

COUNCIL ACTION FORM

SUBJECT: NEW WATER PLANT CHANGE ORDER NO. 14 – CONTRACT 2

BACKGROUND:

The new Water Treatment Plant project is budgeted to wrap up in the current fiscal year. Table 1 below shows the entire project budget, from 2008 through the mid-year budget amendments currently being considered by Council.

Table 1: Total Project Budget

	Water Fund	SRF Loan
All Prior Years	\$ 813,792	\$ 39,728,135
Current Year	706,002	29,667,686
Subtotal	\$ 1,519,794	\$ 69,395,821
Total		\$ 70,915,615

On October 14, 2014, the City Council awarded a construction contract to Knutson Construction of Minneapolis, Minnesota, for the City's new drinking water treatment plant. This contract, along with all other project expenses, are summarized in Table 2.

Table 2: Total Project Costs To Date

Contract	Amount	Total
FOX Engineering		
Original Contract	\$ 8,240,000	
Change Orders 1-11	763,986	\$ 9,003,986
Contract 1: Pipeline – S.M. Hentges & Sons		
Original Contract	\$ 3,197,273	
Change Orders 1-4	54,566	\$ 3,251,839
Contract 2: Treatment Plant – Knutson Construction		
Original Contract	\$ 52,497,000	
Change Orders 1-13	300,719	\$ 52,797,719
All Other Expenses		\$ 3,163,437
(e.g., land acquisition, lime sludge disposal, environmental investigations, etc.)		
Subtotal		\$ 68,216,981
Contingency		\$ 2,698,634
Total		\$ 70,915,615

Thirteen previous change orders have been executed for Contract 2 with Knutson Construction (see the attached summary for a description of each). Additional items have been identified that need to be addressed and that require a change to the contract. Knutson has provided a proposed change order for the work. Each item is described below.

- **SCADA revisions** – Changes have been requested to monitor the fire alarms at the existing Technical Services Complex through the SCADA system at the new treatment plant. Also included are staff-requested revisions to the control system. **Total cost is \$75,482.**
- **Replace valves along 13th Street** – Three distribution system valves near the new water plant will need to be operated during start-up but are difficult to operate or are inoperable. Replacing these valves would better isolate the distribution system so fewer customers would be impacted in case of a problem. **Total cost for the valves is \$64,023.**
- **Door hardware revisions** – Two doors needed to be modified to accommodate electric strikes for the security system. **Total cost for the change is \$3,032.**
- **Ammonia feed system** – Only the space for an ammonia feed system was included in the plant design; no equipment was included. Because of problems in maintaining a consistent chlorine level caused by fluctuating ammonia levels, it was subsequently determined by staff that the ammonia feed system should be installed now as a part of the initial plant construction. **Total cost for the system is \$145,082.**
- **City IT revisions** – Modifications made to phone system wiring and other components to allow connections to the City's IT infrastructure. **Total cost is \$39,119.**
- **Door hardware revisions at fire-rated doors** – Changes made to meet UL listing requirements. **Total cost for this change is \$2,146.**
- **Removal of high service pump disconnect panels** – Large disconnect panels were removed from the project and a number of stainless steel junction boxes were added. **Total savings for the change is \$249.**
- **Fan coil and Variable Frequency Drive (VFD) relocation** – Two VFDs needed to be moved to accommodate construction at the contractor's expense. City staff requested the other three VFDs be moved to allow for future equipment. **Total cost for this change is \$1,442.**
- **CO2 tank sidewalk and equipment revisions** – Paving was added to minimize maintenance around the tanks and modifications were made to make equipment more accessible for maintenance. **Total cost for this change is \$14,055.**
- **Add back in sample valves** – it was determined that valves that were initially removed are needed. **Total cost for this change is \$606.**
- **Ships ladder modification** – The elevations shown on the drawings did not match; the ladder dimensions and concrete elevations needed to be adjusted. **Total cost for this change is \$2,459.**
- **Stiffen metal stud knee wall** – Modification to the bracing in the walls in the control room. **Total cost for this change is \$3,423.**

- **Exterior stair revisions** – Elevations shown on the drawings did not match. Stair elevations needed to be adjusted. **Total cost for the change is \$5,587.**
- **Sink, WC, and garbage disposal wiring** – Low voltage wiring was not included on the plans for automatic sinks and toilets. **Total cost for the change is \$26,524.**
- **Fire/smoke dampers** – Dampers were not included on the drawings and are required by code. **Total cost for the change \$174,557.**
- **Turbidimeter model change** – The turbidimeter model specified is scheduled to be discontinued this summer. Rather than have obsolete equipment in the new treatment plant, the newer model was requested by staff. **Total cost for the change is \$7,644.**

The net cost for this change order is \$564,932. It is the opinion of the consulting team that this is a fair and reasonable price for the requested changes.

The table below shows project contingency before and after approval of this change order.

Table 3: Contingency Balance

	Total
Available Contingency Before Change Order 14	\$ 2,698,634
Contract 2 Change Order 14 (this Council Action)	564,932
Remaining Project Contingency	\$ 2,133,702

There are still a number of additional changes needed for the project that will result in additional changes to Contract 2. The contractor and consultant are working to determine appropriate pricing for these changes. As these are completed, they will appear on future change orders.

ALTERNATIVES:

1. Approve Change Order No. 14 for Contract 2 with Knutson Construction in the amount of \$564,932.
2. Do not approve the change order at this time.

MANAGER’S RECOMMENDED ACTION:

The proposed changes are to improve reliability and function of the water plant. The consulting engineers, City staff, and Knutson Construction have worked together to come up with reasonable, cost effective recommendations. After approving Change Order No. 14, the remaining contingency available for the project will be \$2,133,702. Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1 as described above.

**New Water Treatment Plant
Summary of Change Orders to Construction Contracts**

Contract 1: S.M. Hentges & Sons (Pipeline)

Description	Net Change
Contract 1, Change Order #1 Raw water realignment, site work, communication structure	\$ 9,256.45
Contract 1, Change Order #2 Piping changes, bypass structure changes, hydrant valves	\$ 21,687.60
Contract 1, Change Order #3 Air relief hydrants, pedestrian ramp, thrust block removal and replacement	\$ 16,974.83
Contract 1, Change Order #4 Road stone, replace lime sludge line laterals, repaint hydrants	\$ 6,647.12
Total Approved Changes to Contract 1	\$54,566.00

Contract 2: Knutson Construction (Treatment Plant)

Description	Net Change
Contract 2, Change Order #1 Sanitary Sewer Realignment	\$ 127,023.00
Contract 2, Change Order #2 Second water service line; additional gate valve; change in pipe material; manhole waterproofing.	\$ 55,634.00
Contract 2, Change Order #3 Minor plumbing changes, tree removal, minor electrical change to elevator, process valve simplification	\$ 5,457.00
Contract 2, Change Order #4 Clearwell access hatches	\$ 6,192.00
Contract 2, Change Order #5 Debris removal, analyzers, access doors, lime pond gates, structural clarifications	\$ 21,790.00
Contract 2, Change Order #6 Electrical modifications, valve floor stand, tracer wire, loss of work time	\$ 22,624.00
Contract 2, Change order #7 Piping modifications to eliminate maintenance in a confined space	\$ 8,985.00
Contract 2, Change order #8 Flooring changes, plumbing modifications, concrete construction changes, valves, concrete pad	\$ 19,341.00

Contract 2, Change order #9 Miscellaneous construction modifications and process piping adjustments	\$ 3,659.00
Contract 2, Change order #10 Service water piping rerouting	\$ 6,027.00
Contract 2, Change order #11 Glass revisions	(\$ 2,360.00)
Contract 2, Change order #12 Natural gas pressure reducing valve and concrete pad	\$ 5,211.00
Contract 2, Change order #13 Lime pond work, water service lines, interior finish selections, hose bib modifications	\$ 21,136.00
Contract 2, Change order #14 Technology revisions, building modifications, equipment relocation, hardware revisions, code requirements	\$ 564,932.00
Total Approved Changes to Contract 2, including this request	\$865,651.00