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THE HONORABLE THOMAS COFFIN

UNITED STATES DISTRICT COURT

DISTRICT OF OREGON

EUGENE DIVISION

CENTER FOR BIOLOGICAL DIVERSITY,

Plaintiff,

v.

U.S. BUREAU OF RECLAMATION,

Case No. 6:15-cv-02358-TC
Consolidated with
Case No. 6:16-cv-00035-TC

MOTION FOR PRELIMINARY INJUNCTION AND MEMORANDUM

Defendant,

and

ARNOLD IRRIGATION DISTRICT, CENTRAL OREGON IRRIGATION DISTRICT, LONE PINE IRRIGATION DISTRICT, NORTH UNIT IRRIGATION DISTRICT, TUMALO IRRIGATION DISTRICT,

Intervenor Defendants.

IN SUPPORT

ORAL ARGUMENT AND EXPEDITED HEARING REQUESTED

WATERWATCH OF OREGON,

Plaintiff,

v.

U.S. BUREAU OF RECLAMATION, **CENTRAL OREGON IRRIGATION DISTRICT**, **NORTH UNIT IRRIGATION DISTRICT**, and **TUMALO IRRIGATION DISTRICT**,

Defendants,

and

ARNOLD IRRIGATION DISTRICT, LONE PINE IRRIGATION DISTRICT,

Intervenor Defendants.

Case No. 6:16-cv-00035-TC

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MOTION FOR PRELIMINARY INJUNCTION

Pursuant to Federal Rule of Civil Procedure 65, Plaintiffs Center for Biological Diversity and WaterWatch of Oregon hereby move to immediately enjoin the U.S. Bureau of Reclamation ("BOR") and Defendant irrigation districts from operating Crane Prairie dam and reservoir, Wickiup dam and reservoir, and Crescent Lake dam and reservoir in ways that harm Oregon spotted frogs. BOR and Defendant irrigation districts are violating the Endangered Species Act ("ESA") by continuing to operate those facilities in ways that cause irreversible harm to Oregon spotted frogs before completing ESA consultation and a habitat conservation plan for those operations.

Because the operation of the dams and reservoirs in Spring 2016 and beyond threatens Oregon spotted frogs with likely irreparable harm, Plaintiffs respectfully request that this Court enter a preliminary injunction not later than April 1, 2016 to protect spotted frogs this breeding season and beyond. Plaintiffs request an injunction that would alter operations of Crane Prairie, Wickiup, and Crescent Lake dams and reservoirs in ways that reduce harm to Oregon spotted frogs, as described more fully in the accompanying memorandum and declarations. Pursuant to Local Rule 7-1, the undersigned certify that the parties have conferred and have been unable to resolve this motion.

Plaintiffs request an expedited hearing on this matter. In light of the important public interest nature of this litigation and nonprofit status of the litigants, Plaintiffs further request that this Court waive any injunction bond under Fed. R. Civ. P. 65(c).

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MEMORANDUM IN SUPPORT OF MOTION FOR PRELIMINARY INJUNCTION

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INTRODUCTION

The Oregon spotted frog has experienced significant declines in its range and abundance, resulting in it being listed as a threatened species under the Endangered Species Act ("ESA") in August 2014. The decline of this species is an indicator of the degradation of wetland and aquatic habitats across the Pacific Northwest that can no longer support numerous wetland-dependent species. One of the areas in which this degradation is apparent is the Upper Deschutes Basin of central Oregon. Operation of Crane Prairie, Wickiup, and Crescent Lake reservoirs (sometimes collectively referred to herein as the "system") has significantly altered the hydrology of the Upper Deschutes River, Little Deschutes River, and Crescent Creek, completely reversing the natural flow conditions in the basin. Extreme high and low flows, as well as sharp fluctuations in the flow from system operations, significantly impair habitat, kill frogs, kill frog eggs, delay frog maturity, and kill many fish species. Indeed, these alterations to the natural conditions in the basin are cited by the U.S. Fish and Wildlife Service ("USFWS") as a primary cause of the Oregon spotted frogs' decline and currently precarious status.

The Bureau of Reclamation ("BOR") and the irrigation districts that operate the dams have been aware of the harm these facilities cause to spotted frogs for many years. Since receiving notice from the Plaintiffs of intent to sue under the ESA, BOR has begun consulting with USFWS, but not over the system's ongoing operations. Rather, the consultation is confined to a very limited proposal by the irrigation districts to release a small, inadequate amount of water from Crescent Lake into the system. Moreover, the consultation process even on this limited basis is expected to take two to five years to produce a final biological opinion for BOR and a final habitat conservation plan for the irrigation districts. In the meantime, operation of Crane Prairie, Wickiup, and Crescent Lake reservoirs continues to cause irreversible harm to Oregon spotted frogs every season of every year, in violation of the ESA.

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Plaintiffs in this consolidated action seek a preliminary injunction to adjust operation of these reservoirs in ways that will avoid and reduce harm to Oregon spotted frogs in the immediate future.[1] Plaintiffs request that the Court adopt their expert recommendations for reservoir operations that will avoid and reduce harm to Oregon spotted frogs as described below.

STATEMENT OF FACTS

I. OREGON SPOTTED FROG IN THE UPPER DESCHUTES BASIN.

Historically, the Oregon spotted frog ranged from British Columbia to northeastern California, but human actions have degraded much of its habitat and now it is absent from 76-90% of its former range. *Endangered and Threatened Wildlife and Plants; Threatened Status for Oregon Spotted Frog; Final Rule,* 79 Fed. Reg. 51,658, 51662, 51,706 (Aug. 29, 2014) (Ex. 1 to Declaration of Anna M. Sewell ("Sewell Decl.")). The majority of remaining populations are small and isolated, with low genetic diversity and little opportunity for genetic exchange between populations, making them vulnerable to extirpation. *Id.* at 51,686-87, 51,706-07. Due to the decline in range and abundance, USFWS listed the Oregon spotted frog as a threatened species under the ESA on August 29, 2014. *Id.* at 51,658.

Oregon spotted frog is the most aquatic native frog species in the Pacific Northwest, and these frogs rarely leave the water in any season. *Id.* at 51,661; Sewell Decl., Ex. 2 at 1. They use shallow water areas for breeding and rearing in spring; perennially deep, moderately vegetated pools in the summer; and perennial well-oxygenated water in winter. Sewell Decl., Ex. 1 at 51,661; Ex. 2 at 1; *see also* Declaration of Theresa L. Simpson In Support of Plaintiffs' Joint Motion for Preliminary Injunction ("Simpson Decl.") at ¶¶ 21-29. Because of their

[1] Plaintiffs have standing to bring this action. Filed with this Motion and Memorandum are the Declarations of Jeffrey Perin, member of WaterWatch; Kimberley Priestly, staff member of WaterWatch; and Tierra Curry, member and staff member of Center for Biological Diversity.

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dependence on water, they must have aquatic connections between habitat areas and to disperse to other breeding sites. Sewell Decl., Ex. 2 at 1; Ex. 3 at 4. Rapid drops in water level can leave eggs, tadpoles, or frogs stranded on dry land, causing mortality. Sewell Decl., Ex. 2 at 1. Extremely low flows can force spotted frogs into smaller areas with less vegetative protection, making them more vulnerable to predation.

The spotted frog's habitat needs vary with its life history stages. Breeding occurs in spring, when females lay eggs in shallow water (less than 14 inches deep) with low or sparse vegetation and high exposure to the sun. Sewell Decl., Ex. 1 at 51,660-61; Ex. 2 at 1. These areas often consist of seasonally flooded wetlands that are connected to larger perennial water bodies so that tadpoles can move into deeper water as the seasonal wetlands dry out. Sewell Decl., Ex. 1 at 51,660-61; Ex. 2 at 1. If water levels drop too early or too quickly, eggs become desiccated or tadpoles become stranded, leading to high mortality and potential loss of the entire reproductive cohort for that year at that site. Sewell Decl., Ex. 1 at 51,660, Ex. 2 at 1; Ex. 3 at 5. Because breeding sites have such unique characteristics, there is high fidelity to breeding locations and limited ability to switch sites, making Oregon spotted frogs particularly vulnerable to modification of egg-laying sites. Sewell Decl., Ex. 1 at 51,661, 51,687. A stochastic event that affects a breeding site could significantly reduce the Oregon spotted frog population associated with that sub-basin. *Id.* at 51,687.

Eggs hatch within three to four weeks of egg-laying, and tadpoles move into deeper perennial water as summer progresses and water in wetlands recedes. Sewell Decl., Ex. 2 at 1. Tadpoles metamorphose into juvenile frogs during their first summer, usually within about four months. Sewell Decl., Ex. 2 at 1; Simpson Decl., ¶ 26. Spotted frogs take 3-4 years to reach breeding maturity. Simpson Decl., ¶ 22. In summer, after metamorphosis, juvenile and adult

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frogs use deeper, permanent water in wetlands or creeks that have moderate to dense emergent vegetation where they feed, bask, and hide from predators. Sewell Decl., Ex. 1 at 51,661; Ex. 2 at 1.

In fall, juvenile and adult frogs begin moving into overwintering habitat, which contains well-oxygenated water that persists through the winter, such as springs, side channels, and beaver ponds, and provides sheltering locations to protect frogs from predators and freezing. Sewell Decl., Ex. 1 at 51,661; Ex. 2 at 1. Spotted frogs often stay active during the first month after surface freeze-up, then have little movement in January and February before increasing activity again in March. Sewell Decl., Ex. 1 at 51,661. Like breeding habitat, the specific requirements for overwinter habitat do not allow for much flexibility in site selection. Sewell Decl., Ex. 3 at 4.

In Oregon, this species has been completely extirpated from the Willamette Valley and is found in just two of twelve historically-occupied sub-basins west of the Cascade Mountains. Sewell Decl., Ex. 1 at 51,663. East of the Cascades, it occurs in just eight sub-basins, including the Upper Deschutes River and Little Deschutes River sub-basins. *Id.* In the Upper Deschutes sub-basin, Oregon spotted frogs are found in high-elevation lakes and reservoirs, wetland ponds, and riverine wetlands and oxbows along the Deschutes River, with eighteen known breeding locations within this sub-basin. *Id.* at 51,665-66; Ex. 4 at 1.

The Upper Deschutes River between Wickiup Dam and Bend historically had many occupied breeding sites on floodplains along the river, but now, because of the dam system and its operation, this part of the river contains just six Oregon spotted frog breeding locations: Bull Bend, Dead Slough, LaPine State Park, Sunriver, Slough Camp, and the Old Mill Pond. Sewell Decl., Ex. 3 at 1; Ex. 5 at 1; Ex. 6 at 14-15. The Slough Camp location consists of two breeding

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sites: a small marsh on the west side of the river and a larger wetland complex on the east side of the river. Sewell Decl., Ex. 5 at 1; Ex. 6 at 15. Except for the Sunriver site, each of these sites has fewer than 40 breeding females based on the most recent egg mass surveys. Sewell Decl., Ex. 5 at 1. These small populations are isolated and disconnected, and are thus at risk of extirpation. Sewell Decl., Ex. 3 at 1; Ex. 7 at 2. In contrast, the Sunriver site has more than 700 breeding females because a system of weirs maintains consistent water levels from breeding through metamorphosis that allows for persistence of a robust population. Sewell Decl., Ex. 1 at 51,670; Ex. 5 at 1; Ex. 6 at 14-15.

Oregon spotted frogs use Crane Prairie Reservoir and associated wetlands, and to a lesser extent Wickiup Reservoir and wetlands, for breeding, rearing, and overwintering. Sewell Decl., Ex. 4 at 1; Ex. 5 at 1. Crane Prairie Reservoir is just upstream of Wickiup Reservoir, with a short stretch of the Deschutes River connecting the two. Breeding sites have been documented in several areas around Crane Prairie Reservoir, with more than 100 egg masses found at two sites in 2015, but just five and ten egg masses observed at two other sites that same year. Sewell Decl., Ex. 4 at 1; Ex. 5 at 1. Some Oregon spotted frog breeding sites have been documented around Wickiup Reservoir and in the arm of the Deschutes River between Crane Prairie and Wickiup, with small numbers of egg masses located at each site. Sewell Decl., Ex. 4 at 1; Ex. 5 at 1. Sites around Wickiup would likely have more frogs if not for the extreme alterations in reservoir levels that occur at Wickiup. Simpson Decl., ¶¶ 31, 32, 58, and 76.

In the Little Deschutes sub-basin, spotted frogs occur within wetland, pond, and riverine habitat along the Little Deschutes River and Crescent Creek, with twenty-three known breeding locations. Sewell Decl., Ex. 1 at 51,666. Five known sites exist along Crescent Creek, which range in size from five to sixty-two breeding females at each site. Sewell Decl., Ex. 5 at 1.

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Below the confluence with Crescent Creek, the middle and lower portions of the Little Deschutes River have nine known sites, with seven sites containing between eight and twenty-three breeding females and the other two sites with eighty-eight and 101 breeding females. *Id.* at 1-2.

In both the Upper Deschutes and Little Deschutes sub-basins, Oregon spotted frog breeding begins as early as mid-March and rearing can last until mid-August. Sewell Decl., Ex. 8 at 5; Ex. 9; Simpson Decl., ¶¶ 24, 27, 39, 80. Frogs use summer foraging habitat during the dry season, but start moving toward overwintering habitat as early as mid-September so they are in their winter habitat before freezing begins. Simpson Decl., ¶ 28. More than 35,000 acres of wetlands in the Upper and Little Deschutes River sub-basins have been proposed as critical habitat for Oregon spotted frogs, and 76% of that acreage is affected by irrigation management. Sewell Decl., Ex. 7 at 1; Ex. 10 at 2.[2] *See also* Sewell Decl., Ex. 11 (satellite image of Oregon spotted frog sites in sub-basins).

II. HARM TO SPOTTED FROGS FROM CRANE PRAIRIE, WICKIUP, AND CRESCENT LAKE DAMS.

There is no dispute that operation of Crane Prairie, Wickiup, and Crescent Lake dams harms Oregon spotted frogs in the Upper Deschutes and Little Deschutes sub-basins. USFWS, BOR, and the irrigation districts all recognize this fact. *See* Sewell Decl., Ex. 1 at 51,669-70; Ex. 2 at 2; Ex. 3 at 1-2; Ex. 4 at 2; Ex. 5; Ex. 6 at 14-15; Ex. 7; Ex. 8 at 2-3; Ex. 12; Ex. 13 at 1-2. Crane Prairie and Wickiup reservoirs are managed together to store up to 250,000 acre-feet of water for irrigation purposes. Sewell Decl., Ex. 18 at 2-11. As stated in the final listing rule for Oregon spotted frog, "[i]n the Upper Deschutes River sub-basin in Oregon, regulated water releases from Crane Prairie and Wickiup Reservoirs result in extreme seasonal fluctuations in

[2] USFWS issued a proposed rule designating critical habitat for Oregon spotted frog but has not yet issued a final rule. 78 Fed. Reg. 53,538 (Aug. 29, 2013). The proposed rule also described the habitat features important to Oregon spotted frog. *Id.* at 53,544.

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stream flows that have affected the amount of overwintering and breeding habitat available for Oregon spotted frogs." Sewell Decl., Ex. 1 at 51,670. Historically, the Deschutes River had stable flows of about 730 cubic feet per second (cfs) in summer and 660 cfs in winter. *Id.* But water storage in the reservoirs during the winter, water releases in spring, and water diversions for irrigation result in extremely low flows of about 20-30 cfs from October to April in the Deschutes River below Wickiup Dam, which is just one-tenth of historic flows, and high summer flows of about 1,400 cfs that are double historic flows. *Id.*; Ex. 2 at 2; Ex. 6 at 14. These extreme flows and rapid fluctuations harm spotted frogs.[3]

Similarly, "Oregon spotted frog habitats in the Little Deschutes River sub-basin in Oregon are affected by regulated water management downstream of Crescent Lake Dam in Crescent Creek and the Little Deschutes River below the confluence with Crescent Creek." Sewell Decl., Ex. 1 at 51,670. Crescent Lake Dam stores up to 86,000 acre-feet of water in winter and spring before releasing it for irrigation in summer, creating abnormally low flows in the rivers during the overwintering and breeding seasons. Sewell Decl., Ex. 2 at 2; Ex. 13 at 1-2. In the final listing rule, USFWS determined that hydrologic changes from water manipulation were a moderate to very high threat to Oregon spotted frogs in five occupied sub-basins, including the Upper Deschutes and Little Deschutes sub-basins. Sewell Decl., Ex. 1 at 51,672.

A. Threats to Spotted Frogs Downstream of Wickiup Dam.

One of the primary threats to Oregon spotted frogs from water manipulation is impaired breeding. As described above, egg-laying sites are found in shallow water. If water levels are too high or too low before breeding occurs, it eliminates or delays the opportunity for breeding

[3] It bears noting that all species, especially fish, are affected by the extreme fluctuations and that fish are particularly negatively affected by the fall draw-down in river flows and extremely low winter flows, necessitating "bucket-brigade" fish rescues and resulting in large fish die-offs in recent years.

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because these habitat sites are either flooded with too much water or completely dry, and thus not suitable for Oregon spotted frog egg-laying. Sewell Decl., Ex. 1 at 51,669; Ex. 4 at 2; Ex. 5 at 1. Changes in water level during the breeding season are also detrimental. Egg masses are prone to desiccation if water levels recede, causing mortality of the stranded eggs or larvae. Sewell Decl., Ex. 1 at 51,660, 51,669; Ex. 2 at 1. Even after eggs hatch, tadpoles may die if water levels recede during the rearing period before metamorphosis into juvenile frogs. Sewell Decl., Ex. 1 at 51,669; Ex. 13 at 2, 4-5. Rising water levels during the breeding period are also a threat because they put egg masses in deeper water, making them more vulnerable to fish predation. Sewell Decl., Ex. 5 at 1.

Regulated water releases from Crane Prairie and Wickiup reservoirs result in extreme seasonal fluctuations downstream in the Deschutes River, with abnormally low flows from October to April and abnormally high flows in summer that affect breeding and overwintering habitat. Sewell Decl., Ex. 2 at 2; Ex. 6 at 14; Ex. 17; Simpson Decl., ¶¶ 34, 39-56.

USFWS states that, "[s]ites located below Wickiup Reservoir do not experience natural hydrological fluctuation. Water releases from reservoir [sic] occur from April 15 to Oct 15. Therefore, breeding sites may not have enough water for egg mass development and overwintering and dispersal are affected." Sewell Decl., Ex. 5 at 1; *see also* Ex. 2 at 2 (discussing adverse effects to breeding and overwintering habitat and harm to individual frogs in the form of desiccation, predation, and freezing from seasonal fluctuations in river flows below Wickiup). USFWS has further stated that, "[w]e must make water available at key times (i.e., earlier in spring or over winter) to offset the impact to OSF downstream of Wickiup Reservoir. Populations downstream of Wickiup Reservoir are most vulnerable during the storage season (Oct 15 to April 15)." Sewell Decl., Ex. 7 at 2.

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Because irrigation releases from Wickiup Dam generally begin in mid-April, breeding habitat at several of the six spotted frog sites below Wickiup are often not inundated at the start of the breeding season, preventing suitable habitat for egg-laying. Sewell Decl., Ex. 1 at 51,670; Simpson Decl., ¶¶ 36-42. For instance, breeding habitat was all or mostly dry at the Bull Bend site in 2014 and at East Slough Camp in 2013 and 2015 before irrigation releases began, either preventing or delaying breeding at those sites. Sewell Decl., Ex. 5 at 1; Ex. 9; Ex. 10 at 3-5; Ex. 14 at 2-4; *see also* Ex. 1 at 51,670 and Ex. 7 at 2 (noting that Slough Camp site is likely impacted by regulated flows each year). Even delayed breeding harms spotted frogs because it delays metamorphosis and results in younger and smaller frogs entering the winter season, which are less likely to survive the winter conditions. Simpson Decl., ¶ 40. The timing of irrigation releases also caused egg masses that were deposited at East Slough Camp in 2014 to become stranded and desiccated, resulting in mortality of the eggs. Sewell Decl., Ex. 5 at 1; Ex. 10 at 13-14; Ex. 14 at 4-6. The Dead Slough and LaPine State Park breeding sites likewise "experience an unnatural hydroperiod due to regulated flows from Wickiup Reservoir." Sewell Decl., Ex. 6 at 14. Impacts to breeding habitat may cause the loss of an entire reproductive cohort at that site for that year. Sewell Decl., Ex. 1 at 51,669; Ex. 9.

Changes in water levels between years also harm spotted frogs because they cannot use the same breeding sites year after year. Normally, female spotted frogs have high fidelity to breeding sites and use the same egg-laying locations each year. Sewell Decl., Ex. 1 at 51,687. Changes in water levels between years mean that breeding sites used one year may not have the appropriate water depth the next year, forcing female frogs to search for other sites. Simpson Decl., ¶¶ 25, 67-68. This requires expenditure of energy, decreases the chance of finding a mate in time to breed, and reduces breeding success. *Id*.

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The rapid draw down of the river in fall and storage of water in the reservoirs during winter also causes harm to Oregon spotted frogs below Wickiup Dam. For example, at the onset of the water storage season in October, water rapidly drains from East Slough Camp. Sewell Decl., Ex. 1 at 51,670; Ex. 6 at 15. The result is the loss of aquatic pathways from rearing and nonbreeding habitat to overwintering habitat, often either stranding frogs or forcing them to make over-land movement to overwinter habitat. Sewell Decl., Ex. 1 at 51,670; Simpson Decl., ¶¶ 43-45. Plaintiffs' expert observed this happening in Fall 2015 at the Slough Camp site, when a juvenile frog was stranded in a small pool that later went dry as water levels quickly receded in the river. *Id.* ¶ 45. Spotted frogs that move over land to find overwinter habitat must expend additional energy for this journey and are exposed to predators, increasing their chance of mortality. *Id.* ¶ 44-45. It is likely that some juvenile and adult spotted frogs do not survive the transition from rearing/nonbreeding habitat to overwinter habitat each year. *Id.* ¶ 45.

The low water levels downstream of Wickiup during winter also eliminate most overwintering habitat. *Id.* ¶ 46-50. The low flows are in the main channel of the river and cannot inundate riverine bench wetlands at the edge of the river that would provide good overwinter habitat. *Id.* Plaintiffs' expert observed the increasing loss of overwinter habitat as water levels in the Deschutes River dropped during Fall 2015, resulting in very little suitable overwinter habitat available to Oregon spotted frogs by the end of the draw-down period. *Id.* ¶¶ 51-54. Similar observations were made in an agency email during a staged draw-down in 2014. *See* Sewell Decl., Ex. 15. The limited amount of suitable overwinter habitat results in the deaths of some Oregon spotted frogs that cannot find suitable habitat, and forces others into small areas within the main river channel that are marginal habitat and have a high risk of predation. Simpson Decl., ¶¶ 51-54; Sewell Decl., Ex. 1 at 51,669. USFWS has stated that

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increasing winter flows below Wickiup Dam to provide overwintering habitat for Oregon spotted frogs along the Deschutes River is necessary to reduce harm to the frogs, and recommends more than 500 cfs for winter flows below Wickiup Dam. Sewell Decl., Ex. 9; Ex. 12 at 2; Ex. 15 at 2; *see also* Simpson Decl., ¶ 54 (noting that higher flows in winter are critical to provide suitable overwinter habitat).

Finally, the extreme fluctuations in river flows below Wickiup Dam have significantly altered the channel morphology. Water flows that rapidly rise in spring when water is released from the reservoirs, and then suddenly drop again in fall when water storage begins, have eroded the streambank, destabilized bank vegetation, and caused loss of sinuosity. Simpson Decl., ¶ 55. The sediment eroded from the banks is then deposited on point bars along the channel. *Id*. This deposition of sediment has filled in or cut off wetlands along the channel edge, contributing to habitat loss by blocking aquatic pathways to off-channel rearing habitat and overwintering habitat along the river. *Id*.

Continuing impacts to Oregon spotted frogs below Wickiup Dam are particularly detrimental because of the small size of, and large distance between, these sub-populations. USFWS stated that "[e]xtant populations on the Deschutes River below the dam are small, extremely disjunct (i.e., separated by distances over 10 miles) and at risk of extirpation." Sewell Decl., Ex. 7 at 2. As explained in the final listing rule, small, isolated populations of Oregon spotted frogs are vulnerable to extirpation because they have little genetic diversity, could be eliminated by a single stochastic event or chronic source of mortality, and are unlikely to be recolonized due to their distance from other breeding sites. Sewell Decl., Ex. 1 at 51,659, 51,686-87, 51,707; Ex. 8 at 2. USFWS noted that the East Slough Camp site in particular is a "key population" of spotted frog that "is critical to having frogs persist in this segment of the

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Deschutes River." Sewell Decl., Ex. 9. Extirpation of frogs from one or more sites would put the Upper Deschutes sub-basin population at further risk of extinction. Simpson Decl., ¶ 56.

B. Specific Threats to Spotted Frogs Around Crane Prairie and Wickiup Reservoirs.

Similar adverse impacts occur around Crane Prairie and Wickiup reservoirs due to fluctuations in surface water elevation, causing direct harm to Oregon spotted frogs. *See* Sewell Decl., Ex. 17 (graphs showing changes in reservoir elevation 2005-2014). USFWS has stated that "management of regulated water in Crane Prairie and Wickiup Reservoirs results in unnatural wetland hydroperiods along the margins of both reservoirs that affects the availability of breeding habitat for Oregon spotted frog." Sewell Decl., Ex. 6 at 14. In another document, the agency stated that, "[a]nnual and seasonally abrupt changes in water levels within the reservoirs affect OSF breeding habitat at the edges of the reservoirs. Wetlands may be completely inundated with water during the breeding season whereby masses are in deep water that is accessible by fish or egg masses are in extreme shallows and may be desiccated when water level suddenly drops." Sewell Decl., Ex. 5 at 1; Simpson Decl., ¶¶ 63-68 (describing harm to breeding habitat from changing water levels in reservoirs). Indeed, USFWS documented stranded egg masses in 2014 and 2015 in wetlands along the Deschutes River between Crane Prairie and Wickiup reservoirs due to receding water levels during the breeding season. Sewell Decl., Ex. 5 at 1.

Rapid changes in water levels at other times of the year also harm spotted frogs. Release of water from the reservoirs for irrigation during the spring and summer lowers water levels before tadpoles have morphed into juvenile frogs, causing tadpoles either to be stranded and die or to move into deeper open water in the reservoir, increasing their risk of predation by fish. Simpson Decl., ¶¶ 69-74; Sewell Decl., Ex. 1 at 51,660; 51,669. After metamorphosis, continued lowering of water levels in the reservoirs for irrigation deliveries dries out summer

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foraging habitat, which forces juvenile and adult frogs to expend energy to move to the small amount of low water refugia that exists, or into open water of the reservoir, making them more vulnerable to predators and increasing mortality. Simpson Decl., ¶¶ 69-74; Sewell Decl., Ex. 1 at 51,669.

Similarly, low reservoir levels in the fall at the end of the irrigation season leaves suitable overwintering habitat dry at a time when spotted frogs are starting to move into that habitat. Simpson Decl., ¶¶ 75-77. In most years, both Crane Prairie and Wickiup reservoirs are so low in summer and early fall that almost all wetland habitat around their edges is dry and unusable by spotted frogs. *Id.* In sum, the extreme fluctuations in reservoir water levels harms Oregon spotted frogs during each life history season.

C. Threats to Spotted Frogs Downstream of Crescent Lake Dam.

In the Little Deschutes River sub-basin, Oregon spotted frog habitat is similarly "affected by regulated water management downstream of Crescent Lake Dam in Crescent Creek and the Little Deschutes River below the confluence with Crescent Creek." Sewell Decl., Ex. 1 at 51,670. Water is stored in Crescent Lake from November through March, with typical flows below the dam of just 5 cfs. Sewell Decl., Ex. 13 at 1. Small releases begin in April after breeding would normally begin, with the majority of irrigation releases from Crescent Lake typically occurring later, from June to October, reaching more than 100 cfs in July through September. *Id.* at 1-2. Because most water is released well after the spotted frog breeding season, breeding habitat remains dry and/or egg mass desiccation occurs along the creek and rivers. Sewell Decl., Ex. 1 at 51,670; Ex. 5 at 1-2. Egg mass stranding has been observed on several occasions along Crescent Creek and the Little Deschutes River below Crescent Creek prior to irrigation water releases. Sewell Decl., Ex. 1 at 51,670; Ex. 5 at 1-2; Ex. 13 at 1-2; Ex. 14 at 1. Low winter flows below Crescent Lake Dam beginning in October also limit

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overwintering habitat along Crescent Creek and the Little Deschutes River. Sewell Decl., Ex. 5 at 1-2; Ex. 13 at 1-2.

In light of the known threats to Oregon spotted frogs in the Little Deschutes sub-basin from operation of Crescent Lake Dam, USFWS noted the need to adjust flows from Crescent Lake to ensure that breeding and rearing habitat along Crescent Creek and the Little Deschutes River are inundated from the start of spotted frog breeding through metamorphosis. Sewell Decl., Ex. 12 at 2; Ex. 15 at 1. In addition, an increase in winter flows from Crescent Lake is needed to allow water to remain in oxbows along the rivers where Oregon spotted frogs may overwinter. *Id.*

BOR and the irrigation districts agreed to release water from Crescent Lake at the rate of 30 cfs starting in February 2015 to improve Oregon spotted frog breeding habitat along Crescent Creek and the Little Deschutes River. Sewell Decl., Ex. 13; Ex 16 at 1.[4] Surveys completed in April 2015 along Crescent Creek documented egg masses at six sites. Sewell Decl., Ex. 16 at 5-6. Most eggs hatched, but desiccation of two egg masses still occurred at two of the six sites due to inadequate flows. *Id*. During draw-down of the rivers in Fall 2015, Plaintiffs' expert observed the rapid reduction in overwintering habitat along Crescent Creek and the Little Deschutes River as water levels dropped and suitable wetland or off-channel habitat dried out. Simpson Decl., ¶¶ 79-80, 84. Plaintiffs' expert also observed stranded frogs, likely juveniles, in the Little Deschutes during this time. *Id.* ¶ 85-86, 88. As described above, the low winter flows increase mortality of spotted frogs because they either cannot find suitable overwinter habitat, or are forced into small areas with increased risk of predation. *Id.* ¶ 88-89. Thus, despite increasing flows to 30 cfs in Spring 2015, harm to frogs still occurred below Crescent Lake due

[4] This is part of the very limited proposal on which BOR has agreed to consult.

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to egg mass desiccation and loss of overwintering habitat. *Id.* ¶ 90.

III. ESA CONSULTATION OVER OPERATION OF THESE FACILITIES.

BOR owns, and therefore has authority over, operation of Crane Prairie and Wickiup dams and reservoirs, but has transferred daily operation and maintenance of the facilities to Central Oregon and North Unit Irrigation Districts. Sewell Decl., Ex. 18 at 2-1 to 2-5. In 2003, well before the Oregon spotted frog was listed as a threatened species, BOR consulted with USFWS and NOAA Fisheries over impacts to ESA-listed species from the "Continued Operation and Maintenance of the Deschutes River Basin Projects." *Id.* at 1. This consultation covered operation and maintenance of Crane Prairie and Wickiup dams and reservoirs, among others. *Id.* at 2-1 to 2-5.[5]

The "Proposed Action" in BOR's 2003 Biological Assessment ("BA") was "the continued operation and maintenance of Reclamation's project facilities throughout the Deschutes River basin as described in Chapter 2. Subsequent consultations will be initiated if significant changes are anticipated in future project O&M [operations and maintenance] procedures, *additional listings of species occur within the Deschutes River basin potentially affected by O&M activities*, or other criteria described in 50 CFR 402.16 apply." Sewell Decl., Ex. 18 at 1-1 (emphasis added).

Chapter two of the BA reiterated that the consultation "involves O&M activities associated with those facilities for which Reclamation has authority to operate, largely defined by Reclamation ownership. Storage, diversion, and delivery facilities comprising the proposed action include . . . Crane Prairie Dam and Reservoir [and] Wickiup Dam and Reservoir," among other facilities. *Id.* at 2-1. Specifically for Crane Prairie and Wickiup, the BA's proposed action

[5] Crescent Lake Dam was not included in the 2003 consultation because it is not owned by BOR but, rather, is owned and operated by Tumalo Irrigation District. Sewell Decl., Ex. 19 at 5.

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covered the following project operations:

- Storage in and release of water from Crane Prairie Dam and Reservoir for diversion (an interrelated and interdependent action is diversion of storage water by private facilities);
- Storage in and release of water from Wickiup Dam and Reservoir for diversion; and
- Diversion of Wickiup Reservoir storage water by North Unit Headworks and Main Canal (an interrelated and interdependent action is the diversion of natural flow water).

Id. at 2-8. The BA analyzed the hydrologic effects of BOR's project operations on five species listed under the ESA at that time by comparing water flows from the current operations with water flows that would occur without BOR facilities operating—i.e., if the reservoirs were run-of-the-river and just passed natural flows. *Id.* at 1-8, 6-2 to 6-4.

In addition to BOR's consultation with USFWS and NOAA, eight central Oregon irrigation districts, including Defendants and Intervenors in this lawsuit, have been seeking ESA incidental take permits from USFWS and NOAA that would authorize "take" of seven ESA-listed species caused by otherwise lawful actions conducted by the irrigation districts. Sewell Decl., Ex. 8 at 2. These permits would be issued as part of a habitat conservation plan ("HCP") under Section 10 of the ESA that would attempt to minimize and mitigate effects of the proposed incidental take on the covered species. *Id.* Other agencies and organizations have been part of this HCP process for years, including Plaintiff WaterWatch. *Id.*; Declaration of Kimberly Priestly In Support of Motion for Preliminary Injunction ("Priestley Decl."), ¶¶ 5, 7, 10-11. Oregon spotted frog is one of the seven species at issue in the HCP due to the acknowledged

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impacts to this species from irrigation activities in the upper Deschutes Basin. Sewell Decl., Ex. 8 at 2. Despite the fact that the Deschutes Basin HCP process began in March 2008—*eight years ago*—it is expected to take another *five years* before it is completed. Sewell Decl., Ex. 19 at 5.[6]

After the Oregon spotted frog was listed as a threatened species in August 2014, no immediate changes were made to the operation of Crane Prairie, Wickiup or Crescent Lake dams to benefit the species other than the increase in flows in Crescent Creek in Spring 2015, as described above. *See supra* p. 13. Nor did BOR reinitiate the 2003 consultation, as the 2003 BA stated must happen if a new species was listed. Sewell Decl., Ex. 18 at 1-1. Therefore, in July 2015, almost a year after the Oregon spotted frog was listed as threatened, Plaintiff Center for Biological Diversity sent a letter to BOR notifying the agency of the Center's intent to sue under the ESA unless BOR immediately initiated consultation with USFWS and implemented actions to protect Oregon spotted frogs from further harm during that consultation process. Sewell Decl., Ex. 20. Plaintiff WaterWatch sent a similar letter to BOR and the irrigation districts in August 2015, identifying the need to make changes to operations to protect the Oregon spotted frog pending a new BOR consultation and an HCP for the districts. Sewell Decl., Ex. 21.

The following month, the irrigation districts sent a letter to BOR stating that they intended to implement various conservation measures to benefit Oregon spotted frogs during the five-year completion period for the HCP. Sewell Decl., Ex. 19 at 3-9. Because those measures included some changes to the operation of Crane Prairie and Wickiup reservoirs, which require

[6] In fact, WaterWatch has been participating in Deschutes Basin work groups and cooperative efforts for the last ten years in an effort to address the needs of fish, fishing, wildlife, and recreation businesses along with other water uses in the Basin. Priestly Decl., ¶¶ 5, 11-12. WaterWatch has been advocating for water conservation measures that would increase efficiency of water use, and it appears there is significant room to increase efficiency in this basin that would provide enough water for all resources and all users. Sewell Decl., Ex. 23.

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BOR approval, BOR initiated consultation with USFWS over BOR's approval of those operational changes in a September 2015 letter. *Id.* at 1-2. BOR proposed a schedule that would complete consultation by July 2017. *Id.* at 1, 10. BOR chose to initiate this very narrow consultation rather than reinitiate the prior consultation from 2003, which would have had to assess impacts from these changes on all listed species in the area.

The interim conservation measures proposed by the irrigation districts included provisions that related to how much water is stored in Crane Prairie Reservoir and the rate at which water can be released from Crane Prairie. *Id.* at 6. The provisions set a maximum of 50,000 acre-feet of water that can be stored in Crane Prairie, and a minimum of 5,000 acre-feet that will remain in the reservoir at all times, allowing a fluctuation of 45,000 acre-feet. *Id.* Another provision limited the release of water from Crane Prairie after July 16 to 0.1 foot change in water surface elevation per 24-hour period, but would not apply if there is insufficient water in Wickiup Reservoir to meet irrigation demands. *Id.* There were no requirements for maximum or minimum water storage in Wickiup Reservoir or limitations on the rate of water releases or rates of draw-down. *Id.* at 7. The measures also included the same minimum flow of 30 cfs in Crescent Creek used in Spring 2015. *Id.* There were no measures at all related to flows in the Deschutes River downstream of Wickiup Dam. *Id.* at 6-9. Finally, the letter stated that a monitoring and adaptive management program would be developed (with no specifics), and adaptive management "may" be used to modify releases of water from Crescent Lake Reservoir. *Id.* at 9.

In response to BOR's request for initiation of consultation on this very narrow proposal, USFWS replied with a letter stating that the schedule for consultation BOR proposed seemed achievable, and that the proposed conservation measures were "a step in the right direction" to

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address impacts to the spotted frog. Sewell Decl., Ex. 22. A "step in the right direction" does not constitute proper consultation on the operation of the Upper Deschutes reservoir and dam system as done in 2003 and does little, if anything, to avoid the continuing harm to Oregon spotted frogs. Plaintiffs therefore seek a preliminary injunction to achieve necessary protections starting this breeding season, the first week of April, 2016, and continuing until completion of a Biological Opinion covering the entire operation and a Habitat Conservation Plan.

ARGUMENT

I. IN ESA CASES THE STANDARD FOR INJUNCTIVE RELIEF REQUIRES THAT THE EQUITIES TIP IN FAVOR OF THE SPECIES.

A plaintiff seeking a preliminary injunction must show "that he is likely to succeed on the merits, that he is likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest." *League of Wilderness Defenders/Blue Mountains Biodiversity Project v. Connaughton*, 752 F.3d 755, 759 (9th Cir. 2014) (citing *Winter v. Natural Res. Def. Council, Inc.*, 555 U.S. 7, 20 (2008)).

In ESA cases, however, courts may not apply traditional equitable balancing because the "plain intent of Congress in enacting the statute was to halt and reverse the trend toward species extinction, whatever the cost," and thus "the balance has been struck in favor of affording endangered species the highest of priorities . . . ." *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184, 194 (1978). Accordingly, the Ninth Circuit recently reaffirmed that in ESA cases, "the equities and public interest factors *always* tip in favor of the protected species." *Cottonwood Envtl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1091 (9th Cir. 2015) (emphasis added). "[C]ourts may not use equity's scales to strike a different balance." *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 422 F.3d 782, 793 (9th Cir. 2005). Because Plaintiffs are likely to succeed on the merits and likely to suffer imminent irreparable harm, injunctive relief is warranted here.

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II. PLAINTIFFS ARE LIKELY TO SUCCEED ON THE MERITS.

A. The ESA Requires Federal Agencies to Ensure Their Actions Do Not Jeopardize Listed Species or Adversely Modify Critical Habitat.

The purpose of the ESA is to conserve species so they recover and are no longer in danger of going extinct. 16 U.S.C. § 1531. In accordance with this purpose, federal agencies must insure that any actions they take are not likely to jeopardize the continued existence of a threatened or endangered species or adversely modify the species' critical habitat. *Id.* § 1536(a)(2). To insure compliance with this substantive duty, the ESA imposes procedures requiring a federal agency to consult with USFWS or National Marine Fisheries Service over any action authorized, funded, or carried out by the agency that may affect a threatened or endangered species. *Id.*; *Nat'l Wildlife Fed'n,* 422 F.3d at 790.

During the consultation process, the action agency, here BOR, prepares a BA to determine if the action is likely to adversely affect the listed species. 50 C.F.R. § 402.12. If the BA concludes that the action is "not likely to adversely affect" the species and the Service agrees, the Service issues a "letter of concurrence" and consultation is complete. *Id.* §§ 402.13(a), 402.14(b). If, however, the BA concludes that the action is "likely to adversely affect" the species, the Service completes a biological opinion to determine if the adverse effects are likely to jeopardize the continued existence of the species or adversely modify its critical habitat. *Id.* § 402.14(g)(4). If jeopardy or adverse modification is found, the Service dictates reasonable and prudent alternative actions that could go forward without causing such result. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14 (g)(5), (h)(3).

An action agency's responsibility does not end with the initiation of consultation. During the consultation process, an agency cannot make any irreversible or irretrievable commitment of resources with respect to the agency action which has the effect of foreclosing the formulation or

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implementation of any reasonable and prudent alternative measures. 16 U.S.C. § 1536(d). Courts have interpreted this provision to require protection of the species from an action's adverse impacts pending completion of consultation. *See, e.g.*, *Natural Res. Def. Council v. Houston*, 146 F.3d 1118, 1128 (9th Cir. 1998) (BOR violated Section 7(d) by executing water service contracts prior to completion of consultation); *Pac. Rivers Council v. Thomas*, 936 F. Supp. 738, 745-50 (D. Idaho 1996) (Section 7(d) required prohibiting livestock grazing until consultation was complete).

Furthermore, an agency cannot take any actions that would jeopardize the survival and recovery of the species pending the completion of consultation. *Wash. Toxics Coalition v. EPA*, 413 F.3d 1024, 1034-35 (9th Cir. 2005); *Defenders of Wildlife v. Martin*, 454 F. Supp. 2d 1085, 1095-97 (E.D. Wash. 2006). Where an agency wants to continue ongoing actions during the consultation process, it has the burden of proving those actions are non-jeopardizing to the species. *Wash. Toxics Coal.*, 413 F.3d at 1035; *Defenders of Wildlife v. Jackson*, 791 F. Supp. 2d 96, 113-14 & n.21 (D.D.C. 2011); *Native Ecosystems Council v. Krueger*, 946 F. Supp. 2d 1060, 1076 (D. Mont. 2013).

The ESA also prohibits "take" of a threatened or endangered species, and this applies to "any person," not just federal agencies. 16 U.S.C. §§ 1538(a)(1)(B), 1533(d); 50 C.F.R. §§ 17.21(c), 17.31. "Take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect a species, where "harm" includes significant habitat modification or degradation that kills or injures wildlife by significantly impairing essential behaviors such as breeding, feeding, and sheltering. 16 U.S.C. § 1532(19); 50 C.F.R. § 17.3. The Service, however, can authorize "take" of a protected species if that take is incidental to an otherwise lawful activity and will not jeopardize the species. 16 U.S.C. §§ 1536 (b)(4), 1539(a)(1)(B). Such authorization occurs

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through an incidental take statement within a biological opinion, or through an incidental take permit issued as part of a habitat conservation plan. *Id.* §§ 1536(b)(4), 1539(a)(2); 50 C.F.R. §§ 402.14 (i), 17.32(b). Until such authorization is issued, the parties are liable for any take that occurs. 16 U.S.C. § 1538(a)(1)(B); *see also Ctr. for Biol. Diversity v. BLM*, 698 F.3d 1101, 1108, 1115 (9th Cir. 2012); *Defenders of Wildlife v. Martin*, 454 F. Supp. 2d at 1098.

B. BOR and the Irrigation Districts are Violating the ESA with their Operation of Crane Prairie and Wickiup Dams and Reservoirs.

As described above and in the declaration of Oregon spotted frog biologist Theresa Simpson, BOR and the irrigation districts' operation of Crane Prairie and Wickiup reservoirs significantly impairs Oregon spotted frog breeding, rearing, summer foraging, and overwintering habitat around the reservoirs and downstream along the Deschutes River. Even with the minor adjustments to operation of Crane Prairie reservoir outlined in the irrigation districts' interim conservation measures, these facilities will continue to harm spotted frogs and their habitat during the ESA consultation and HCP process. Thus, BOR is violating ESA Sections 7(a)(2) and 7(d), and both BOR and the irrigation districts are violating ESA Section 9, with their continued operation of these facilities pending completion of consultation and the HCP.

Under the ESA, jeopardy to a species occurs if an action "reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." 50 C.F.R. § 402.02. "Take" occurs when any individual of a protected species is killed or harmed, including from habitat modification or degradation that significantly impairs breeding, feeding, or sheltering behaviors. 16 U.S.C. § 1532(19); 50 C.F.R. § 17.3. As demonstrated by Plaintiffs' evidence, and described in detail above, Defendants' operation of Crane Prairie and Wickiup reservoirs both directly and indirectly kills and injures spotted frogs and thus reduces

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the reproduction, numbers, and distribution of Oregon spotted frog in the Upper Deschutes River sub-basin. *See above*; Sewell Decl., Exs. 1-17; Simpson Decl., ¶¶ 33-90.

Specifically, reservoir operations impair spotted frog breeding in many ways, including by causing desiccation of egg masses that kills the eggs, flooding of egg masses into deeper water that increases predation of eggs, and failure to inundate breeding habitat for much of the breeding season that either prevents or delays breeding. *See above*; Sewell Decl., Exs. 1-17; Simpson Decl., ¶¶ 33-75. USFWS documented stranded egg masses in 2014 and 2015 near Wickiup Reservoir due to the timing and extent of irrigation releases from Wickiup. Below Wickiup Dam, USFWS observed "take in the form of mortality" from stranded egg masses at East Slough Camp in 2014 and dry breeding habitat that same year at the Bull Bend site, as well as dry breeding habitat in 2013 and 2015 at the East Slough Camp site, because irrigation releases had not begun. *See above*; Sewell Decl., Ex. 9; Ex. 10 at 3-5, 13-14; Ex. 14 at 2-6. In Crane Prairie Reservoir, BOR data shows that in most years, including 2015, reservoir water levels rise and/or fall by more than 12 inches during the breeding season, which would likely cause flooding or desiccation of egg masses. Simpson Decl., ¶ 65. Preventing or even delaying breeding harms spotted frogs. Sewell Decl., Ex. 1 at 51,669; Simpson Decl., ¶ 39.

Operations of Crane Prairie and Wickiup impair feeding and sheltering behaviors of spotted frogs during other seasons. During the rearing and summer foraging seasons, reservoir levels drop, causing tadpoles, juveniles, and adult frogs to be stranded or to move into unprotected open water or low-water refugia areas that have less food availability and higher risk of predation, increasing mortality. Simpson Decl., ¶¶ 60-63, 69-74; Sewell Decl., Ex. 1 at 51,669. All suitable rearing and summer foraging habitat around the edge of Crane Prairie is often dry before the end of the metamorphosis period, and much earlier at Wickiup. Simpson

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Decl., ¶¶ 70, 73.

Below the reservoirs, rapid lowering of river flows in fall and winter kills or injures spotted frogs by stranding some juveniles and adults and leaving almost all overwinter habitat dry, as observed by Plaintiffs' expert in the Fall of 2015. Simpson Decl., ¶¶ 43-54, 84-89; Sewell Decl., Ex. 1 at 51,670; Ex. 2 at 2; Ex. 5 at 1; Ex. 6 at 14-15; Ex. 7 at 2. When river flows drop, the primary overwinter habitat available is in the main river channel, which has less cover and higher risk of predation, increasing winter mortality. Simpson ¶¶ 51-54. Indeed, USFWS has stated that water *must* be made available earlier in spring and over winter below Wickiup Dam, and has recommended winter flows of more than 500 cfs to provide overwinter habitat—a 16-fold increase over the 20-30 cfs that currently occurs in winter. Sewell Decl., Ex. 7 at 2; Ex. 15 at 2.

The irrigation districts' interim conservation measures will do little to alleviate the harm to spotted frogs from operation of Crane Prairie and Wickiup reservoirs. The measures contain some provisions related to Crane Prairie Reservoir, but will still allow harm to occur there. For instance, water levels in Crane Prairie can rise up to two feet during the breeding season, allowing for flooding of egg masses; water levels can start dropping July 16, which is about a month before the end of the metamorphosis period; water levels can drop below the minimum needed to inundate edge habitat during the summer and early fall, forcing frogs to move into open-water or low-water refugia; and the rate of water releases after July 15 is limited to 0.1 foot change in water surface elevation per day *only* if there is enough water in Wickiup to meet irrigation demands. Sewell Decl., Ex. 19 at 6. Thus, harm to spotted frogs from fluctuating water levels in Crane Prairie is still likely to occur during the breeding, rearing, and summer foraging seasons. Moreover, *the measures contain no provisions regarding water levels in*

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Wickiup Reservoir to protect frogs using habitat around that reservoir, nor any measures regarding flows below Wickiup to reduce harm to spotted frogs along the Deschutes River. *Id.* at 8. Even USFWS did not acknowledge these measures were sufficient to minimize harm to spotted frogs in the interim, stating they were just "one step in the right direction." Sewell Decl., Ex. 22.

Accordingly, operation of Crane Prairie and Wickiup reservoirs will continue to "take" Oregon spotted frogs during the consultation and HCP process, in violation of Section 9.

Furthermore, this harm to frogs reduces the reproduction, number, and distribution of frogs in the Upper Deschutes River sub-basin. Given that many of the spotted frog sites in this sub-basin already are at high risk of extirpation due to their small size and distance apart, *see* Sewell Decl., Ex. 1 at 51,686-87; Ex. 7 at 2; Ex. 8 at 2; Ex. 9; Simpson Decl., ¶¶ 56, 90, BOR has not proven that ongoing operations of Crane Prairie and Wickiup are non-jeopardizing and can continue pending completion of consultation, in violation of ESA Sections 7(a)(2) and 7(d).

C. The Irrigation Districts are Violating the ESA with their Operation of Crescent Lake Dam and Reservoir.

The Crescent Lake Dam and Reservoir were originally built and owned by BOR. In the 1990s, ownership and operation of the dam, according to BOR documents, appears to have been turned over to defendant Tumalo Irrigation District ("TID"). Similar to the situation with Crane Prairie and Wickiup operations, Crescent Lake is operated solely for irrigation and has substantially altered natural flows in Crescent Creek and the Little Deschutes tributary to the Deschutes River, with very high flows during the summer season and sharp drops in the fall, ending with very low flows in the winter. Simpson Decl., ¶¶ 81-90. While there are numerous sites along Crescent Creek and the Little Deschutes river occupied by spotted frogs, the timing and rate of water release for irrigation are adversely affecting availability, suitability, quantity

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and connectivity of that habitat and are harming frogs. Simpson Decl., ¶ 90; Sewell Decl., Ex. 1 at 51,670; Ex. 5 at 1-2; Ex. 13 at 1-2. USFWS has noted the need for higher flows below Crescent Lake Dam to avoid harm to spotted frogs during breeding and overwintering. Sewell Decl., Ex. 12 at 2; Ex. 15 at 1.

For example, in the Fall of 2015, Plaintiffs' expert observed that with river flow at 140 cfs at the LAPO gauge on the Little Deschutes River near LaPine State Park, most wetland breeding habitat along the Little Deschutes at the Casey Tract habitat site was dry. Simpson Decl., ¶¶ 87-89. In reviewing historic data, it is clear that flows are rarely higher than 140 cfs. Simpson Decl., ¶ 80. Plaintiffs' expert also observed that low flows are generally present at the start of breeding season, leaving most breeding habitat in the Crescent Creek and Little Deschutes areas dry and unusable for breeding. Simpson Decl., ¶ 81. Delayed breeding harms spotted frogs because it delays tadpole development and metamorphosis and thereby decreases juvenile survival. Simpson Decl., ¶ 40.

Low river flows observed during the fall draw down and early winter in 2015 show reduced amount and quality of overwinter habitat for spotted frogs. Plaintiffs' expert observed spotted frogs stranded in marginal overwinter habitat in the Fall of 2015 at sites along the Little Deschutes river. Simpson Decl., ¶¶ 85-89. Those frogs were highly likely to have increased mortality due to freezing and anoxia. *Id.* Plaintiffs' expert predicted, based upon her knowledge of habitat in the area, that shallower sites like the Casey Tract pools and Leona Slough were also likely dry and drying, with inadequate overwinter habitat and likely high mortality. *Id*. All off-channel habitat and nearly all river edge habitat was dry and usuable at the times observed. *Id.* Highly variable flows recorded at the LAPO gauge between December 9, 2015 and January 26, 2016, similar to variations recorded in every year, mean that spotted frogs forced to use the river

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channel to overwinter are required to move around frequently, expending a great deal of energy and exposing them to higher risk of predation, both of which increase mortality. Simpson Decl., ¶ 88.

Moreover, despite implementing releases of 30 cfs from Crescent Lake, Plaintiffs' expert observed the stranding and drying effects in the Fall of 2015 and the federal agencies documented egg mass desiccation in the Spring of 2015. Sewell Decl., Ex. 16 at 5-6. The very limited proposal does little, if anything, to stem the harm set forth above.

In sum, the effects of Crescent Lake reservoir management are harming Oregon spotted frog breeding, rearing and overwintering, limiting their reproductive success and increasing mortality along Crescent Creek and the Little Deschutes River. Simpson Decl., ¶ 90.

III. THE CONTINUED OPERATION OF CRANE PRAIRIE, WICKIUP, AND CRESCENT LAKE DAMS AND RESERVOIRS IS LIKELY TO CAUSE IMMINENT, IRREPARABLE HARM TO OREGON SPOTTED FROGS.

Plaintiffs have established they are likely to win on the merits. They also have shown that irreparable harm to the Oregon spotted frog is ongoing and will continue due to the operation of these dams and reservoirs. That is all that is required to obtain a preliminary injunction under the ESA. As noted above, in ESA cases, "the equities and public interest factors *always* tip in favor of the protected species." *Cottonwood Envtl. Law Ctr.*, 789 at 1091 (emphasis added). "[C]ourts may not use equity's scales to strike a different balance." *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.*, 422 F.3d at 793. Thus, a preliminary injunction is necessary here.

A. In ESA Cases, A Likely Ongoing or Future Violation Meets the Test of Irreparable Harm for Injunctive Relief.

To meet the irreparable harm factor, a plaintiff must show that irreparable injury is likely in the absence of an injunction. *Winter*, 555 U.S. at 22. "In light of the stated purpose of the

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ESA in conserving endangered and threatened species and ecosystems that support them, establishing irreparable injury should not be an onerous task for plaintiffs." *Cottonwood Envtl. Law Ctr.*, 789 F.3d at 1091.[7] In ESA Section 9 cases, this test is met if plaintiffs show "a violation of the ESA is at least likely in the future." *Nat'l Wildlife Fed'n v. Burlington Northern Railroad*, 23 F.3d 1508, 1511 (9th Cir. 1994). In other words, an injunction should issue if there is a reasonably certain threat of imminent harm to a protected species. *Marbled Murrelet v. Pac. Lumber Co.*, 83 F.3d 1060, 1066-68 (9th Cir. 1996); *Defenders of Wildlife v. Bernal*, 204 F.3d 920, 925 (9th Cir. 2000); *Forest Conservation Council v. Rosboro Lumber Co.*, 50 F.3d 781, 787-88 (9th Cir. 1995); *Ctr. for Biol. Diversity v. Otter*, 2016 WL 233193 (D. Idaho Jan. 8, 2016); *Or. Natural Desert Ass'n v. Tidwell*, 2010 WL 5464269, at *3 (D. Or. Dec. 30, 2010).

Injunctions stopping or modifying ongoing actions pending compliance with the ESA are necessary if "continuation of the status quo could result in irreparable harm to a threatened species." *Nat'l Wildlife Fed'n*, 422 F.3d at 796; *see also Wash. Toxics Coal.*, 413 F.3d at 1035; *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 532 (9th Cir. 2010); *Tidwell*, 2010 WL 5464269, at *2-6; *Ctr. for Biol. Diversity v. U.S. Fish and Wildlife Serv.*, 2011 WL 6813200, at *4-6 (N.D. Cal. Dec. 28, 2011); *Defenders of Wildlife v. Martin*, 2007 WL 641439, at *8 (E.D. Wash. 2007); *Pac. Coast Fed'n of Fishermen's Ass'ns v. U.S. Bureau of Reclamation*, 138 F. Supp. 2d 1228, 1250 (N.D. Cal. 2001) (all enjoining ongoing actions pending compliance with the ESA). As explained in detail in *supra* part IV, the ongoing operation of the dams and

[7] Although the Ninth Circuit in *Cottonwood* held that there is no presumption of irreparable injury "where there has been a procedural violation in ESA cases," this holding was limited to procedural ESA cases without a substantive allegation of take under Section 9. In contrast to a purely procedural ESA case, the allegations of harm in this case include direct, substantive take of the species. Furthermore, by recognizing that the establishment of irreparable harm in ESA cases "should not be an onerous task," and that "the equities and public interest factors *always* tip in favor of the protected species," the Ninth Circuit in *Cottonwood* affirmed the equitable tipping of the scales in a species' favor. *Id.*

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reservoirs will continue to kill generations of frogs. This direct, continuing harm in the form of desiccated egg masses and dead frogs is irreparable: it cannot be undone. As the continued status quo operation of the system dams and reservoirs will continue to result in irreparable harm to threatened frogs, an injunction to implement one of the proposals set forth below to stop the ongoing harm, through a run-of-the-river or "unregulated" condition or modification of the ongoing action through maintenance of set, more consistent flows, is appropriate and required under the law.

B. Harm to Spotted Frogs is Ongoing and Will Continue.

The Oregon spotted frog was listed as threatened in August of 2014. It has been acknowledged as a potential candidate for listing since at least 2003, when BOR completed the earlier biological opinion and noted the frog may become listed in the future, requiring reinitiation of consultation. Since the actual listing in 2014, there have been no changes to system operations in Crane Prairie, Wickiup or the Deschutes River mainstem. There has been only the limited and demonstrably inadequate 30 cfs proposal implemented in Crescent Creek. As described by Plaintiffs' expert and above, harm to frogs and their habitat occurs every season of every year with the operation of Crane Prairie, Wickiup and Crescent Lake for irrigation purposes: during breeding, during rearing and summer metamorphosis, during fall draw-down and overwintering. Habitat that has been proposed as critical habitat is dry much of the year and unusable for frogs. Frogs are harmed when egg masses are desiccated or flooded out in the spring, when breeding is prevented or delayed due to dry breeding habitat, when rearing habitat dries out before metamorphosis, when juvenile and adult frogs are stranded in the fall draw-down, and when frogs are forced into unsuitable winter habitat and then frozen, killed by anoxic conditions, or predated upon by fish.

As recently as October 2015, with the system operating as it had in all previous years by

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shutting down flows in the Deschutes and in Crescent Creek/Little Deschutes to the most minimal flows, harm to frogs was continuing. Observations by Plaintiffs' expert during that period were similar to observations of changes in the landscape and habitat during the same period in 2014, made by staff of federal agencies. *Cf.* Simpson Decl., ¶¶ 46-51 and 84-88 with Gritzner email, Sewell Decl., Ex. 15. As recently as Spring of 2015, agencies documented egg masses desiccated and dead because of fluctuations in water levels brought on by the usual operation of the system. Furthermore, the proposal offered by irrigators does little or nothing to prevent harm to spotted frogs. The proposals for Crane Prairie and Crescent Creek are not sufficient to protect breeding, rearing, nonbreeding, and overwinter habitat around Crane Prairie and along Crescent Creek and the Little Deschutes River, and there is absolutely nothing to reduce harm to frogs on the mainstem Deschutes River or around Wickiup Reservoir. *See above* Simpson Decl., ¶¶ 96-101.

Because there is no biological opinion dictating measures to ensure no jeopardy and no adverse impacts to critical habitat, and because there is no habitat conservation plan to address continued operation of the system, these harms are ongoing and will continue.

IV. TO AVOID OR AT LEAST MINIMIZE HARM PENDING COMPLETION OF A BIOLOGICAL OPINION AND HABITAT CONSERVATION PLAN, CONDITIONS IN THE UPPER DESCHUTES BASIN MUST MOVE TO A STATE THAT IS CLOSER TO NATURAL FLOW CONDITIONS.

A. It is Important for Protections to be in Place by the First Week of April This Year.

In order to avoid harm in the coming year, it is important that an injunction be in place by the first week of April. As noted in the Simpson Declaration, in most years breeding begins by mid-March and therefore the recommendations for avoiding harm are tied to that date. Because of heavy snow-pack this year, there may be a natural delay in breeding by a few weeks, but that delay is unlikely to extend beyond the first week of April. Simpson Decl., fn. 1.

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B. Each of the Two Proposals by Plaintiffs' Experts Result in Moving the River Toward More Natural Flow Conditions.

Ms. Simpson has proposed two methods for the main stem Deschutes and a single method for the Crescent Creek/Little Deschutes tributary that will help avoid or at least minimize harm to Oregon spotted frogs in the interim, pending completion of consultation and a habitat conservation plan. Simpson Decl., ¶¶ 93-96. Each has been verified as possible with hydrograph study and modeling by Mr. Kamman and his team of hydrologists and modelers. *See generally* Declaration of Gregory R. Kamman In Support of Plaintiffs' Joint Motion for Preliminary Injunction ("Kamman Decl."). Each proposal builds on Ms. Simpson's direct observations of the habitat in the Upper Deschutes Basin—both the Little Deschutes and Upper Deschutes sub-basins—as to when and where habitat must be inundated in particular seasons to ensure frogs are not harmed. One proposal for the main stem represents a more managed or hands-on scenario, while the other allows for a largely unregulated run-of-the-river condition. Either of these represents a significant improvement over current operations that will protect frogs while the biological opinion and habitat conservation plan are being completed.

1. The Regulated Option for main stem Deschutes and Crane Prairie Reservoir.

The first or more-managed option (referred to hereafter as the "Regulated Option")[8] provides that for most years (years within the "average" hydrograph for the Upper Deschutes Basin) between March 15 and September 15 of each year flows in the Upper Deschutes (the main stem river upstream of Bend to the Wickiup reservoir), as measured at the WICO gauge just below Wickiup Reservoir, must be maintained at a level of at least 770 cfs. This level will inundate much of the frog's habitat (although not all) in most years from the start of breeding in

[8] Mr. Kamman refers to the Regulated Option as the Supply-Based Option and it is presented second in his declaration and report.

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mid-March until juvenile frogs have reached a certain stage of maturity and it is still early enough for all frogs to reach overwinter habitat before freeze-up. During wet years (at the top of the hydrograph), flows could be increased up to 838 cfs during this same March 15 to September 15 time period. During dry years (for example, years where the hydrograph is similar to 2004/2005), the flow level can drop to 650 cfs during this same period in order to stay within the hydrograph. *See* Simpson Decl., ¶ 94; Kamman Decl., ¶ 9-10 and Ex. B, part 4.0.

Under the Regulated Option, winter flows in the Upper Deschutes River must be maintained at a higher level than current operations in order to ensure frogs have suitable overwinter habitat. Winter flows, as measured at the WICO gauge, must be maintained at not less than 600 cfs in all but the dry years, when winter flows would drop to 530 cfs. Simpson Decl., ¶ 94; Kamman Decl., Ex. B, Tables at p. 14. The fall draw-down from summer to winter flows would begin September 15 of each year and occur over a one-month period, ending by October 15. This would allow frogs to move from summer habitat to overwinter habitat before freeze-up occurs, and allow them time to move to that habitat along aquatic pathways rather than be stranded due to quickly receding water levels. Simpson Decl., ¶ 94. Plaintiffs' expert also recommends monitoring of breeding, rearing, and overwinter habitat along the Deschutes River to determine if appropriate inundation is occurring during these periods. Simpson Decl., ¶ 94.

Finally, under the Regulated Option, the reservoir level in Crane Prairie should be set so that a water surface level of 4,443.3 feet is maintained in order to inundate vegetated edge habitat around Crane Prairie that provides for breeding, rearing and overwintering. Simpson Decl., ¶ 94.

2. Run-of-the-River Option for main stem Deschutes with regulated level for Crane Prairie Reservoir.

The second largely-unmanaged option (hereafter referred to as the "Run-of-the-River

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Option")[9] available for the Upper Deschutes sub-basin would allow for natural flows to pass through the system and down the river. This option simply requires that Crane Prairie and Wickiup reservoir controls be left open (or in the case of Crane Prairie set to maintain a reservoir level of 4,443.3 feet) and left in this condition throughout the year. Simpson Decl., ¶ 94; Kamman Decl., ¶ 8 and Ex. B, part 3.0. Under the Run-of-the-River Option, the natural hydrograph will control habitat inundation and flows in the river, a condition that frogs obviously evolved under. While the mere existence of the Crane Prairie and Wickiup Reservoirs on the landscape are damaging to frogs (reservoirs tend to fluctuate in ways that inundate and dry out frog habitat in a manner that is not natural), allowing Run-of-the-River will significantly limit the negative effects and the variability of flows that those reservoirs normally cause. *Id*.

The hydrograph data for the last 11 years demonstrates that allowing natural snowmelt/precipitation/groundwater flows to occur in the Upper Deschutes will minimize harm to frogs by significantly reducing the extreme fluctuations in river flows as well as the extreme fluctuations in reservoir water levels. The resulting flows and water levels will provide better inundation of habitat at appropriate times for the frog's life history needs, allowing for more natural breeding, rearing and overwintering along the Deschutes River and around the reservoirs. *Id.* As noted above, options will avoid or at least significantly reduce harm to the Oregon spotted frog while BOR and the irrigation districts complete their required ESA processes.

3. Regulated proposal for Crescent Creek/Little Deschutes tributary.

Plaintiffs propose a regulated option for Crescent Creek and the Little Deschutes River. Under the regulated proposal for this sub-basin, a minimum flow level of 40 cfs must be maintained at the CREO gauge year-round. This level of flow will keep significant portions of

[9] Mr. Kamman refers to this option as the "Unregulated Option" and addresses it first.

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frog habitat along Crescent Creek and downstream in the Little Deschutes River inundated and maintain aquatic pathways for frogs to move between habitats. Because this is a smaller sub-basin, and there are no known Oregon spotted frogs around Crescent Lake, the solution here is simpler. Simpson Decl., ¶ 95; Kamman Decl., ¶ 10 and Ex. B, part 2.0.

CONCLUSION

Based upon the foregoing, Plaintiffs request a preliminary injunction from the Court ordering Defendants to adopt either the Regulated Option or the Run-of-the-River Option (each with a set level for Crane Prairie) for the Upper Deschutes and the 40 cfs at CREO gauge minimum for Crescent Creek/Little Deschutes.

Respectfully submitted this 9th day of February, 2016.

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CERTIFICATE OF SERVICE

I certify that on February 9, 2016 , I electronically filed the foregoing with the Clerk of the Court using the appellate CM/ECF system, which system will serve all parties who are registered participants.

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