

# Monterey County Water Resources Agency

## Nacimient Dam Low Level Outlet Works 42" Butterfly Valve

# Actuator Price Quote Request

### **1.0 Introduction**

Monterey County Water Resources Agency (MCWRA) owns and operates Nacimient Dam. Dam facilities include low level outlet works consisting of an outlet structure containing three (3) 42-inch diameter butterfly valves operated in an open-closed manner. The outlet structure is continuously submerged, with maximum submergence of 155 feet. The new actuators will replace (name plate data below):

- GH Bettis model T505-S actuator
- Part No. 101521
- Serial No. 892038A-2 (1 of 3 actuators)
- Max Operating Pressure 1,700 psi
- Max Hydrostatic Test Pressure 2,700 psi
  - Scotch yoke mechanism
  - Double-acting hydraulic cylinder with sea-pot pressure equalizer
  - Manufactured and installed in 1989

### **2.0 Instructions to Supplier**

MCWRA is soliciting price quotes for three (3) valve actuators conforming to specifications provided herein. Complete the Price Quote in its entirety, or submit equivalent documentation. Provide information described in Section 6.0 herein along with the Price Quote. The total price shall include furnishing all items specified herein, including all fees, taxes and shipping costs, to the Salinas, CA ship-to address provided. If a particular specification in Section 3.0 cannot be directly met, alternative solutions to meet the requirement may be proposed, and the price for any alternative proposal shall be included in the total price.

### **3.0 Actuator Specifications**

1. Quarter-turn rotation
2. 100% OPEN – 100% CLOSED operation (no modulation)
3. Operate 42-inch diameter DeZurik BAW AWWA Class 150B Butterfly valve, Buna seat material, installed in 1989 (see Attachment 1 for original valve order and drawings)
4. Continuous water submerged service (155 feet maximum submergence)
5. Provide torque to:
  - a. OPEN one valve at a time under highest head condition of full reservoir (155 feet of water) on upstream side of valve and empty outlet pipe on downstream side of valve
  - b. CLOSE one valve at a time with maximum of 700 cubic feet per second (cfs) flow through the three 42" valves (average maximum water velocity thru one valve  $700 \text{ cfs} / 3 = 233.3 \text{ cfs}$  per valve computes to 34 ft/sec)
  - c. Meet above torque requirements with a minimum safety factor of 1.5 (350 cfs and 51 ft/sec capacity)

6. Hydraulically actuate to OPEN position. Minimum hydraulic system operating pressure 600 psi; Maximum 1,000 psi. (NOTE: if your actuator meets all other specifications herein, but requires hydraulic operating pressure outside the range indicated above to operate, please contact MCWRA to discuss hydraulic operating system parameters.)
7. Spring return to CLOSED position. If spring return not feasible, double acting maybe acceptable.
8. Fail to 100% CLOSED position (valve closes in the event of hydraulic system pressure loss) preferred.
9. 90° Rotation time: 5 minutes
10. Hydraulic oil: Chevron Lubricating Oil FM ISO 46, or equal food grade oil
11. U.S. Customary dimensions (inches-feet) and connection sizes (no metric or hard-conversion from metric to U.S. Customary)
12. 3/8-inch NPT hydraulic hose connection on actuator hydraulic cylinder
13. Mechanical angular stroke adjustment of  $90^\circ \pm 5^\circ$ . Actuator travel-stops shall lock in place and prevent travel-stop setting creep and valve movement when fully open or closed due to vibration and impact loads.
14. High visibility position indicator that can be seen by remote operated vehicle (in good visibility) and felt (tactile) by a diver (in poor visibility)
15. Minimum of two (2) lifting eyes integral to the actuator body that allow the actuator to be symmetrically lowered onto and lifted from the valve shaft
16. No dissimilar metal construction such that corrosion is induced between actuator parts
17. Coating:
  - a. CeRam-Kote 54 SST available from Freecom, Inc., Big Springs, Texas, Tel: 800-346-4299 [www.ceram-kote.com](http://www.ceram-kote.com), or Devoe Bar-Rust 233H available from International Paint Protective Coatings, [www.international-pc.com](http://www.international-pc.com), or equal.
    1. Epoxy or epoxy/ceramic industrial coating for continuous (fresh water) submerged service; Minimum 80% solids volume; 24 mils minimum dry film thickness; Apply the manufacturer's recommended number of coats to attain the minimum coating thickness; Each coat shall be a different color than the preceding coat; Color of topcoat: black.
  - b. Surface Preparation:
    1. Steel: Abrasive blast to near white metal surface in accordance with SSPC-SP10. Blast profile should be 1.5 to 2.5 mils in depth and be of sharp jagged nature (as opposed to a "peen" pattern from shot blasting)
    11. Cast Iron: Abrasive blast to near white metal surface in accordance with SSPC-SP10. Blast profile should be 2 to 2.5 mils in depth and be of sharp jagged nature (as opposed to a "peen" pattern from shot blasting)
    111. Surface profile shall be determined using a Keane-Tator surface profile comparator, or Testex replica tape used in conjunction with an analog or digital spring-loaded micrometer for acquiring surface profile measurements according to Method C in ASTM D4417.
  - c. Holiday detection spark test. Repair coating pinholes or other defects prior to shipment.
  - d. Install magnesium anode(s) on the actuator to provide cathodic protection to entire actuator, including bolt heads and small diameter drain plugs and bleed valves. Attach anode(s) directly to actuator bare metal. Do not coat anode(s). Size anode(s) for 20-year life at 85% anode utilization factor. Protective current shall not cause cathodic disbondment of the coating.
18. Fit mounting bolt pattern, shaft and key sizes shown in Attachment 4.
19. Fit inside the outlet structure without wall or adjacent actuator interference
20. The actuator shall be effectively sealed to prevent entry of water, and shall be permanently lubricated and without lubrication fittings.

21. Minimum warranty of 1 year from date received by MCWRA against defective parts and workmanship
22. **Ship to:** Monterey County Water Resources Agency, 10690 Nacimiento Lake Drive, Paso Robles, CA 93426

#### **4.0 Do Not Include in Quote**

For clarity in providing pricing, do not include the following items in your quote:

- a. Anything metric
- b. Electric or electronic features
- c. Hydraulic control system
- d. Bolts, nuts, washers

#### **5.0 ATTACHMENTS:**

Attachment 1 – Original 42-inch Butterfly Valve Order and Drawings (5 pages)

Attachment 2 – Plan and Profile View of Outlet Structure and Valves, and Existing Valve Shaft Dimensions (3 sheets)

Attachment 3 – Photos of Valves and Existing Actuators (3 pages)

Attachment 4 – 42" Valve Mounting Bolt Pattern and Existing Actuator Dimensions (1 drawing)

Attachment 5 – Monterey County Local Preference Policy (5 pages)

#### **6.0 Vendor to Provide the Following Information**

The vendor shall provide the following information along with a completed Price quote:

- Recommended hydraulic oil
- Warranty
- Coating specification (if alternative to coatings listed in Item 17 of Section 3.0)
- Anode(s) weight, attachment method and location on actuator, and estimated total amperage output
- Drawing(s) showing actuator plan and profile dimensions, connection details and weight
- Operation and Maintenance Manual
- Recommended spare parts
- Description of Manufacturer testing procedures to be conducted on actual actuators shipped
- Actuator output torque values based on specifications in Item 5, Section 3.0 herein
- Minimum and maximum actuator operating pressures (See Note on Item 6 of Section 3.0)
- Estimated lead time, estimated shipping time, and estimated total time to deliver products to customer ship-to site
- Installation instructions (for submerged application)
- If a particular specification in Section 3.0 is not directly met, provide alternative solution to meet the requirement.

#### **7.0 MCWRA Contact**

Contact Mr. Alex Henson of MCWRA with any questions at:

Monterey County Water Resources Agency

Mailing Address: 1441 Schilling Pl North Bldg, Salinas, CA 93901

Tel: 831-755-4874 Direct

Tel: 831-755-4860 Reception

Email: [hensonalex@co.monterey.ca.us](mailto:hensonalex@co.monterey.ca.us)

**8.0 Price Quote Submittal**

Price Quote submittal with all items described in Section 6.0 is requested by **12:00 pm**  
**(Pacific Time) November 3, 2023.** Email submittals are preferred.

Send to: ATTN: Mr. Alex Henson  
Monterey County Water Resources Agency  
Address: 1441 Schilling Pl North Bldg, Salinas, CA 93901  
Email: [hensona@co.monterey.ca.us](mailto:hensona@co.monterey.ca.us)

**Price Quote**

Item	Description	QTY	Price
1	42" BFV Submerged Service Actuator Manufacturer & Model:	3	\$
2	Other Required Part(s):		\$
3	Recommended Spare Part(s):		\$
4	Taxes		\$
5	Shipping to Salinas, California		\$
6	TOTAL PRICE		\$
7	Estimated Lead Time (place-order to ready-to-ship): _____ + Estimated Shipping Time to Salinas, California: _____ = Estimated Total Time to Delivery: _____		
8	All specifications in Section 3.0 are included in Total Price (check box): <input type="checkbox"/> YES <input type="checkbox"/> NO – if NO, complete items 9 & 10 below		
9	Specification(s) not included in Total Price:		
10	Proposed Alternative(s) to item(s) listed in Line 9 and included in Total Price:		