

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF BASIN 37
ADMINISTRATIVE PROCEEDING

Docket No. AA-WRA-2021-001

FINAL ORDER

INTRODUCTION

The Director of the Idaho Department of Water Resources (“Department” or “IDWR”) commenced this administrative proceeding in response to an exceptionally dry year in the Wood River Basin. This order is issued after a six-day hearing in which senior surface water users argued that junior ground water pumpers are interfering with their water rights and junior ground water pumpers raised various defenses and argued they should not be curtailed. In this order, the Director concludes that the effects of ground water withdrawals in the Bellevue Triangle on senior water rights diverting from Silver Creek and the Little Wood River during the 2021 irrigation season are contrary to prior appropriation doctrine. The Director orders that junior priority ground water rights within the Bellevue Triangle listed in Exhibit A to this order should be curtailed for the 2021 irrigation season starting July 1, 2021.

PROCEDURAL BACKGROUND

On May 4, 2021, the Director issued a *Notice of Administrative Proceeding, Pre-Hearing Conference, and Hearing* (“Notice”). The *Notice* stated that a drought is predicted for 2021 irrigation season, and the water supply in Silver Creek and its tributaries may be inadequate to meet the needs of surface water users. *Id.* at 1. The *Notice* also stated that curtailment model runs of the Wood River Valley Groundwater Flow Model v.1.1 (“WRV1.1 Model” or “Model”) showed that curtailment of ground water rights during the 2021 irrigation season would result in increased surface water flows for the holders of senior surface water rights during the 2021 irrigation season. *Id.*

The *Notice* cited Idaho Code § 42-237a.g.’s provision that “water in a well shall not be deemed available to fill a water right therein if withdrawal of the amount called for by the right would affect . . . the present or future use of any prior surface or ground water right,” and stated that, based on the information from the Model, the Director believes “that the withdrawal of water from ground water wells in the Wood River Valley south of Bellevue (commonly referred to as the Bellevue Triangle) would affect the use of senior surface water rights on Silver Creek and its tributaries during the 2021 irrigation season.” *Id.* The *Notice* stated the Director was therefore initiating an administrative proceeding, pursuant to Idaho Code § 42-237a.g. and IDAPA 37.01.01.104, to determine whether water is available to fill the ground water rights within the Wood River Valley south of Bellevue, as depicted in the map attached to the *Notice*. *Id.* The map defined this as the “Potential Area of Curtailment.” The *Notice* stated “[i]f the

Director concludes that water is not available to fill the ground water rights, the Director may order the ground water rights curtailed for the 2021 irrigation seasons.” *Id.*¹

The *Notice* instructed parties wishing to participate in the administrative proceeding to send written notice the Department by May 19, 2021. *Id.* The *Notice* scheduled a pre-hearing conference for May 24, 2021, and scheduled the hearing for June 7-11, 2021, at the Department’s state office. *Id.*

On May 11, 2021, the Director issued a *Request for Staff Memorandum* (“*Request*”). The *Request* described ten subjects to be addressed in the staff memoranda, and directed that the memoranda be submitted to the Director on or before May 17, 2021. *Id.* at 1-3.

Four staff memoranda responding to the *Request* were submitted to the Director on May 17, 2021, and posted on IDWR’s website the next day.² Also posted on the Department’s website were supporting files for the staff memorandum addressing the Model’s predictions of the hydrologic response in Silver Creek to curtailment of ground rights in the Bellevue Triangle.³

A large number of parties filed notices of intent to participate in the administrative proceeding. The persons and entities who filed notices of participation are identified in the *Scheduling Order*, *Order Granting Party Status* and *Order Granting Party Status and Closing the Proceeding to Additional Parties*. The participants are individually identified in this order only as needed for clarity and to avoid confusion.

The Prehearing Conference was held on May 24, 2021. At the Prehearing Conference and in the subsequently issued *Scheduling Order* the Director discussed a number of issues related to party status. It was pointed out at the Prehearing Conference that the area analyzed by Jennifer Sukow in her staff memorandum was slightly smaller than the “Potential Area of Curtailment” depicted in the map attached to the *Notice*. *Scheduling Order* at 3. The Director therefore limited the “Potential Area of Curtailment” to the area considered in Sukow’s staff memorandum. *Id.* The boundary for the updated “Potential Area of Curtailment” is reflected in Figure 17 of Sukow’s staff memorandum. IDWR Ex. 2, Figure 17.

Prior to the hearing, the parties engaged in discovery, depositions, and filed various motions. The hearing began on Monday, June 7, 2021, and concluded on Saturday, June 12, 2021. Various lay and expert witnesses testified and exhibits were admitted into the record.

¹ Ground water rights for domestic and stock watering uses as defined in Idaho Code §§ 42-111 and 42-1401A(11) were excluded from the administrative proceeding. *Notice* at 1.

² The *Request for Staff Memorandum* was issued, and the staff memoranda were submitted, before the May 19, 2021, deadline for filings notices of participation. On the day after the deadline for filing notices of participation, the Department sent emails to the parties who had filed notices, informing them that the *Request* and the staff memoranda were available on the Department’s website.

³ One of the supporting GIS files could not be opened when posted. This was corrected on May 21, 2021.

FINDINGS OF FACT

The relationship between ground water in the Bellevue Triangle and surface water flowing in Silver Creek and the Little Wood River is a central focus of the underlying contested case. A description of the hydrology of the Upper Big Wood River Basin is necessary to understand the hydrologic relationships between ground water in the Bellevue Triangle and surface water in Silver Creek and the Little Wood River.

The Upper Big Wood River Basin hydrologic system is comprised of three main arterial streams: the Big Wood River, Silver Creek, and Camas Creek.

Silver Creek originates from various springs emitting from the shallow aquifer underlying an area of irrigated cropland south and east of the community of Bellevue, Idaho.

Hydrology of the Wood River Basin

Big Wood River

The Big Wood River begins in the Boulder Mountains near Galena, Idaho. The river flows mostly south and occasionally east to the community of Ketchum. At Ketchum, Trail Creek flows into the Big Wood River from the east through Sun Valley, Idaho. Other streams drain snowmelt to the Big Wood River from the Boulder and Pioneer Mountains, located to the east, and the Smoky Mountains located to the west. The Big Wood River gathers flow as it courses south through the communities of Hailey and Bellevue. Just south of Bellevue, the Big Wood River Valley broadens into an expanse of agricultural land shaped like a triangle. The vertices of the triangle are roughly located at Bellevue on the north, Stanton Crossing (where Highway 20 crosses the river) on the southwest, and Picabo, Idaho on the southeast. This area is locally known as the “Bellevue Triangle.”

Early settlers of Bellevue Triangle land diverted water from the Big Wood River through canals and flood irrigated land within the Bellevue Triangle. Much of the canal water is delivered from the Big Wood River southeasterly through the Bellevue Triangle.

In recent decades, farmers converted flood irrigation systems to pressurized pipes and to sprinkler applications of water to crops.

The Big Wood River flows south to Stanton Crossing, turns west at approximately Stanton Crossing, and discharges into Magic Reservoir. Magic Reservoir can store 191,500 acre feet of water, primarily for irrigation.

While some of the water diverted for irrigation in the Wood River Valley returns as ground water inflow to the Big Wood River, this decision only addresses the relationship between ground water underlying the Bellevue Triangle and hydraulically connected surface water flows in Silver Creek and the Little Wood River.

Camas Creek

Camas Creek flows into Magic Reservoir from the west. The hydrologic relationship of ground water pumping in the Camas Creek Basin to other surface water sources in the Wood River Basin is not evaluated by this decision.

Silver Creek and Tributary Spring Creeks

Silver Creek and its tributary spring creeks derive their water from springs emitting from the shallow aquifer underlying the Bellevue Triangle. Emergent spring flows gather in various open channels that ultimately flow into Silver Creek.

A portion of the water diverted from the Big Wood River and applied for flood irrigation in the Bellevue Triangle historically enhanced the flows of Silver Creek. Changes to pressurized sprinkler systems in recent years increased efficiencies of water application to agricultural fields, reducing the amount of incidental recharge to ground water. Nonetheless, Big Wood River water delivered through surface water canals continues to percolate into the ground water underlying the Bellevue Triangle.

Silver Creek meanders through the Bellevue Triangle, generally in an easterly direction. Near Picabo, Silver Creek flows out of the Bellevue Triangle in a southeasterly direction for 10-15 miles into the desert of the northern Eastern Snake Plain. As it flows into the desert, Silver Creek approaches the stream channel of the Little Wood River.

The Little Wood River headwaters are located north of Carey, Idaho. From Carey, the Little Wood River carves a streambed in a southwesterly direction along the boundary between the Eastern Snake Plain and the uplifted surrounding geography to the northwest.

As the Little Wood River and Silver Creek channels approach each other, Silver Creek turns southwesterly and parallels the Little Wood River for approximately three miles. The two stream channels converge 2.5 miles southwest of where Silver Creek crosses State Highway 93, IDWR Ex. 4 at 8. The Little Wood River continues to flow in a southwesterly direction after its confluence with Silver Creek.

Little Wood River

Water users in the Carey, Idaho area divert all or most of the flow of the Little Wood River except during high water events. The Little Wood River channel is often dry downstream from Carey, Idaho. As a result, Silver Creek sustains flows in the Little Wood River continuously from its confluence downstream to where the Milner Gooding Canal contributes additional surface water to the Little Wood River from the Snake River. *See* map on page 7, Sukow 2015 report attached to Ex. 2, *see also* testimony from Kevin Lakey, Tr. p. 892.

The Little Wood River flows southwesterly through the town of Richfield. The Little Wood River then turns westerly and subsequently flows through the towns of Shoshone and Gooding.

Water Development and Water Rights

Surface Water Development

Initial development of irrigation water rights in the Wood River Basin started in the 1870's and 1880's. Many of the earliest water rights bear priority dates of this vintage.

Early priority water rights authorizing diversion and beneficial use from Silver Creek and the Little Wood River bear priority dates of 1877 to 1883. In a normal or average water year,

water rights bearing a priority date of 1883 and earlier are deliverable for the entire irrigation season. IDWR Ex. 4 at 12, 15.

In a normal or average water year, water rights bearing a priority date of 1884 are deliverable until mid-to-late July. *Id.*

In average and above average water years, water from Magic Reservoir water on the Big Wood River is delivered and injected into the Little Wood River by the Big Wood Canal Company. Much of this Magic Reservoir storage water is rediverted from the Little Wood River near Richfield and delivered south to the Dietrich Tract.

In the early 1930's, the U.S. Bureau of Reclamation ("the BOR") completed the Milner Gooding Canal, which delivers Snake River natural flow and storage water for irrigation of farm land located in the Lower Little Wood River Basin and the Lower Big Wood River Basin. The Milner Gooding Canal crosses the Little Wood River northeast of Shoshone, Idaho through a siphon under the Little Wood River bed. At the canal siphon crossing of the Little Wood River, a portion of the Snake River water flowing in the Milner Gooding Canal can be discharged directly into the Little Wood River through a bifurcation at the head of the siphon to enhance water supplies in the Little Wood River. The contracts for the Snake River water deliveries will be discussed later in this decision.

Ground Water Development in the Wood River Valley

Ground water development for irrigation in the Bellevue Triangle began around 1930. IDWR Ex. 2 at 12.

Some of the earliest wells were constructed in an artesian aquifer located in the southern part of the Bellevue Triangle. Significant development of the artesian aquifer for irrigation began in the late 1940s. IDWR Ex. 2 at 12. The artesian pressures are created by a confining layer of clay above the ground water.

Ground water in wells completed in the artesian aquifer would rise in the well column above the level where the ground water was encountered, and would sometimes rise high enough to free flow above the level of the ground.

With the advent of modern drilling equipment, rural electrification, and efficient pumping systems, diversion of ground water increased until the early 1990's when regulatory action by IDWR restricted further ground water development.

Regulatory Activities

On June 28, 1991, Keith Higginson, Director of IDWR, issued an order designating the Big Wood River Ground Water Management Area ("Management Area Order"). Three findings of fact from the order designating the ground water management area are important for this decision:

2. The surface and ground waters of the Big Wood River drainage are interconnected. Diversion of ground water from wells can deplete the surface water flow in streams and rivers. New ground water uses can also deplete available supplies for other users and affect basin underflow which presently accumulates in the Magic Reservoir.

3. There are a number of Applications for Permit to Appropriate Water pending before the department which propose additional consumptive uses of ground water within the Big Wood River drainage.
4. Injury could occur to prior surface and ground water rights including the storage right in Magic Reservoir if the flows of streams, rivers and ground water underflow in the Big Wood River Basin are intercepted by junior priority ground water diversions.

The Management Area Order contained a Management Policy that stated IDWR would not approve a new application for consumptive use unless there was a showing that the use proposed by the application would not injure existing water rights. Approvals of new applications to appropriate ground water for consumptive uses other than domestic largely ceased after issuance of the Management Area Order.

Because of continued concerns about the impact of ground water diversions on both ground water and surface water sources in the Wood River Basin, IDWR, in coordination with the water users in the Wood River Basin, has initiated or addressed the following activities since issuance of the Management Area Order:

- 2010 – In cooperation with the U.S. Geological Survey, began a program to expand the existing hydrologic monitoring network in the Wood River Valley with the installation of four stream gages in the Wood River Valley
- September 21, 2011 – Issued order (a) creating the Upper Wood Rivers Water Measurement District, and (b) requiring all ground water users to install measuring devices prior to the 2014 irrigation season
- 2012 – In cooperation with the U.S. Geological Survey, began work on development and calibration of a numerical groundwater-flow model for the Wood River Valley, including Silver Creek and ground water underlying the Bellevue Triangle
- September 17, 2013 – Issued order (a) combining water districts for the Big Wood River, the Little Wood River, and Silver Creek; and (b) adding ground water rights from the Upper Big Wood River valley above Magic Reservoir and the Silver Creek drainage to the water district (Water District 37), and (c) abolishing the Upper Wood Rivers Water Measurement District
- February 2015 to June 2016 – First conjunctive management delivery call by surface water users against ground water users dismissed on procedural grounds
- 2016 – Published final report documenting version 1.0 of the Wood River Valley Groundwater-Flow Model (IDWR Ex. 2 at 14)
- March 2017 to June 2017 – Second delivery call dismissed on procedural grounds
- 2018 through 2020 – Proposals for Ground Water Management Plans submitted by ground water users to Director of IDWR

- 2019 – Published final report documenting recalibrated version 1.1 of the Wood River Groundwater-Flow Model (IDWR Ex. 2 at 14)
- 2019 - Published a summary of groundwater conditions in the Big Wood Ground Water Management Area and a summary of Silver Creek Flow Measurements by IDWR staff between 2014 and 2018.
- 2020 – Published a summary of seepage surveys by IDWR staff between 2017 and 2019 on Trail Creek near Ketchum.
- Fall 2020 through spring 2021 – Approximately biweekly meetings of Big Wood River Ground Water Management Area Advisory Committee; at these committee meetings, analyses of the hydrology and hydrogeology of the Wood River Basin were presented by experts and by those who had personally observed facts related to water availability and use.
- May 4, 2021 – Director initiates administrative proceeding for Basin 37

The Wood River Valley Ground Water Flow Model

The Wood River Valley aquifer system is hydraulically connected to Silver Creek and its tributaries above the Sportsman Access gage. IDWR Ex. 2 at 2. Water use within the Wood River Valley aquifer system affects Silver Creek reach gains from ground water, and thus affects streamflow in Silver Creek and in the Little Wood River downstream of Silver Creek. *Id.*

Discharge from the Wood River Valley aquifer system is the primary source of water for Silver Creek. *Id.* at 4.

The WRV1.1 Model was developed to serve as a tool for water rights administration and water resource management and planning. *Id.* at 15.

Twenty-two Modeling Technical Advisory Committee (“MTAC”) meetings were convened between March 2013 and January 2019 to facilitate a transparent and open process of data collection, model construction, and model calibration. *Id.* at 14. With input from the MTAC, the final report documenting the present version of the model was published in 2019.

In 2019, Allan Wylie, one of the model developers, wrote the following:

“Although every groundwater model is a simplification of a complex hydrologic system, WRV Aquifer Model Version 1.1 is the best available tool for evaluating the interaction between groundwater and surface water in the Wood River Valley. The science underlying the production and calibration of the WRV Aquifer Model Version 1.1 reflects the best knowledge of the aquifer system available at this time. The WRV Aquifer Model Version 1.1 was calibrated to 1,314 aquifer water-level measurements and 1,026 river gain-and loss calculations. Calibration statistics indicate a good fit to the observed data, providing confidence that the updated model provides an acceptable representation of the hydrologic system in the Wood River Valley.”

Id. at 15