



The Loss of the West's Most Valuable Refuges: Impacts of the KBRA to Lower Klamath and Tule Lake National Wildlife Refuges

Summary

On January 15, 2008, the first public draft of the Klamath Basin Restoration Agreement (Draft 11) ("KBRA") was released. The KBRA attempts to address many natural resource issues in the Klamath Basin, including management of the basin's National Wildlife Refuges. Instead of promoting sound management of our Klamath Basin National Wildlife Refuges, the KBRA would lock in damaging commercial agriculture on the refuges, as well as institute water policies that favor agriculture at the expense of refuge wetlands.

Background

One hundred and fifty years ago early settlers in the Klamath Basin were met by a vast expanse of 350,000 acres of wetlands, shallow lakes and marshes; they fished a roaring, salmon rich river winding through hundreds of miles of western countryside, and were amazed by the spectacular migrations of geese, eagles, and other birds. Half a century ago, during the peak of fall migration, over 7 million waterfowl and 1000 overwintering bald eagles could be found in the Klamath Basin at one time.

Home to invaluable wildlife species and remarkable territory, the basin wetlands drew the attention of conservationists from across the nation, including President Theodore Roosevelt. In 1908 President Roosevelt designated 81,000 acres of marsh and open water in Lower Klamath Lake as the first National Wildlife Refuge for waterfowl. Twenty years later, Tule Lake joined the Refuge System when Franklin Roosevelt authorized the protection of 37,000 acres in what was Tule Lake.

Unfortunately, their visionary actions to protect these fragile and important wetlands have been undermined by a century of mismanagement and abuse. The US Bureau of Reclamation's massive Klamath Irrigation Project, initiated in 1905, paved the way for extensive agricultural development that destroyed thousands of acres of wetland, and drained much of what was Lower Klamath and Tule Lakes. The newly created refuge was within the boundaries of a massive Bureau of Reclamation irrigation project when, in 1917, the Bureau of Reclamation worked with a railroad company to build a dike that cut off Lower Klamath Lake from the Klamath River thereby drying up the entire lake and refuge for a quarter of a century. This led photographer and former Oregon Game Commissioner, William Finley, to write in 1925:

“Today, Lower Klamath Lake is but a memory. It is a great desert waste of dry peat and alkali. Over large stretches fire has burned the peat to a depth of from one to three feet, leaving a layer of white loose ashes onto which one sinks above his knees. One of the most unique features in North America is gone. It is a crime against our children.”

In recent decades, continued agricultural development, excessive water diversions, agricultural pollution, and drought have further damaged the remaining wetland habitat.

Perhaps the most serious problem today facing wildlife on the Pacific Flyway, and in the Klamath Basin, is the lack of wetland habitat. This is a problem exacerbated in the Klamath Basin by the practice of leasing 22,000 acres of publicly owned land on Tule Lake and Lower Klamath National Wildlife Refuges for commercial agriculture. While the creation of the refuges was intended to preserve vital fragments of the once-vast Klamath wetland system for geese, herons, and eagles, much of that land is today instead managed for potatoes, alfalfa, and onions. While agricultural practices of a small scale and mostly for refuge management purposes can be found on other refuges in the United States, extensive commercial agriculture of this nature is unique to the Klamath Basin.

Over time, 80% of the historic wetlands in the Klamath Basin have been drained, largely due to early development during the first half of the 20th Century. Today, only 12,000 to 27,000 acres of the remaining refuge lands are maintained in permanent and seasonal wetlands on Lower Klamath, while only 13,000 acres remain (in open water) on Tule Lake. Similarly, peak numbers of migratory birds have also dropped by over 80% during approximately the last 60 years. In spite of Congress’s passage of the National Wildlife Refuge System Improvement Act in 1997, which made conservation the primary purpose of system refuges, commercial agriculture continues to dominate the landscape on Tule Lake NWR, and lease land agricultural development continues to place burdensome water demands on an already drought-prone basin. Worse, while wetlands are nature’s most efficient system for filtering pollution, today Tule Lake and Lower Klamath NWR make water quality problems in the basin worse through run-off that includes pesticides and fertilizers, sparking algal blooms and other conditions toxic to fish.

Before it left office, the Bush administration and associated settlement parties utilized the KBRA to lock in commercial agriculture on 22,000 acres of National Wildlife Refuge lands on Lower Klamath and Tule Lake NWR’s for the next 50 years; it also secured a water deal wherein refuge wetlands are required to give up water in drier years, while irrigation of refuge lands for commercial agriculture is not.

KBRA Impacts to Klamath Basin National Wildlife Refuges

1. Locks in Commercial Agriculture on Lower Klamath and Tule Lake National Wildlife Refuges for 50 Years. The KBRA requires all non-federal parties to support continued commercial agriculture at current levels on 22,000 acres of Tule Lake and Lower Klamath National Wildlife Refuges (Section 15.4.3 A). The purpose of this

provision is to attempt to lock in commercial farming of these important refuge lands for 50 years; as Section 1.6 on page 5 of the KBRA provides, the term of the agreement and contractual obligations to support commercial farming on the refuges is 50 years. Both the National Wildlife System Improvement Act of 1997 and the Kuchel Act, make it clear that wildlife conservation and waterfowl management are the primary purposes of the refuges, and that any commercial agriculture activity must be consistent and compatible with these primary purposes. Large-scale commercial agriculture on these refuges is not, in fact, compatible with refuge purposes. The KBRA would make it more difficult to challenge this incompatible use, particularly if Congress ratifies and approves the KBRA.

Commercial agriculture on 22,000 acres of two of the nation's most important National Wildlife Refuges should be phased out, in the interest of waterfowl and wetland protection, water storage potential, and improved water quality. Refuge leaselands are used for commercial agriculture, a distinctly different program from cooperative farming practices, which are often used as a management tool on these and other National Wildlife Refuges (NWR). Approximately 4700 acres are enlisted in the cooperative farming program on Lower Klamath NWR. Unlike the coop program, wherein over 25% of grains are left for waterfowl and other birds, commercial agriculture provides little or no benefit to wildlife and prevents these former wetlands from being restored and managed for the fish and wildlife that the national wildlife refuge system was created to protect.

2. Water for the Refuges. The KBRA is being touted as providing a more secure water allocation for Lower Klamath and Tule Lake National Wildlife Refuges. This is entirely inaccurate:

- a) **No Change in Tule Lake NWR Water Management.** Under the KBRA, Tule Lake NWR would continue to receive its current water allocation, as mandated under existing contracts and biological opinions for the ESA listed suckers that inhabit the refuge.
- b) **The Realization of the KBRA Water Allocation to Lower Klamath NWR is Unlikely.** The KBRA water allocation to Lower Klamath Lake NWR does not become effective until a number of very-difficult-to-satisfy conditions are met. These conditions include regulatory assurances under the ESA, due to a guarantee of water deliveries to Klamath Project irrigators at a level that current ESA regulations disallow; final judgments in state courts confirming or validating the water allocation (if individual irrigators should object, this may not be achievable); the deadline for implementing the On-Project Water Plan has passed (this could be as late as March 1, 2022 – Section 15.3.8A, Page 97 of the KBRA); timely publication of a notice by the Secretary of Interior indicating a number of other conditions have been met, including very substantial funding, and completion of dam removal or volitional fish passage; and finally the acceptance by the Adjudicator or court handling the Oregon water rights adjudication (Oregon has made it clear it is not obligated to accept the allocation.). (See KBRA

Sections 15.3.1 A, 15.3.4 A, 15.3.8A and 22.12 of the KBRA.) Even in the unlikely event the KBRA water allocation to refuges became effective it is somewhat illusory because the allocation is reduced by a number of other factors including droughts (See (e) and (f) below).

- c) **Eliminates Best Tools to Secure Water for Lower Klamath NWR.** Lower Klamath NWR's water needs based on current refuge management goals are equal to 60,000 acre-feet during the irrigation season and 35,000 acre-feet in the winter. Because the refuge's water rights for refuge wetlands have a priority date of 1908 and the Klamath Reclamation Project has a 1905 priority date for irrigation, Lower Klamath NWR wetlands have suffered. Under the KBRA, the irrigation season allocation (presuming it ever goes into effect), is 60,000 acre-feet in wetter years and progressively diminished to 48,000 acre-feet, as water year types get drier, with a dramatic additional reduction in drought years (see below). Though this allocation, if effective, may currently put the refuge in a better water situation than present, this is simply a product of the unfinished Klamath Basin water adjudication, and the fact that the State of Oregon does not regulate water users that have water rights junior to the refuges. Ideally, USFWS could store winter water on the former refuge wetlands currently being drained for commercial agriculture and use this stored water for refuge purposes. USFWS could also use the 1905 priority dated water rights associated with the refuge lands used for commercial agriculture to ensure water delivery to refuge wetlands rather than irrigation for commercial agriculture.

- d) **Limits Lower Klamath NWR from Improving Water Situation.** Even if the KBRA water allocation to Lower Klamath NWR ever takes effect, it is not the full amount needed in many years. Furthermore, the KBRA includes language that could be interpreted to limit the ability of Lower Klamath NWR to improve its water allocation in drier years, or expand its wetlands in wetter years. Section 15.1.2 E iii (5) provides that the allocation to Lower Klamath NWR shall be reduced by any delivery of surface water through Reclamation facilities from other delivery points. This would limit the ability of the refuges to increase their water supplies by developing other water sources by purchase, lease, or storage. It should be noted that under the KBRA, the Project irrigators guaranteed water from the Klamath River is not reduced if they find or develop alternate sources of water. In addition, Sections 17.3.2 and 15.1.2 E (ii) also reduce, if not eliminate, the possibility of storing water on the refuges for increasing refuge water supply. Section 17.3.2 predetermines how all new storage should be allocated regardless of where it is developed; refuges are not identified as a priority to receive any newly stored water while Section 15.1.2 reduces irrigation season deliveries to Lower Klamath NWR by any amount stored on the refuge in excess of the 35,000 acre-feet wintertime allocation.

- e) **Puts Heavy Burden on Lower Klamath NWR Wetlands in Times of Water Shortage.** Lower Klamath NWR's water shortages are typically most acute in dry years and the KBRA does not change this. In fact, the KBRA locks in a

drought year response on the refuges that reduces the already low dry year allocation of 48,000 acre-feet to 24,000 acre-feet (and possibly lower). (In this regard it should be noted that a prior biological opinion indicated a minimum of 32,000 acre-feet is necessary just to support the waterfowl food base of the bald eagles that overwinter in the basin.) These dry and drought year cutbacks are required under the KBRA without first requiring cutbacks in water delivered to commercial agriculture on National Wildlife Refuge land. This is likely a violation of the Kuchel Act and National Wildlife System Improvement Act of 1997. Section 15.1.2G(iv) of the KBRA allows the On-Project Water plan to limit deliveries to these refuge leaselands to meet water needs on private farms, but not to meet refuge needs. Under the KBRA, it is unlikely the refuges would fare any better in droughts than they do currently.

- f) **Other Reductions in Lower Klamath NWR Water Allocation.** KBRA Section 15.1.2 E (iii) sets forth other situations that would also reduce the allocation of water to Lower Klamath NWR. These include a reduction in the irrigation season allocation by one-acre foot for each acre placed in walking wetlands, regardless of whether the walking wetlands are on refuge or private lands or how much water is actually delivered to the walking wetlands. The walking wetland program is discussed below.

3. Walking Wetlands. The Walking Wetland program has been implemented to increase wetlands on the refuge leaselands and private lands in the upper basin. The program is called “walking” wetlands because the wetlands created are temporary (generally only in existence for one to three years). The land is then converted back to agriculture for continued commercial purposes. After land has temporarily been in wetlands it is more valuable to local farmers due to the decreased need for pesticides and fertilizer. If under water for three years, the crops grown may also qualify as organic thereby bringing in greater revenue.

While the program is portrayed as a progressive and good reason for commercial agriculture on National Wildlife Refuge land, it is merely a justification for temporary wetlands that offer no long-term solution to the upper basin’s habitat, water quality or quantity challenges. While it may be better to have some of the refuge leaselands in wetlands instead cultivation, the fact remains that the *value* of the program to wildlife is when it is in wetlands, not row crops. The program demonstrates the terrific benefits of restoring cultivated property to wetlands, and how quickly the landscape can recover. The KBRA does not stipulate a percentage of refuge leaselands that must be in walking wetlands, but does penalize Lower Klamath NWR for any walking wetlands by reducing the water allocation by one-acre foot per acre of walking wetlands, as noted above. It is possible that public wetlands on a National Wildlife Refuge would suffer, in order to create temporary wetlands on private lands for the landowners’ benefit, all at taxpayer expense.

4. Circumvents Federal Laws to Grant Unwarranted Subsidies to Klamath Reclamation Project Irrigators. The construction of the tunnel through Sheepy Ridge

and the D pumping plant in 1942, coupled with years of below market power rates, have allowed Project irrigators to pump water and drain 15,500 acres of Tule Lake NWR in the interest of commercial agriculture. The KBRA, in Section 15.4.2A, modifies existing contracts to change the cost allocation of the D plant pumping by increasing the responsibility of USFWS, while decreasing the amount the Tule Lake Irrigation District has to pay. Because this likely violates current Reclamation law on cost sharing, Section 15.4.6 of the KBRA attempts to circumvent the law by having the Secretary of Interior agree that the cost sharing agreements in the KBRA are not a “contract” as defined in the Reclamation Reform Act of 1982 (Public Law 97-293).

In Section 15.4.4 A, existing Project irrigator debt to the United States for unpaid capital costs of the Project facilities is cancelled. In addition, approximately 60% of the revenue from leasing refuge land for commercial farming will go to the Reclamation fund applied against future Project capital costs (Section 15.4.4 B). By diverting these funds to reduce the expenses of all Project irrigators, the KBRA increases the political support for continuing commercial agriculture on these NWRs. In addition, 20% of the leaseland revenues would go to USFWS, 10% to Tulelake Irrigation District and 10% to Klamath Drainage District, the two irrigation districts, whose customers cultivate refuge leaselands. This KBRA mechanism creates unnecessary agency dependence on the leaseland program. Federal legislation is necessary to implement this debt cancellation and allocation of leaseland revenues as the proposal is inconsistent with existing law.

The KBRA also provides over \$40 million in power subsidies and preferential power rates from the Columbia River Hydropower System that will continue to subsidize draining refuge land for agriculture. Federal legislation will also be necessary to implement these provisions.

5. Supports Development of Legislation to Modify the California Endangered Species Act. Because of the potential impacts of the KBRA on Tule Lake NWR and the Lost River, Section 24.2 of the KBRA acknowledges that implementation of the KBRA may cause the incidental take of southern bald eagles, golden eagles, greater sandhill cranes, American peregrine falcons, and Lost River suckers and shortnose suckers under the California Endangered Species Act. In certain circumstances, the California Department of Fish and Game is required to develop legislation to allow incidental take of these species.

6. Upper Klamath National Wildlife Refuge Will Still Periodically Go Dry. Not only does this KBRA adversely impact Lower Klamath Lake and Tule Lake NWRs, but it also continues irrigation diversion levels at such a high level that Upper Klamath NWR will also continue to suffer. Water for Upper Klamath National Wildlife Refuges is dependent on the lake levels in Upper Klamath Lake. When lake levels go below an elevation of 4,140 feet, refuge wetlands begin to go dry and when lake levels reach 4,139 feet, all 14,000 acres of marshes in Upper Klamath NWR will be dry. With the water guarantees to Project irrigators in the KBRA, Upper Klamath NWR will be totally dry in late summer and fall during dry years.

Fast Facts: Klamath Basin Wetlands

- Historically contained 350,000 acres of wetlands and tremendous populations of waterfowl and other wetland birds.
- 80% of the Pacific Flyway waterfowl pass through the Basin during fall and spring migration. The abundance and diversity of waterfowl and other migratory water birds make the Klamath Basin one of the most unique and significant wetland wildlife areas in the nation.
- Some of the most productive breeding areas for water birds in the intermountain West.
- The largest over-wintering population of bald eagles in the lower 48 states.
- Three of the remaining 13 American White Pelican colonies remaining in the West.
- At one time up to 10 million birds in the basin thought to be the largest concentration of waterfowl in the world.
- As late as the 1950's peak waterfowl numbers reached 7 million birds, but there has been a steady decline down to 1.2 to 1.8 million birds at peak times today.
- 75% of the historic wetlands have been lost in the Klamath Basin and 95% of the wetlands in California have been lost – this greatly increases the importance of the remaining wetlands, most of which are located in the basin's 6 National Wildlife Refuges.
- The abundance and viability of suitable habitat is unquestionably the greatest limitation confronting waterfowl.
- The decline in wetland habitat in Klamath Basin refuge wetlands decreases the carrying capacity of the entire Pacific Flyway, having impacts from Alaska to Mexico.
- Under the North American Waterfowl Management Plan signed by the United States and Canada, wetland habitats in the Klamath Basin are currently insufficient to achieve the Plan's goals.

Lower Klamath National Wildlife Refuge

- The first National Wildlife Refuge for waterfowl, it was created in 1908 by President Theodore Roosevelt.
- Initially, the entire 80,000 acres of Lower Klamath Lake was protected, but subsequent administrations reduced the refuge to 50,000 acres of which only 12,000 to 27,000 acres are maintained in permanent and seasonal wetlands today (15,000 acres are farmed with 6,000 of those acres being leased for commercial farming).
- In 1917, the Bureau of Reclamation worked with a railroad company to build a dike that cut off Lower Klamath Lake from the Klamath River thereby drying up the lake and refuge for a quarter of a century. Water was brought back to the refuge in 1942 when the tunnel through Sheepy Ridge was constructed to drain water from Tule Lake.
- Lower Klamath Lake National Wildlife Refuge (LKNWR) is the single most important staging area for both fall and spring migratory waterfowl in the Pacific

- Flyway, and most heavily used waterfowl area in the entire Pacific Flyway. It regularly supports 40-60% of the Basin's migratory population.
- LKNWR supports the greatest proportion of overwintering bald eagles and is currently the chief feeding area for overwintering eagles (50-90% of the basin's overwintering eagles use LKNWR each winter month).
 - LKNWR is one of the major waterfowl production areas in the intermountain west and supports one of the densest breeding populations of waterfowl in the National Wildlife Refuge system, averaging over 50,000 birds during the 10 years prior to the water crisis.
 - During late summer LKNWR is a focal point for molting waterfowl with 50,000 to 100,000 birds present, some coming from over 300 miles away.
 - LKNWR is home to most of the 411 wildlife species in the upper Klamath Basin, including 25 species of special concern of which 3 are threatened or endangered species.
 - LKNWR supports up to 1,000 sandhill cranes during the fall migration making it one of the largest fall staging areas for cranes in the Pacific Flyway – at times 20 to 30% of Central Valley population of greater sandhill cranes (considered a threatened species by the State of California) are on LKNWR.
 - LKNWR supports one of the last two remaining white pelican colonies in California (the other is in Clear Lake National Wildlife Refuge).
 - At times peak spring tundra swan populations on LKNWR have approached 50% of the Pacific Flyway total.
 - At times peak canvasback population numbers on LKNWR have been greater than 50% of the Pacific Flyway total, making LKNWR one of the most important staging areas for this species.
 - LKNWR supports one of the only remaining breeding colonies of California gulls in California.
 - LKNWR is rapidly becoming one of the major production areas for breeding white-faced ibis in the intermountain west.
 - In 50% of all future years 60 to 80% of the permanent and seasonal wetlands in Lower Klamath National Wildlife Refuge will be dry.

Tule Lake National Wildlife Refuge

- Established in 1928, it consists of 39,116 acres, about 30,000 acres from the historic lakebeds of Tule Lake, which once ranged from 50,000 to 100,000 acres in size.
- As a result of controversy over the future of the Tule Lake National Wildlife Refuge (TLNWR) (continued reclamation of Tule Lake lands for farming or dedication to wildlife) the Kuchel Act was passed in 1964 establishing the primary purpose of the refuge to be for waterfowl, but allowing commercial farming on the TLNWR as long as it is compatible with refuge purposes.
- Today almost 50% of the TLNWR is leased for farming (17,000 acres, 15,500 of which is leased for commercial farming (as distinct from cooperative farming to produce grain for waterfowl); with 13,000 acres in two sumps filled with polluted agricultural return flow.

- The biological resources of TLNWR have declined significantly since the passage of the Kuchel Act.
- The lost productivity at TLNWR has increased the importance of LKNWR for migratory and breeding waterfowl and overwintering bald eagles.
- Before its decline, TLNWR was considered the premier waterfowl refuge in North America.
- If TLNWR is managed to enhance wetland productivity the biological potential is enormous, however the leaseland farm program severely restricts management options to increase TLNWR wetlands and wetland productivity.
- Despite the loss of its productivity, TLNWR remains one of the most important waterfowl migration staging areas in the Klamath Basin and regularly receives most of the Arctic goose use within the Klamath Basin in the fall and supports large populations of fish eating birds in the spring and summer months.
- TLNWR produces an average of 4,665 waterfowl per year and supports 50,000 to 100,000 molting waterfowl in the late summer.

Upper Klamath National Wildlife Refuge

- Upper Klamath Lake is the largest freshwater lake in Oregon.
- Established in 1928 as 15,000 acres of primarily open water and freshwater marsh.
- Currently operates as 14,400 acres of freshwater marsh.
- Like other Klamath Basin refuges, Upper Klamath National Wildlife Refuges hosts a variety of species, including the ESA listed Lost River and short nosed suckers.
- Under current Klamath Reclamation Project operations, all 15,000 acres of Upper Klamath National Wildlife Refuge and all other wetlands around Upper Klamath Lake will be dry for extended periods.
- Upper Klamath National Wildlife Refuge can only be accessed by canoe, and supports a number of well-visited canoe trails throughout the refuge and lake.
- Upper Klamath Lake suffers from major water quality challenges due to agricultural nutrient and cattle grazing discharge into Upper Klamath Lake at the north end of the lake.