3 4 8 8 1 2 3 3 4 8 8 1 2 3 3 4 8 8 1 2 3	2012 2013 2014 2015 2016 2016 2017 1 2 3 4 6 6 2017 1 2 3 4 6 2017 2017 10 50 \$1540 \$1517 \$1557 \$1523 \$1517 \$1523 \$15177 \$1523 \$15177 \$1523 \$15177 \$1523 \$15177 \$1523 \$15177 \$1523 \$15177 \$1523 \$15177 \$1523 \$15177 \$15236	2012 2013 2014 2015 2016 2017 2016 50 50 51	2112 2014 2014 2015 2014 2015 2016 2017 2016 2017 2016 2019 <th< td=""><td>2012 2013 2014 2015 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 <th< td=""><td></td><td></td><td></td><td></td></th<></td></th<>	2012 2013 2014 2015 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 2016 2017 <th< td=""><td></td><td></td><td></td><td></td></th<>				

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Firm Fued Proposal Submittal - UP Contrast No.: 5V0600-11-C-82 /b Rewsed SDC Projects and Revised Capital Improvement Projetam Polable Water Utility System at Fort Knox Amy Installation, Kentucky

Table 10. RR 50-year Cost Schedula and Residual Values (Table IV-S in FPR)

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Table IV-3 Renewals and Replacement Costs and Residual Values (2011 Dotars except where noted)

	2006	2000	2000	2020	ABA	0004	0000	0000	TOUG	DADE	2000	1004	2000	1 100
Item and Stee	15	16	17	18	19	8	22 66	22	29	24	25	28	27	2002
6.75" (NA - DIP starts at 4" Diameter)	\$1.540	\$1.540	\$1.540	50	8	50	50	50	50	50	50	8		,
1 " (NA - DIP starts at 4" Diameter)	\$5,561	\$5,561	\$5,561	8	8	\$0	8	5	8	8	\$0	8	8	
1.25" (NA - DIP starts & 4" Diameter)	\$6,128	\$6,128	\$6,128	SO	8	50	5	8	8	8	8	5	50	
1.5" (NA - DIP starts at 4" Diameter)	\$17,741	\$17,741	\$17,741	\$8	8	80	50	8	80	80	50	8	50	
2" (NA - DIP starts at 4" Diameter)	\$43,389	\$43,389	\$43,389	\$ 0	8	\$0	\$0	8	8	80	80	80	8	
2.5" (NA - DIP starts at 4" Diameter)	\$7,578	\$7,576	\$7,576	\$0	8	\$0	S 0	8	8	\$0	80	8	8	
3" (NA - DIP starts at 4" Diameter)	\$12,355	\$12,355	\$12,355	80	\$0	80	\$0	8	50	SO	8	50	8	
4	\$21,019	\$21,019	\$21,019	\$0	\$ 0	\$0	50	\$0	\$	8	8	\$	8	
5" (NA Pipe diameters even numbers - use 6")	\$1,011	\$1,011	\$1,011	8	\$0	\$	S 0	80	8	SS	8	5	\$0	.स.
e .	\$459,576	\$459,576	\$459,576	8	\$0	50	\$0	\$0	\$0	\$0	8	88	8	-
	\$352,377	\$362,377	\$362,377	8	50	\$0	S 0	\$0	\$0	88	\$0	\$8	\$0	
8" - HR Center	\$ 0	\$ 0	\$0	\$0	50	\$0	8	\$0	\$0	\$0	8	8	8	
10"	\$168,458	\$168,458	\$108,458	8	8	\$ 0	8	80	\$0	\$0	80	\$0	50	ा ।
12-	\$138,200	\$138,200	\$138,200	\$0	\$0	80	8	50	8	8	8	\$0	5	~
14"	\$87,211	\$87,211	\$87,211	80	50	\$0	\$0	80	\$0	8	08	80	50	
16"	\$24,043	\$24,043	\$24,043	\$0	50	\$0	\$0	\$0	8	8	8	80	5	-
24"	\$127,424	\$127,424	\$127,424	\$0	\$0	\$	\$	\$	\$0	8	8	S 0	\$0	-
DISTRIBUTION PIPE - DUCTILE IRON														
1" (NA - DIP starts at 4" Diameter)	\$20	\$20	8	\$0	\$0	8	80	\$0	\$0	\$0	80	8	8	
1.25" (NA - DIP starts at 4" Diameter)	\$830	\$830	\$0	\$0	\$0	8	\$0	\$0	\$0	\$ 0	5	\$0	8	1
1.5" (NA - DIP starts at 4" Diameter)	\$527	\$527	50	\$0	\$0	8	\$0	\$0	\$0	5	8	8	8	-
2" (NA - DIP starts at 4" Diameter)	\$1,464	\$1,484	30	8	\$0	8	80	8	8	\$0	\$0	\$	\$0	
3" (NA - DIP starts at 4" Diameter)	\$149	\$149	8	\$0	\$0	\$0	50	5	8	50	8	\$0	\$0	
6.	\$5,098	\$5,098	50	\$	50	\$0	08	\$0	8	8	5	50	50	-
8	\$3,655	\$3,855	\$0	\$0	\$0	\$0	8	\$0	19	\$0	\$	8	\$0	-
æ.	\$0	영	\$ 0	\$0	8	\$0	80	\$0	80	\$ 0	50	8	\$0	-
10"	\$1,646	\$1,646	\$0	8	8	8	8	8	8	\$0	5	8	\$	-
12	\$364	\$354	\$0	5	8	50	8	\$0	8	50	50	8	\$0	-
12"	\$0	\$0	\$0	\$0	8	\$0	S0	8	\$0	\$0	8	\$0	\$0	
	\$90	\$86	50	\$0	80	\$0	80	8	5	\$ 0	\$0	\$0	\$0	-
DISTRIBUTION PIPE - TRANSITE (Replaced with	(í.				
	8	50	\$0	\$0	50	50	80	8	8	0\$	50	\$0	50	Ĩ
1.5	8	\$0	\$0	\$0	50	50	8	\$0	50	50	8	\$8	\$0	
2"	\$0	50	50	8	50	80	30	50	8	50	8	\$0	\$8	
9°	\$0	\$0	50	8	80	\$0	50	8	*	80	8	\$	8	-
6.	\$0	\$	\$0	8	50	50	8	50	\$0	\$0	\$0	\$0	\$0	
a	-	-		8	50	8	18	50	50	10	8	8	80	
10-	80	90	20	50	30	90	8	\$0	50	50	-	80	50	
DISTRIBUTION PIPE - PVC (Replaced with C-90)	;													,
	80	50	50	50	50	50		50	50	8	50	50	50	
	50	80	12	SO	100	5	18	8	50	1	50	SO	50	
4	50	50	8	50	50	50	5	50	\$0	8	5	-	8	
3-	\$0	\$0	8	\$0	SO	8	50	80	8	8	\$	\$0	영	-
4	\$0	\$0	\$0	8	80	8	\$0	\$0	8	8	\$	\$0	5	-
A .	\$0	\$0	\$ 0	80	\$0	8	\$0	8	80	8	80	\$0	8	-
4	\$0	\$0	50	80	SO	\$0	50	50	18	8	8	\$	50	-
4.	\$0	8	\$0	\$0	\$ 0	\$ 0	\$0	\$0	8	\$0	\$0	\$0	8	

firm tracel Micke Proposal Submittal – UP Contract No. : SP0600-11-C-82 70 Revised GDC Projects and Revised Capital Improvement Program Potable Water Utsity System at Fort Knox Army Installation, Rentuctly

Table 10. R R 50-year Cost Schedule and Residual Values (Table IV-3 in FPR)

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Table IV-3 Renewals and Replacement Costs and Realdual Values (2011 Dollars except where noted)

	2040	2041	2042	2043	2044	2045	2048	2047	2048	2049	2050	2051	2052	2053
Item and Size	29	30	31	32	33	34	8	36	37	38	39	40	41	A
0.75" (NA - DIP starts at 4" Diameter)	s e	5 2	58	5 2	58	88	52	500	se	se	56	58	58	s 2
1 05" (NA - DiP starts at 4" Diamatar)	51	5	5	8	51	5	5	81	81	8	6	6	5 6	8 8
1.5" (NA - DIP starts at 4" Diameter)	8	\$0	501	50	5	5	8	81	81	\$0	50	SO	5	50
2" (NA - DIP starts at 4" Diameter)	8	8	\$0	8	50	8	\$ 0	8	0\$	8	8	\$0	50	8
2.5" (NA - DIP starts at 4" Diameter)	8	8	SO	8	50	50	\$0	\$0	S 0	\$0	8	\$0	\$0	\$0
3" (NA - DIP starts at 4" Diameter)	8	8	\$0	8	8	18	8	\$0	So	8	8	18	\$0	8
4" (NA Dine diametars even numbers - use 6")	88	Sec	50	5 5	88	88	8 2	82	88	50	88	88	58	88
8	\$0	8	\$01	5	81	81	81	81	801	81	8	8	50	81
	\$0	\$0	\$	\$	5	8	8	8	80	8	8	8	\$0	8
8" - HR Center	30	50	8	\$0	8	8	\$ 0	\$8	80	영	8	50	\$ 0	S0
10"	\$0	\$0	8	\$0	SO	8	\$0	\$0	\$0	8	\$0	\$0	8	\$0
12*	50	18	38	8		8	8	8	50	\$0	So	\$0	8	\$0
	50			5 2	52	3 2		38	52		5 2	12	3 8	2
10-	5 8	5 2	5 2	58	58	58	5 8	58	9 2	se	5 2	56	58	5 2
DISTRIBUTION PIPE - DUCTILE IRON	1						1		1			1		-
1" (NA - DIP starts at 4" Diameter)	\$0	8	\$ 0	8	8	8	8	80	8	8	\$0	\$0	8	80
1.25" (NA - DIP starts at 4" Diameter)	\$0	8	\$0	\$0	\$	8	80	\$0	18	\$8	8	8	50	\$ 0
1.5" (NA - DIP starts at 4" Diameter)	\$0	8	50	50	50	8	50	50	\$0	\$0	\$0	8	50	\$0
2" (NA - DIP starts at 4" Diameter)	\$0	8	\$0	\$	8	8	8	8	\$0	\$0	\$0	8	\$0	80
3" (NA - DIP starts at 4" Diameter)	50		50	-	1			10	50	8	50	8	10	50
	52	54		56	58	56	56	5 5	56	52	56	52	52	58
	81		50	8	88	88	5	61	8	5	83	8	8	8
10-	8	8	\$0	8	8	\$0	\$0	80	\$0	80	8	80	80	\$0
12"	50		50	3 15	\$0	\$0	\$0	50	SO	\$0	8	50	50	\$0
14	8 8	8 2	50	88	300 SO	02 606,0me	300 SO	940, SO	200,000	02 606,0 46	SO SO	05	0S COC'CHE	500,000
DISTRIBUTION PIPE - TRANSITE (Replaced with	5	•				5	5	5	5	5	5	5	:	1
	52			32	38	3 2	3 2				52		38	3 8
	5	5 4	5	58	5	5 2	58	5	5	58	5	58	52	58
ω, I	50	8	8	5	50	8	50	80	\$	81	8	8	81	\$
6. C.	\$0	8	8	5	\$0	\$0	\$	\$ 0	50	병	\$0	\$ 0	8	50
8	50	18	18	50	50	8	\$0	50	50	\$0	80	\$0	8	\$
10" DISTRIBUTION PIPE - PVC (Renieced with C-90)	đ	*	06	-	06	8	56	06	50	90	50	\$0	8	8
1.5"	30	5	8	8	SO	8	50	50	80	50	50	50	ß	8
2	8	8	50	8	5	8	8	8	8	8	So	8	8	8
3	S 0	8	50	8	8	5	80	8	8	8	\$	80	\$ 0	\$0
3.	\$0	8	50	50	SS	8	8	\$0	8	\$0	\$0	8	\$ 0	8
4.	\$ 0	8	\$0	\$0	\$0	5	80	\$ 4	544	544	\$44	\$44	\$44	S44
	\$0	8	8	\$0	8	50	\$0	\$0	50	\$0	\$0	8	\$0	8
	50			50	3 23		5	38	3	80	So	8	58	8
	ne.	*	ee.		*	30	e.	2	e e	en en	ue	8	ž	50

-25 March 2016 Taxes Jot 6

Tablo IV-3		aun IV. Nn av	-year Lost aut	DUUM AND NO.	I some Among L	44 NB 6-41 000	10			
And Residual Values (2011 Dollars except where noted)										
liem and Size	2054	2055	2058	2057	2068	2059	2060	2061	Residual Value	Residual Value of R&R in Nominal S
0.75" (NA - DIP starts at 4" Diameter)	02	30	8	50	\$0	\$0	\$0	\$0	\$4,620	\$5,402
1 " (NA - DIP starts at 4" Diameter)	\$0	\$0	8	50	\$0	08	50	50	\$16,683	3 \$19,506
1.25" (NA - DIP starts at 4" Diameter)	SO	SO	8	50	\$0	8	50	50	\$18,383	\$21,495
1.5" (NA - DIP starts at 4" Diameter)	50	\$0	\$0	50	\$0	8	\$0	SO	\$53,222	\$62,231
2" (NA - DIP starts at 4" Diameter)	\$0	80	\$0	\$0	\$0	8	50	\$0	\$130,106	3 \$152.131
2.5" (NA - DIP starts at 4" Diamster)	S 0	0\$	\$0	\$0	\$0	8	50	\$0	\$22,725	3 \$26,576
3" (NA - DIP starts at 4" Diameter)	SO	50	50	50	50	8	18	50	\$37.06	5 \$43,339
		50	50	50	5 40	5 15	50		20,582	5 573,728
3 (INA File distribute over numbers - way o)	SO	8 2	50	80	8	5	8	50	\$1,378,728	3 S1.612.098
8	S	8	\$0	50	50	\$0	\$0	SO	\$1,057,132	\$1,236,067
8" - HR Center	\$0	台	\$0	\$0	\$0	\$0	\$0	\$0	\$	0\$
10	\$0	8	\$0	\$0	\$0	S 0	0\$	0\$	\$505,375	3 \$590,914
127	80	8	08	SO	SO	05	\$0	50	\$414,585	3 \$484,776
14	50	8	50	50	18	50	50	so	\$261,63	2 \$305,917
24*	8 6	500		50	5 8	56	5	2 4	S12.121	0 904,337
DISTRIBUTION PIPE - DUCTILE IRON					1					
1" (NA - DIP starts at 4" Diamotor)	\$0	\$0	0\$	S 0	8	S 0	\$0	\$0	S	\$ \$63
1.25" (NA - DIP starts at 4" Diameter)	SO	0\$	20	50	8	50	08	\$0	\$2.24	2 \$2,576
1.5" (NA - DIP starts at 4" Diameter)	50	50	50	50	3 18	50	50	3 15	51,42	2 S1,634
A (NA - Did state at 4" Diamotor)	5 8	6 60	A 60	*		5 8	6	58	a	1 240,441
0	8	\$0	\$0	\$0	So	8	50	8	\$13,765	\$ \$15,818
8.	8	\$0	\$0	\$0	\$0	50	\$0	8	\$9.881	9 \$11,340
8	18	50	SO	\$10.432	\$10,432	\$10,432	\$10,432	\$10,432	\$50.07	5 \$113,312
14	8 2	5 6		58	58	58	52	50	20.44	30,1U0
12	\$45.303	\$45.303	\$45.303	\$45.303	\$45.303	8	50	50	\$543,634	\$1,070,519
14"	S O	\$0	0\$	8	\$0	\$0	\$0	\$0	\$23	2 \$267
DISTRIBUTION PIPE - TRANSITE (Replaced with			ł	5		5				
	5	50		5 19	50	A 46	80	5 8		
10	100	50	20	88	80	80	5 6	8 8		50
3	8	30	\$0	8	SO	80	81	SO	s	50
6	SO	\$0	SO	50	\$0	SO	8	SO	ş	8
2	SO	30	0 S	50	\$	8	8	58		18
10 DISTRIBUTION PIPE - PVC (Replaced with C-90)	*	90	0e	90	5	an an	2	90		
1.5	SO	\$25,468	\$26.466	\$25,466	\$25,466	\$25,466	\$25,468	\$25,466	\$167.584	\$372,639
2*	0\$	\$0	0\$	0\$	\$17.117	\$17,117	\$17.117	\$17,117	\$66,411	3 \$151,594
3	\$0	SO	\$0	\$788	\$788	\$788	\$788	\$788	\$3,78	4 \$8,563
3	SO	\$0	SO	50	\$1,005	\$1,005	\$1,005	\$1,005	\$3,69	8 \$8,901
	544	644	544	544	\$44	544	544	\$44	800	8 \$1,178
b , b		2104	2106	2012	2106	2102	2012	2106	34,02	4 300, 800 300, 800
	\$0	\$0	so	50	\$11.878	\$11,975	\$11,675	\$11.676	\$45,298	B \$103,396
										11 12 12 12 12

i em 8 ues Procé Propositivuonimai – UP Contra de No. 3 Polido-11-C-42/0 Resued 550 Properta nuo Reveed Cudval Inscientement Program Poliable Wyder Unifin System et / Ori Koox Army Installation, ke mucky

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Order Statistical Very Version (217) Outra very Very Very (217) Outra very Very Very (217) Outra very Very Very Very (217) Outra very Very Very Very (217) Outra very Very Very Very Very Very Very Very V	Table IV-3 Bonowale and Bonlanamant Costs												
International 101 201 301 301 100 <	and Residual Values (2011 Dolars except where noted)												
B S	ham and Size	2012	2013	2014	2015	2016	2017 B	2018	2019 A	2020	2021	2022	2023
C Sinter Construction Sinter Constructin Constructin Constructin Sinter Construction<	6 ,	50	50	50	\$0	8	8	50	8	8	\$0	8	8
Constraint Constra		58	58	58	58	58	5 5	5 8	58	58	58	68	58
Product Product <t< td=""><td>2,0</td><td>85</td><td>88</td><td>88</td><td>88</td><td>88</td><td>82</td><td>88</td><td>88</td><td>88</td><td>88</td><td>50</td><td>88</td></t<>	2,0	85	88	88	88	88	82	88	88	88	88	50	88
Ber Sint		81	8	81	81	81	81	81	81	8	8	81	\$0
B S		8	8	8	8	\$0	5	8	8	\$0	\$0	8	50
Be Sector		\$0	\$0	\$0	8	\$0	50	\$0	\$0	\$ 0	50	8	8
C Single Si		100	8	5	; 2	18	18	18	18	8	8	. 8	50
o o	19	52	52	52	52	52	58	5 8	58	56	56	5	50
NO. SO	10 [°]	88	88	88	88	82	88	88	88	87	88	88	888
1/2 50	10"	\$8	8	8	\$ 0	8	50	\$ 0	\$0	80	8	8	\$0
PVC SD	12" Zussman Range (Mt.Eden) - Pipe Material -	\$0	\$0	8	8	\$0	8	50	50	\$0	8	50	\$0
1.5 50		\$0	\$0	6	\$0	80	50	50	50	20	5	50	50
1.5* 50 5	-	\$ 0	S 0	8	80	80	8	8	\$0	80	\$0	\$0	\$0
• •	1.5	\$0	58	58	88	5 5	38	5 5	5 5	38	3 2		50
Zuannan Range (MLEden) - Pige Material - PC 50										1			
Ar SO SO<	Zussman Range (Mt.Eden) - Pipe Material - PE 1	50	8	50	8	50	50	8	5	8	5	30	5
Yuno Range - Pipe Material - PVC 50	4.	\$0	8	80	80	8	\$	\$0	\$0	8	\$0	8	8
2 50 </td <td>Yano Range - Pipe Material - PVC</td> <td>ł</td> <td>;</td> <td>;</td> <td>;</td> <td>ł</td> <td>;</td> <td>;</td> <td>;</td> <td>1</td> <td>;</td> <td>1</td> <td>ł</td>	Yano Range - Pipe Material - PVC	ł	;	;	;	ł	;	;	;	1	;	1	ł
Lashman Conver- Fige Material - PVC 50		20	50	50	50	8	50	50	50	50	50	30	8
Land Statut Statut <td>Beshem's Comer - Pipe Material - PVC - 55*</td> <td>5</td> <td>6</td> <td>5</td> <td>5</td> <td>5</td> <td>5</td> <td>s</td> <td>ŝ</td> <td>5</td> <td>\$</td> <td>5</td> <td>9</td>	Beshem's Comer - Pipe Material - PVC - 55*	5	6	5	5	5	5	s	ŝ	5	\$	5	9
Ber File HYDRANTS S0	24.1 C 21.1	5	5 2	5 6	52	5 8	58	5 2	58	58	52	58	58
FIRE HYDRANTS S0 S0 S0 S142.369		20		88	88	68	8	5	5	88	5	53	88
Fire Hydrants \$0 \$0 \$0 \$142,369	FIRE HYDRANTS		19	((0		10			8			18
Frei Hydrants 50	Fire Hydrants	\$0	80	8	\$142,369	\$142,369	\$142,369	\$142,389	\$142,368	\$142,369	\$142,369	\$142,369	\$142,369
Fire Hydranis S0 S24,195 <	Fire Hydrants	50	8	\$35,563	\$35,583	\$35,563	\$35,563	\$35,563	\$35,563	\$35,563	\$35,563	\$35,563	\$35,583
Free Hydranis \$0 \$0 \$0 \$292	Fire Hudrants	5	52	924,180	03 CR1,H2&	901, MG	03,476	924,190	Cat '576	241,192	08 081'1576	\$4,190	\$24, 193
Free Hydrants \$0	Fire Hydrants	8	8	8	\$292	\$282	\$282	\$292	\$292	\$292	\$292	\$292	\$282
Fre Hydrants \$0	Fire Hydrants	\$0	8	\$8	8	8	50	8	80	8	08	\$0	8
Operation & Maintenance Building \$425,000 \$0 <td>Fire Hydrants</td> <td>\$0</td> <td>50</td> <td>\$0</td> <td>8</td> <td>8</td> <td>50</td> <td>S0</td> <td>80</td> <td>8</td> <td>\$0</td> <td>\$0</td> <td>8</td>	Fire Hydrants	\$0	50	\$ 0	8	8	50	S 0	80	8	\$0	\$0	8
Vehicles/Equipment Stel0,000 \$0	Operation & Maintenance Building	\$425,000	\$0	\$0	\$ 0	8	\$0	50	80	8	\$0	8	8
Water Lab Equipment - Backhee \$117,300 \$0	Vehicles/Equipment	\$180,000	80	80	\$0	8	\$0	80	\$180,000	50	\$0	30	8
If roots, and Furniture S85,500 S0 <	Water Lab Equipment + Backhoe	\$117,300	\$0	8	8	8	8	8	80	8	\$0	\$117,300	8
Admin Equipment, Power Equipment \$59,350 \$0	Toots, and Furniture	\$85,800	80	\$	\$0	8	8	80	8	8	\$0	88	8
Subtrat=2011\$ \$998,500 \$1,828 \$1,896,577 \$2,109,138 \$1,015,613 \$1,762,338 \$4,740,378 \$1,705,178 \$1,693,338 \$1,871,069 Subtrat=2011\$ \$1,013,965 \$14,071 \$1,828,903 \$2,144,104 \$3,144,068 \$1,477,658 \$1,793,226 \$4,823,461 \$1,758,065 \$1,723,016 \$1,993,862 General and Administrative Overhead=2012\$ \$44,814 \$619 \$84,872 \$137,020 \$12,202 \$78,343 \$75,813 \$32,770	Admin Equipment, Power Equipment	\$56,350	50	\$0	80	8	\$56,350	\$0	\$0	\$0	\$0	\$56,350	18
Subbolan-20125 \$1,013,950 \$14,071 \$1,926,903 \$2,146,104 \$3,114,086 \$1,647,636 \$1,743,226 \$4,623,461 \$1,750,665 \$1,723,016 \$1,903,862 [General and Administrative Overhead-2012\$ \$44,814 \$619 \$64,872 \$94,428 \$137,020 \$61,286 \$76,902 \$212,232 \$76,843 \$75,813 \$83,770	Sublotal-2011\$	\$998,500	\$13,829	\$1,895,677	\$2,109,138	\$3,080,458	\$1,815,813	\$1,702,338	\$4,740,378	\$1,705,179	\$1,683,338	\$1,871,069	\$6,004,205
	Subtral-20125	\$1,013,985	\$14,071	\$1,928,903	\$2,146,104	\$3, 114,098	\$1,847,638	\$1,793,226	\$4,823,461	\$1,735,085	\$1,723,016	\$1,903,862	\$6, 108, 440
		544.814	5619	\$84,872	\$84,428	\$137,020	\$81,286	\$78,902	\$212,232	\$78,343	\$75,813	\$83,770	\$288,815

From Hoad Price Proposal Submittal - UP Contract No. SP0600-11-C-82 X0 Revived SDC Proyech and Reveed Capital Improvement Program Possole Water Uniter System at Fort Knox Amy Insaliation, Remucky

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			Table 1	10. R R 50-vea	r Cast Scheduk	e and Residua	Values (Table	IV-3 In FPR)						
Table IV-3														
Renewals and Replacement Costs and Residual Values														
(2011 Losiers except where noted)														
tem and Size	2026	2027	2028	2028 18	2030 19	2031	2032	2033	2034	2035	2036	2037	2038	2039
8.61	88	\$0 \$0	\$ 0 \$ 0	88	88	88	\$0	88	\$	\$0	88	88	\$ 0	
4 01	88	5 0	88	88	88	80	8 8	88	88	88	88	88	88	
	8	5	8	8	8	8	8	8	8	8	8	8	8	
	88	50	8 8	영원	50	5	50	8 8	88	88	88	58	88	
α ι Ι	8	8	8	8	8	8	8	80	8	8	8	8	8	
49 00	5 5	88	5 5	88	56	5 5	88	30 30	88	88	88	88	88	
10	58	58	58	58	58	58	58	58	58	58	58	58	58	
12	8	8	81	\$ 0	5	8	\$0	\$0	8	8	\$	8	8	
Zussman Range (Mt.Eden) - Pipe Material -														
-	\$0	\$0	8	\$ 0	\$0	\$0	\$ 0	\$0	\$0	50	50	8	8	
1.5"	88	88	8 8	8 8	55	88	\$ 0	8 8	88	8 8	8 8	88	88	
4	90	De	a U	ac ac	De	ž	ec.	ac ac	8	26	an	ą	0¢	
Zussman Range (Mt.Eden) - Pipe Material - PE				5		;	•		5	1	:	5		
	88	88	88	\$0 \$0	88	% 8	80	\$ 8	88	88	58	88	8 8	
Yano Range - Pipe Material - PVC	3	3	5	5	5	5	5	\$	5	5	5	5	5	
< Basham's Comer - Pipe Material - PVC	ŧ	2	ę	2	2	-	2	ę	2	ę	2	2	ę	
125	8	50	8	30	8	5	\$0	80	8	8	8	8	8	
	88	58	50	50	88	88	88	88	88	88	88	88	88	
FIRE HYDRANTS								5	;		5	•	:	
Fire Hydrants	88	8 8	5	5	5	8 8	500	88	5	88	8 2	88	5	235
Fire Hydrants	81	8	\$8	8	\$	\$	\$0	\$	8	8	8	8	80	12
Fire Hydrants	\$4,081	\$4,081	\$4,081	\$4,081	\$4,081	\$4,081	58	5 5	5 5	58	38	88	58	
Fire Hydrants	8	50	5	\$583	\$583	\$583	\$593	\$583	\$583	\$583	\$583	\$583	\$583	
Fire Hydrants	\$0	50	50	8	\$15,741	\$15,741	\$15,741	\$15,741	\$15,741	\$15,741	\$15,741	\$15,741	\$15,741	\$15.
Operation & Maintanance Building	\$0	8	\$	8	8	8	18	50	8	8	8	8	8	
VenKies/Equipment + Rection	3160,000	5 2	5 8	80	5	5 8	\$117 300 \$0	000,0016	5	8 2	88	58	5	
Toola, and Furniture	8	\$85,800	8	50	5	8	8	8	8	8	8	8	8	
Admin Equipment, Power Equipment	8	\$56,350	8	\$0	S 0	80	\$56,350	\$0	\$ 0	8	8	\$56,350	\$0	
Subbita-2011\$	\$1,675,001	\$1,703,076	\$1,551,797	\$142,154	\$20,405	\$20,405	\$189,974	\$317,074	\$16,324	\$16,324	\$38,824	\$1,034,824	\$85,324	\$420
Seneral and Administrative Overhead-2012\$	\$74,992	\$76,248	369,476	\$6,364	340,103	acu,ros 2014	9190,JUN	\$14,198	\$731	\$731	\$1,738	\$48,335	\$3,820	\$18
Total Cost-2012\$	\$1,779.350	\$1,808,174	\$1.648.471	\$151.010	\$21 A78	\$21.676	\$201 ANB	\$19A A27	\$17 941	PW 243	\$41.243	S1 099 398	\$90,640	\$446

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		Table 1	O. RR SO-year	Cost Schedule	and Residual	Values (Table I	V-3 in FPR)						
2040	2041	2042	2043 32	2044	2045	2048	2047	2048	2049	2050	2051	2052	A 28
\$	8	\$8	8	\$22,753	\$22,753	\$22,753	\$22,783	\$22,753	\$22,753	\$22,753	\$22,763	\$22,753	\$22.7
8 8	8 8	58	88	88	58	8 8	88	\$8 \$8	88	8 8	58	88	\$18,8
8	8	88	88	8	8	8	88	8	\$0	8	8	8	
56	5 8	88	5	\$25,868	\$25,888	\$25,868	\$25,869	\$25,868	\$25.868	\$25,868 \$0	\$25.888	\$25.86a	\$25.86
81	88	88	88	50	50	50	\$36,788	\$36,789	\$36,789	\$36,789	\$36,789	\$36,789	\$36,78
8	\$0	\$ 0	8	\$ 0	8	\$0	\$0	80	\$0	8	8	50	
80	8	5	8	8	58	8	8	50		8	18	8	. 47
s	8 8	88	5	\$8,842	\$8,842	\$8,842	\$6,842	\$8,842	\$6,842	\$6,842	\$6,842	\$6,842	88. 24.
8	88	8	8	5	5	88	8	8	3	5	5	5	
92	ž	5	ŧ	40,000	40,000	90,000	48,800	40,000	99,90V	40,000	40,000	90,900	49,00
85	5	50	5	5	5	8	\$177	\$177	\$177	\$177	\$177	\$177	51
8	81	8	81	81	8	81	\$8	\$	8	8	\$0	\$617	\$61
8 8	8 8	88	8 8	55	\$ 50	8 8	\$65,325	\$55,325	\$55,325	\$55,325	\$65,325	\$108	\$65,32
			11	1		ł.	(ĺ				
88	58	88	88	88	88	88	58	88	88	88	88	\$25,058	\$25,0
			-			-	** 000	e. 000			-		
\$4,600	\$4,800	54,800	\$4,800	\$4,800	34,000	34,000	34,000	34,000	94,800	34,000	\$4,000	\$4,000	\$4,00
\$0	\$0	8	\$0	\$0	8	\$0	\$0	8	8	\$ 0	8	8	44
8	88	88	8	8	38	8	8	8	88	8	8	; 8	. 40
ð	2	2	ž	ž	٤	ę	ę	ę	ę	ę	ş	ą	
\$192,390	\$192,390	\$182,390	\$192,390	\$192,390	\$192,390	\$192,390	\$192,390	\$192,390	\$192,390	58	58	58	
\$24,195	\$24, 195	\$24,195	\$24,195	\$24,185	\$24,185	\$24,195	\$24,195	\$24,195	88	88	88	88	
\$0	8	S 0	0	30	\$ 0	\$0	\$4,081	\$4,081	\$4,081	\$4,081	\$4,081	\$4,081	\$4,08
\$292	\$292	\$292	\$292	\$292	\$292	\$292	\$282	\$282	\$292	8	8	8	
58	5 19	5 2	58	5 8	56	58	5 8	56	58	58	3 8	5 6	
8	81	8	8	8	8	81	8	8	\$0	81	81	81	
\$180,000	8	80	\$0	8	\$0	\$	\$180,000	8	\$	5	8	8	-
58	5 5	\$117,300	5 8	58	58	58	5 18	5 5	5 8	58	58	\$117,300	
88	88	\$56,350	88	S 0	58	8	\$58,350	50	88	88	88	\$56,350	40.4
\$437,039	\$257,039	\$582,414	\$257,039	\$376,784	\$379,625	\$367,784	\$700,550	\$793,575	\$470,587	\$324,481	\$211,761	\$796,505	\$1,076,30
\$444,699	\$261,544	\$592,622	\$261,544	\$383,388	\$16 000	\$18 488	\$712,828	\$807,484	\$478,815	\$330,148	\$215,472	\$810,465	\$1,085,16
\$464,286	\$273,052	\$618.697	4070 080							P014 874	COD VCC	404 404	E4 143 35
	2040 29 29 30 50 50 50 50 50 50 50 50 50 50 50 50 50	2040 2041 29 30 50 50 50 50 <t< td=""><td>2040 2041 2041 2042 29 30 31 31 50 50 50 50 50 50 50 50 50 50 50 50 <td< td=""><td>2040 2041 2041 2042 2043 30 31 32 29 30 31 32 30 31 32 50</td><td>Table 10. RR S0-year Cest Schedule 2040 2041 2042 2043 2044 32 33 30 30 31 32 33 33 33 50</td><td>2000 29 2011 31 2012 31 2013 32 2014 32 <t< td=""><td>2040 2041 2042 2043 2044 2045 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td></th<></td></t<></td></td<></td></t<>	2040 2041 2041 2042 29 30 31 31 50 50 50 50 50 50 50 50 50 50 50 50 <td< td=""><td>2040 2041 2041 2042 2043 30 31 32 29 30 31 32 30 31 32 50</td><td>Table 10. RR S0-year Cest Schedule 2040 2041 2042 2043 2044 32 33 30 30 31 32 33 33 33 50</td><td>2000 29 2011 31 2012 31 2013 32 2014 32 <t< td=""><td>2040 2041 2042 2043 2044 2045 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td></th<></td></t<></td></td<>	2040 2041 2041 2042 2043 30 31 32 29 30 31 32 30 31 32 50	Table 10. RR S0-year Cest Schedule 2040 2041 2042 2043 2044 32 33 30 30 31 32 33 33 33 50	2000 29 2011 31 2012 31 2013 32 2014 32 2014 32 <t< td=""><td>2040 2041 2042 2043 2044 2045 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td></th<></td></t<>	2040 2041 2042 2043 2044 2045 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td></th<>						

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	1	bla 10. R R 50	-year Cost Scho	edule and Resi	dual Values (T	able IV-3 in PP	2			
Table IV-3 Renewals and Replacement Costs and Residual Values										
(2011 Dollars except where noted)										
tiam and Site	2054	2055	2056	2057	2068	2059	2060	2081	Residual Value	Residual Value of
6"	\$22,753	\$22,753	\$22,753	\$22,783	\$22,753	\$0	50	50	\$273,030	\$537,649
0	\$18,845	\$18,845	\$18,845	\$18,845	\$18,845	\$18,845	\$18,845	\$18,845	\$158,039	\$341,034
. e	\$0	\$7,183	\$7,183	\$7,183	\$7,183	\$7,183	\$7,183	\$7,183	\$47,264	\$105,108
e .	\$0	8	8	\$15,718	\$15,718	\$15,718	\$15,718	\$15,718	\$75,444	\$170,719
19	SO	50	8	\$0	\$12,415	\$12,415	\$12,415	\$12,415	\$48,169	\$108,950
	\$25,868	\$25,868	\$25,868	\$25,868	\$25,868	\$0	50	8	\$310,414	\$611,200
¥ 0	330,788	847 018	S-30, / 08	330,/08	847 018	930, /08	330, / da	330,708	84/4,0/B	3804,542
a , 6	50	50	5	35,632	35,632	\$5.632	\$5.632	35.632	\$27 032	SA1 189
œ, 1	\$	8	81	50	\$11,785	\$11,785	\$11,785	\$11,785	\$45,847	\$104.194
4	\$6,842	\$6,842	\$6,842	\$6,842	\$6,842	\$0	80	8	\$82,104	\$161,679
101	30	\$466	\$406	\$466	\$468	\$486	\$466	\$466	\$3,069	\$6,825
12	\$9,980	\$9,980	\$9,980	\$9,980	\$9,980	\$0	8	\$0	\$119,760	\$235,830
2usuman Kange (MLEGen) - Pipe Material - PVC										
-	\$177	\$177	\$177	\$177	\$177	\$177	\$177	\$177	\$2,285	\$4,740
	\$617	\$817	\$817	\$617	\$817	\$617	\$617	\$817	\$5,611	\$12,158
1.5	S108	SEE 325	SEC 325	855 325 BULS	9015	BOLS YAS	BOLS WWS	865 335	8713 60A	\$1 480 52,088
Vistoman Danna (Nº Edan) - Dina Matarial - DR						8	2		3 9	
1°	\$1,789	\$1,789	\$1,789	\$1,789	\$1,789	\$1.789	\$1,789	\$1,789	\$18,277	\$35,207
4	\$25,058	\$25,058	\$25,058	\$25,058	\$25,058	\$25,058	\$25,058	\$25,058	\$228,028	\$494,058
Yano Range - Pipe Material - PVC		5	3	5	2	8	5	5	***	
A Basham's Corner - Pipe Material - PVC	94,000	ec.	8	e	a	8	ž	2	949,000	107'1 86
1.25"	\$121	\$121	\$121	\$121	\$121	\$121	\$121	\$121	\$904	\$1,992
Ņ	\$110	\$110	\$110	\$110	\$110	\$110	\$110	\$110	\$821	\$1,811
9	\$631	\$631	\$631	\$831	\$631	\$631	\$831	\$631	\$4,698	\$10,358
FIRE HYDRANTS	1	1	;	ł	ľ		ł			
Fire Hydrants		88	56	56	52	38	88		\$004,120	\$1,100,038
Fire Hydrants	5	5	5	5	5	88	5 2	5 2	\$72.584	\$125.488
Fire Hydrants	\$4,081	\$4,081	\$4,081	\$0	\$0	8	8	50	\$25,302	\$50,260
Fire Hydrants	\$ 0	\$0	\$0	\$0	\$0	8	50	8	1865	\$1,743
Fire Hydrants	\$583	\$593	\$683	\$583	\$583	\$583	\$583	\$583	\$4,011	\$8,843
Fire Hydrants	5	\$15,741	\$15,741	\$15,741	\$15,741	\$15,741	\$15,741	\$15.741	596,965	\$215,636
Operation & Maintenance Building	50	3 8	8		50	8	5	5 6	\$147,333	\$147,333
Water Lab Emulament + Reckhoa	200,0016	58	50			sa	50	5 2	S11 730	\$23 FO3
Tools, and Furniture	50	8	8	\$85,600	5	8	50	50	\$62.773	\$137.195
Admin Equipment, Power Equipment	\$	8	8	\$58,350	8	\$	8	8	\$11,270	\$24,631
Subbala-20115	\$577.112	\$369.958	\$352,408	\$523.659	\$626.435	\$324.940	\$324.940	\$324,940	\$13,312,361	\$21.132.941
Subtotal-20125	\$587,227	\$366,267	\$358,584	\$532,837	\$636,397	\$330,635	\$330,635	\$330,635	a second second second	and the second second
General and Administrative Overhead-2012\$	\$25,838	\$16,118	\$15,778	\$23,445	\$28,001	\$14,548	\$14,548	\$14,548		
Total Cost-2012\$	\$613,065	\$382,383	\$374,362	\$556,282	\$684,388	\$345,183	\$345,183	\$345,183		

Firm Face Proposal Super Ital - UP Contract No. 500600-11-C-82-10 Revised SDC Projects and Revised Capital Improvement Program Pouble Water Unity System at Fort Knox Amy Initialiation, Kentudy

Firm Fixed Price Proposal Submittal – UP Contract No . SP0600-11-C-8270 Revised ISDC Projects and Revised Capital.Improvement Program Potable Water Utility System at Fort Knox Army Installation, Kentucky

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
T	Project				Cash Flow (Cu	rrent Year \$)*				R&R
Contract Year	Costs 20125	R&R Revenues	Project	Net	Beginning Balance	Average Balance	Interest	Interest Expense	Ending Balance	Revenu 20095
1	1.058.580	1,412,248	1,058,580	353,668	-	176.834	3.537	-	357,205	1,340,5
2	14,691	1,412,248	14,948	1,397,300	357.205	1,055,855	21,117	-	1,775,622	1.317.4
3	2,013,774	1,412,248	2,084,983	(672,735)	1,775,622	1,439,255	28,785	-	1,131,673	1,294,7
4	2,240,533	1,412,248	2,360,417	(948,169)	1,131,673	657,588	13,152	-	196,656	1,272,4
5	3,251,118	1,399,315	3,485,107	(2,085,792)	196,656	(846,240)	-	46,543	(1,935,679)	1,239,0
6	1,928,934	1,423,841	2,104,004	(680,164)	(1,935,679)	(2,275,761)		125,167	(2,741,010)	1,239,
7	1,872,128	1,448,796	2,077,832	(629,036)	(2,741.010)	(3,055,528)	0.00	168,054	(3,538,100)	1,239,
8	5.035,693	1,474,189	5,686,961	(4,212,772)	(3,538,100)	(5.644,486)	10 - 0	310,447	(8,061,319)	1,239,
9	1,811,408	1,500,026	2,081,532	(581,505)	(8,061,319)	(8,352,071)		459,364	(9,102,188)	1,239,
10	1,798,829	1,526,317	2,103,306	(576,989)	(9,102,188)	(9,390,682)		516,488	(10, 195, 665)	1,239,
11	1,987,632	1,553,069	2,364,801	(811,732)	(10,195,665)	(10,601,531)	(-)	583,084	(11,590,481)	1,239,
12	6,378,255	1,580,289	7,721,581	(6,141,292)	(11,590,481)	(14,661,127)	*	806,362	(18,538,135)	1,239,
13	1,819,489	1,607,986	2,241,298	(633,312)	(18,538,135)	(18,854,791)	0.50	1,037,013	(20,208,460)	1,239,
14	1,911,341	1.636,169	2,395,709	(759,540)	(20,208,460)	(20,588,230)	-	1,132,353	(22,100,353)	1,239,
15	1,779,350	1,664,846	2,269,359	(604,514)	(22,100,353)	(22,402,610)	-	1,232,144	(23,937,010)	1,239,
16	1,809,174	1,694,025	2,347,838	(653,813)	(23,937,010)	(24,263,916)	-	1,334,515	(25,925,338)	1,239,
17	1,648,471	1,723,716	2,176,781	(453,065)	(25,925,338)	(26,151,871)	-	1,438,353	(27,816,756)	1,239,
18	151,010	1,753,927	202,901	1,551,026	(27,816.756)	(27,041,243)	-	1,487,268	(27,752,999)	1,239
19	21,676	1,784,668	29,635	1,755,033	(27,752,999)	(26,875,482)	-	1,478,152	(27,476,118)	1,239
20	21,676	1,815,947	30,155	1,785,793	(27,476,118)	(26,583,221)	-	1,462,077	(27,152,402)	1,239
21	201,809	1,847,775	285,665	1,562,110	(27,152,402)	(26,371,347)	-	1,450,424	(27,040,716)	1,239
22	336,827	1,880,161	485,143	1,395,018	(27,040,716)	(26,343,208)	-	1,448,876	(27,094,575)	1,239
23	17,341	1,913,114	25,415	1,887,699	(27,094,575)	(26,150,726)		1,438,290	(26,645,166)	1,239
24	17,341	1,946,645	25,860	1,920,785	(26,645,166)	(25,684,773)	-	1,412,663	(26,137,044)	1,239
25	41,243	1,980,763	62,582	1,918,181	(26,137,044)	(25,177,953)	-	1,384,787	(25,603,650)	1,239
26	1,099,398	2,015,479	1,697,466	318,014	(25,603,650)	(25.444,643)		1,399,455	(26,685,092)	1,239
27	90,640	2,050,804	142,400	1,908,404	(26,685,092)	(25,730,890)		1,415,199	(26, 191, 886)	1,239
28	446,695	2,086,748	714,083	1,372,665	(26,191,886)	(25,505,554)	-	1,402,805	(26,222,027)	1,239
29	464,266	2,123,322	755,180	1,368,142	(26,222,027)	(25,537,955)	-	1,404,588	(26,258,472)	1,239
30	273,052	2,160,537	451,934	1,708,603	(26,258,472)	(25,404,170)	=	1,397,229	(25,947,098)	1,239
31	618,697	2,198,404	1,041,966	1,156,438	(25,947,098)	(25,368,879)	-	1,395,288	(26, 185, 948)	1,239
32	273,052	2,236,935	467,915	1,769,021	(26,185,948)	(25,301,437)	8	1,391,579	(25,808,506)	1,239
33	400,257	2,276,142	697,921	1,578,221	(25,808,506)	(25,019,396)	*	1,376,067	(25,606,352)	1,239
34	403,275	2,316,035	715,508	1,600,527	(25,606.352)	(24,806,089)		1,364,335	(25,370,160)	1,239
35	390,696	2,356,628	705,340	1,651,288	(25,370,160)	(24,544,516)	2	1,349,948	(25,068,820)	1,239
36	744,193	2,397,932	1,367,068	1,030,864	(25,068,820)	(24,553,388)	74	1,350,436	(25,388,392)	1,239
37	843,013	2,439,960	1,575,741	864,219	(25,388,392)	(24.956,283)	π.	1,372,596	(25,896,769)	1,239
38	499,883	2,482,724	950,746	1,531,978	(25,896,769)	(25,130,780)	2	1,382,193	(25,746,984)	1,239
39	344,674	2,526,239	667,038	1,859,200	(25,746,984)	(24,817,383)	•	1,364,956	(25,252,740)	1,239
40	224,953	2,570,515	442,976	2,127,540	(25,252,740)	(24,188,970)	-	1,330,393	(24,455,593)	1,239
41	846,126	2,615,568	1,695,387	920,182	(24,455,593)	(23,995,503)		1,319,753	(24,855,164)	1,239
42	1,143,352	2,661,411	2,331,093	330,318	(24,855,164)	(24,690,006)	+	1,357,950	(25,882,797)	1,239
43	613,065	2,708,057	1,271,838	1.436,219	(25,882,797)	(25,164,688)	-	1,384,058	(25,830,636)	1,239
44	382,383	2,755,520	807,178	1,948,342	(25,830,636)	(24,856,465)	-	1,367,106	(25,249,400)	1,239
45	374,362	2,803,816	804,099	1,999,717	(25,249,400)	(24,249,541)	÷.	1,333,725	(24,583,407)	1,239
46	556,282	2,852,958	1,215,788	1,637,169	(24,583,407)	(23,764,823)	-	1,307,065	(24,253,304)	1,239
47	664,398	2,902,961	1,477,534	1,425,427	(24,253,304)	(23,540,590)	÷.	1,294,732	(24,122,609)	1,239
48	345,183	2,953,840	781.095	2,172,745	(24, 122, 609)	(23,036,237)		1,266,993	(23,216,857)	1,239
49	345,183	3,005,612	794,785	2.210,826	(23,216,857)	(22,111,444)	-	1,216,129	(22,222,160)	1,239
50	345,183	3.058.290	808 715	2 249 575	(22,222,160)	(21.097.373)		1.160.356	(21,132,941)	1.239

Table 11, R R Cash Flow (Table IV-4 in FPR)

-25-March-2016 1 June 2016

TAB 4

AMENDMENT OF SOLICITATION/MODI	FICATION OF CONTRACT	1. CONTRACT ID C	ODE K	Page 1 of 5
2. AMENDMENT/MODIFICATION NO. P00029	3. EFFECTIVE DATE See Block 16C	4 REQUISITION/PUR	CHASE REQ. NO.	5. PROJECT NO. (If applicable
ISSUED BY	CODE SP0600	7 ADMINISTERED	BY (If other than Item	6) CODE
DLA ENERGY - UTILITY SERVICES 8725 JOHN J. KINGMAN ROAD. STP 1040 FORT BELVOIR, VA 22060-6222 Buyer/Symbol: Daoma Young/DLA Energy- PHONE: (703) 617-1425 E-MAIL: dawnna Vo	00 FEEBB oung g dla mit P P 8.2			
8. NAME AND ADDRESS OF CONTRACT	OR (NO., street city, county, State , and	d ZIP (ode)	9ª AMENDMENT	OF SOLICITATION NO.
Hardin County Water District No. 1 1400 Rogersville Road			96. DATED (SEE 17	ЕМ 11)
Radcliff, KY 40160-9343 Phone: (270) 351-3222 ext. 208 Ens. (270) 352-3055		x	108 MODIFICATI NO. SP0600-1	ON OF CONTRACT/ORDER 1-C-8271
POC: Jim Brace, General Manager DUNS # 130402811 CAGE #316V9			10b. DATED (SEE) 30 Sep	TEM 13) ptember 2011
11.	THIS ITEM ONLY APPLIES TO	AMENDMENTS OF SOI	LICITATIONS	· · · · · · · · · · · · · · · · · · ·
OFFERS PRIOR TO THE HOUR AND you desire to change an offer already subm or letter makes reference to the solicitation 12. ACCOUNTING AND APPROPRIATION 13. THIS ITEM APPLIES ONLY TO MOD	DATE SPECIFIED MAY RES itted, such change may be made b and this amendment, and is received N DATA (<i>If required</i>) IFICATIONS OF CONTRACTS/OF	ULT IN REJECTION y telegram or letter, pro red prior to the opening RDERS, IT MODIFIES	OF YOUR OFFER vided each telegram hour and date specifi	If by virtue of this amendme ied.
A. THIS CHANGE ORDER IS ISSU CONTRACT ORDER NO IN IT	JED PURSUANT TO (Specify author EM 10A	in) THE CHANGES SET	FORTH IN ITEM 14 A	RE MADE IN THE
B. THE ABOVE NUMBERED CON office, appropriation date, etc.) S	TRACT/ORDER IS MODIFIED TO I	REFLECT THE ADMINIS	STRATIVE CHANGES	(such as changes in paying
C. THIS SUPPLEMENTAL AGREE	EMENT IS ENTERED INTO PURSUA	ANT TO AUTHORITY OF	F: FAR 52.243-1 ALT	I Changes-Fixed Price
D. OTHER (Specify type of modificate IMPORTANT: Contractor [] is not. [X] is	tion and authority) required to sign this document and ret	um 1 copies to the iss	ung office	The community of the second
14. DESCRIPTION OF AMENDMENT/MO	DIFICATION (Organized by UCF se	ction headings, including s tility Privatizatio	olicitation contract sub	ject matter where feasible.)
	Potable Water	r Utility System		
	See Additional Page	es for Further Deta	ails.	
Except as provided herein, all terms and conditi	ons of the document referenced in Iten	19A or 10A, as heretofore	changed, remains unch	anged and in full force and effect.
15A NAME AND TITLE OF SIGNER (Typ JIM BRUCE, GENERAL M	e or print) IANAGER	16A. NAME OF CON CARL S	TRACTING OFFICE	R
15B NAME OF CONTRACTOR/OFFEROF	ISC DATE SIGNED	16B UNITED STAT	ES OF AMERICA	16C DATE SIGNED
BY BILLS BECC		BY Carl	Silverston Controcting Officer	August 10, 201
SN 7540-71-152-8070 REVIOUS EDITION UNUSABLE	<u>L.</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		STAN	DARD FORM 30 (REV 10-83) nbed by GSA

C

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FAR (48 CFR) 52 243

- Update and phase out Section B.5 Initial System Deficiency Corrections Charges Schedule 2, to account for the modified ISDC schedule. Effective January 31, 2017, Section B.5 Initial System Deficiency Corrections Charges – Schedule 2 will be closed out in its entirety.
- 2) Establish Section B.6 Capital Improvement Projects, to contractually accept the Water Quality and Capital Improvement Projects (CIP) submitted by Hardin County Water District 1 (HCWD1) dated June 1, 2016. HCWD1 proposed to modify the list of currently approved and funded ISDCs in accordance with section C.11.2.5 of its Utility Privatization (UP) contract with the Government and add new Capital Improvement Projects (CIPs) that are in better interest of the installation and government.
- 3) Funding in the amount of \$12,208,104.00 is re-allocated from the ISDCs for use towards the new CIPs totaling \$16,456,000.00. The additional unfunded capital cost for the proposed projects is in the amount of \$4,247,896.00 and is available in the HCWD1's Fort Knox reserve fund to fully fund the CIPs.
- B. As a result of the changes described in Paragraph A Section B Supplies or Services and Prices/Costs is revised as follows:

B.5 – Initial System Deficiency Corrections Charges Schedule B.5 is hereby revised as follows:

FROM:

Project No.	Project Name	Project Completion (Contract Year)	Project Cost
ISDC#1	System Survey/ Assessment and Re-Map the Utility System	1	\$121,610
ISDC#2	Leak Detection Survey	1	\$49,530
ISDC#3	Hydraulic Model	1	\$22,050
ISDC#4	Master Flow Meters at the WTP	1	\$24,909
ISDC#5	20-inch Raw Valves	1	\$89,319
ISDC#6	New Raw Water Main from the Muldraugh WTP to the 16-inch Raw Water Line Between Otter Creek PS and Central WTP	1	\$1,946,203
ISDC#7	Otter Creek Pump Station	1	\$117,449
ISDC#8	Muldraugh HLPS	1	\$108,234
ISDC#9	Central WTP	1	\$64,202
ISDC#10	Central WTP Clear Well	1	\$1,825,443
ISDC#11	Fire Hydrants	4	\$1,957,620
ISDC#12	THIS ITEM PURPOSEFULLY LEFT BLANK		
ISDC#13	Water Storage Tank No. 5	1	\$439,499
ISDC#14	Automatic Transfer Switches	2	\$248,658
ISDC#15	Pipe between Otter Creek PS and Central WTP	2	\$1,773,822
ISDC#16	Water Storage Tank No. 6	2	\$395,981
ISDC#17	Water Storage Tank No. 8	2	\$395,981
ISDC#18	Water Storage Tank No. 7	3	\$199,980
ISDC#19	SCADA System	3	\$335,784
ISDC#20	Distribution System Pipe and Valves	3	\$1,113,332
ISDC#21	Distribution System Pipe and Valves	3	\$3,034,103
ISDC#22	Distribution System Pipe and Valves	3	\$188,402
ISDC#23	Distribution System Pipe and Valves	4	\$6,618,777

Project No.	Project Name	Project Completion (Contract Year)	Project Cost
ISDC#24	Water Tank No. 1	3	\$24,398
ISDC#25	Water Tank No. 2	3	\$24,398
ISDC#26	Water Tank No. 4	3	\$45,636
ISDC#27	West Point Well Field	1	\$63,891
ISDC#28	Van Voorhis Pump Station	1	\$8,776
ISDC#29	Decommission Muldraugh WTP	5	\$496,146
ISDC#30	Muldraugh WTP Operation Year 1	1	\$999,495
ISDC#31	Muldraugh WTP Operation Year 2	2	\$997,297
ISDC#32	Muldraugh WTP Operation Year 3	3	\$997,297
ISDC#33	Muldraugh WTP Operation Year 4	4	\$997,297
ISDC#34	Muldraugh WTP Operation Year 5	5	\$997,297

TO:

Project No.	Year 1 Project Name	Re-allocated Efforts
ISDC#1	System Survey/ Assessment and Re-Map the Utility System	Completed
ISDC#2	Leak Detection Survey	Completed
ISDC#3	Hydraulic Model	Completed
ISDC#4	Master Flow Meters at the WTP	Completed
ISDC#5	20-inch Raw Valves	Completed
ISDC#10	Central WTP Clear Well	Completed
ISDC#11-1	Fire Hydrants Year 1	Completed
ISDC#13	Water Storage Tank No. 5	Completed
ISDC#14	Automatic Transfer Switches	Completed
ISDC#16	Water Storage Tank No. 6	Completed
ISDC#17	Water Storage Tank No. 8	Completed
ISDC#19	SCADA System	Completed
ISDC#22	Distribution Pipe and Valves (4,200-LF at new HRC)	Completed
ISDC#30	Muldraugh WTP Operation Year 1	Completed

Project No.	Year 2 Project Name	Re-allocated Efforts
ISDC#7	Otter Creek Pump Station	Completed
ISDC#11-2	Fire Hydrants Year 2	Completed
ISDC#27	West Point Well Field	Completed
ISDC#28	Van Voorhis Pump Station	Completed
ISDC#31	Muldraugh WTP Operation Year 2	Completed

Project No.	Year 3 Project Name	Re-allocated Efforts
ISDC#32	Muldraugh WTP Operation Year 3	Completed

Project No.	Year 4 Project Name	Re-allocated Efforts
ISDC#23-4	Distribution Pipe and Valves (136,000-LF of CI pipe - no specific areas) - Year 4	Completed
ISDC#33	Muldraugh WTP Operation Year 4	Completed

Project No.	Year 5 Project Name	Re-allocated Efforts
ISDC#29	Decommission Muldraugh WTP	Completed
ISDC#34	Muldraugh WTP Operation Year 5	Completed

B.6 – Capital Improvement Projects Schedule B.6 is hereby established as follows:

Project No.	Year 6 – 10 Project Name	CIP Totals
1	Muldraugh WTP Improvements	\$4,845,000.00
2	1.5 MG Old Ironsides Tank	\$5,054,000.00
3	1.5 MG Education Center Tank	\$5,060,000.00
4	Park Road 14' Main Extension	\$290,000.00
5	Automatic Flusher Installed in Dietz Area	\$13,000.00
6	Line Improvement - Gold Vault Area	\$163,000.00
7	Line Improvements - North Frazier Area	\$30,000.00
8	Line Improvements - 7th Armon Division Cut off Road	\$143,000.00
9	Decommission Central WTP and Large Diameter Mains	\$322,000.00
10	Installation of Check Valves New Education Center Tank	\$70,000.00
11	Remove Frazier Tank	\$76,000.00
12	Remove Van Voorhis Tank	\$60,000.00
13	Remove Prichard Tank	\$76,000.00

14	Automatic Flusher Installed in Dietz Area	\$13,000.00
15	Automatic Flusher Installed in Prichard Area	\$13,000.00
16	Remove HRC Tank	\$76,000.00
17	Remove Fort Knox High School Tank	\$76,000.00
18	Remove Old Ironside Tank	\$76,000.00
	Total:	\$16,456,000.00

C. Section G - Contract Administration Data G.6 Accounting and Appropriation Data

No additional funding is required for this modification. HCWD1 proposed to modify contract SP0600-11-C-8271 by removing ISDC #'s: 8, 9, 20, 21-2, 21-3, 11-3, 18, 24, 25, 26, 11-4, 15, 6, 11-5, 23-5, and 35 from the list of currently approved and funded ISDCs in accordance with section C.11.2.5 of its Utility Privatization (UP) contract with the Government. HCWD1 proposed to re-allocate the funding to pay towards the new government accepted CIPs. The ISDC removal resulted in a credit of \$12,208,104.00 while the new approved CIPs totaled \$16,456,000.00. The additional unfunded capital cost for the proposed projects in the amount of \$4,247,896.00 has been verified as available for completion of the CIPs in its entirety using the HCWD1's Fort Knox Water Fund Reserve. The CIPs are hereby fully funded.

The Contracting Officer agrees with the proposed funding re-allocation after a review of HCWD1's FPR because it is consistent with the framework of the contract. Volume IV of the FPR, on page IV-36, provides HCWD1 the discretion to manage deviations and maintain a separate cash balance in reserves understanding that revenues will be spent only on projects that exclusively benefit the government.

D. The total amount obligated remains unchanged at \$38,248,924.06.

E. The total value of the contract remains unchanged at \$250,530,429.46.

F. All other Terms and Conditions shall remain unchanged and in full force and effect.

End of Modification

TAB 5

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE PAG		PAGE	GE OF PAGES		
2. AMENDME	NT/MODIFICATION NUMBER	3. EFFECTIVE DATE	4. REQUISITION/PURCHAS	SE REQUI	SITION NUMBER	5. PROJEC	CT NUMBE	R (If applicable
P00033		See Block 16C					-	You amaile
DLA ENERGY 8725 JOHN FORT BEL Buyer/Sym PHONE: (7	V – UTILITY SERVICES N J. KINGMAN ROAD, STP 10400 VOIR, VA 22060-6222 bol: Matthew Fox/DLA Energy-FEEBB 703) 617-1421 E-MAIL: <u>Matthew.fox@d</u>	Ia.mil P.P. 8.2			than item 6)	om art politik 8 ret (f) minite(to set obliver 08 to 0 moltay	010 odt 9 (r 8
8. NAME ANI	D ADDRESS OF CONTRACTOR (NO.,	street city, county, State	and ZIP Code)		A. AMENDME	NT OF SOLI	CITATION	NUMBER
Hardin Count	v Water District No. 1							
1400 Rogers Radcliff, KY 4 Phone: (270)	ville Road 0160-9343 351-3222 ext. 208				B. DATED (SE	E ITEM 11)	-14	A
Fax: (270) 35	2-3055	r gebodde - agr		1	OA. MODIFICA	TION OF CO	NTRACT/	ORDER NUMB
DUNS # 1304	102811	(ar Datrict 1 (NC)			. 9450, CIPAG	SPO	0600	
CAGE #316V	9	s'oci é /g angis c			OB. DATED (SE	EE ITEM 13)		
CODE	(3)	ACILITY CODE	Industriant Decisi		de0 0.8 g	SP0600-	11-C-82	71
	11. THIS ITE	MONLY APPLIES TO	AMENDMENTS OF	SOLICI	TATIONS			N
communication specified. 12. ACCOUNT See Sectio	, provided each letter or electronic communic	ation makes reference to the red)	solicitation and this amender	nent, and	is received prior	to the opening	ng hour and	I date
000 00000	13. THIS ITEM AF	PLIES ONLY TO MO	DIFICATIONS OF CO	NTRA	CTS/ORDER	S.	10005	BUDCLAR
CHECK ONE	A THIS CHANGE ORDER IS ISSUED PUE	E CONTRACT/ORDE	NUMBER AS DESC	RIBED	TEM 14 ARE MA	DE IN THE	CONTRAC	TORDER
	NUMBER IN ITEM 10A.							
	B. THE ABOVE NUMBERED CONTRACT/ appropriation data, etc.) SET FORTH IN	ORDER IS MODIFIED TO RE	FLECT THE ADMINISTRAT	TIVE CHA	NGES (such as	changes in p	baying offic	10
\boxtimes	C. THIS SUPPLEMENTAL AGREEMENT IS	SENTERED INTO PURSUAI	NT TO AUTHORITY OF: 52.	.243-1 - (Changes Fixed	-Price Altern	ate I	and the second s
	D. OTHER (Specify type of modification an	d authority)	585	name	otten to b	Ferio		
E. IMPORT	ANT: Contractor is not is is	required to sign this de	ocument and return 1	copies	to the issuin	g office.		
14. DESCRIPT	ION OF AMENDMENT/MODIFICATION (Org	anized by UCF section hea	dings, including solicitatio	n/contra	ct subject matte	r where fea	sible.)	1.00
					oined to b			
					NY 1 3017			
Except as provi	ided herein, all terms and conditions of the do	cument referenced in Item 9/	or 10A, as heretofore chan	nged, rem	ains unchanged	and in full fo	rce and effe	ect.
	CE GENERAL MANACE	Prohit Prices	CARL SILVERS	STON	E. CONT		NG OF	FICER
ISB. CONTRAC	CTØR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF	FAMERIO	CA		16C.	DATE SIGNED
A	TAMES Sucu	01 C27 10	SILVERSTONE.CARL.137702304	4 Date: 2017	WHE BY GEVERSTONE CARE, I KI 02 01 12 9002 40 00	7023044	Feb	uary 1 201
(9)	gnature of person authorized to sign)	- 01-120-17	(Signatu	re of Con	tracting Officer)	Parto		
Previous edit	ion unusable		Ann	126-4	STANDAR Prescribed by	D FORM	1 30 (RE	V. 11/201 53.243

- A. The purpose of this modification is to:
 - Provide funding in the amount of \$644,796.35 for January 1, 2017 to January 31, 2017 (month 60 of 600) for SubCLINs 0005AD Monthly Utility Service Charge (MUSC) and 0056AC Initial System Deficiency Correction (ISDC) surcharge under ACRN AL.
 - Establish CLIN 0006 and subCLIN 0006AA for Contract Year 6's MUSC. Funding is provided in the amount of \$516,680.00 for February 1, 2017 to March 31, 2017 (Months 61-62) under ACRN AM.
 - Revise Schedule B.4 Monthly Utility Service Charge Schedule 1, to decrease the scheduled MUSC from \$258,340.00 to \$245,094.00. Hardin County Water District 1 (HCWD1) requested that the MUSC not increase. As a result, this decreases the contract value by \$158,952.00.
 - Revise Schedule B.6 Capital Improvement Projects to remove Project six (6) Line Improvement Gold Vault Area in the amount of \$163,000.00.
- B. Section B Supplies or Services and Prices/Costs As a result of the changes described in Paragraph A, Section B.3 is revised as follows:

(1) B.3. Schedule is hereby modified to reflect the funding of SubCLINs 0005AD, 0056AC, and 0006AA:

B.3 Schedule

Utility Service Payment by the Government

SubCLIN 0005AD is hereby revised as follows:

FROM:

0005	Monthly Utility Service Charge -Year 5	Qty	Unit	Unit Price	Total Price
0005AD	Month 57-59 of 60 ACRN: AL	3	Мо	\$245,094.00	\$735,282.00
	Period of performance: October 1, 2016- December 31, 2016	a line page	raugh ai	in only in the second second	la tan e 17 marin
0005AE	Month 60 of 60 ACRN: TBD Period of performance: January 1 2017- January 31, 2017	1	Мо	\$245,094.00	\$245,094.00

TO:

0005	Monthly Utility Service Charge -Year 5	Qty	Unit	Unit Price	Total Price
0005AD	Month 57-60 of 60 ACRN: AL Period of performance:	4	Мо	\$245,094.00	\$980,376.00
	October 1, 2016- January 31, 2017				

SubCLIN 0056AC is hereby revised as follows:

FROM:

0056	Monthly Utility Service Charge -Year 5	Qty	Unit	Unit Price	Total Price	e
0056AC	Month 57-59 of 60	3	Mo	\$399,702.35	\$1,199,107	.05
	ACRN: AL					
	October 1, 2016- December 31, 2016				16.819.9418 10.945 FBS7	
0056AD	Month 60 of 60 ACRN: TBD	1	Мо	\$399,702.35	\$399,702.	35
	Period of performance:					M
	January 1, 2017- January					
00.576.030	31, 2017				a.mc.sost	
00.010.001	\$11274416 \$11	1.4		1	PLERI, 11/25	NE

TO:

0056	Monthly Utility Service Charge -Year 5	Qty	Unit	Unit Price	Total	Price
0056AC	Month 57-59 of 60 ACRN: AL Period of performance:	4	Мо	\$399,702.35	\$1,598,	809.40
	October 1, 2016- January 31, 2017			20 L (0.1	HD.4-93	26

CLIN 0006 and subCLIN 0006AA are hereby established:

Monthly Utility Service Charge -Year 6	Qty	Unit	Unit Price	Total Price
Month 61-72	12	Мо	\$245,094.00	\$2,914,128.00
ACRN: AM				10048 AD
Period of performance:				
February 1, 2017 -				
January 31, 2018				
	Monthly Utility Service Charge -Year 6 Month 61-72 ACRN: AM Period of performance: February 1, 2017 – January 31, 2018	Monthly Utility Service Charge -Year 6QtyMonth 61-7212ACRN: AM Period of performance: February 1, 2017 – January 31, 2018	Monthly Utility Service Charge -Year 6QtyUnitMonth 61-7212MoACRN: AM Period of performance: February 1, 2017 – January 31, 2018Home	Monthly Utility Service Charge -Year 6QtyUnitUnit PriceMonth 61-7212Mo\$245,094.00ACRN: AM Period of performance: February 1, 2017 – January 31, 2018

C. Section B - Supplies or Services and Prices/Costs – As a result of the changes described in Paragraph A, Section B.4 is revised as follows:

B.4 Monthly Utility Service Charge – Schedule 1

The Contract Year 6 MUSC is reduced from \$258,340.00 to \$245,094.00, as HCWD1 requested the MUSC to remain unchanged.

~	Contract Year	Monthly Service Charge	Purchase Price Recovery Surcharge	Monthly Credit	Monthly Utility Service Charge	Annual Utility Service Charge	
2	1999 1999 1999 1999 1999 1999 1999 199	\$246,172.00	\$85,968.00	(\$85,968.00)	\$246,172.00	\$2,954,064.00	
	2	\$246,172.00	\$85,968.00	(\$85,968.00)	\$246,172.00	\$2,954,064.00	
	3	\$246,172.00	\$85,968.00	(\$85,968.00)	\$246,172.00	\$2,954,064.00	
	4	\$246,172.00	\$85,968.00	(\$85,968.00)	\$246,172.00	\$2,954,064.00	

Modification P00033 SP0600-11-C-8271 Fort Knox, KY

	5	\$246 172 00	\$85 968 00	(\$95 968 00)	\$246 172 00	\$2.0E4.0C4.00
	6	\$245,094.00	\$85,968,00	(\$85,968.00)	\$246,172.00	\$2,954,064.00
	7	\$262,867.00	\$95,968.00	(\$85,968.00)	\$245,094.00	\$2,941,128.00
	0	\$202,007.00	\$05,968.00	(\$85,968.00)	\$262,867.00	\$3,154,404.00
	0	\$207,473.00	\$05,908.00	(565,968.00)	\$267,475.00	\$3,209,700.00
	9	\$272,163.00	\$85,968.00	(\$85,968.00)	\$272,163.00	\$3,265,956.00
	10	\$276,933.00	\$85,968.00	(\$85,968.00)	\$276,933.00	\$3,323,196.00
	11	\$281,786.00			\$281,786.00	\$3,381,432.00
	12	\$286,725.00			\$286,725.00	\$3,440,700.00
	13	\$291,751.00			\$291,751.00	\$3,501,012.00
	14	\$296,864.00			\$296,864.00	\$3,562,368.00
	15	\$302,067.00			\$302,067.00	\$3,624,804.00
	16	\$307,361.00			\$307,361.00	\$3,688,332.00
	17	\$312,748.00			\$312,748.00	\$3,752,976.00
	18	\$318,230.00			\$318,230.00	\$3,818,760.00
	19	\$323,807.00			\$323,807.00	\$3,885,684.00
	20	\$329,483.00			\$329,483.00	\$3,953,796.00
	21	\$335,258.00		· 92%	\$335,258.00	\$4,023,096.00
	22	\$341,134.00			\$341,134.00	\$4,093,608.00
	23	\$347,113.00			\$347,113.00	\$4,165,356.00
	24	\$353,196.00			\$353,196.00	\$4,238,352.00
	25	\$359,387.00			\$359,387.00	\$4,312,644.00
	26	\$365,686.00			\$365,686.00	\$4,388,232.00
	27	\$372,095.00			\$372,095.00	\$4,465,140.00
	28	\$378,616.00			\$378,616.00	\$4,543,392.00
	29	\$385,252.00			\$385,252.00	\$4,623,024.00
	30	\$392,005.00			\$392,005.00	\$4,704,060.00
	31	\$398,875.00			\$398,875.00	\$4,786,500.00
	32	\$405,866.00			\$405,866.00	\$4,870,392.00
	33	\$412,980.00			\$412,980.00	\$4,955,760.00
	34	\$420,218.00			\$420,218.00	\$5,042,616.00
	35	\$427,583.00			\$427,583.00	\$5,130,996.00
	36	\$435,077.00			\$435,077.00	\$5,220,924.00
	37	\$442,703.00			\$442,703.00	\$5,312,436.00
	38	\$450,462.00			\$450,462.00	\$5,405,544.00
	39	\$458,357.00			\$458,357.00	\$5,500,284.00
	40	\$466,390.00			\$466,390.00	\$5,596,680.00
	41	\$474,565.00			\$474,565.00	\$5,694,780.00
	42	\$482,882.00			\$482,882.00	\$5,794,584.00
	43	\$491,346.00			\$491,346.00	\$5,896,152.00
	44	\$499,957.00			\$499,957.00	\$5,999,484.00
	45	\$508,720.00			\$508,720.00	\$6,104,640.00
	46	\$517,636.00			\$517,636.00	\$6,211,632.00
	47	\$526,709.00			\$526,709.00	\$6,320,508.00
	48	\$535,940.00			\$535,940.00	\$6,431,280.00
	49	\$545,334.00			\$545,334.00	\$6,544,008.00
-	50	\$554,892.00		110.1104.1.1	\$554,892.00	\$6,658,704.00

D. Section B - Supplies or Services and Prices/Costs – As a result of the changes described in Paragraph A, Section B.6 Capital Improvement Projects is revised as follows:

	Project No.	Year 6 – 10 Project Name	CIP Totals
27.270		Muldrauch WTP Improvements	\$4 845 000 00
	2	1.5 MG Old Ironsides Tank	\$5,054,000,00
	2	1.5 MG Education Contor Tank	\$5,054,000.00
	4	Park Road 14' Main Extension	\$290,000.00
	5	Automatic Flusher Installed in Dietz Area	\$13,000.00
	6	Line Improvement - Gold Vault Area	\$163,000.00
	7	Line Improvements - North Frazier Area	\$30,000.00
	8	Line Improvements - 7th Armon Division Cut off Road	\$143,000.00
	9	Decommission Central WTP and Large Diameter Mains	\$322,000.00
	10	Installation of Check Valves New Education Center Tank	\$70,000.00
0.976	11	Remove Frazier Tank	\$76,000.00
0.012	12	Remove Van Voorhis Tank	\$60,000.00
	13	Remove Prichard Tank	\$76,000.00
	14	Automatic Flusher Installed in Dietz Area	\$13,000.00
	15	Automatic Flusher Installed in Prichard Area	\$13,000.00
	16	Remove HRC Tank	\$76,000.00
	17	Remove Fort Knox High School Tank	\$76,000.00
	18	Remove Old Ironside Tank	\$76,000.00
	and the second second second	Total:	\$16,293,000.00

E. Section G – Contract Administration Data - As a result of the changes described in Paragraph A, Section G.5 is revised as follows:

G.5 Accounting and Appropriation Data

ACRN AL is hereby increased in the amount of \$644,796.35. Funds are provided under the Direct Cite MIPR Number MIPR10940300 Amendment 2 as follows:

Line of Accounting:

ACRN AL 02120172017 2020000 A2ABH 131079QDPW 2334 0010940300 S.0045978.28.3 021001 \$2,579,185.40

MIPR10940300 dated October 25, 2016	Basic	\$1,289,592.70
terest ninety days prior to the date when, in the	Amend 1	\$644,796.35
et which the total actionit payable by the	Amend 2	\$644,796.35
adul ere komen de chanixongre hwy sometre	Total	\$2,579,185.40
Funding	data when that point will be reached at	beterrites and (1)
P00031	On CLIN 0005 (subCLIN 0005AD)	\$490,188.00
P00031	On CLIN 0056 (sub CLIN 0056AC)	\$799,404.70
P00032	On CLIN 0005 (subCLIN 0005AD)	\$245,094.00
P00032	On CLIN 0056 (sub CLIN	\$399,702.35

company of the burner measurement substance	0056AC)	D S x den 1 Support
P00033	On CLIN 0005 (subCLIN 0005AD)	\$245,094.00
P00033	On CLIN 0056 (sub CLIN 0056AC)	\$399,702.35
Total Funding for ACRN AL	contracted Characteria	\$2,579,185.40

ACRN AM is hereby established in the amount of \$516,680.00. Funds are provided under the Direct Cite MIPR Number

MIPR10969832 Basic as follows:

MIPR10969832 dated December 27, 2016	Basic	\$516,680.00
ALL IN THE REAL PROPERTY OF TH	Total	\$516,680.00
Funding Breakdown		
P00033	On CLIN 0006 (subCLIN 0006AA)	\$516,680.00
Total Funding for ACRN AM	And of the method	\$516,680.00

F. DFARS Clause 252.232-7007 Limitation of Government's Obligation (APR 2014) is hereby updated:

1.5.4 LIMITATION OF GOVERNMENT'S OBLIGATION (APR 2014)

(a) Contract line items 0001 to 0057 are incrementally funded. For these items, the sum of \$41,342,633.46 of the total price is presently available for payment and allotted to this contract. An allotment schedule is set forth in paragraph (j) of this clause.

(b) For items identified in paragraph (a) of this clause, the Contractor agrees to perform up to the point at which the total amount payable by the Government, including reimbursement in the event of termination of those items for the Government's convenience, approximates the total amount currently allotted to the contract. The Contractor is not authorized to continue work on those items beyond that point. The Government will not be obligated in any event to reimburse the Contractor in excess of the amount allotted to the contract for those items regardless of anything to the contrary in the clause entitled "Termination for Convenience of the Government." As used in this clause, the total amount payable by the Government in the event of termination of applicable contract line items for convenience includes costs, profit, and estimated termination settlement costs for those items.

(c) Notwithstanding the dates specified in the allotment schedule in paragraph (j) of this clause, the Contractor will notify the Contracting Officer in writing at least ninety days prior to the date when, in the Contractor's best judgment, the work will reach the point at which the total amount payable by the Government, including any cost for termination for convenience, will approximate 85 percent of the total amount then allotted to the contract for performance of the applicable items. The notification will state (1) the estimated date when that point will be reached and (2) an estimate of additional funding, if any, needed to continue performance of applicable line items up to the next scheduled date for allotment of funds identified in paragraph (j) of this clause, or to a mutually agreed upon substitute date. The notification will also advise the Contracting Officer of the estimated amount of additional funds that will be required for the timely performance of the items funded pursuant to this clause, for a subsequent period as may be specified in the allotment schedule in paragraph (j) of this clause or otherwise agreed to by the parties. If after such notification additional funds are not allotted by the date identified in the Contractor's notification, or by an agreed substitute date, the Contracting Officer will terminate any items for which additional funds have not been allotted, pursuant to the clause of this contract entitled

"Termination for Convenience of the Government."

(d) When additional funds are allotted for continued performance of the contract line items identified in paragraph (a) of this clause, the parties will agree as to the period of contract performance which will be covered by the funds. The provisions of paragraphs (b) through (d) of this clause will apply in like manner to the additional allotted funds and agreed substitute date, and the contract will be modified accordingly.

(e) If, solely by reason of failure of the Government to allot additional funds, by the dates indicated below, in amounts sufficient for timely performance of the contract line items identified in paragraph (a) of this clause, the Contractor incurs additional costs or is delayed in the performance of the work under this contract and if additional funds are allotted, an equitable adjustment will be made in the price or prices (including appropriate target, billing, and ceiling prices where applicable) of the items, or in the time of delivery, or both. Failure to agree to any such equitable adjustment hereunder will be a dispute concerning a question of fact within the meaning of the clause entitled "Disputes."

(f) The Government may at any time prior to termination allot additional funds for the performance of the contract line items identified in paragraph (a) of this clause.

(g) The termination provisions of this clause do not limit the rights of the Government under the clause entitled "Default." The provisions of this clause are limited to the work and allotment of funds for the contract line items set forth in paragraph (a) of this clause. This clause no longer applies once the contract is fully funded except with regard to the rights or obligations of the parties concerning equitable adjustments negotiated under paragraphs (d) and (e) of this clause.

(h) Nothing in this clause affects the right of the Government to terminate this contract pursuant to the clause of this contract entitled "Termination for Convenience of the Government."

(i) Nothing in this clause shall be construed as authorization of voluntary services whose acceptance is otherwise prohibited under 31 U.S.C. 1342.

(j) The parties contemplate that the Government will allot funds to this contract on a yearly basis no later than 30 days prior to the next Contract Year Period of Performance.

- G. The total amount obligated is increased by \$1,161,476.35 from \$40,181,157.11 to \$41,342,633.46.
- H. The total value of the contract is decreased by \$158,952.00 from \$250,523,961.46 to \$250,365,009.46.
- I. All other Terms and Conditions shall remain unchanged and in full force and effect.

End of Modification
_	Contract Addre	or: Dugan & Meye 2700 River Green ss: Louisville KY 40	ers Circle 1541 1206	Pace Contracting, LLC 5 Shelbyville Road, Louisville KY 40245	MAC Construction & Excava 1908 Unruh Ct, New Albany 47150	IN 103 S Church St, C) 41031	<i>ıction</i> /nthiana, KY
Ackr	Bid Bc	and YES		VES	ON	ON NO	
Item Description	Qty Unit			,			
1 General Construction	1 LS	\$17,242,	536.00	\$16,400,000.00			
UNIT PRICE ITEMS							
2A Additional Excavation for Structures	500 CY	\$18.61 \$9	,304.00	\$20.00 \$10,000.00	\$0.00 \$0.0	0 \$0.00	\$0.00
2B Additional Excavation for Trenches	100 CY	\$90.60	9,060.00	\$30.00 \$3,000.00	\$0.0	0	\$0.00
2C Earth Backfill	500 CY	\$21.63 \$10),815.00	\$35.00 \$17,500.00	\$0.0	0	\$0.00
2D Crushed Stone Backfill	200 CY	\$64.18 \$12	2,836.00	\$40.00 \$8,000.00	\$0.0		\$0.00
2E Granular Backfill 0 Wood Supports		301. // 300	1,004.00		\$0.U		\$0.00
2F & Bracing	1000 mfbm	n <u>\$27.33</u> \$27	,334.00	\$75.00 \$75,000.00	\$0.0	0	\$0.00
2G Rock Excavation for Structures	500 CY	\$52.22 \$26	\$,111.00	\$75.00 \$37,500.00	\$0.0	0	\$0.00
2H Rock Excavation for Pipe Trenches	500 CY	\$77.01 \$38	3,503.00	\$150.00 \$75,000.00	\$0.0	0	\$0.00
21 Reinforcing Steel	1,000 LBS	\$1.70 \$1	,696.00	\$2.00 \$2,000.00	\$0.0	0	\$0.00
2J Class I Concrete, Walls or Formed	100 CY	\$1,000.87 \$100),087.00	\$600.00 \$60,000.00	\$0.0	0	\$0.00
2K Class I Concrete, Slab or Unformed	100 CY	\$451.66 \$ 45	5,166.00	\$400.00 \$40,000.00	\$0.0	0	\$0.00
2L Class II Concrete	100 CY	\$150.08 \$15	5,008.00	\$250.00 \$25,000.00 \$25,000.00	\$0.0		\$0.00
2N CDF II	500 CY	\$152.08 \$76	3,042.00	\$200.00 \$100,000.00	\$0.0		\$0.00
	500 CY	\$70.48 \$35	5,240.00	\$200.00 \$100,000.00	\$0.0) 0 1	\$0.00
20 Concrete Repair Type 1		م محمد محمد محمد محمد محمد محمد محمد مح	,432.30	\$130.00 \$240.000 \$240.000 00	\$0.0		\$0.00
2R Concrete Repair Type 3	150 SF	\$55.20 \$8	3,280.00	\$60.00 \$2,000.00 \$60.00 \$9,000.00	\$0.0 \$0.0		\$0.00
2S Concrete Repair Type 4	800 LF	\$128.80 \$103	3,040.00	\$60.00 \$48,000.00	\$0.0	0	\$0.00
2T Concrete Injection Grouting of Cracks	500 LF	\$82.80 \$41	,400.00	\$60.00 \$30,000.00	\$0.0	0	\$0.00
Total UNIT PRICE Items		\$1,018,:	380.50	\$1,022,500.00	\$0.00	0	\$0.00
Combined Item 1 + Item 2		\$18,260,9	916.50	\$17,422,500.00			
ALTERNATE BIDS			٤				د اک
3A Filter Magic Control System	1 LS	\$925,000.00	0 \$1,10	0,000.00		0	0
Manual Gear Operators for the 3B Pneumatic Valve Actuators provided under Item 3.A	1 LS	\$90,000.00	0 \$10	8,000.00		0	0
3C GAC Filter Media	1 LS	\$118,000.00	0 \$18	6,000.00 0		0	0
3D Orthos Underdrain System 3E AWI Underdrain System		(\$20,000.00) \$54,000.00	0 (\$) (0	0,000.00) (\$90,000.00) 0			
3F FRP Stilling Walls	1 LS	(\$40,000.00)	C\$) 0	8,000.00) 0		0	0
Total ALTERNATE BIDS (Acce	pted)		\$0.00	(\$90,000.00)	\$0.0	0	\$0.00
PAC SLURRY BUILDING DEDU	L ITEMS)	\$2,987,3 \$15,273,4	390.00 526.50	\$1,353,000.00 \$15,979,500.00	No Bi	d.	No Bid
		\$705	;973.50				
* corrected unit price extended amount		Dugan & Mevers	<i>"</i>	Pace Contracting, LLC	MAC Construction	Judy Construct	inn

2:00 PM, Wednesday, September 30, 2020 BID RESULTS yers Pace Contracting, LLC

Hardin County Water District No. 1 Muldraugh Water Treatment Plant Improvements



Stantec Consulting Services Inc. One West Fourth Street Suite 820, Winston-Salem NC 27101-3818

October 8, 2020 File: 175666024

Attention: Mr. Daniel Clifford, Engineering Manager Hardin County Water District No. 1 1400 Rogersville Road, Radcliff, KY 40160

Dear Mr. Clifford,

Reference: HCWD1 – Muldraugh WTP Improvements, Letter of Recommendation

The Advertisement for Bids for the Fort Knox Muldraugh WTP Improvements project requested sealed bids be received by 2:00 PM on Wednesday, September 30, 2020. Two contractors presented bids at this time. Both bids were opened and publicly read aloud. Both companies represented at the bid opening are properly licensed contractors, submitted acknowledged receipt of Addenda, and submitted a proper bid security in the amount of five percent of the total bid submitted.

Bid results are shown in the attachment and as generally summarized below:

Contractor Name	Item 1 - Base Bid	Item 2 - Unit Prices	Item 3 - Bid Alternates (Accepted)	Combined Total Contract Price
Dugan & Meyers	\$17,242,536.00	\$1,018,380.50 *	\$0.00	\$18,260,916.50
Pace Contracting, LLC	\$16,400,000.00	\$1,022,500.00	(\$90,000.00)	\$17,332,500.00

* Dugan & Meyers had two irregularities in the extension of their unit prices for Items 2O and 2P.

Hardin County Water District No. 1 established total project funding in the approximate amount of \$16,000,000.00. As the bids for the Combined Total Contract Price are in excess of the funds available for the project, the District entered into negotiations with both contractors to reduce the scope of work as may be necessary to bring the Contract price within the funds available. Each contractor was directed to provide a deduct for the removal of the PAC Slurry Structure from the scope of work to bring the contract price within the funds available.

Contractors submitted the following deduct for removal of the PAC Slurry structure:

Dugan & Meyers:	(\$2,987,390.00)**
-----------------	--------------------

Pace Contracting: (\$1,353,000.00)

October 8, 2020 Mr. Daniel Clifford, Engineering Manager Page 2 of 2

Reference: HCWD1 – Muldraugh WTP Improvements, Letter of Recommendation

** Dugan & Meyers deduct pricing was submitted with the following caveats: "1) Elimination of the PAC Slurry Tanks and Pump Room Complete; Earthwork, Concrete, Masonry, Process Equipment, Coatings, Plumbing, Mechanical, and Electrical; 2) Based upon changes to the project overall scope, the previously listed subcontractors are subject to change; 3) 4" W1 terminated 2' beyond the edge of driveway. Deduct includes elimination of the 1.5" W1 line, RPZ-11-04, and all piping downstream; 4) 6" WD lines terminated 2' beyond the edge of driveway; 5) Storm terminated at MH-5, 6) Electrical feeder conduit shall be terminated and be capped 2' beyond edge of driveway; 7) Electrical feeder wire has been eliminated to source of power in the MCC; 8) Deduct price is price is based upon manufacturer CHEMCO Systems, LP for Specification 11420; 9) Award and NTP will occur on or before November 2, 2020."

With the deduct of the PAC Slurry structure from the scope of work, a total bid price of \$15,273,526.50 was obtained from Dugan & Meyers, making them the apparent Low Bidder for the Muldraugh WTP Improvements project.

Dugan & Meyers enjoys a good reputation for General Contracting in Kentucky and Hardin County. Based on the above bid evaluation and deduct negotiations, we see no reason why the contract for the Muldraugh WTP Improvements project should not be awarded to Dugan & Meyers.

Please do not hesitate to contact me if you have any questions about the bid results and this recommendation.

Regards,

Stantec Consulting Services Inc.

Linda Pass, PE Senior Associate Phone: 704-488-2171 cell Linda.Pass@stantec.com

Attachment: Tabulated Bid Results

\\us0512-ppfss01\workgroup\1756\active\175666024\technical_production\construction\bidding_mwtp\bid-results\hcwd1_muldraughwtp_recommendation.docx

Notice of Award

Date: October 19, 2020

ect: Muldraugh Water Treatment Plant Improvements								
n County Water District No. 1	Owner's Contract No.:							
	Engineer's Project No.: 175666024							
Dugan & Meyers, LLC	·							
2700 River Green Circle								
Louisville, KY 40206								
	n County Water District No. 1 Dugan & Meyers, LLC 2700 River Green Circle Louisville, KY 40206							

You are notified that your Bid dated $\frac{9/30/2020}{1000}$ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for

Muldraugh Water Treatment Plant Improvements

The Contract Price of your Contract is \$15,273,526.50, and includes Unit Price Items and Bid Alternates as follows:

Attachment A - Contract amount calculations

<u>Attachment B</u> - Emails dated October 7-8, 2020 from Dugan & Meyers, LLC (corrected unit price extensions, statement of base bid mfrs and bid alternates, and proposed deduct for deletion of the PAC Slurry structure)

1 digital copy of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

 $\underline{1}$ digital set of conformed Drawings will be delivered separately or otherwise made available to you within 2 weeks of this Notice of Award.

You must comply with the following conditions precedent within ten (10) days of the date you receive this Notice of Award.

- 1. Deliver to the Owner $\underline{1}$ fully executed counterparts of the Contract Documents.
- 2. Acknowledge that issuance of the Notice to Proceed will be pending approval (or waiver) through the Certificate of Public Convenience and Necessity (CPCN) process.

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

Hardin County Water District No. 1	
Owner 1 1 1	
By: At MI. Her	
Ann III Contact	i.
Authorized Signature	
Title	e

Copy to Engineer Muldraugh WTP Improvements HCWD1 175666024

NOTICE OF AWARD NA - 1 10/19/2020

Hardin County Water District No. 1 **Minutes of Special Meeting** of the Board of Commissioners

October 19, 2020

Chairman William Gossett called the meeting to order at 11:27 A.M. with Commissioners John Tindall, Jim Shelton, Ron Hockman and Howard Williams in attendance. Staff present included Stephen M. Hogan, General Manager; Scott Schmuck, Finance & Accounting Manager; Daniel Clifford, Engineering Manager; Justin Metz, County Systems Manager; and Nora Gocking, Executive Assistant. David Wilson, Attorney attended via teleconference.

An invocation was given by Commissioner Williams. Chairman Gossett opened the floor for public comment. There was none and Chairman Gossett closed the floor.

Mr. Wilson entered the meeting via video conference at this time.

BID AWARD - FK Muldraugh Water Treatment Plant Improvements: Mr. Hogan presented the item and Mr. Clifford offered to answer any and all Board questions. Discussion ensued and Mr. Hogan, Mr. Clifford, and Mr. Wilson answered all Board questions to satisfaction. Treasurer Tindall made a motion to authorize award of the Muldraugh Water Treatment Plant Improvements, for the Fort Knox Water Utility, to Dugan & Meyers in the amount of \$15,273,526.50. Commissioner Williams seconded the motion and motion passed.

Adjourn: Being no further business before the Board, Treasurer Tindall made a motion to adjourn at 11:51 A.M. Motion was seconded by Secretary Hockman and motion passed.

(Minutes submitted by Nora Gocking, Executive Assistant)

APPROVAL OF MINUTES

I hereby certify that the foregoing minutes were duly approved by the Board of Commissioners of the Hardin County Water District No. 1 at a meeting held on the date shown below:

HARDIN COUNTY WATER DISTRICT No.1

Mr. Ron Hockman, Secretary

Date Approved

HARDIN COUNTY WATER DISTRICT No.1 Staff Information Item

DATE:	October 19, 2020
AGENDA ITEM NO.:	
ITEM:	Bid Award – Muldraugh Water Treatment Plant Improvements
SUBMITTED BY:	Daniel Clifford, Engineering Manager
THROUGH:	Stephen Hogan, General Manager

Bids were opened on September 30, 2020 at 2:00 PM for the Muldraugh Water Treatment Plant Improvements, Fort Knox Water Utility. There were 2 firms that submitted bids.

The project consists of the rehabilitation and improvements to the water treatment plant. Scope of work is included in the drawing set and specification book.

The project will be funded thru ISDC for \$15,273,526.50.

The apparent low bidder is Dugan & Meyers, 2700 River Green Circle, Louisville KY 40206. Stantec Consulting Service has verified work experience, references and resources to construct the project as designed within the terms of the contract.

RECOMMENDATION:	Staff believes they have the capacity and experience to complete the project and recommends that the board award the Muldraugh Water Treatment Plant Improvements contract to Dugan & Meyers, 2700 River Green Circle, Louisville KY 40206
Suggested Motion Languages:	"Move to authorize award of the Muldraugh Water Treatment Plant Improvements, for the Fort Knox Water Utility, to Dugan & Meyers in the amount of \$15,273,526.50".

								Propo	osed Cash Fle	ow Model w/ R	R&R Expens	es												
							Revenues								Expe	enses								
																						5-year		
						Monthly						MWTP	Lou Water					Stantec Fees				Average,		
F	K Water Reserve	Checking				Service Charge	MWTP ISDC	Checking				Operating	Fees (WTP &	MWTP HS	N	MWTP Bypass	MWTP	for Remaining	ISDCs (Tanks ISDCs			2013-		
Date	Fund Balance	Account	CD1	CD2	Net	(CLIN 001)	(CLIN 005)	Interest	CD1 Interest	CD2 Interest	R&R	Cost	Lagoon)	Pumps I	MWTP SCADA	Line	Construction	ISDCs	& Mains) (Demo)	Purchase Water		2018	Days	Total
					Total Project	Cost Opinion (In	c. EDC, RPR, a	nd G&A) ==>			-\$123,984.	14 -\$101,451.02	\$1,510,000.00	\$126,000.00	\$200,000.00	\$10,000.00	\$15,273,526.50	\$500,000.00	\$1,090,526.00 \$762,000.0	0 -\$1,284,162.99	-1040082.615 Aug		31	
						Total Project S	chedule Durat	ion (Mos) ==>			50	0% 50%	2	3	6	3	15	15	3	4 \$3.07	/kgal Sep		30	J
Oct-20	\$17,189,742.37	\$10,166,461.60	\$3,372,443.74	\$3,650,837.03	-\$343,021.09	\$261,011.05	\$99,703.53	\$431.73	\$17,680.84	\$12,818.54	-\$61,992.	.07	-\$200,000.00	-\$42,000.00		-\$3,333.33	5	-\$33,333.33	-\$363,508.67		Oct	1.67643	31	51.9694
Nov-20	\$16,877,220.66	\$9,823,440.51	\$3,390,124.58	\$3,663,655.57	7 -\$454,707.32	\$261,011.05	\$99,703.53	\$403.70	\$0.00	\$0.00	-\$61,992.	.07	-\$200,000.00	-\$42,000.00		-\$3,333.33		-\$33,333.33	-\$363,508.67	-\$111,658.21	NTP Nov	1.57709	30	47.3128
Dec-20	\$16,422,513.34	\$9,368,733.18	\$3,390,124.58	\$3,663,655.57	7 -\$2,388,405.07	\$261,011.05	\$99,703.53	\$397.85	\$0.00	\$0.00	-\$61,992.	.07	-\$1,110,000.00	-\$42,000.00		-\$3,333.33	-\$1,018,235.10	-\$33,333.33	-\$363,508.67	-\$117,115.00	10/26/2020 Dec	1.60081	31	49.625
Jan-21	\$14,034,108.27	\$6,980,328.11	\$3,390,124.58	\$3,663,655.57	7 -\$932,918.13	\$261,011.05	\$99,703.53	\$296.42	\$17,773.54	\$12,863.55	-\$61,992.	.07					-\$1,018,235.10	-\$33,333.33	\$0.00	-\$180,368.64	Sub Complete Jan	1.89523	31	58.752
Feb-21	\$13,131,827.22	\$9,455,308.11	\$3,407,898.13	\$3,676,519.12	2 -\$936,214.09	\$265,585.79	\$101,451.02	\$362.67	\$0.00	\$0.00	-\$61,992.	.07			-\$33,333.33		-\$1,018,235.10	-\$33,333.33	\$0.00	-\$156,719.73	12/20/2021 Feb	1.82317	28	, 51.0488
Mar-21	\$12,195,613.13	\$8,519,094.01	\$0.00	\$3,676,519.12	2 -\$947,658.81	\$265,585.79	\$101,451.02	\$361.77	\$0.00	\$0.00	-\$61,992.	.07			-\$33,333.33		-\$1,018,235.10	-\$33,333.33	\$0.00	-\$168,163.55	Final Mar	1.76698	31	54.7764
Apr-21	\$11,247,954.32	\$7,571,435.21	\$0.00	\$3,676,519.12	2 -\$944,160.50	\$265,585.79	\$101,451.02	\$311.15	\$0.00	\$12,487.78	-\$61,992.	.07			-\$33,333.33		-\$1,018,235.10	-\$33,333.33	\$0.00	-\$164,614.63	1/19/2022 Apr	1.78735	30	53.6204
May-21	\$10,316,281.59	\$6,627,274.70	\$0.00	\$3,689,006.89	-\$962,372.61	\$265,585.79	\$101,451.02	\$281.43	\$0.00	\$0.00	-\$61,992.	.07			-\$33,333.33		-\$1,018,235.10	-\$33,333.33	\$0.00	-\$182,797.01	May	1.92074	31	59.543
Jun-21	\$9,353,908.99	\$5,664,902.10	\$0.00	\$3,689,006.89	-\$982,350.45	\$265,585.79	\$101,451.02	\$232.80	\$0.00	\$0.00	-\$61,992.	07			-\$33,333.33		-\$1,018,235.10	-\$33,333.33	\$0.00	-\$202,726.22	Jun	2.20115	30	66.0346
JUI-21	\$8,371,558.54	\$4,682,551.65	\$0.00	\$3,689,006.89	-\$830,383.69	\$265,585.75	\$101,451.02	\$198.85	\$0.00	\$12,952.56	-\$61,992.	07 -\$50,725.5			-\$33,333.33		-\$1,018,235.10	-\$33,333.33	\$0.00	4	Jui	2.14492	31	66.4924
Aug-21	\$7,554,127.41	\$7,554,127.41	\$0.00	\$3,701,959.45	-\$967,426.41	\$205,505.78	\$101,451.02	\$320.79	\$0.00	\$0.00	-\$01,992.	.07 -\$50,725.5					-\$1,010,235.10	-\$33,333.33	\$0.00 #########	*	Aug	1.07231	31	56.0416
Sep-21	\$6,566,699.00	\$6,566,699.00	\$0.00	\$0.00	J -\$987,479.34	\$265,585.75	\$101,451.02	\$269.86	\$0.00	\$0.00	-\$61,992.	07 -\$50,725.5					-\$1,018,235.10	-\$33,333.33	\$0.00 #########	F	Sep	1./6632	30	52.9896
Nov 21	\$3,579,219.00	\$3,579,219.00	\$0.00	\$0.00	\$907,512.20 \$097,560,50	\$200,000.78 ©266.696.70	\$101,451.02	\$230.93 \$199.70	\$0.00	\$0.00	-\$01,992.	07 \$50,725.5					-\$1,010,235.10	-\$33,333.33	\$0.00 ##################################	#	E44 126 950 No.	1.07043	31	31.9094
Dec-21	\$3,604,146,87	\$3.60/ 1/6.87	\$0.00	\$0.00 \$0.00	-\$707,000.00	\$265,585,70	\$101,451.02	\$153.05	\$0.00	\$0.00	-\$61,992.	07 -\$50,725.5					-\$1,018,235,10	-\$33,333,33	\$0.00	*	callone purchased Dec	1.57709	31	47.3120
Jan-22	\$2,807,050,72	\$2,807,050,72	\$0.00	\$0.00 \$0.00	\$763,796,67	\$265,585,70	\$101,451.02	\$110.00	\$0.00	\$0.00	-\$61,992.	07 -\$50,725.5					-\$1,018,235,10	-\$33,333.33	\$0.00		gailoris purchaseu Dec	1 80523	31	49.020
Feb-22	\$2,007,050.72	\$2,007,050.72	\$0.00	\$0.00	-\$860,633,59	\$270 240 71	\$0.00	\$78.37	\$0.00	\$0.00	-\$61,992	07 -\$50,725.5					-\$1,018,235,10				Feh	1.82317	28	1 51 0488
Mar-22	\$1,182,620,46	\$1,182,620,46	\$0.00	\$0.00	\$156,398,08	\$269,065,44	\$0.00	\$50.22	\$0.00	\$0.00	-\$61,992	07 -\$50,725.5	+				\$1,010,200.10				Mar	1.76698	31	54.7764
Apr-22	\$1,339,018,54	\$1,339.018.54	\$0.00	\$0.00	\$156,402,89	\$269.065.44	\$0.00	\$55.03	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5				FK Water	Reserve Fund	Balance			Apr	1.78735	30	53.6204
May-22	\$1,495,421.43	\$1,495,421.43	\$0.00	\$0.00	\$156,411.36	\$269,065.44	\$0.00	\$63.50	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5				The worder	neserve runu	Dulunce			May	1.92074	31	59.543
Jun-22	\$1,651,832.79	\$1,651,832.79	\$0.00	\$0.00	\$156,415.74	\$269,065.44	\$0.00	\$67.88	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5		<u>ہ</u> ج	19.00						Jun	2.20115	30	66.0346
Jul-22	\$1,808,248.54	\$1,808,248.54	\$0.00	\$0.00	\$156,424.65	\$269,065.44	\$0.00	\$76.79	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5		ê lê	17.00 517.2M						Jul	2.14492	31	66.4924
Aug-22	\$1,964,673.18	\$1,964,673.18	\$0.00	\$0.00	\$156,431.29	\$269,065.44	\$0.00	\$83.43	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5		ΣS.	16.00						Aug	1.87231	31	58.0416
Sep-22	\$2,121,104.47	\$2,121,104.47	\$0.00	\$0.00	\$156,435.03	\$269,065.44	\$0.00	\$87.17	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5		S:	15.00						Sep	1.76632	30	52.9896
Oct-22	\$2,277,539.50	\$2,277,539.50	\$0.00	\$0.00	\$156,444.58	\$269,065.44	\$0.00	\$96.72	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5		, s	13.00						Oct	1.67643	31	51.9694
Nov-22	\$2,433,984.08	\$2,433,984.08	\$0.00	\$0.00	\$156,447.89	\$269,065.44	\$0.00	\$100.03	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5		Š.							Nov	1.57709	30	47.3128
Dec-22	\$2,590,431.96	\$2,590,431.96	\$0.00	\$0.00	\$156,457.86	\$269,065.44	\$0.00	\$110.00	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5		s:	11.00						Dec	1.60081	31	49.625
Jan-23	\$2,746,889.83	\$2,746,889.83	\$0.00	\$0.00	\$156,464.51	\$269,065.44	\$0.00	\$116.65	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5			\$9.00						Jan	1.89523	31	58.752
Feb-23	\$2,903,354.33	\$2,903,354.33	\$0.00	\$0.00	\$161,175.13	\$273,781.35	i \$0.00	\$111.36	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.51			\$8.00						Feb	1.82317	28	51.0488
Mar-23	\$3,064,529.46	\$3,064,529.46	\$0.00	\$0.00	\$161,193.91	\$273,781.35	i \$0.00	\$130.14	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5			\$7.00						Mar	1.76698	31	54.7764
Apr-23	\$3,225,723.37	\$3,225,723.37	\$0.00	\$0.00	\$161,196.33	\$273,781.35	\$0.00	\$132.56	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5			\$6.00 \$5.00						Apr	1.78735	30	53.6204
May-23	\$3,386,919.70	\$3,386,919.70	\$0.00	\$0.00	\$161,207.60	\$273,781.35	\$0.00	\$143.83	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5			\$4.00						May	1.92074	31	59.543
Jun-23	\$3,548,127.30	\$3,548,127.30	\$0.00	\$0.00	5161,209.58	a a 273,781.35	50.00	\$145.81	\$0.00	\$0.00	-\$61,992.	07 -\$50,725.5			\$3.00					-	Jun	2.20115	30	66.0346
Jui-23	\$3,709,330.00	\$3,709,330.00	\$0.00	\$0.00	0 \$101,221.29 0 \$161,229.12	92/3,/01.30	\$0.00	\$157.5Z	\$0.00	\$0.00	-\$01,992.	07 \$50,725.5			\$2.00 \$1.00						Jui	2.14492	31	60.4924
Aug-23	\$3,070,000.17	\$3,070,550.17	\$0.00	\$0.00	9101,220.13 \$161,220.46	92/3,/01.30	\$0.00	\$104.37 \$165.60	\$0.00	\$0.00	-\$01,992.	07 \$50,725.5			\$0.00						Aug	1.0/231	31	30.0410
Oct 22	\$4,001,700.01	\$4,001,700.01	\$0.00	\$0.00 \$0.00	\$161,223.40 \$161,241,92	\$272,794,26	50.00	\$179.06	\$0.00	00.00 00.00	\$61,002	07 \$50,725.5							, , , , , , , , , , , , , , , , , , ,		Oct	1.67642	21	51.0604
Nov-23	\$4,155,015.70	\$4 354 257 59	\$0.00	\$0.00 \$0.00	\$161,247.00	\$273,781,36	\$0.00	\$178.04	\$0.00	\$0.00	-\$61,002	07 -\$50,725.5							in far bec		Nov	1.57709	30	1 47 3128
Dec-23	\$4 515 500 30	\$4 515 500 30	\$0.00	\$0.00	\$161 255 52	\$273,781.36	\$0.00	\$191.75	\$0.00	\$0.00	-\$61,992	07 -\$50,725.5						<u>, , , , , , , , , , , , , , , , , , , </u>			Dec	1 60081	31	49.625
Jan-24	\$4,676,755,83	\$4,676,755,83	\$0.00	\$0.00	\$161,262,37	\$273,781,35	\$0.00	\$198.60	\$0.00	\$0.00	-\$61,992	07 -\$50,725.5									Jan	1.89523	31	58,752
Feb-24	\$4,838,018.20	\$4,838,018.20	\$0.00	\$0.00	\$166,047.90	\$278,579.91	\$0.00	\$185.57	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5									Feb	1.82317	28	51.0488
Mar-24	\$5,004,066.10	\$5,004,066.10	\$0.00	\$0.00	\$166,074.84	\$278,579.91	\$0.00	\$212.50	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5									Mar	1.76698	31	54.7764
Apr-24	\$5,170,140.94	\$5,170,140.94	\$0.00	\$0.00	\$166,074.81	\$278,579.91	\$0.00	\$212.47	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5									Apr	1.78735	30	53.6204
May-24	\$5,336,215.74	\$5,336,215.74	\$0.00	\$0.00	\$166,088.94	\$278,579.91	\$0.00	\$226.61	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5									May	1.92074	31	59.543
Jun-24	\$5,502,304.68	\$5,502,304.68	\$0.00	\$0.00	\$166,088.46	\$278,579.91	\$0.00	\$226.12	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.51									Jun	2.20115	30	66.0346
Jul-24	\$5,668,393.14	\$5,668,393.14	\$0.00	\$0.00	\$166,103.05	\$278,579.91	\$0.00	\$240.71	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5									Jul	2.14492	31	66.4924
Aug-24	\$5,834,496.19	\$5,834,496.19	\$0.00	\$0.00	\$166,110.10	\$278,579.91	\$0.00	\$247.77	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5									Aug	1.87231	31	58.0416
Sep-24	\$6,000,606.29	\$6,000,606.29	\$0.00	\$0.00	\$166,108.93	\$278,579.91	\$0.00	\$246.60	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5									Sep	1.76632	30	52.9896
Oct-24	\$6,166,715.22	\$6,166,715.22	\$0.00	\$0.00	\$166,124.21	\$278,579.91	\$0.00	\$261.87	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5									Oct	1.67643	31	51.9694
Nov-24	\$6,332,839.43	\$6,332,839.43	\$0.00	\$0.00	\$166,122.59	\$278,579.91	\$0.00	\$260.25	\$0.00	\$0.00	-\$61,992.	07 -\$50,725.5									Nov	1.57709	30	47.3128
Dec-24	\$6,498,962.02	\$6,498,962.02	\$0.00	\$0.00	\$166,138.32	\$278,579.91	\$0.00	\$275.98	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.5									Dec	1.60081	31	49.625
Jan-25	\$6,665,100.34	\$6,665,100.34	\$0.00	\$0.00	<u> \$166,145.37</u>	\$278,579,91	\$0.00	\$283.04	\$0.00	\$0.00	-\$61,992.	.07 -\$50,725.51									Jan	1.89523	31	58.752
-	\$0.00		\$0.00	\$0.00	<i>.</i>																гео 1.8 Мог 1 ⁻¹	231/044 28	51.048//24	4
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F	\$0.00		\$0.00	\$0.00)																Oct 1.6	57643226 31	51.9694	÷

Wuetcher, Gerald

From:	Daniel Clifford <dclifford@hcwd.com></dclifford@hcwd.com>
Sent:	Friday, October 30, 2020 3:15 PM
То:	Wuetcher, Gerald
Cc:	David Wilson (David.Wilson@sbwhlaw.com); Stephen Hogan; Scott Schmuck; Justin
	Metz
Subject:	FW: [Non-DoD Source] Muldraugh Water Treatment Plant Improvements Project

Jerry,

Please see response below from Contracting Officer, DLAE, Contract SP0600-11-C-8271

Daniel Clifford

Engineering Manager Hardin County Water District No.1 1400 Rogersville Road, Radcliff KY, 40160 (270) 351-3222 (Office) (270) 268-4090 (Cell) DClifford@hcwd.com



From: Silverstone, Carl CIV DLA ENERGY (USA) [mailto:carl.silverstone.civ@mail.mil] Sent: Friday, October 30, 2020 2:43 PM To: Justin Metz < jmetz@HCWD.com> Cc: David Wilson <david.wilson@sbwhlaw.com>; Daniel Clifford <dclifford@HCWD.com>; Stephen Hogan <shogan@HCWD.com>; Brett Pyles
byles@hcwd.com>; Addison, Kevin N CIV USARMY USAG (USA) <kevin.n.addison2.civ@mail.mil>; Legions, Randall N CIV DECA (USA) <randall.legions@dla.mil>; Moore, Brittney S CIV DLA ENERGY (USA) <brittney.moore@dla.mil>

Subject: RE: [Non-DoD Source] Muldraugh Water Treatment Plant Improvements Project

Hello,

For the Muldraugh Water Treatment Plant Improvement effort, the Government has no objections to HCWD1's plan of action.

Carl Silverstone **Contracting Officer** Defense Logistics Agency Energy 8725 John J. Kingman Road STP 10400 Fort Belvoir, VA 22060-6222 (571) 767-9116 / DSN: (392) 767-9116 Email: carl.silverstone@dla.mil

From: Justin Metz [jmetz@HCWD.com]
Sent: Friday, October 30, 2020 10:43 AM
To: Silverstone, Carl CIV DLA ENERGY (USA); Addison, Kevin N CIV USARMY USAG (USA)
Cc: David Wilson; Daniel Clifford; Stephen Hogan; Brett Pyles; Scott Schmuck
Subject: [Non-DoD Source] Muldraugh Water Treatment Plant Improvements Project

All active links contained in this email were disabled. Please verify the identity of the sender, and confirm the authenticity of all links contained within the message prior to copying and pasting the address to a Web browser.

Mr. Silverstone,

In preparation for Hardin County Water District No. 1 (HCWD1) submittal to the Kentucky Public Service Commission (PSC) for a Waiver of the Certificate of Public Convenience and Necessity (CPCN), HCWD1 is requesting a response to the following;

Hardin District has advised DLA of the expected cost for the Muldraugh Water Treatment Plant Improvements Project, that it intends to finance from remaining ISDC Surcharge proceeds and other funds in the Fort Knox Water Utility Fund, and the DLA offers no objections.

Attached is the certified Bid Tabulations and Recommendation for Award.

I apologize for the late request and a response is urgently needed for the submittal to PSC. Please respond with a with an acknowledgement of no objections.

As acting General Manager, I'm sending this on behalf of Stephen Hogan.

Justin Metz, CSP

County Systems Manager Hardin County Water District No.1 1400 Rogersville Road, Radcliff KY, 40160 (270) 351-3222 (office) jmetz@hcwd.com < Caution-mailto:jmetz@hcwd.com >

