



*Where Life is Sweet*

Mayor and Members of the City Council

## **STAFF REPORT**

For the Meeting of February 24, 2025

### **Title/Subject**

Resolution 2356- Water Service Agreement with Amazon Data Services, Inc.

### **Summary and Background**

This resolution authorizes a multi-faceted water supply agreement with Amazon Data Services, Inc.

This agreement leverages an Aquifer Storage & Recovery (ASR) process which will allow the company to support several additional data center facilities within the community while returning at least 100 million gallons per year of drinking water to the City of Hermiston; increasing the community's long-range water supply capacity. The company will pay all capital construction costs associated with this project, and will pay the same water rates as all other customers within the city.

### **How it Works- Generally**

The City of Hermiston operates the City's water system, and also operates the jointly-owned Regional Water System (RWS) with the Port of Umatilla. Broadly speaking, the RWS consists of very large pumps in the Columbia River, a very large pipeline which runs 9 miles south in to Hermiston, and a large filtration/treatment facility in Hermiston. This system has peak capacity to flow roughly 20,000 gallons of water per minute (GPM), but during the Winter months the actual demand is closer to 8,000GPM. Similarly, the City of Hermiston's system experiences roughly 1.5 million gallons per day of demand in the Winter compared to nearly 10 million gallons per day in the Summer.

This proposed arrangement will maximize the existing infrastructure by pumping upwards of 400 million gallons of water from the Columbia River between October and March (when demand is low), and storing it approximately 1,500' underground in the deep basalt aquifer. New ADS data centers to be built will then be supplied water from the stored water throughout their summertime cooling season. This will allow for additional economic development without any additional summertime withdrawals from the Columbia River when demand is highest from fish, farmers, and families.

As part of ADS' commitment to being a good community partner, this proposed agreement will have them paying the same water rates as all other customers within the City. Additionally, as part of the company's "Water-Positive" goals, upon operation, the company will pay to process, treat, and inject at least 100 million gallons of water per year over and above what it utilizes for cooling each year. It is estimated that the company may utilize up to 200 million gallons per year. Therefore, the 100MG of water being provided each year to the community's future use is estimated to equal roughly half of the water used by the company for cooling.

### **How it Works- Specifically**

Specific Water Guarantee- This arrangement guarantees provision of 105 million gallons of water per year at flows up to 4,500 gallons per minute.

ASR Operation- This arrangement will utilize the City's un-used potable water capacity from the RWS from approximately October through March to supply water to go down in to the ASR Well.

ASR- ASR is a proven method for storing massive volumes of water for future use. ASR has been successfully used for many years by the cities of Pendleton, Kennewick, The Dalles, and Prineville. A traditional well down in to the deep basalt aquifers pulls ancient water which is trapped in large underground aquifers. Generally, those aquifers are not replenished through natural sources on a human time-scale. However, just as water can be pulled out of the aquifer, water can also be pushed back in to the aquifer for any number of uses.

This agreement will require drilling a new approximately 1,500' deep well, and then installing all the necessary on-site equipment (i.e. pumps/motors/tanks) to then recover the water in the future.

The Oregon Water Resources Department is highly involved in permitting of ASR wells. City staff has been working with GSI, Inc. our groundwater consultants, since 2022, to develop the ASR concept and submitted an official ASR License application in July, 2024. Upon approval of the ASR License and completion of the well, there is a period of monitoring and "building the bubble." Generally, by pouring water in to the aquifer, we will be creating a large "bubble" of water which will have the water quality/chemistry from our surface water, which pushes-out existing groundwater. After a period of bubble-building, and monitoring, then water can be withdrawn.

An important distinction also should be made that ASR is different than Aquifer Recharge (AR). What we are doing, ASR, is putting treated potable drinking water directly in to the aquifer. AR, which others in the region have worked on to varying degrees of success, is a less precise method which simply puts un-treated surface water on to a large area and allows it to percolate in to the aquifer. Due to the precision of ASR, the City anticipates being able to recover upwards of 95% of all water put in to the ground.

Source Water- The City of Hermiston owns approximately 1,500GPM of potable water treatment capacity directly in the Regional Water System. This is the source of water which will be used to inject in to the aquifer. While this water source factors in to the City's Water System Master Plan as a necessary source of water in the future, current water demand levels are such that the City has not utilized any of it's allocation from this source for many years.

Water Supply Capacity- It is critical to understand the seasonal nature of water supply demand on the City's water system in order to understand how much capacity exists. In July,

2024, the City supplied 258 million gallons (MG) of water to customers. In January, 2025, the City supplied 44 million gallons of water to customers. This variance implies that for all day-to-day needs of residents, excluding irrigation, the true water supply need is roughly 1.4 million gallons per day (MGD) compared to the 8.34MGD being supplied in the Summer.

Since the City has the water rights and developed system capacity to currently supply 8.34MGD to customers in July without even utilizing any source water supply from the RWS, then that means the community's winter-time demand would have to increase 5.8 times before RWS water would be necessary in the winter time. Put another way, the City has this developed asset that is going unused, and will be un-needed until the city grows to a population of at least 120,000 residents.

Community Impacts- This agreement should be celebrated by fishermen, farmers, and financial analysts.

1. Fish: This agreement results in significant supply of summertime water for industry without pulling a single drop of water from the Columbia River in the summertime (the period of the year when stream flows are lowest).
2. Financial Analysts: City of Hermiston utility rate payers have significant sunk-costs in the developed capacity within the RWS which goes otherwise un-used in the winter time. This agreement not only generates revenue from that infrastructure, but forms a critical component in driving-down future costs for rate payers by improving the economies of scale through the RWS' drinking water treatment facility.

When Shearer's Foods was operating and purchasing potable water from the RWS, the unit-rate through the RWS was approximately \$3. That is the same rate which the City of Hermiston itself had to purchase water at from the RWS wholesale, and then turn around and retail it to customers within the city at roughly \$3.80. That \$0.80 margin did not justify the cost of pumping and conveying the water in to town.

Through this agreement, ADS will guarantee purchasing nearly 5 times as much potable water each year from the RWS as Shearer's did; thus driving the unit rate for potable RWS water down to a projected \$0.61 by 2027. This improvement in economies of scale will make accessing potable water for residential customers within the city in the summertime significantly more affordable.

3. Futurists: Storing more than 100 million gallons of water per year will result in expansion of the City of Hermiston water rights capacity by 3.3 Billion gallons over the term of the agreement; equal to 2.3 years-worth of the entire city's current water demands. Therefore, rather than questioning how much of the City's water capacity ADS' data centers are using, future ADS data centers will be net contributors to the City of Hermiston's peak summertime capacity needs.
4. Farmers: It is anticipated that ADS will discharge roughly half of the water that it uses each year during peak irrigation season. This discharge will have been water which was captured during the winter, paid for by ADS to convey and store underground, before being pulled back out for their use, and finally discharged to local irrigation canals at no cost for use by local small farms located within the Hermiston Irrigation District. For context, this equals an estimated 63 acres of farmland which can be fully irrigated for an entire season in the region's highest-value commodities of potatoes,

corn, and onions. To be clear, without this effort, none of this 63-acres of irrigation water would otherwise be available to local farmers.

## **Financial**

This Water Supply Agreement (WSA) is broken in to two very distinct phases.

1. Phase 1- This phase will physically drill the ASR Well and install necessary equipment for injecting water. Approximately \$8.1 million.
2. Phase 2- This phase will install the necessary equipment to pull water back out of the ground and deliver it out to the distribution system in quantities and pressures as spelled out in the agreement. Approximately \$12 million.

The WSA is clear that ADS will cover 100% of the cost of Phase 1. However, there are two possible unknowns prior to Phase 2, which is a) the actual output of the new well and b) the approval of the ASR license from OWRD. Therefore, the agreement delineates that Phase 2 will only begin upon successful completion of Phase 1 (a well that outputs enough water volume, and approval of an ASR license), at which point ADS will cover 100% of the cost of moving forward with Phase 2.

Operational Financials- Upon completion of the capital assets, there will be two stages for operational financials: “Initial Contribution” and “On-Going Replenishment.”

1. Initial Contribution- This can be thought of as “building the bubble.” Table 1 of the agreement shows that from 2025 to 2029, ADS will pay the City \$885,000 for water to put in to the ASR well. This water will be purchased at the City’s cost to purchase/treat the water from the RWS, as shown in Table 1.
2. On-going Replenishment- From 2029 and beyond, ADS will pay the City whatever the current rate for city water is at the time, for at least 200 million gallons per year. The City will use that revenue to purchase RWS water and put it down the ASR well through the Winter time. ADS shall always pay for at least 100 million gallons of water per year more than it actually uses in it’s facility each year. That additional water shall be injected in to the aquifer and shall be available for use by the City water utility in the future.

## **Alternatives and Recommendation**

### **Alternatives**

1. Approve Resolution 2356
2. Reject Resolution 2356
3. Table Resolution 2356

### **Recommended Action/Motion**

Motion to approve Resolution 2356.

### **Submitted By:**

Mark Morgan, Assistant City Manager