



# MEMORANDUM

---

**Resolution 23-086, A Resolution of the City Council of Homer, Alaska Awarding a Contract to HDR Engineering, Inc in the amount of \$15,061 to Assist with the Procurement of Membrane Filter Trains for the Water Treatment Plant and Authorizing the City Manager to Negotiate and Execute the Appropriate Documents. City Manager/Public Works Director.**

**Item Type:** Backup Memorandum  
**Prepared For:** City Council  
**Date:** July 26, 2023  
**From:** Janette Keiser, PE, Public Works Director/City Engineer  
**Through:** Rob Dumouchel, City Manager

---

**I. Issue:** The purpose of this Memorandum is to recommend award of a Task Order to HDR to help with the procurement/installation of membrane filter trains at the Water Treatment Plant.

**II. Background:**

The City's water is treated with a sophisticated system of long, small-diameter hollow threads, which, when connected together in a frame, comprise a "membrane filter". The entire frame structure when hung with these threads, looks like a huge rack of drying angel hair pasta and is colloquially referred to as a "train". Water flows through the membrane filter train, which removes organic and inorganic particles. The entire system has room for five of these filter trains.<sup>1</sup> They were installed when the Water Treatment Plant (WTP) was built in 2007 and have a predicted life span of 10-15 years. Over time, the membranes become brittle, get holes and need to be repaired. The crew has done this multiple times. The process involves injecting a polymer into the tiny hollow threads with a syringe. This is delicate, time consuming work. Plus, the effectiveness of the membranes is degraded because the polymer blocks the flow of water through the repaired membranes. It is time to replace them. Since they are very expensive, our strategy is to do this one at a time.

The FY24 Capital Budget includes \$80,000 to procure one membrane filter train and the FY25 Capital Budget includes \$80,000 for the buy a second one. We expect to ask Council for authorization to buy one in FY 26, FY 27 and FY 28. At that point, we'll be good for another 10-15 years.

---

<sup>1</sup> Currently we are using four trains, but expected to need the 5<sup>th</sup> within the next five years as water demands continue to grow.

We need professional help to develop specifications for the membranes we need to make sure they are compatible with our existing system. Plus, we would benefit from professional help, experienced in this highly technical industry, to identify manufacturers and negotiate terms and conditions for the procurement. HDR Engineering Inc. (HDR) provided the original design for the WTP and has on staff, a membrane expert, Nathan Kutil, who can help us with this process. We asked HDR for a proposal to help us specify performance standards for the new membrane filter trains and negotiate with potential vendors. The strategy would be to negotiate a procurement for all five trains so we lock in the prices. The payment schedule would be contingent upon future Council authorizations. HDR has submitted a proposal for these services for the not to exceed price of \$15,061.

**III. RECOMMENDATION:** That the City Council award a Task Order to HDR Engineering Inc. in the Not To Exceed amount of \$15,061.