PTJR
Julie Cavanaugh-Bill (NV Bar No. 11533)
Attorney & Counselor at Law
CAVANAUGH-BILL LAW OFFICES, LLC
Henderson Bank Building
401 Railroad Street, Suite 307
Elko, Nevada 89801
TEL: 775-753-4357
FAX: 775-753-4360
julie@cblawoffices.org

Lisa T. Belenky (CA Bar No. 203225), *Pro Hac Vice to be submitted*
CENTER FOR BIOLOGICAL DIVERSITY
1212 Broadway, Suite 800
Oakland, CA 94612
TEL: 415-632-5307
FAX: 510-844-7150
lbelenky@biologicaldiversity.org

Douglas Wolf (NM Bar No. 7473), *Pro Hac Vice to be submitted*
CENTER FOR BIOLOGICAL DIVERSITY
3201 Zafarano Drive
Suite C, #149
Santa Fe, NM 87507
TEL: 202-510-5604
dwolf@biologicaldiversity.org

Attorneys for Petitioner

CASE NO: A-20-817876-P
Department 24

DISTRICT COURT

CLARK COUNTY, NEVADA

CENTER FOR BIOLOGICAL DIVERSITY,

Petitioner,

vs.

TIM WILSON, P.E., Nevada State Engineer, DIVISION OF WATER RESOURCES, DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES,

Respondents.

Case No. _____
Dept No. _____

PETITION FOR JUDICIAL REVIEW OF ORDER 1309

Petitioner, the CENTER FOR BIOLOGICAL DIVERSITY, by and through its counsel, Julie Cavanaugh-Bill of CAVANAUGH-BILL LAW OFFICES, LLC, hereby requests, pursuant to NRS § 533.450(1), that this Court review Order 1309, issued by Respondents TIM WILSON, P.E., Nevada State Engineer, and DIVISION OF WATER RESOURCES, DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES on June 15, 2020, and attached hereto as Exhibit 1. Petitioner alleges as follows:

PARTIES

1. Respondent TIM WILSON, P.E. is the State Engineer of the State of Nevada, Division of Water Resources, and is sued in his official capacity.

2. Respondent DIVISION OF WATER RESOURCES, DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES is a governmental division of the State of Nevada.

3. Petitioner, the CENTER FOR BIOLOGICAL DIVERSITY ("the Center"), is a national, non-profit conservation organization incorporated in California and headquartered in Tucson, Arizona. The Center has over 74,000 members including members who reside in Nevada. The Center has offices throughout the United States and Mexico, including in Arizona, California, Florida, Hawaii, Idaho, Minnesota, Nevada, New Mexico, New York, North Carolina, Oregon, Washington, Washington D.C., and La Paz, Baja California Sur, Mexico. Many of the Center's members who reside in Nevada and neighboring states live, visit, or recreate in and near areas directly affected by Order 1309. In particular, the Center and its members have educational, scientific, biological, aesthetic and spiritual interests in the survival and recovery of the Moapa dace, a small fish endemic to the Muddy River Springs Area within the Lower White River Flow System. The Moapa dace is imperiled by diminishing spring flows caused by groundwater pumping in the Lower White River Flow System, and is listed as endangered under the Federal Endangered Species Act, 16 U.S.C. §§ 1531 *et seq*. To protect its interests in the survival and recovery of the Moapa dace the Center submitted technical reports pursuant to Nevada State Engineer Order 1303 and participated in a public hearing before the State Engineer, held between

September 23, 2019 and October 4, 2019, the ultimate outcome of which was Order 1309. The Center is aggrieved by the State Engineer's decision because the interests of the Center and its members in the survival and recovery of the Moapa Dace will suffer long-term harmful impacts from the groundwater drawdown and springflow reductions authorized under Order 1309.

JURISDICTION AND VENUE

4. This Court has jurisdiction over this action pursuant to NRS § 533.450 (Orders and decisions of the State Engineer subject to judicial review).

5. The Court has the authority to review the State Engineer's Order, and grant the relief requested, pursuant to NRS § 533.450. All requirements for judicial review have been satisfied.

6. Venue is proper before this Court pursuant to NRS § 533.450. Clark County is a "county in which the matters affected or a portion thereof are situated." NRS § 533.450(1). Therefore, the Eighth Judicial District Court of the State of Nevada in and for Clark County is the proper venue for judicial review.

7. In addition, the subject matter of the petition involves decreed waters of the Muddy River Decree. Under NRS § 533.450(1), "on stream systems where a decree of court has been entered, the action must be initiated in the court that entered the decree." This court has proper jurisdiction over the Muddy River Decree, *Muddy Valley Irrigation Company et al., v. Moapa Salt Lake Produce Company*, Case No. 377, which was entered in the Tenth Judicial District of the State of Nevada, in and for Clark County, in 1920.[1]

8. The State Engineer's order and the matters affected by it are the subject of related litigation pending before this Court. *See* Petition for Judicial Review of Order 1309, *Las Vegas Valley Water Dist. & S. Nev. Water Auth. v. Nev. State Eng'r*, Case No. A-20-816761-C (June 17, 2020).

---

[1] In 1920, the Tenth Judicial District consisted of Clark County and Lincoln County. In 1945, Clark County was designated as the Eighth Judicial District.

FACTUAL BACKGROUND

I. The Lower White River Flow System

9. The Lower White River Flow System ("LWRFS") is a geographically vast complex of hydrologically connected groundwater aquifers in Southern Nevada. The groundwater in these aquifers is contained within and flows through a fairly continuous layer of carbonate rock that extends below several geographically distinct basins or valleys in Clark and Lincoln counties, including Coyote Springs valley, the Black Mountains region, Garnet Valley, the California Wash basin, Hidden Valley, Kane Springs Valley,[2] and the Muddy River Springs Area ("MRSA").[3]

10. This carbonate-rock aquifer complex is "highly transmissive," meaning that pumping from anywhere within the carbonate aquifer system rapidly affects groundwater levels and spring flows throughout the entire Lower White River Flow System.[4]

11. The interconnected, highly transmissive carbonate-rock aquifers of the Lower White River Flow System ultimately discharge (*i.e.*, exit the aquifer) into the Colorado River.[5] The main points of discharge are the Muddy River Springs, located in the Muddy River Springs Area within and adjacent to the Moapa National Wildlife Refuge in Clark County.[6] The springs form

---

[2] In Order 1309, the State Engineer determined that Kane Springs Valley should be included within the boundary of the Lower White River Flow System due to a "close hydraulic connection." Exhibit 1 at 52 (CBD000052) (exhibits referenced in this Petition are filed concurrently in a separate Appendix, references to the bates stamped page numbers in the Appendix are provided as "CBD___"). The Center agrees with and supports the State Engineer's conclusion on this issue as set forth in Order 1309.

[3] Exhibit 1 at 46, 51-54 (CBD000046, CBD000051-54).

[4] Exhibit 7 at 26 (CBD000170).

[5] *Id.* at 21 (CBD000165).

[6] *Id.*

the headwaters of the Muddy River, which then flows from the Refuge area into the Colorado River at Lake Mead.[7] Significantly smaller quantities of groundwater may discharge from the Lower White River Flow System through other springs near the shore of Lake Mead, or seep directly into the Colorado River through a hydrologically distinct "basin-fill" aquifer in the Muddy River Springs area.[8]

12. The Muddy River springs are thus directly connected to the regional carbonate-rock aquifers of the Lower White River Flow System.[9] Because of this connection, flows from the springs can change rapidly in direct response to changes in carbonate groundwater levels.[10] Put differently, groundwater withdrawals from anywhere within the carbonate aquifer complex intercept, or "capture," water that would otherwise flow from the Muddy River springs and into

---

[7] *See generally id.*

[8] *Id.* at 25-26 (CBD000169-70). The "basin-fill" and carbonate aquifers in the Lower White River Flow system exist within different geologic layers and are fed by different sources of water. Data on the effects of groundwater pumping indicates that the basin fill aquifers in the Muddy River Springs area are connected to the carbonate aquifer, while the basin fill aquifers in Coyote Springs Valley to the northwest are separate from the carbonate. *Id.* at 13 (CBD000157). Consequently, the carbonate aquifer near the Muddy River Springs feeds water into, or "recharges," the basin fill aquifer, but there is no such connection between the carbonate and basin fill in the Coyote Springs Valley. *Id.* There is no evidence that the basin fill recharges the carbonate anywhere in the Lower White River Flow system. *Id.*

[9] *Id.* at 15 (CBD000159); Exhibit 8 at 29 (CBD000200).

[10] Exhibit 8 at 29 (CBD000200).

the Muddy River.[11] Over the long term, pumping from the carbonate aquifer captures discharge—including spring flow—at nearly a one-to-one ratio.[12]

13. Springflows in the Muddy River Springs Area are dependent on the elevation of groundwater within the carbonate aquifer; as carbonate groundwater levels decline, springflows decrease, beginning with the highest-elevation springs.[13] Over time, as groundwater levels continue to decline, pumping will gradually and increasingly affect lower-elevation discharge as well.[14] The higher-elevation Muddy River springs are therefore more rapidly and more severely affected by carbonate groundwater pumping than lower-elevation springs and other sources of discharge, and the higher-elevation springs—which harbor the vast majority of Moapa dace—will dry up before flows are significantly reduced in the lower-elevation springs or the Muddy River system more generally.[15]

14. Springflows and groundwater levels in the Muddy River Springs Area began to decline in the 1990s as carbonate groundwater pumping increased.[16] From 2000 to 2010 carbonate pumping rose from about 4,800 to about 7,200 acre-feet per year,[17] while spring flows (as measured at the Warm Springs West gauge in the Moapa National Wildlife Refuge) declined from about 4.0 cubic feet per second (cfs) to as low as 3.4 cfs between the 1990s and mid-2000s.[18] The

---

[11] *Id.*

[12] *Id.*

[13] *Id.*

[14] *Id.*

[15] *Id.*; Exhibit 4 at 24 (CBD000108).

[16] Exhibit 7 at 24 (CBD000168).

[17] *Id.* at 22 (CBD000166).

[18] *Id.* at 16 (CBD000160).

smaller, high-altitude Muddy River springs are currently flowing at little more than half of their 1990s average.[19]

II. The Moapa Dace

15. The Moapa dace (*Moapa coriacea*) is endemic to the Muddy River Springs Area.[20] The dace was federally listed as endangered in 1967.[21]

16. The Moapa dace is found only in the upper tributaries of the Muddy River.[22] Approximately 95 percent of the total population occurs within 1.78 miles of one major tributary that flows from three high-elevation spring complexes within the Muddy River Springs area.[23]

17. Threats to the Moapa Dace include non-native predatory fishes, habitat loss from water diversions and impoundments, wildfire risk from non-native vegetation, and groundwater development in the Lower White River Flow System which, as noted, decreases spring flows in the Muddy River Springs area.[24]

18. The Moapa Dace is vulnerable to unpredictable catastrophic events due to its limited distribution and small population size.[25]

III. Order 1169 Pump Test

19. The State Engineer issued Order 1169 in March 2002 after receiving several applications to appropriate groundwater from the Coyote Springs Valley, Black Mountains Area,

---

[19] *Id.* at 22-24 (CBD000166-68).

[20] Exhibit 1 at 4 (CBD000004).

[21] *Id.*

[22] Exhibit 4 at 24 (CBD000108).

[23] *Id.*

[24] *Id.* at 15 (CBD000099).

[25] *Id.*

Garnet Valley, Hidden Valley, California Wash, and Muddy River Springs Area hydrographic basins.[26]

20. Order 1169 held in abeyance all pending groundwater applications in the Coyote Springs Valley, Black Mountains Area, Garnet Valley, Hidden Valley, Muddy River Springs Area, and Lower Moapa Valley hydrographic basins pending a test of the regional carbonate aquifer system.[27] The State Engineer explained that he did not believe it prudent to issue additional groundwater rights in the regional carbonate aquifer complex until a significant portion of then-existing groundwater rights were pumped for a substantial period of time to determine whether development of those water rights would adversely impact senior water rights or the environment.[28]

21. Order 1169 required that at least 50 percent, or 8,050 acre-feet per year, of then-existing water rights in Coyote Spring Valley be pumped for at least two consecutive years.[29] In April 2002 the State Engineer added the California Wash basin to the Order 1169 pump test basins.[30]

22. The Order 1169 pump test began in November 2010 and concluded in December 2012.[31] During the test an average of 5,290 acre-feet per year was pumped from carbonate-aquifer wells in Coyote Springs Valley and a cumulative total of 14,535 acre-feet per year was pumped throughout the Order 1169 study basins.[32]

---

[26] Exhibit 1 at 3 (CBD000003).

[27] *Id.*

[28] *Id.*; Exhibit 2 at 7 (CBD000075).

[29] Exhibit 1 at 3 (CBD000003).

[30] *Id.*

[31] *Id.* at 5 (CBD000005).

[32] *Id.* at 6 (CBD000006).

23. The Order 1169 pump test results demonstrated that there is a "unique" and "direct hydraulic connection" between the regional carbonate aquifer complex and the Muddy River springs, and that pumping from anywhere within the carbonate aquifer complex captures flows that would otherwise ultimately discharge from the Muddy River springs.[33] The pump test caused "sharp declines" in groundwater levels and flows from the highest-elevation Muddy River springs, which are considered the "canary in the coalmine" regarding the impacts of pumping on streamflow and Moapa dace habitat.[34]

24. On January 29, 2014, after reviewing the pump test results, the State Engineer found that "pumping under the Order 1169 test measurably reduced flows in headwater springs of the Muddy River," and that, "if pending water right applications were permitted and pumped in addition to existing groundwater rights in Coyote Spring Valley and the other Order 1169 basins, headwater spring flows would be reduced in tens of years or less to the point that there would be a conflict with existing rights."[35]

25. The State Engineer also found that, "to permit the appropriation of additional groundwater resources in the Coyote Spring Valley . . . would impair protection of these springs and the habitat of the Moapa dace and therefore threatens to prove detrimental to the public interest."[36]

26. Finally, the State Engineer concluded that "only a small portion" of existing water rights, "may be fully developed without negatively affecting the endangered Moapa dace and its habitat or the senior decreed rights on the Muddy River."[37]

---

[33] Exhibit 3 at 7-11 (CBD000086-90); Exhibit 5 at 26 (CBD0000137).

[34] Exhibit 3 at 7-11 (CBD000086-90); Exhibit 5 at 25 (CBD0000136).

[35] Exhibit 5 at 26 (CBD0000137).

[36] *Id.*

[37] Exhibit 6 at 2 (CBD000142).

27. Carbonate groundwater levels have not recovered since the completion of the Order 1169 pump test and continue to decline despite a subsequent decrease in groundwater pumping.[38] Groundwater levels at the EH-4 monitoring well—a key location for evaluating pumping impacts to the Muddy River springs—reached an all-time low point on November 9, 2018.[39] Groundwater levels at other monitoring wells briefly recovered from the pump test but began trending downward again in early 2016.[40]

28. Spring flows have also exhibited a declining trend in recent years. Flows at the Warm Springs West gauge briefly recovered after the pump test from 3.3 to 3.6 cfs, but have been declining ever since.[41] As of fall 2019, flows at Warm Springs West were approximately 3.2 cfs.[42]

IV. Order 1303

29. On January 11, 2019, the State Engineer issued Interim Order 1303 to obtain stakeholder input on four specific factual matters related to information obtained during and after Order 1169 pump test: (1) the geographic boundary of the Lower White River Flow System, (2) aquifer recovery since the Order 1169 pump test, (3) the long-term annual quantity of groundwater that may be pumped from the Lower White River Flow System, and (4) effects on senior water rights of moving water rights between the carbonate and alluvial (or basin-fill) system.[43]

---

[38] Exhibit 7 at 16 (CBD000160); Exhibit 8 at 3, 23-24 (CBD000174, CBD000194-95).

[39] Exhibit 8 at 23 (CBD000194).

[40] *Id.*

[41] *Id*.

[42] Exhibit 9 at 1519 (CBD000218).

[43] Exhibit 1 at 10 (CBD000010).

30. On July 3, 2019, the Center submitted a technical report prepared by Dr. Tom Myers,[44] outlining responses to the four Order 1303 questions.[45] On August 16, 2019, the Center submitted a rebuttal report prepared by Dr. Myers, offering rebuttals to positions that other parties to the Order 1303 proceedings put forward in their July reports.[46] Dr. Myers's analysis of pumping rates, groundwater levels, and springflow demonstrated that current carbonate pumping rates are unsustainable, and that any pumping from the carbonate aquifer would ultimately reduce springflow in the Muddy River Springs Area and harm the Moapa dace.[47]

31. Between September 23, 2019, and October 4, 2019, the State Engineer held a hearing on the stakeholder reports submitted pursuant to Order 1303. During the hearing, the Center presented expert testimony from Dr. Myers explaining further the basis for his conclusion that any additional carbonate pumping would reduce both groundwater levels and flows from the Muddy River Springs, thus adversely affecting the Moapa dace and senior decreed water rights.

32. Dr. Myers's conclusions are based on the fundamental hydrologic principle that in any groundwater system the amount of discharge (water flowing out of the system) must equal the amount of recharge (water flowing into the system).[48] Pumping upsets this balance by removing groundwater that would otherwise exit the system as springflow or some other form of discharge.[49] Over time, the system may reach a new equilibrium or "steady state" in which the reduction in

---

[44] Dr. Myers holds Masters and Doctorate degrees in hydrology/hydrogeology and has over thirty-seven years of experience in this field. *See generally* Exhibit 10 (CBD000219-29).

[45] *See generally* Exhibit 7 (CBD000145-71)

[46] *See generally* Exhibit 8 (CBD000172-201)

[47] Exhibit 7 at 25 (CBD000169); Exhibit 8 at 24 (CBD000195).

[48] *See* Exhibit 7 at 17 (CBD000161); Exhibit 8 at 24-27 (CBD000195-198).

[49] *See* Exhibit 8 at 24-27 (CBD000195-198).

discharge equals the amount being pumped.[50] But unless and until this occurs pumping will continue to reduce the amount of water that exits the system.[51] In the context of the Lower White River Flow system, the application of this principle is that carbonate groundwater pumping will reduce springflows in the Muddy River Springs Area unless and until the system reaches a steady state.[52]

33. Dr. Myers's reports and testimony explained that the Lower White River Flow System has not reached a steady state because groundwater levels and springflows continue to decline despite recent reductions in pumping and increasing annual precipitation rates.[53] After the conclusion of the Order 1169 pump test, and especially since 2014, total pumping has decreased and remained between 7,000 and 8,000 acre-feet per year—roughly equivalent to 1995-97 levels.[54] Precipitation, meanwhile, increased from 2014 through 2018.[55] Despite this reduction in pumping and increase in precipitation, carbonate groundwater levels and springflows have steadily declined.[56] As Dr. Myers explained, these decreases indicate that the system has not reached a steady state, and that even with current pumping levels, "it is only a matter of time before the spring flow on which the [Moapa] dace depends decreases significantly or is completely lost." [57]

34. Dr. Myers explained that there is very little recharge in the Lower White River Flow System, meaning that very little water enters the carbonate aquifer system from precipitation and

---

[50] *Id.* at 27 (CBD000198).

[51] *Id.*

[52] *Id.*

[53] *See* Exhibit 9 at 1513-14 (CBD000212-13).

[54] Exhibit 1 at 55 (CBD000055); Exhibit 8 at 22 (CBD000193).

[55] Exhibit 8 at 3 (CBD000174).

[56] *Id.* at 23 (CBD000194).

[57] Exhibit 7 at 25 (CBD000169); *see also* Exhibit 8 at 27-28 (CBD000198-99).

other sources.[58] Springflows will, therefore, not recover significantly even if pumping is stopped, and any damage done to the Moapa dace and its habitat from excessive pumping rates will be long-term and possibly irreversible.[59]

35. Dr. Myers also explained that carbonate pumping impacts Muddy River flows: "carbonate pumping would eventually dry the Muddy River Springs, but carbonate groundwater flow also supports basin fill water through direct discharge from the carbonate to the basin fill and secondary recharge of springflow into the basin fill. The long-term decline of flow in the Muddy River indicates there is a limit to the amount of even basin fill groundwater that can be pumped without affecting Muddy River flows. . . . Because the spring flow is directly responsible for Muddy River flows, preventing any additional carbonate pumpage is also necessary for protecting downstream water rights."[60]

36. Several other stakeholders presented hydrological analyses that agreed with Dr. Myers. The Southern Nevada Water Authority, for instance, stated that "any groundwater production from the carbonate system within the [Lower White River Flow System] will ultimately capture discharge to the [Muddy River Springs Area]."[61] Modeling presented by National Park Service, meanwhile, "confirm[ed] that [groundwater] drawdown will increase and springflow [will] decrease regardless of pumping rate."[62]

---

[58] Exhibit 7 at 4, 17 (CBD000148, CBD000161).

[59] Exhibit 8 at 28 (CBD000199).

[60] Exhibit 7 at 26 (CBD000170).

[61] *Id.*

[62] Exhibit 8 at 27 (CBD000198).

V. Order 1309

37. On June 15, 2020, the State Engineer issued Order 1309, which set forth the State Engineer's conclusions regarding the four factual matters on which the State Engineer sought stakeholder input.[63]

38. Order 1309 acknowledged that groundwater levels in the regional carbonate aquifer have "not recovered to pre-Order 1169 test levels," and that insufficient data exist to determine whether groundwater levels were approaching a "steady state."[64] Nevertheless, the State Engineer "agreed" with a minority of stakeholders who argued that water levels in the Muddy River Springs Area "may be approaching steady state."[65]

39. In order 1309, the State Engineer also acknowledged that current pumping is capturing Muddy River flows, noting that Muddy River flows in headwaters at the Moapa Gage have declined by over 3,000 afy.[66] The State Engineer made a finding that "capture or potential capture of the waters of a decreed system does not constitute a conflict with decreed right holders if the flow of the source is sufficient to serve decreed rights."[67] The State Engineer provided a discussion of how those rights could potentially be met even with reduced headwater flows and then concluded that up to 8,000 acre-feet per year could continue to be pumped from the regional

---

[63] The Center agrees with and supports the State Engineer's conclusions on criteria 1 (the geographic boundary of the Lower White River System). The Center takes no position on the State Engineer's conclusions regarding criteria 4 (movement of water rights).

[64] Exhibit 1 at 57 (CBD000057).

[65] *Id.*

[66] Exhibit 1 at 61 (CBD000061) ("Flow in the Muddy River at the Moapa Gage has averaged approximately 30,600 afa since 2015, which is less than the predevelopment baseflow of about 33,900." (Footnotes omitted).

[67] *Id.* at 60 (CBD000060).

carbonate aquifer without impacting the fully decreed water rights in the Muddy River, stating "reductions in flow that have occurred because of groundwater pumping in the headwaters basins is not conflicting with Decreed rights."[68]

40. The state engineer's decision does not consider the impacts of 8,000 acre-feet/yr of pumping on the Moapa dace or its habitat.

GROUNDS FOR THE PETITION

41. The State Engineer's determination that up to 8,000 acre-feet per year (afy) may be sustainably pumped from the Lower White River Flow System is arbitrary, capricious, irrational and not supported by substantial evidence.[69] As noted, the 8,000 afy figure is based on the assumption that groundwater levels in the Muddy River Springs Area are approaching a "steady state" after the Order 1169 pump test.[70] However, the State Engineer acknowledged that insufficient data currently exist to determine whether this "steady-state" hypothesis is in fact accurate.[71] Moreover, the State Engineer's determination ignored and/or arbitrarily dismissed compelling expert evidence proffered by multiple other stakeholders that groundwater levels continue to decline despite recent decreases in pumping, and thus indicating that the aquifer is not approaching equilibrium.[72]

42. The State Engineer failed to properly consider the environmental consequences of groundwater pumping in the Lower White River Flow System when determining the amount of groundwater that could be sustainably pumped. In Order 1309, the State Engineer acknowledged

---

[68] Exhibit 1 at 61 (CBD000061).

[69] *Id.*

[70] *Id*. at 57 (CBD000057).

[71] *See id*.

[72] *See id.* at 62 (CBD000062); Exhibit 7 at 24 (CBD000168); Exhibit 8 at 25, 28 (CBD000196, CBD000199).

that "issuing a permit to withdraw groundwater that reduces the flow" of the Muddy River Springs would harm the Moapa dace and violate the ESA.[73] The State Engineer further determined that a minimum spring flow of 3.2 cfs is necessary to maintain adequate habitat for the Moapa dace, and that more than 3.2 cfs may be required to support the recovery of the species.[74] However, in determining the amount of groundwater that could be sustainably pumped, the State Engineer failed to adequately consider how pumping would affect Moapa dace populations and habitat.[75] The State engineer's determination regarding the long-term annual quantity of water that can be sustainably pumped is based on two conclusions: first, that "reductions in flow that have occurred because of groundwater pumping . . . [are] not conflicting with Decreed rights,"[76] and second, that "spring discharge may be approaching a steady state."[77] As noted, the "steady-state" hypothesis is not consistent with the available data, which show a continuing decline in groundwater levels and springflow.[78] And neither the alleged "steady state" of the carbonate aquifer, nor the alleged absence of conflicts with senior decreed rights relate to whether the level of groundwater pumping ultimately selected (or any particular level of groundwater pumping) will provide sufficient flow from the Muddy River springs to ensure the long-term survival and recovery of the Moapa dace. Thus, the State Engineer failed to explain the basis for his conclusion that pumping at current levels will adequately protect the Moapa dace, and failed to comply with Nevada water law, which requires him to consider environmental impacts as a component of the public interest.

---

[73] Exhibit 1 at 45 (CBD000045). The Center agrees with and supports the State Engineer's analysis of potential ESA liability.

[74] *Id.*

[75] *See id.* at 59-61 (CBD000059-61).

[76] *Id.* at 61 (CBD000061).

[77] *Id.* at 63 (CBD000063).

[78] *See, e.g.*, Exhibit 7 at 24 (CBD000168); Exhibit 8 at 25, 28 (CBD000196, CBD000199).

43. The State Engineer also failed to properly consider the public interest because, based on the evidence in the record, the 8,000 afy permitted under Order 1309 is excessive and allows too much pumping to adequately protect the Moapa dace. As explained above, spring flows at the Muddy River springs continue to decline, even though groundwater pumping from the carbonate aquifer in the Lower White River Flow System has averaged 7,000-8,000 afy since the Order 1169 pump test.[79] Allowing this level of pumping to continue will result in additional and sustained spring flow declines and associated reductions in Moapa dace habitat. Even though the Order requires that additional data be obtained and commits to reassessing the pumping limit in the future, that approach poses unacceptable risks for the Moapa dace because declines in spring flows are not easily restored. Experience from the pump test and other evidence provided at the Order 1303 hearing show that even if pumping is reduced in the future, recovery of spring flows can take many years or even decades.[80] Accordingly, the State Engineer's conclusion that maintaining pumping at current levels will adequately protect the Moapa dace is arbitrary, capricious, irrational, and not supported by substantial evidence.

44. The evidence in the record also shows that groundwater development anywhere within Lower White River Flow System ultimately captures a portion of fully-decreed Muddy River Flow and that since groundwater development began, Muddy River flows in the headwaters at the Moapa Gage have declined by over 3,000 afy.[81] Therefore, the State Engineer's conclusion that pumping up to 8,000 afy from the regional carbonate aquifer does not constitute a conflict with decreed right holders is unsupported.

---

[79] Exhibit 1 at 55 (CBD000055).

[80] *See, e.g.*, Exhibit 7 at 23-24 (CBD000167-68); Exhibit 8 at 28 (CBD000199).

[81] Exhibit 1 at 61 (CBD000061) ("Flow in the Muddy River at the Moapa Gage has averaged approximately 30,600 afa since 2015, which is less than the predevelopment baseflow of about 33,900." (Footnotes omitted).

CONCLUSION

For the reasons stated above, and for others that may be raised during the pendency of this appeal, Petitioner respectfully requests judgment as follows:

a. For an Order amending Order 1309 to remove or strike findings made therein regarding the amount of water that can be sustainably pumped from the Lower White River Flow System; amending Order 1309 to remove or strike the findings and conclusions therein that pumping in the Lower White River Flow System will not conflict with Muddy River decreed rights; directing the State Engineer to fully consider the environmental consequences of groundwater pumping within the Lower White River Flow System; and directing the State Engineer to prohibit all carbonate groundwater pumping within the geographic boundary of the Lower White River Flow System, including Kane Springs Valley, until a new sustainable limit is determined by the State Engineer after remand.

b. For costs of suit and reasonable attorney's fees; and

c. For such other and further relief as this Court deems just and equitable.

Respectfully Submitted this 13th day of July, 2020.

/s/ Julie Cavanaugh-Bill
Julie Cavanaugh-Bill (NV Bar No. 11533)
401 Railroad Street, Suite 307
Elko, Nevada 89801
775-753-4357

/s/ Lisa T. Belenky
Lisa T. Belenky (CA Bar No. 203225) (*Pro Hac Vice to be submitted*)
Center for Biological Diversity
1212 Broadway, Suite 800
Oakland, CA 94612
415-632-5307

/s/ Douglas Wolf
Douglas Wolf (NM Bar No. 7473) (*Pro Hac Vice to be submitted*)
Center for Biological Diversity
3201 Zafarano Drive
Suite C, #149
Santa Fe, NM 87507
202-510-5604

LIST OF EXHIBITS-FILED AS A SEPARATE APPENDIX

Exhibit Number	Description	Page Count
1	Nevada State Engineer, Order No. 1309 (June 15, 2020)	68
2	Nevada State Engineer, Order No. 1169 (March 8, 2002)	11
3	Nevada State Engineer, Interim Order No. 1303 and Addendum (May 15, 2019)	17
4	U.S. Fish & Wildlife Service, Intra-Service Programmatic Biological Opinion for the Proposed Muddy River Memorandum of Agreement, File No. 1-5-05-FW-536 (Excerpt) (Jan. 30, 2016)	15
5	Nevada State Engineer, Ruling No. 6254 (Jan. 29, 2014)	29
6	State of Nevada, Department of Conservation and Natural Resources, Division of Water Resources, Notice Re: Public Workshop Regarding Existing Water Right Use and Groundwater Pumping in the Lower White River Flow System (June 14, 2018)	4
7	Tom Myers, Ph.D., Technical Memorandum Re: Groundwater Management and the Muddy River Springs, Report in Response to State Engineer Order 1303 (June 1, 2019)	27
8	Tom Myers, Ph.D., Technical Memorandum Re: Groundwater Management and the Muddy River Springs, Rebuttal in Response to Stakeholder Reports Filed with Respect to Nevada State Engineer Order 1309 (August 16, 2019)	30
9	Transcript of Proceedings, Public Hearing Regarding Existing Water Right Use and Groundwater Pumping in the Lower White River Flow System (Excerpt) (Oct. 2, 2019)	17
10	Curriculum Vitae of Tom Myers, Ph.D	11

CERTIFICATE OF SERVICE

Pursuant to NRCP 5(b), I, an employee of the Center for Biological Diversity, hereby certify that on July 13, 2020, I served complete copies of the foregoing NOTICE OF AND PETITION FOR JUDICAL REVIEW and the separate APPENDIX WITH EXHIBITS 1-10 by personally delivering true copies thereof to the following addresses:

Tim Wilson, P.E.
Nevada State Engineer
Division of Water Resources
901 S. Stewart Street, Suite 2002
Carson City, NV 89701

Tori N. Sundheim, Esq.
Deputy Attorney General
Nevada Attorney General's Office
100 N. Carson Street
Carson City, NV 89701

By: /s/ Scott Lake
Scott Lake
Nevada Legal Advocate
Center for Biological Diversity
PO Box 6205
Reno, NV 89513-6205
Ph: (802) 299-7495

Pursuant to NRCP 5(b), I, an employee of the Center for Biological Diversity, hereby certify that on July 13, 2020, I served complete copies of the foregoing NOTICE OF AND PETITION FOR JUDICAL REVIEW and the separate APPENDIX WITH EXHIBITS 1-10 by placing true copies thereof in the United States mail, Certified Mail – Return Receipt Requested, postage prepaid, addressed as follows:

Robert O. Kurth, Jr.
3420 North Buffalo Drive
Las Vegas, NV 89129
Attorney for 3335 Hillside, LLC

Laura A. Schroeder
Therese A. Ure
10615 Double R Blvd., Ste. 100
Reno, Nevada 89521
Attorneys for City of North Las Vegas and Bedroc

Paulina Williams
Baker Botts, L.L.P.
98 San Jacinto Boulevard, Suite 1500
Austin, TX 78701
Attorney for Georgia Pacific Corporation

Bradley J. Herrema. Esq.
Brownstein Hyatt Farber Schreck
100 N. City Parkway, Suite 1600
Las Vegas, Nevada 89106
Attorneys for Coyote Springs Investment, LLC

Kent R. Robison, Esq.
Therese M. Shanks, Esq
Robison, Sharp, Sullivan & Brust
71 Washington Street
Reno, Nevada 89503
Attorneys for Coyote Springs Investment, LLC

Dylan V. Frehner, Esq.
Lincoln County District Attorney
P.O. Box 60
Pioche, NV 89043
Attorney for Lincoln County Water District

Alex Flangas
50 West Liberty Street, Suite 700
Reno, NV 89501
Attorney for Nevada Cogeneration Associates Nos. 1 and 2

Beth Baldwin
Richard Berley
ZIONTZ CHESTNUT
Fourth And Blanchard Building
2101 Fourth Avenue, Suite 1230
Seattle, Washington 98121-2331
Attorneys for Moapa Band of Paiute Indians

Steve King, Esq.
227 River Road
Dayton, NV 89403
Attorney for Muddy Valley Irrigation Company

Sylvia Harrison
Sarah Ferguson
McDONALD CARANO LLP
100 West Liberty Street, 10th Floor
Reno, Nevada 89501
Attorneys for Georgia Pacific Corporation and Republic Environmental Technologies, Inc.

Severin A. Carlson
Kaempfer Crowell, Ltd.
50 W. Liberty Street, Suite 700
Reno, Nevada 89511
Attorney for Church of Jesus Christ of the Latter-Day Saints

Karen Peterson
ALLISON MacKENZIE, LTD.
402 North Division Street
Carson City, Nevada 89703
Attorney for Vidler Water Company, Inc. and Lincoln County Water District

Karen Glasgow
Office of the Regional Solicitor
San Francisco Field Office
U.S. Department of the Interior
333 Bush Street, Suite 775
San Francisco, CA 94104
Attorney for National Park Service

Paul G. Taggart, Esq.
Timothy D. O'Connor, Esq.
TAGGART & TAGGART, LTD.
108 North Minnesota Street
Carson City, Nevada 89703
Attorneys for Las Vegas Valley Water District and Southern Nevada Water Authority

Greg Morrison
50 W. Liberty St., Suite 750
Reno, NV 89501
Attorney for Moapa Valley Water District

Justina Caviglia
6100 Neil Road
Reno, NV 89511
Attorney for Nevada Power Company d/b/a NV Energy

State of Nevada, Dept. of
Conservation and Natural Resources
Division of State Parks
901 S. Stewart Street, Suite 5005
Carson City, NV 89701
Pacific Coast Building Products
P.O. Box 364329
Las Vegas, NV 89036

S & R, Inc.
808 Shetland Road
Las Vegas, NV 89107

Technichrome
4709 Compass Bow Lane
Las Vegas, NV 89130

William O'Donnell
2780 S. Jones Blvd. Ste. 210
Las Vegas, NV 89146

Global Hydrologic Services, Inc.
Mark D. Stock
561 Keystone Avenue, #200
Reno, NV 89503-4331

Laker Plaza, Inc.
7181 Noon Rd.
Everson, WA 98247-9650

State of Nevada
Department of Transportation
1263 South Stewart Way
Carson City, NV 89030

Steven C. Anderson, Esq.
LAS VEGAS VALLEY WATER DISTRICT
1001 S. Valley View Blvd.,
Las Vegas, NV 89153
Attorney for Las Vegas Valley Water District and Southern Nevada Water Authority

LUKE MILLER
Office of the Regional Solicitor
U.S. Department of the Interior
2800 Cottage Way, Suite E1712
Sacramento, CA 95825
Attorney for US. Fish and Wildlife Service

Larry Brundy
P.O. Box 136
Moapa, NV 89025

Casa De Warm Springs, LLC
1000 N. Green Valley Pkwy
Ste. Nos. 440-350
Henderson, NV 89074

Clark County
500 S. Grand Central Pkwy, 6th Fl.
Las Vegas, NV 89155-1111

Clark County Coyote Springs Water Resources GID
1001 S. Valley View Blvd.
Las Vegas, NV 89153

Mary K. Cloud
P.O. Box 31
Moapa, NV 89025

Don J. & Marsha L. Davis
P.O. Box 400
Moapa, NV 89025

Dan & Latrice Whitmore
P.O Box 23
Moapa, Nevada 89025

Ascar Egtedar
1410 East Lake Mead Blvd.
North Las Vegas, NV 89030

Ute Leavitt
P.O. Box 64
Overton, NV 89040

Dry Lake Water, LLC
2470 St. Rose Pkwy., Ste. 107
Henderson, NV 89074

Kelly Kolhoss
P.O. Box 232
Moapa, NV 89025

Lake At Las Vegas Joint Venture, Inc.
1600 Lake Las Vegas Parkway
Henderson, NV 89011

By: /s/ Elise Ferguson
Elise Ferguson
Public Lands Paralegal
Center for Biological Diversity
1212 Broadway St., Suite 800
Oakland, CA 94612
Ph: 510-844-7106