

**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: June 28, 2022**

REGULAR **CONSENT** **EFFECTIVE DATE** June 29, 2022

DATE: June 14, 2022

TO: Public Utility Commission

FROM: Steph Yamada

THROUGH: Bryan Conway, Marc Hellman, and Bruce Hellebuyck **SIGNED**

SUBJECT: AVION WATER COMPANY:
(Docket No. ADV 1398/Advice No. 22-01)
Introduces the Pressurized Irrigation Supplementation Test Tariff.

STAFF RECOMMENDATION:

Staff recommends that the Public Utility Commission of Oregon (Commission) allow Avion Water Company's (Avion or Company) proposed Schedule No. 17 to become effective for service rendered on and after June 29, 2022.

DISCUSSION:

Issue

Whether the Commission should allow Avion's filed tariff sheets to become effective.

Applicable Rule or Law

Under ORS 757.205(1)-(2), a rate-regulated water utility must file schedules showing all rates, tolls, and charges for any service performed by it within the state and all rules and regulations that in any manner affect its rates. Pursuant to ORS 757.210, the Commission may approve tariff changes if they are deemed to be fair, just, and reasonable. Tariff revisions may be made by filing revised sheets with the information required under the Commission's administrative rules, including OAR 860-036-2010.

Pursuant to ORS 757.220, filings that propose any change in rates, tolls, charges, rules, or regulations must be filed with the Commission at least 30 days before the effective

date of the change.

Analysis

Background

Avion is a rate and service-regulated water utility serving approximately 15,000 customers in the vicinity of Bend, Oregon. With this filing, Avion proposes to introduce Schedule No. 17 into its tariff to establish a Pressurized Irrigation Supplementation Test program. The filing was submitted on May 19, 2022, with a proposed effective date of June 29, 2022.

Several subdivisions within Avion's territory are served by dual-pipe systems in which irrigation water and potable domestic water are delivered separately. In total, approximately 935 customers receive pressurized surface irrigation water through a dual-pipe system.¹ Pursuant to Schedule No. 2 of Avion's tariff, the irrigation water for these customers is supplied by several irrigation districts, including Arnold Irrigation District, Swalley Irrigation District, and Central Oregon Irrigation District, in accordance with water rights owned by each end user. Avion collects payment for irrigation water from these customers, which is ultimately passed through to the applicable irrigation districts. Under normal conditions, irrigation water is provided throughout the irrigation season, which extends from April through October. Avion states that its Schedule No. 2 irrigation customers generally "use the water for both home landscape watering and watering of small hobby farms and hayfields."²

Due to factors such as the extreme drought conditions impacting Central Oregon, the irrigation districts that supply water to Avion's dual-pipe irrigation customers have significantly reduced surface water deliveries in recent years. Central Oregon Irrigation District's website states that 2022 marks, "the third consecutive year that Deschutes County has declared a drought and the first time the county has ever declared a drought three years in a row," and asks customers, to "please prepare for curtailment to 65% in mid to late July."³ Swalley Irrigation District's website states that, "[d]elivery rates may vary across the District and some patrons may experience water shortages" which "may be especially evident during warm, dry weather in April, May, and September."⁴ Arnold Irrigation District's website states that, "[w]eather will continue to be the biggest factor impacting our outlook for water demand" and that moderate

¹ See Attachment A, Avion's response to Staff's IR 1.

² See Attachment B, Avion's response to Staff's IR 7.

³ See Attachment C, COID Website, <https://www.coid.org/important-information/>.

⁴ See Attachment D, Swalley Website, <https://www.swalley.com/irrigation-schedule-stock-runs>.

weather will “provide the prospect of getting through the end of June.”⁵ The specific extent to which each district may need to reduce irrigation water deliveries in 2022 and future years is currently unknown.

While not unheard of in the Central Oregon area, the presence of a separate dual-pipe system for irrigation deliveries is not typical for water systems in Oregon. Typically, customers receive only potable domestic water, which can also be used for purposes such as lawn watering and landscape irrigation at the homeowner’s discretion. The majority of Avion’s customers do not have access to a separate irrigation delivery system—in those areas, the domestic system consists of larger diameter pipe to adequately supply water for typical domestic uses that may include outdoor watering for lawns and other home landscaping purposes.

Because irrigation water in dual-pipe areas was anticipated to be provided separately, the potable domestic water in those areas is supplied by smaller diameter pipe. Consequently, the domestic portion of the dual-pipe system is not sized sufficiently to simultaneously supply water for existing household uses as well as additional irrigation-related uses. In the event that irrigation water provided through the dual-pipe system becomes unavailable, customers may seek to supplement that water using their metered domestic line, which could reduce domestic water pressure below adequate levels in dual-pipe areas.

With the present filing, Avion proposes to introduce a test program to explore the feasibility of maintaining irrigation deliveries to its dual-pipe customers using domestic water. As part of the proposed test, Avion would charge selected portions of the dual-pipe irrigation system with domestic water during low usage times of day, approximately between the hours of 8 p.m. and 5 a.m.

Avion estimates that approximately 425 customers will be included in the proposed test program.⁶ The specific dual-pipe irrigation systems to be included for testing were selected based on the following criteria:⁷

- The system is at higher risk of curtailment of surface water deliveries due to the current drought and the seniority (or lack thereof) of the water rights of the associated irrigation district providing delivery;
- The system is close to a domestic mainline; and,

⁵ See Attachment E, Arnold June 6, 2022 Irrigation Season Update, <https://www.arnoldirrigationdistrict.com/june-6-2022-irrigation-season-update>.

⁶ See Attachment F, Avion’s response to Staff’s IR 2.

⁷ See Attachment G, Avion’s response to Staff’s IR 3.

- The domestic mainline adjacent to the surface irrigation system has sufficient off-peak capacity that Avion believes it will support the test program without impacting domestic customers.

Avion intends to notify the customers to be included in the test via US Mail and telephone.⁸

Avion states that, in order to conduct the proposed test, it will, “install either a hot tap connection or valved tee in the adjacent domestic mainline. From the tee, a meter and [Reduced Pressure Principle Backflow Prevention Assembly] will be installed followed by appropriate mainline to connect to the pressurized surface water irrigation system. A solenoid valve run by a timer will be installed to limit when the water is available.”⁹ Avion anticipates short-term costs of approximately \$30,000 associated with connecting the pressurized irrigation water system to the domestic system.¹⁰

Avion typically pumps between 15 and 18 million gallons of water daily during summer months and anticipates that the proposed test program will utilize additional domestic water of approximately 250,000 gallons per day,¹¹ representing an increase of approximately 1.4 to 1.7 percent. Avion “believes that there is sufficient domestic capacity available at the times of day proposed to supply this quantity of water.”¹² Avion further states that its mitigation costs are driven by peak usage, and because the proposed test will utilize water during off-peak times, the proposed test is not expected to impact Avion’s water rights or cause the Company to need additional mitigation credits.¹³ If “during the course of the test Avion determines that there is not sufficient capacity, Avion plans to either alter or terminate the program to ensure sufficient capacity to provide adequate domestic service.”¹⁴

OAR 860-036-1670 allows water utilities to restrict usage in times of water shortages. While difficult to forecast, Avion anticipates that localized watering restrictions would likely be necessary in selected neighborhoods in the event that customers begin using domestic water to make up for a lack of district-provided irrigation water.¹⁵ Avion states that the proposed test program represents a proactive approach that is intended to help avoid such restrictions.¹⁶

⁸ See Attachment H, Avion’s response to Staff’s IR 4.

⁹ See Attachment I, Avion’s response to Staff’s IR 8.

¹⁰ See Attachment J, Avion’s response to Staff’s IR 9.

¹¹ See Attachment K, Avion’s response to Staff’s IR 10.

¹² *Ibid.*

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ See Attachment L, Avion’s response to Staff’s IR 11.

¹⁶ *Ibid.*

The proposed test program is anticipated to last through the current irrigation season, ending in October of 2022.¹⁷ Avion states that it will consider the test to be successful if it is, “able to provide the water necessary for participating customers to maintain their irrigated lands while maintaining acceptable pressure levels for domestic customers.”¹⁸ If the proposed test program proves to be successful and an ongoing reduction in district-supplied irrigation water appears likely, Avion will file a tariff revision to reflect the use of domestic water for dual-pipe irrigation purposes on a permanent basis.

The proposed test program will not have any impact on rates. Customers will continue to pay for irrigation services pursuant to Schedule No. 2 of Avion’s tariff.

The Company has reviewed a draft of this memo and has not noted any concerns.

Conclusion

Staff finds that Avion’s proposed test program represents a reasonable response to the ongoing reduction in irrigation water supplied by the irrigation districts serving Avion and its customers. The test program is not anticipated to harm customers, and could help to proactively protect the domestic system in dual-pipe areas. The filing complies with applicable statutes and Commission rules, and should be approved.

PROPOSED COMMISSION MOTION:

Allow Avion’s proposed Schedule 17 to become effective for service rendered on and after June 29, 2022.

Avion ADV 1398 PMM

¹⁷ See Attachment M, Avion’s response to Staff’s IR 5.

¹⁸ See Attachment N, Avion’s response to Staff’s IR 6.

1. How many customers currently receive irrigation water through a separate (dual pipe) system?

Avion Response: Approximately 935 customers receive pressurized surface irrigation water through the dual pipe system.

7. For what purposes do Avion's Schedule No. 2 customers generally use irrigation water? For example, farming, home landscaping, etc.

Avion Response: Schedule 2 customers use the water for both home landscape watering and watering of small hobby farms and hayfields.

Important Information

2022 IRRIGATION SEASON START-UP

COID is expecting a water year like 2021; however, it is impossible to predict live flow and how it translates to reductions or deliveries. As drought conditions continue, please prepare for curtailment to 65% in mid to late July.

Flow Schedule for Season:

These flows are the maximum allowable delivery Rate. Our ability to meet these rates is dependent on available water.

50% flow from Start Up Date – April 30th

75% flow from May 1st – May 14th

100% flow from May 15th – September 15th

75% flow from September 16th -September 30th

50% flow from October 1st – ?

Season shut off October (Specific date to be announced in September)

*Due to the drought conditions these flows are subject to change as flows in the Deschutes River decrease.

2022 Water Outlook – March 29, 2022

March 16, 2022, marked the third consecutive year that Deschutes County has declared a drought and the first time the county has ever declared a drought three years in a row. Twice before the county had back-to-back droughts, in 1991-1992 and 2001-2002.

Central Oregon's snowpack and precipitation remain below average for the water year. As of March 28, the Upper Deschutes and Crooked River basins were 81% of the median for precipitation and just 57% of the median for snowpack (Snow Water Equivalent).

COID is expecting a water year like 2021; however, it is impossible to predict live flow and how it translates to reductions or deliveries. As drought conditions continue, please prepare for curtailment to 65% in mid to late July.

While conservation is a critical tool for saving water during a drought, it is only one of many actions that must be taken to address drought. COID is committed to investing in water infrastructure to diversify supplies essential to building climate resilience throughout the Deschutes Basin.

Long-term, COID is working on the following:

- ▶ Water marketing that allows for more legal options to move water between districts.
- ▶ Large piping projects that create significant water savings to benefit farmers, the Deschutes River and endangered species.
- ▶ On-farm and past the Point of Delivery conservation projects.

We are Hiring! Click here to learn more....

Dismiss

(/job-openings)



(https://www.swalley.com/)

Contact Us (/contact-us)

Search...

INFORMATION

(/DEVELOPMENT-HANDBOOK-POLICY-FEE-SCHEDULES)

DEVELOPMENT POLICY / FEES (/DEVELOPMENT-HANDBOOK-POLICY-FEE-SCHEDULES)

IRRIGATION SCHEDULE & STOCK RUNS (/IRRIGATION-SCHEDULE-STOCK-RUNS)

IRRIGATION & ENERGY BACKGROUND INFO (/IRRIGATION-ENERGY-BACKGROUND-INFO)

SYSTEM STATUS MAP / MODERNIZATION (/SYSTEM-IMPROVEMENT-STATUS-MAP)

PROJECTS (/CURRENT-UPCOMING-PIPING-OTHER-IMPORTANT-PROJECTS)

DESCHUTES BASIN BOARD OF CONTROL (/5303CD7)

Irrigation Schedule & Stock Runs

Irrigation Season Estimated Target Flow Dates and Rates - Annual Ramp-up Schedule

- April 1 (depending on weather and demand).....0% to 30% flow rate delivered (~2 gpm/ac)
- May 150% flow rate delivered (~3.5 gpm/ac)
- May 15 - Sept 14.....100% flow rate delivered (~5-7 gpm/ac)
- Sept 15.....50% flow rate delivered (~3.5 gpm/ac)
- Oct 1- 31 (depending on weather and demand).....30% to 0% flow rate delivered (~2 gpm/ac)

**Flows are always subject to change, and not guaranteed.*

The Irrigation Season

Swalley's Irrigation Season runs from April 1st to October 31st. We typically start turning in stockwater flows for cattle and other livestock around the last week in March and then roll right into our irrigation season on April 1st per our annual ramp-up schedule. Delivery rates may vary across the District and some patrons may experience water shortages during the spring and fall 30-50% ramp-up & ramp-down periods. Shortages may be especially evident during warm, dry weather in April, May, and September. We do not ramp up our entire system all at once. We are demand-based, and typically startup our Main Canal/Pipeline first and then open up the branch-laterals as customers call in and request water. If it's cold and wet in the spring, we may delay running water until we have substantial demand, so it's important that customers call and let us know what their needs and concerns are. When ramping the system down in the fall, we also operate on-demand, and if enough water users on a branch-lateral request to be turned off early, we may need to shut down whole portions of our system early. **Finally, we do not make changes or adjustments to customer flows during the weekends unless it is a true emergency. If you wish for us to change the flow at your delivery gate please think ahead and call in your change requests early in the week, Monday through Thursday, so that we have at least 24 hours to make the necessary adjustments prior to the weekend.**

Patron/Customer Maintenance Responsibility

Swalley delivers water to your delivery gate located on a District-owned canal or pipeline. Beyond the Swalley owned canal or pipeline, the conveyance leading to your property is usually privately owned and maintained by you and your neighbors -- unless there is some other sort of arrangement, as is the case for Avion customers and other private water user groups. Swalley does not maintain these privately owned irrigation systems beyond the initial delivery gate. Clogged private ditches and pipelines, grates, pumps, silted-in ponds, and/or filters are the joint-responsibility of landowners to keep free and clear and in good working order. The cleaner your private infrastructure is, the more efficient your flows will be. Please call the District office with any questions or concerns. We are here to help, discuss your concerns, and advise.

****Note: Turning water into and out of our system is always weather-dependent and per demand. Once we start turning flows in for the irrigation season, typically April 1st through April 8th, it may take 2-3 days for water to reach your private system. As we transition into summer, flows increase from 30% to 50% to 100%, and then in the fall, flows decrease from 100% to 50% to 30% to 0% with the same 2-3 day period of adjustment. Your private ditch or pipeline clean-outs and irrigation maintenance during the fall and early spring shoulder seasons are key to you enjoying a reliable water delivery.***



[\(https://www.arnoldirrigationdistrict.com/\)](https://www.arnoldirrigationdistrict.com/)

Pay Bill Online

[\(https://client.pointandpay.net/web/ArnoldIrrigationDisrictOR/\)](https://client.pointandpay.net/web/ArnoldIrrigationDisrictOR/)

Contact Us (</office-open-to-the-public-by-appointment>)

Search...	Go!
-----------	-----

THIS ITEM APPEARS ON

[HOMEPAGE \(/\)](#)

JUNE 6, 2022 IRRIGATION SEASON UPDATE

The continued moderate weather and additional rains have eased the necessity to draw heavily from storage to maintain our delivery levels. This has provided a buffer of storage water supply to maintain current delivery levels and get to the end of June.

Weather will continue to be the biggest factor impacting our outlook for water demand and is, of course, unpredictable. Moderate weather will continue to stabilize demand on natural flow and provide the prospect of getting through June.

We will continue to communicate every two weeks with updates as the irrigation season continues forward.

FYI - Please read the post to the right of this one with the updated Deschutes Basin Board of Control report on the irrigation districts' results and ongoing water conservation efforts in the basin.

COPYRIGHT © 2022 ARNOLD IRRIGATION DISTRICT
19604 BUCK CANYON RD., BEND OR 97702
TELEPHONE (541) 382-7664

[PRIVACY POLICY \(/PRIVACY-POLICY\)](/PRIVACY-POLICY)

POWERED BY STREAMLINE ([HTTP://WWW.GETSTREAMLINE.COM/](http://www.getstreamline.com/)) | SIGN IN
([HTTPS://WWW.ARNOLDIRRIGATIONDISTRICT.COM/USERS/SIGN_IN?DESTINATION=%2FJUNE-6-2022-IRRIGATION-SEASON-UPDATE](https://www.arnoldirrigationdistrict.com/users/sign_in?destination=%2FJUNE-6-2022-IRRIGATION-SEASON-UPDATE))

2. How many customers are expected to be included in the proposed test program?

Avion Response: Avion estimates that approximately 425 customers will be included in the proposed test program.

3. How will Avion determine which customers are eligible for the proposed test program?

Avion Response: Avion has identified several pressurized surface irrigation systems for testing that meet the following criteria:

- The system is at higher risk of curtailment of surface water deliveries due to the current drought and the seniority (or lack thereof) of the water rights of the associated irrigation district. providing delivery
- The system is close to a domestic mainline.
- The domestic mainline adjacent to the surface irrigation system has sufficient off-peak capacity that Avion believes it will support the test program without impacting domestic customers.

4. How does Avion intend to notify customers of their eligibility for the proposed test program?

Avion Response: Avion intends to notify the customers in the test systems via US Mail and telephone.

8. Please explain any changes to Avion's system that will be necessitated by the proposed test.

Avion Response: In order to conduct the proposed test, Avion will need to install either a hot tap connection or valved tee in the adjacent domestic mainline. From the tee, a meter and RPBA will be installed followed by appropriate mainline to connect to the pressurized surface water irrigation system. A solenoid valve run by a timer will be installed to limit when the water is available.

9. Does Avion predict significant costs or savings associated with implementing the proposed test program? If so, please identify and estimate the projected costs and savings. Please provide an estimate of the amount costs would change on a per customer (participant) basis.

Avion Response: Avion anticipates short term costs of approximately \$30,000 associated with connecting the domestic system to the pressurized surface water system for the proposed test program. Since the surface irrigation water is already pumped, Avion anticipates the additional pumping costs to use domestic water for the test period will be minimal.

10. By volume, how much domestic water is the proposed test program expected to utilize per day?
 - a. Does Avion have sufficient domestic capacity available to supply this quantity of water without harming other services? Please explain.
 - b. How does Avion expect the proposed test program will impact its water rights, including Avion's need to acquire mitigation credits? Please explain.

Avion Response: Avion anticipates that the proposed test program would likely utilize approximately 250,000 gallons per day. For context, Avion typically pumps between 15 and 18 million gallons per day during the summer months.

- a. Avion believes that there is sufficient domestic capacity available at the times of day proposed to supply this quantity of water. If during the course of the test Avion determines that there is not sufficient capacity, Avion plans to either alter or terminate the program to ensure sufficient capacity to provide adequate domestic service.
- b. Avion's mitigation costs are driven by peak usage. As the test program will use water during off peak times, we do not anticipate that it will impact Avion's water rights or cause Avion to need additional mitigation credits. On the contrary, by focusing this consumption at night rather than during peak usage times, the test program will likely reduce the need for additional mitigation, although such an outcome would be difficult to quantify.

11. OAR 860-036-1670 Water Use Restrictions allows a utility to restrict water usage in times of water shortages. Regarding that OAR:
- a. Does Avion believe it would have to restrict usage under that OAR if the domestic system were unable to provide adequate pressure due to customers using the domestic system to make up for a lack of surface water?
 - b. Has Avion explored the use of restrictions under this OAR rather than or in combination with pressurized irrigation? Please explain.

Avion Response:

- a. Accurately predicting people's behavior in the event of a hypothetical scenario is difficult, but our best guess is as follows:
 - Avion does not anticipate a system wide restriction as a result of customers using domestic water to make up for the lack of irrigation water, but this is very difficult to forecast.
 - Avion anticipates localized watering restrictions would likely be required in selected neighborhoods as a result of customers using domestic water to make up for the lack of irrigation water.
 - Even if pressure is maintained above 40 psi (which is generally considered adequate for purposes of the OARs), a hypothetical drop from 80 psi to 40 psi will result in unhappy customers who will call to complain about the pressure. Avion would prefer to avoid such unnecessary conflict.
- b. We have not explored the use of restrictions under OAR 860-036-1670. We consider the use of such restrictions to be a reactive response that should be used when needed, but not otherwise. The filing of this test tariff represents a proactive approach to help avoid such restrictions.

5. How long is the proposed test program expected to last?

Avion Response: Avion expects the test program to last through the current irrigation season, ending in October of 2022.

6. Please explain the criteria that Avion will use to assess the successfulness of the proposed test program.

Avion Response: Avion will consider the test to be successful if we are able to provide the water necessary for participating customers to maintain their irrigated lands while maintaining acceptable pressure levels for domestic customers.