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Upcoming Stories:

Klamath Update

Climate Consequences

CWA Groundwater Regulation

& More!

1944 TREATY WITH MEXICO

ALLOCATING RIO GRANDE WATER – A SOUTH TEXAS PERSPECTIVE

by Glenn Jarvis, Law Offices of Glenn Jarvis (McAllen, Texas)

INTRODUCTION

The Rio Grande is a river that has been divided by politics and history into two segments. The Upper Reach runs from the headwaters of the Rio Grande in southern Colorado through Central New Mexico to Fort Quitman, Texas. The Lower Reach continues downstream from Fort Quitman — through miles of desert, mountains, and semi-tropical areas — to the Gulf of Mexico.

The water in the Upper Reach all comes from tributary sources in the United States, while a great majority of the flows into the Lower Reach derive from sources in Mexico. Flows in the Lower Reach historically combined waters from what are now "US flows" from the Upper Reach — principally Texas tributaries (Pecos River and Devil's River) — together with water from several Mexican tributaries. The Elephant Butte Dam and Reservoir now limits the amount of water from above Fort Quitman, Texas (Upper Reach) entering the Lower Reach.

International allocation of the water in the Lower Reach was agreed upon in the *Treaty Between the United States of America and Mexico on the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, 59 Stat. 1219.* The 1944 Treaty was signed at Washington, D.C. on February 3, 1944, and later ratified by each country and proclaimed by the President of the US on November 27, 1945 with an effective date of November 8, 1945 (referred to herein as the "1944 Treaty" or "Treaty").

This article provides a brief review of the historical background of the 1944 Treaty and an outline of the Treaty developments before discussing current points of contention. For the purposes of this article, these issues are identified from a "South Texas viewpoint" — without going into further detail.

BACKGROUND

International Water Commission, 1924-1930

In the early 1900's, the US and Mexico both recognized that equitable division of waters of the Rio Grande *below* Fort Quitman, Texas, would be necessary. Some unilateral studies were made in each country, but without progress on how the water would be divided between the countries.

By the Act of the Congress in 1924, the President of the US was authorized to designate three special Commissioners to the International Boundary Commission (IBC) to cooperate with representatives of Mexico in a study regarding equitable use of the waters of the Rio Grande below Fort Quitman, with a view to their proper utilization for irrigation and other uses. With the concurrence of Mexico, the scope of IBC studies was extended to include the Colorado River and the Tijuana River by the Act of the Congress of March 3, 1927.

US/Mexico Treaty

Allocation

Irrigation & Flood Control

Storage Need

Storage Dams

IBWC

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The IBC was the first joint commission established by the two countries to study the question of allocation and regulation of the waters in the Lower Reach of the Rio Grande. The IBC made various studies and held several sessions beginning in February, 1928. The American Section of the IBC made its report to the US Congress on March 22, 1930, indicating the negotiators were unable to reach agreement.

Irrigation Development 1930-1943

By the 1930's, irrigation developments in both countries along the Colorado River and along the Rio Grande downstream from the El Paso-Juarez Valley (and Fort Quitman) pointed to a need for allocation and regulation of the Colorado River and Rio Grande waters. During the period from 1930 to 1943, ever increasing irrigation development on both sides of the Rio Grande added to the urgency of this need. In addition, serious floods in the Lower Reach in the 1920's and 1930's emphasized the need for flood control.

The natural unregulated flows in the Rio Grande below Fort Quitman occurred as either: 1) low flows often too low to serve irrigation needs of developed land at that time; or 2) high flood flows which caused heavy damages to the urban areas and irrigated lands and which for the most part was lost to the Gulf of Mexico. The need for storage dams for regulation was clear. However, the economic depression in the 1930's prevented more aggressive action.

Faced with growing problems exacerbated by droughts and floods, the IBC stepped up by conducting surveys, collecting hydrographic data, and completing other investigations and studies in the late 1930's and early 1940's. The data produced was intended to serve as a basis for concluding a Treaty for allocation and regulation of the waters of the Rio Grande below Fort Quitman. This goal was achieved in the Treaty of 1944.

1944 TREATY

The 1944 Treaty is a comprehensive agreement relating to the allocation of the waters of the Lower Rio Grande (from Fort Quitman to the Gulf of Mexico) and the Colorado and Tijuana Rivers further to the west. The Treaty authorized the joint construction and operation of international storage dams on the Rio Grande, which resulted in the construction of Falcon Dam in 1953 and Amistad Dam in 1969.

It should be noted that the "International Boundary Commission" (created by the *Convention of 1889*) was changed by the 1944 Treaty to the "International Boundary and Water Commission" (IBWC or "Commission") and gave it the authority to apply and enforce the Treaty provisions. The relevant IBWC sections representing each country are known as the "US Section of the IBWC" and "Mexican Section of the IBWC."

Treaty Article 4 allocated the water in the Rio Grande between the two countries:

Mexico Allocation

Article 4A allocates to Mexico:

(a) All of the waters reaching the main channel of the Rio Grande (Rio Bravo) from the San Juan and Alamo Rivers, including the return flow from the land irrigated from the latter two rivers.

US/Mexico Treaty

Mexico Allocation

(b) One-half of the flow in the main channel of the Rio Grande (Rio Bravo) below the lowest major international storage dam, so far as said flow is not specifically allotted under this Treaty to either of the two countries.

(c) Two-thirds of the flow reaching the main channel of the Rio Grande (Rio Bravo) from the Conchos, San Diego, San Rodrigo, Escondido and Salado Rivers and the Las Vacas Arroyo, subject to the provisions of subparagraph (c) of paragraph B of this Article.

(d) One-half of all other flows not otherwise allotted by this Article occurring in the main channel of the Rio Grande (Rio Bravo), including the contributions from all the unmeasured tributaries, which are those not named in this Article, between Fort Quitman, and the lowest major international storage dam.

United States Allocation

US Allocation

Article 4B allocates to the United States:

(a) All of the waters reaching the main channel of the Rio Grande (Rio Bravo) from the Pecos and Devils Rivers, Goodenough Spring, and Alamito, Terlingua, San Felipe and Pinto Creeks.

(b) One-half of the flow in the main channel of the Rio Grande (Rio Bravo) below the lowest major international storage dam, so far as said flow is not specifically allotted under this Treaty to either of the two countries.

Minimum US Allocation

(c) One-third of the flow reaching the main channel of the Rio Grande (Rio Bravo) from the Conchos, San Diego, San Rodrigo, Escondido and Salado Rivers and the Las Vacas Arroyo, provided that this third shall not be less, as an average amount in cycles of five consecutive years, than 350,000 acre-feet (431,721,000 cubic metes) annually. The United States shall not acquire any right by the use of the waters of the tributaries named in this subparagraph, in excess of the said 350,000 acre-feet (431,721,000 cubic meters) annually, except the right to use one-third of the flow reaching the Rio Grande (Rio Bravo) from said tributaries, although such one-third may be in excess of that amount.

(d) One-half of all other flows not otherwise allotted by this Article occurring in the main channel of the Rio Grande (Rio Bravo), including the contributions from all the unmeasured tributaries, which are those not named in this Article, between Fort Quitman and the lowest major international storage dam.

Mexico Guarantee

US Minimum

In recognition of the fact that historically the Mexican tributaries named in Article 4B(c) contributed a substantial amount of the normal and flood flows to the Rio Grande for downstream users in both countries, Mexico agreed to an annual minimum allocation to the US of 350,000 acre-feet averaged over five-year cycles.

Mexico Allocation

Concerning the Rio Grande allocation for Mexico, an annual quantified amount of US derived waters was guaranteed to Mexico by Article 10(a) of the Treaty "of 1,500,000 acre-feet (1,850,234,000 cubic meters) to be delivered in accordance with the provisions of Article 15 of this Treaty."

US/Mexico Treaty

"Extraordinary Drought"

In the event of "extraordinary drought or serious accident" the Treaty provides differing obligations for each country.

Concerning US difficulties, Article 10(b) provides that:

> In the event of extraordinary drought or serious accident to the irrigation system in the United States, thereby making it difficult for the United States to deliver the guaranteed quantity of 1,500,000 acre-feet (1,850,234,000 cubic meters) a year, the water allotted to Mexico under subparagraph (a) of this Article will be reduced in the same proportion as consumptive uses in the United States are reduced.

These drought provisions contrast with those of both the 1906 Convention and the 1944 Treaty provisions dealing with the Colorado River (where relative proration is provided).

Repayment Remedy

On the other hand, concerning Mexico's obligations, the two countries agreed to a unique and different remedy for the repayment of Rio Grande water in the event of extraordinary drought or serious accident to the Mexican reservoir systems on the named Mexican tributaries.

With respect to the Lower Reach, the 1944 Treaty provides:

Five-Year Cycles

> In the event of extraordinary drought or serious accident to the hydraulic systems on the measured Mexican tributaries, making it difficult for Mexico to make available the run-off of 350,000 acre feet (431,721,000 cubic meters) annually, allotted in subparagraph (c) of paragraph B of this Article to the United States as the minimum contribution from the aforesaid Mexican tributaries, **any deficiencies existing at the end of the aforesaid five-year cycle shall be made up in the following five-year cycle with water from the said measured tributaries**. (emphasis added)

This important provision dealing with drought conditions in the Lower Reach was specifically emphasized by President Roosevelt in his message to the US Senate on the 1944 Treaty. The address included a message from Secretary of State Cordell Hull, concluding:

> ...it should be noted that the Treaty provides that, in case of drought or serious accident to the hydraulic works in the United States, deliveries of Colorado River water to Mexico will be curtailed in the same proportion as uses in the United States are reduced, and that, if for similar reasons Mexico cannot provide the minimum 350,000 acre-feet from its measured tributaries of the Rio Grande, the deficiency is to be made up from these tributaries during the following 5-year cycle. *See, Message from the President of the United States" transmitting the Treaty, February 15, 1944, U.S. Senate, 78th Congress, 2d Session, Executive A*.

Repayment Schedule

Thus, if a five-year cycle ends with a Mexican water deficit, these provisions provide the repayment schedule to be followed by Mexico. Repayment of this deficit is to occur during the following five-year cycle.

Reservoirs

Article 5 of the Treaty provided for the construction of three possible dams and reservoirs, however, only two — Amistad Dam (upstream from Del Rio, Texas) and Falcon Dam (downstream of Laredo, Texas) — were found feasible and exist today.

In summary, the key allocation provisions of the 1944 Treaty are:

Key Provisions

- The allocation of Rio Grande waters in the Lower Reach to each of the countries is specifically defined by an accounting of water reaching the Rio Grande from each of the contributing tributaries in the Rio Grande Basin in both the US and Mexico.
- Mexico, however, is required to provide an annual minimum amount of 350,000 acre-feet averaged over a five-year period from the named Mexican tributaries.
- In the event of extraordinary drought or hydraulic accident making it difficult for Mexico to provide the 350,000 minimum annual average amount from run-off in the named Mexican tributaries, the deficit is to be made up during the following five-year cycle. (The term "run-off water" in this context is the amount of diffused natural surface waters from rainfall or spring flow which flow into streams and ultimately into storage reservoirs before any use of such flows).

Conservation Storage

- For accounting purposes — with respect to the average minimum annual amount of 350,000 acre-feet within a five-year cycle — annual deficits within that five-year cycle are considered paid should US conservation storage fill, at which time a new five-year cycle accounting begins. US conservation storage is considered filled when the US share of water in storage in both Amistad and Falcon reservoirs reaches full storage levels (said amounts are set out in Minutes) — then a new five-year cycle starts. This has occurred in the past when floodwaters fill the two reservoirs. Elephant Butte Reservoir, however, is covered by the 1906 Convention and is not involved in the 1944 Treaty, which only covers the reach of the Rio Grande below Fort Quitman.

US/Mexico Treaty

1944 Treaty Enforcement: Implementation Flexibility

The US and Mexican Sections of the IBWC are given the responsibility of applying the water allocation provisions of the 1944 Treaty.

Later Determinations

The Treaty recognized the need for the later determination of matters dealing with the implementation of the various provisions of the Treaty. For example, in Article 5, which authorizes the construction of three international dams and reservoirs, the Treaty expressly provided that one or more of the stipulated dams may be omitted, and "...others than those enumerated may be built, in either case as may be determined by the Commission, subject to the approval of the two Governments." Many of the details involved in the implementation of the Treaty were left for later determination by recommendation and approval by the two Governments through the IBWC. The approval "by the two Governments" shall be handled by or through the Department of State of the United States and the Ministry of Foreign Relations of Mexico.

Enforcement

Article 24 of the Treaty, assigning the Commission its powers and duties, provides for enforcement authority in paragraph (c) which provides that: "each Commissioner shall invoke when necessary the jurisdiction of the courts or other appropriate agencies of his country to aid in the execution and enforcement of these powers and duties."

It is clear that each IBWC Commissioner (US and Mexican) is given the legal authority by their respective governments to enforce the Treaty provisions through the courts and agencies in their respective countries.

Commission Authority

The Commission is expressly given the power and duty in Article 24(d): "(d) to settle all differences that may arise between the two Governments with respect to the interpretation or application of this Treaty, subject to the approval of the two Governments."

In cases in which the Commissioners do not reach an agreement, Article 24(d) provides: "They shall so inform their respective governments reporting their respective opinions and the grounds therefore and the points upon which they differ, for discussion through diplomatic channels and for application where proper of the general or special agreements which the two Governments have concluded for the settlement of controversies."

Treaty Disputes

Thus, the IBWC Commissioners are given the authority to resolve all disputes under the Treaty, and to enforce the Treaty provisions in their respective countries subject to the approval of the two Governments acting through the US State Department and the Ministry of Foreign Relations of Mexico.

Implementation Agreements — "Minutes"

Implementation

The Treaty provides that the means by which the approval of the two countries are evidenced and recorded are by "Minutes" signed by each Commissioner and attested by the Secretaries with copies forwarded to each Government within three days after being signed.

If the nature of the Minute is one which does not require the specific approval of both Governments, then if either of the Governments fail to communicate to the Commission its approval or disapproval of the decision within 30 days from the date of the Minute, then the Minute in question and the decision which it contains shall be considered to be approved by that Government. If either Government disagrees, and an agreement is otherwise reached by the two Governments regarding the matter, then this agreement shall be carried out by the Commissioners.

Important Rio Grande "Minutes"

Significant Minutes of particular importance to the Rio Grande in Texas below Fort Quitman will now be discussed.

Minute 234

Mexican Guarantee

This Minute is relevant to the Mexican guarantee of water in the Lower Reach. In 1969, following the closure of Amistad Reservoir, Minute 234 was approved. It pertains to compliance with the provisions of Article 4 relating to the waters of the Rio Grande allocated to the United States from the Conchos, San Diego, San Rodrigo, Escondido, and Salado Rivers, and the Las Vacas Arroyo.

Five-Year Cycles

In this Minute, the Commission agreed to commence the first five-year cycle from when Falcon Dam was placed into operation in October 1953. The Rio Grande annual water volumes during each five-year cycle after 1953 through 1968 were agreed upon. In this Minute, it was agreed that there was a 476,461 acre-feet deficiency during the five-year cycle of October 1, 1953 to September 30, 1958, when the drought of the 1950's was experienced. However, this deficiency was made up during the October 1, 1958 through September 30, 1963 five-year cycle. The 1963-1968 cycle resulted in 32,270 acre-feet more than the average of 350,000 acre-feet per year requirement. Accordingly, the Commission agreed that the provisions of Article 4 in this respect was considered satisfied to September 30, 1968.

US/Mexico Treaty

Deficiency Repayment

This Minute further addressed how repayment of a deficiency in five-year cycle water would occur in the future. In paragraph 2, it is provided:

> That in the event of a deficiency in a cycle of five consecutive years in the minimum amount of water allotted to the United States from the said tributaries, the deficiency shall be made up in the following five-year cycle, together with any quantity of water which is needed to avoid a deficiency in the aforesaid following cycle, by one or a combination of the following means:
>
> a. With water of that portion of the said tributary contributions to the Rio Grande allotted to the United States in excess of the minimum quantity guaranteed by the Water Treaty;
> b. With water of that portion of the said tributary contributions to the Rio Grande allotted to Mexico, when Mexico gives advance notice to the United States and the United States is able to conserve such water; and
> c. By transfer of Mexican waters in storage in the major international reservoirs, as determined by the Commission, provided that at the time of the transfer, United States storage capacity is available to conserve them.

Repayment Limit

This Minute aligns with the language in the Treaty in requiring that any deficiency "shall" be made up in the following five-year cycle. This Minute further assures compliance with the minimum 350,000 acre-foot requirement in the following five-year cycle by requiring that the deficiency shall be made up in the manner agreed upon "...together with any quantity of water which is needed to avoid a deficiency in the aforesaid following cycle... ." In other words, repayment waters cannot create a deficit within any year of the cycle.

Deficits can only occur during a year within a five-year cycle in the event of extraordinary drought or hydraulic accident when it is difficult for Mexico to make the annual 350,000 acre-feet guarantee available from *run-off in the watersheds of the named Mexican tributaries* or because of serious accident to the Mexican reservoir facilities.

Minute 234 requires that any repayment of a prior five-year cycle deficiency shall not adversely impact the minimum requirement in the following five-year cycle.

Repayment Methods

The three different methods of repayment are:

a) excess waters over the minimum 350,000 acre-feet average annual amount;
b) water from the named tributaries out of Mexico's 2/3's share; and/or
c) by transfer of Mexican waters stored in the Rio Grande reservoirs.

Municipal Needs

Minute 293

The provisions of the Treaty regime worked well for over 50 years, including the drought years in 1950's. However, the provisions became stressed in the 1990's.

Due to low flows in the Rio Grande upstream of Amistad Reservoir beginning in 1992 coupled with customary use in Mexico, an emergency situation occurred in 1995. Mexican storage levels in the reservoirs had reached a very low level. This necessitated an emergency agreement between the two countries to assure that there would be no shortages in domestic uses in Mexico. Minute 293 was entitled "Emergency Cooperative Measures to Supply Municipal Needs of Mexican Communities Located Along the Rio Grande Downstream of Amistad Dam." It was signed October 4, 1995, and entered into force November 8, 1995. In the Minute, the United States agreed to loan waters to Mexico under certain circumstances.

Minute 293 was a recognition by all parties on both sides of the Rio Grande below Fort Quitman, that a period of short water supply was being encountered in the region. Indeed, by the end of the five-year cycle ending October 2, 1997, there was a deficit of 1,023,849 acre-feet in Mexico deliveries from the tributaries specified in the Treaty.

Additional deficits were encountered. By September 30, 2001, at the close of the fourth year of another five-year accounting cycle, Mexico's obligation had grown to 1,303,818 acre-feet.

The April, 2002 Report of the US Section IBWC entitled *Update of the Hydrologic, Climatologic, Storage, and Run-off Data for the United States and the Mexican portion of the Rio Grande Basin: October 19, 1992 - September 2001* noted the existing conditions in the named tributaries.

US/Mexico Treaty

Water Available

Water Demands

The Report included important observations including:

- During the prior five-year cycle (ending October, 1997) and first four years of the following cycle (as of October, 2001), the inflows into the five largest reservoirs on the Mexican Tributaries were more than 11.7 million acre-feet. This is more than the 9,450,000 acre-feet (9 years x 350,000 x 3) required to satisfy the Treaty requirement, even considering reasonable transportation losses.
- Examination of rainfall data in the Treaty Tributaries indicate that the annual rainfall amounts and patterns that occurred between 1994 and 1997 were similar to those that occurred in 1982-1985, but the quantities in inflows from the Treaty Tributaries to the Rio Grande were considerably different in the two periods. More information is needed concerning water demands in Mexico and Mexico's reservoir operations during those two periods.

This indicated that run-off in Mexican Tributaries should have been sufficient to provide water for delivery to the Rio Grande to satisfy Mexico's compliance with the 350,000 acre-foot requirement during the 1992-2001 period.

Mexico Deficit Crisis

Minute 307

During the 1997-2001 repayment period, representatives of both countries met to resolve the "crisis" developed by the Mexico deficit. One of the results of these meetings, negotiated at the highest levels of their governments, was the agreement produced in Minute 307. Minute 307 was agreed to at a meeting of the two Governments at the State Department in Washington, DC, on March 16, 2001.

Deficit Reduction

The IBWC Commissioners made note of discussions by US President George W. Bush and Mexican Presidente Vicente Fox Quezada held in Guanajuato, Mexico on February 16, 2001, when a request was made of Mexico to provide to the US a volume of 600,000 acre-feet of water through July 31, 2001. In Minute 307, it was agreed that Mexico would attempt to provide this amount of water. It was also agreed that the two countries would continue further discussions on the deficit reduction so as to arrive at a plan on additional measures that would be taken before the end of 2001. Significantly, it was agreed by the two governments to work jointly to identify measures of cooperation on drought management and sustainable management of the Rio Grande Basin so as to prevent a reoccurrence of this deficit.

Mexican Litigation

After a limited amount of water was transferred by Mexico by contributing its 50% share of unmeasured tributary flows pursuant to Minute 307, several lawsuits were filed by water users in the State of Tamaulipas against the Mexican Section of the IBWC and its federal water agency to enjoin them from making these transfers. The contention was made that such transfers violated the provision of the Treaty that Mexico's deficits are to be repaid from waters from the Rio Conchos and other tributaries named and measured in the Treaty, and not from unmeasured tributaries. In other words, users in Tamaulipas are the beneficiaries of 2/3's of the Mexican Tributaries flows required by the Treaty's 350,000 acre-foot requirement, which were being lost to them. All of these lawsuits were dismissed by Mexican courts.

Mexico failed in its commitments to provide the 600,000 acre-feet contemplated by Minute 307. Thereafter, Mexico did not produce a plan by December 31, 2001, to repay the 1,024,000 acre-feet deficit by October 2002. The US Section of the IBWC presented technical proposals, but Mexico did not respond at that time.

Minute 308

It was not until June 28, 2002, that the two governments officially responded to the ongoing conditions dealing with the Mexico water deficit by agreeing to Minute 308.

Minute 308 resulted from a meeting of the IBWC making note of conversations on these matters between US President George W. Bush, and Mexican President Vicente Fox Quesada, in Monterrey, Nuevo Leon, on March 20, 2002, and their subsequent conversations in Washington, DC, on June 6, 2002.

Financing

This Minute outlined various conditions of flows to that date, ending at the accounting period October 26, 2002. It forecast additional future flows in the Basin. It also indicated financing by both governments for improvements in the irrigated areas in the Basin and further collaboration regarding the collection and sharing of data between the two governments. The Minute contained certain commitments regarding the accounting of water between the parties to reduce the ongoing Mexico deficit, and importantly indicated actions to be taken by both Governments in establishing Advisory Councils. Both countries agreed to establish a forum for the exchange of information, and to encourage information flow to the IBWC from governmental and non-governmental organizations in their respective countries.

Advisory Councils

Conserved Water (Mexico)

A particularly important provision of Minute 308 was that the two Governments recognized that the additional funding for projects in the Basin would result in conserved waters in Mexico. Minute 308 states that whatever water is conserved in the projects on the Rio Conchos and the other named tributaries in the 1944 Treaty will be dedicated to "...ensure their conveyance to the Rio Grande."

US/Mexico Treaty

Minute 309

Conservation Projects

Minute 309 principally addressed the conservation projects funded by the North American Development Bank (NADBank) and the estimated volumes of water saved by the projects in Mexico. The projects were intended to modernize and improve the technology of irrigation districts and units in the Rio Grande Basin in Mexico to make them sustainable and take the necessary measures to ensure conveyance of saved waters to the Rio Grande.

To date, conservation projects in Mexico to ensure deliveries pursuant to the 1944 Treaty under Article 4B(c) and Minute 234, have not formally insured deliveries of water to the Rio Grande in any measurable and formalized manner.

MEXICAN DELIVERIES SINCE 2002

Deficit Reductions

Deficits since 2002 have been satisfied in following cycles by:

- supplementing delivery of flows to the Rio Grande from the six named Mexican tributaries by Mexico's stored water from the tributaries in the Reservoirs pursuant to Minute 234
- one flood conservation level fill and start of new five-year cycle
- flows from unnamed Mexican tributaries downstream of Falcon Dam by special agreements between the US, Mexico, and Texas.

Special Agreements Disputed

It is claimed that these special agreements are inconsistent with the Treaty and Minute 234. The use of the flows from these downstream unnamed tributaries, which are not named tributaries in Article 4A(c) of the Treaty in the accounting of Mexico water deliveries, deprives the reach of the Rio Grande *below* the delivery points of the named tributaries (including the Big Bend area) of the benefit of such flows. This also adversely affects other water accounting details that are damaging to the majority of lower reach water rights holders below Falcon Reservoir. These complicated issues are the subject of current litigation in Texas and are beyond the scope of this article.

IMPACT OF MEXICAN WATER DEFICITS

Texas Impacts

Mexico's lack of water deliveries to the Lower Rio Grande in Texas significantly affects the region's irrigated agriculture of over 500,000 acres, as well as the population of about 1.5 million who depend on the Rio Grande for domestic water supply.

Texas Growth

The growth in population and agricultural needs is increasing the pressure for Mexico to comply with the 1944 Treaty. In 2010, the combined population of the Lower Rio Grande Valley, including Cameron and Hidalgo Counties, was 1.23 million; by the year 2060, the population will be over 2.9 million. Webb County (Laredo, Texas) had a population of over 250,000 in 2010, with a projected population of over 725,000 in 2060; Maverick County (Eagle Pass area) had a population of over 58,000, which is projected to reach approximately 100,000 in 2060. These increases total a projected 3.725 million by 2060. *Rio Grande Regional Water Planning Group* (Texas Water Development Board), Rio Grande Regional Water Plan, Region M, 2010 (Pgs. 2-5).

Crop Impacts

A 2013 report by Texas A&M AgriLife Extension Service covering the Mexican water deficits during the late 1990's revealed that the deficit in deliveries by Mexico and the lack of irrigation water had an estimated cost of $229.2 million in crop revenue loss. These lost revenues contributed to an estimated $394.9 million in economic loss for the region and a loss of 4,840 jobs that depend on the production and sale of crops in the Lower Rio Grande region. *See*, Todd Stapes and Carlos Rubinstein, Tex. Dep't of Agric., *Addressing Mexico's Water Deficit to the United States*, 1 (2013), available at: www.texasagriculture.gov/Portals/0/forms/COMM/Water%20Debt.pdf

NEED FOR RECIPROCITY UNDER TREATY

Colorado River Contrast

The relationship between Mexico and the US on the Colorado River under the 1944 Treaty and the 1906 Convention is in contrast to that relationship in dealing with waters in the Lower Rio Grande.

Mexican Requests

In 2012, Mexico requested a water delivery earlier than was required by the 1906 Convention. The IBWC quickly granted the request without a Minute order. This impacted water users in the El Paso, Texas area, requiring them to scramble to implement alternative water use strategies. This action cost US water users a large amount of water due to water loss. As noted above, a similar action was agreed to by the US in Minute 293 on the Lower Rio Grande when Mexican storage levels in the Reservoirs in 1995 reached a low level, resulting in a US loan of water.

Colorado River Actions

These efforts — based upon a "good neighbor policy"— have also occurred on the Colorado River in the west, which is also covered by the Treaty. For example, in Minutes 318 and 319, the US agreed to adjust delivery schedules for 2010 through 2013 and store water in Lake Mead due to infrastructure damage to Mexican irrigation facilities from the 2010 earthquake in Mexico. Also, Minute 322 provided an emergency delivery of water to the City of Tijuana in Mexico. Recently, Minute 323 (September 21, 2017), dealing with extension of Minute 319, adopted a water scarcity contingency plan in the Colorado River Basin. All of these US actions have been taken within the Colorado River context — with the position of the US as the upstream provider of tributary flows to Mexico.

US/Mexico Treaty

Upstream Water Provision

Minimum Guarantee

"Extraordinary Drought" Defined

Deficit Repayment Structure

Conveyance Losses

Minimum Quantity

Annual Accounting

Reservoir Development

Compliance Ability

Storage Use

Upper Reach Delivery

Reciprocity by Mexico (as the upstream provider of water) for US interests in the Lower Reach of the Rio Grande is needed. Mexico needs to recognize the US as a user of water under the Treaty. To meet Treaty obligations, it needs to set aside water in its allocation processes and reservoir operation plans to deliver a minimum of 350,000 acre-feet per year on average to the US.

MEXICAN WATER DEFICIT ACCOUNTING ISSUES

US as Priority User of Tributary Water

Mexico needs to recognize the United States as a priority user of water in accordance with the Treaty. As noted immediately above, this recognition should result in water being set aside by Mexico in their annual allocation processes and reservoir operation plans to deliver a minimum of 350,000 acre-feet per year on average to the United States. *See, Id*., Todd Staples and Carlos Rubinstein, at page 3.

"Extraordinary Drought"

The term "extraordinary drought," although not expressly defined in the Treaty as other terms were in Article 1, is implicitly defined in the second subparagraph of Article 4 B(d) as an event which makes it difficult for Mexico "...to make available the *run-off of 350,000 acre feet (431,721,000 cubic meters) annually*." (emphasis added). In other words, it is an extraordinary drought condition when there is less than 1,050,000 acre feet (350,000 acre-feet US share and 700,000 acre-feet Mexican share) of run-off waters in the watersheds of the named Mexican tributaries to allow Mexico to deliver to the Rio Grande the required amount of 1,050,000 acre-feet to the Rio Grande.

If there is sufficient run-off water in the watershed of the Mexican tributaries, then an extraordinary drought event does not exist.

If extraordinary drought exists within a year in a five-year cycle, then the shortage involved is to be made up in other years within the five-year cycle. If this is impossible — because of an extraordinary drought in those years — then it is to be made up in the following five-year cycle without creating a deficit shortage in the subsequent five-year cycle. Mexico has ten years in which to satisfy the minimum of the 350,000 annual guarantee. This amount is measured at the Rio Grande, without regard to conveyance losses in Mexico. Thus, Mexico must assume conveyance losses in Mexico and deliver the required amount of water to the Rio Grande where each named tributary in Article 4A(c) flows into the Rio Grande.

The Treaty contemplates that the guaranteed 350,000 acre-feet annual amounts is a *minimum* and that normally more than this amount would flow into the Rio Grande. In order to clarify the 350,000 acre-feet guarantee, the Treaty states in Article 4 B(c) that the US does not acquire a continuing right to these excess flows but has the right to use its portion once they reach the Rio Grande.

The Treaty allocated to the US one-third (1/3) of the run-off in the watersheds of the named Mexican tributaries, and two-thirds (2/3) of this run-off to downstream Mexican users, i.e. 350,000 acre-feet to the US and 700,000 acre-feet to Mexico.

Treaty water accounting in this respect takes place on an annual basis. Only annual deficits created by extraordinary drought or hydraulic accident are qualified and entitled to the remedy of repayment during the following five-year cycle established by the Treaty for repayment of deficits. *See, e.g*., United States of America Department of State, Water Bulletin Number 63 entitled *Flow of the Rio Grande and Related Data from Elephant Butte Dam, New Mexico to the Gulf of Mexico, 1993*, which is one of the annual reports released and agreed to by both countries each year.

Since the Treaty was enacted, there has been considerable reservoir development and improved reservoir management techniques in Mexico on the named Mexican tributaries associated with the Treaty-guaranteed water. Mexico has the sovereign right to pursue better reservoir management and development. However, such development should be made in accordance with its responsibility under the Treaty.

System improvements should have enhanced Mexico's ability to perform its Treaty obligations to provide this *run-off water* so as to comply with its obligations set forth in the 1944 Treaty. The Treaty assures the US that it will receive a minimum of 350,000 acre-feet annually, constituting its 1/3 of the run-off of the named Mexican tributaries unimpeded by reservoir systems. It is subject to Mexico's historical normal use of the run-off water before it is stored. Stored water, however, is subject to the minimum required by the Treaty to flow to the Rio Grande — 1/3 for the US and 2/3's for Mexico users on the Rio Grande downstream.

MEASUREMENT OF WATER AT FORT QUITMAN

Among other things, pursuant to the 1906 Convention and applicable to the Upper Reach, Mexico is entitled to 60,000 acre-feet of water annually from Elephant Butte Reservoir (located in New Mexico). In exchange for this water, Mexico waived any interest or claim to waters downstream from its delivery point under the 1906 Convention to Fort Quitman (located just below El Paso, Texas). The delivery point under the 1906 Convention of 60,000 acre-feet per annum is provided in Article I of the 1906 Convention: "...in the bed of the Rio Grande at the point where the head works of the Acequia Madre, known as the Old Mexican Canal, now exist above the city of Juarez, Mexico." Juarez is across the Rio Grande from El Paso. Elephant Butte Reservoir did not exist at that time, and the 1906 Convention provided that this delivery would commence after the completion of the proposed storage dam near Engle, New Mexico (later becoming Elephant Butte Dam and Reservoir).

US/Mexico Treaty

Mexico Waiver

Delivery Points

1944 Treaty Governing

1906 Convention Controls

Fort Quitman Issue

Mexico Conserved Waters

Allocation Agreements

The 1944 Treaty between the US and Mexico is the governing document for the management of the Rio Grande below Fort Quitman. As noted above, the Treaty divided the flows in the Rio Grande *from* Fort Quitman downstream to the Gulf between the US and Mexico.

Mexico waived its claims to waters in the Rio Grande *above* Fort Quitman in the 1906 Convention. Rio Grande waters constituting inflows from Fort Quitman downstream to the Gulf of Mexico are governed by the 1944 Treaty. By virtue of the interaction between the 1906 Convention and the 1944 Treaty, waters in the Rio Grande flowing at Fort Quitman are US waters. Historical precedent shows this interaction between the 1906 Convention and the 1944 Treaty. During the negotiations for the 1944 Treaty, Mexico expressed its desire to increase the 60,000 acre-feet delivery guarantee from Elephant Butte Reservoir provided for in the 1906 Convention by demanding more Upper Rio Grande water than the 60,000 acre-feet. Mexico also insisted "...on 1/2 of the run-off entering the stream between El Paso and Fort Quitman." The US refused to consider this request, contending that the earlier 1906 Convention had settled the question. Accordingly, Mexico's requested change in ownership of water in the Rio Grande downstream from Mexico's 1906 Convention delivery point and upstream of Fort Quitman was not included in the 1944 Treaty. [The background of the detailed facts and development of international water law principles applicable to streams shared by the two countries is beyond the scope of this paper. *See* Hundley, *Dividing the Waters, A Century of Controversy Between the United States and Mexico*, Univ. of California Press (1966). Pages 17-40, and 131.]

Water in the Rio Grande between El Paso and Fort Quitman, including return flows from each country, is 100% owned by the US. Accounting of water ownership consistent with these long-standing agreements between the US and Mexico is entrusted to the IBWC under the 1944 Treaty and other treaties and agreements, including the 1906 Convention, between the two countries.

Currently, water in the river at Fort Quitman is divided equally between the US and Mexico. The US Section, IBWC, should require that in water accounting between the US and Mexico all flows at Fort Quitman be 100% US waters. As noted, in the 1906 Convention, Mexico waived rights to any water below the Acequia Madre delivery point "to Fort Quitman" — plus the 1944 Treaty divides the water between the two countries "below Fort Quitman." Therefore, the contention is that water in the Rio Grande "at Fort Quitman" is 100% owned by US. The 1/3-2/3 split of the water below Fort Quitman is measured at the point where each of the named Mexican tributaries flow into the Rio Grande downstream of Fort Quitman.

Mexico Conserved Waters is Dedicated to US Deliveries

Under the terms of Minutes 308 and 309 and the various funding mechanisms provided by the NADBank, all waters conserved by these funded projects in Mexico are dedicated to the obligations of Mexico in fulfilling its obligations under the Treaty to provide an annual minimum of 350,000 acre feet, averaged over five-year cycles, from the named Mexico tributaries. This is a recognized agreement between the two countries. It should be enforced. This statement is made based upon the terms of the Minutes mentioned above.

CONCLUSION

After decades of disputes between the US and Mexico over the rights to water in the Rio Grande, the rights were determined and allocated in the first half of the 20th Century by the 1906 Convention and the 1944 Treaty. In the last half of the 20th Century, dams and reservoirs contemplated by these agreements have been constructed in the US, but many others have been constructed in Mexico, after the treaty, pursuant to its sovereign authority. Experience has been gained by the IBWC in the implementation of the international agreements and existing circumstances. It can be expected that challenges will occur in the 21st Century testing the integrity of these agreements in view of activities in both countries, while also testing the Rio Grande's ability to serve those in both countries who rely on its waters.

For Additional Information:

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US Section of the IBWC website: www.ibwc.gov/home.html

Mexican Section of the IBWC website: www.gob.mx/sre/acciones-y-programas/c-i-l-a-mex-eua

Additional background information and details are available on Mr. Jarvis' website: www.GlennJarvis.com

Glenn Jarvis has practiced law in McAllen, Texas since 1963. He was involved in the Court Adjudication of Rio Grande water rights in the Lower Rio Grande in Texas, the Adjudication of water rights in the Middle and Upper Rio Grande in Texas, and involved in the Upper Rio Grande Adjudication of the Rio Grande Upstream of Fort Quitman, Texas, in El Paso. He was Chairman of the Rio Grande Regional Water Planning Group, Texas Water Development Board from 1997 to 2017, which covers the Rio Grande downstream of Amistad Reservoir to the Gulf of Mexico. He is a frequent writer and speaker on water resource and law topics in the United States and Mexico. He concentrates his practice in water rights and water district issues and represents individual clients on water rights issues, irrigation districts, and the Texas Irrigation Council, a state-wide group of irrigation water suppliers.

Mitigation Legislation

Instream Flow Protection

Legislative "Fix"

Out-of-Kind Mitigation

Impairment Standard

Retroactive Reservation

Drop-for-Drop Mitigation

"OCPI"

Legal Availability

MITIGATING FOR DEVELOPMENT

EXEMPT WELL AND WATER ALLOCATION MITIGATION LEGISLATION IN WASHINGTON STATE

THE "*HIRST*-*FOSTER* FIX"

by Chris Pitre, Coho Water Resources (Seattle, WA)

INTRODUCTION

Decisions by the Washington State Supreme Court identified restrictions on how water may be put to use in light of laws developed to protect the benefits of environmentally adequate instream flows. On January 18, 2018, the Washington State legislature passed Engrossed Substitute Senate Bill (ESSB) 6091 to address two water resource allocation issues recently ruled upon by the Court: 1) exempt wells (the *Hirst* issue); and 2) options to mitigate for impacts from new water allocations (the *Foster* issue). Both are intimately related to impairment of instream flows.

This article: provides pertinent legal background; presents an overview of the substance of the ESSB 6091; examines the new law's potential impacts on various stakeholders; and discusses how well ESSB 6091 addresses the problems it aims to ameliorate.

In general terms, ESSB 6091 addresses:

Part 1: Building Applications & Exempt Wells ("*Hirst* Fix") — Building applications utilizing exempt wells filed prior to passage of ESSB 6091 may be approved. Newer applications may be approved with some additional requirements (e.g., fees and more stringent water use caps) until modified instream flow rules are in place as developed under Part 2.

Part 2: Instream Flow Rule Updates — Processes are established to amend existing instream flow rules (Section 202(1), 203(1)).

Part 3: Stream Flow Enhancement ("*Foster* Fix") — A Task Force is convened to recommend options for out-of-kind mitigation of instream flow impacts from new water right allocations. The Task Force must first meet by June 30, 2018 and provide recommendations by November 15, 2019 (Section 301(7)(a)).

It could be said that ESSB 6091 delivers permission to continue groundwater development using a "credit card" backed by future mitigation and promises of future streamflow enhancement.

BACKGROUND

Washington's water resources allocation administration has grown increasingly protective of fish habitat and instream flows over the past couple of decades. The following Washington State Supreme Court decisions are particularly relevant to understanding the genesis and intent of ESSB 6091:

Postema (October 2000): This case established an absolute standard of one-molecule impairment for impacts on instream flows that are not being met — i.e., there is no "de minimus" impact allowance (*Postema v. PCHB*, 11 P.3d 726, (2000)).

Swinomish (October 2013): This case denied the Washington State Department of Ecology (Ecology) the discretion to retroactively establish, by rule amendment, reservations for future water use (such as for exempt wells). This discretion was denied due to the failure to adequately protect instream flows (*Swinomish Indian Tribal Community v. Department of Ecology*, 178 Wn.2d 571, 311 P.3d 6 (2013)). *See* Moon, *TWR* #116 for additional information.

Foster (October 2015): This decision required "drop-for-drop" mitigation. *Foster* re-affirmed that instream flows adopted in a rule must be protected from impairment. This case involved Ecology's decision that conditioned the City of Yelm's water right permit on an extensive mitigation package. The proposed mitigation included offsetting the total quantity of new water use through both: 1) water-for-water mitigation ("in-kind") and 2) "out-of-kind mitigation" — i.e., mitigating for small impairments occurring during the spring and fall with habitat improvements. Having found that public benefits arising from the mitigation package would far outweigh any adverse impacts on stream flows, Ecology had applied a state allowance for "overriding considerations of public interest" (OCPI) to approve the application. The Court said the permit would impair minimum instream flow water rights despite the mitigation proposed and therefore violated water law (*Foster v. Dept. of Ecology, City of Yelm and WA PCHB*, Case No. 90386-7 (2015); *Foster v. Yelm*, 362 P.3d 959 (2015)). *See* Moon, *TWR* #141 for additional information.

Hirst (October 2016): The Court ruled that Whatcom County failed to comply with Washington State's Growth Management Act requirements to protect water resources. The ruling required the county to make an independent decision about legal water availability (*Whatcom County v. Hirst, Futurewise et al*., Case No. 91475-3, 381 P.3d 1 (2016)). *See* Dickison & Haensly, *TWR* #155 and Moon, *TWR* #153.

Mitigation Legislation

While the *Hirst* decision applies only to Whatcom County, the precedent has been interpreted to be applicable to all entities operating under the Growth Management Act (GMA), including counties and cities. The term "counties" in this article is used to refer to all GMA entities for the sake of brevity and because counties are the most broadly impacted by the *Hirst* decision.

In upholding the stricture against impairment to pre-existing water rights, *Hirst* did not introduce any new realities in water law. It confirmed counties' responsibility for determining the *legal availability* of water, specifically in regard to issuing building permits based on water supply from exempt wells.

Legal Availability

"Legal Availability" is the determination that there is water available for a new appropriation based on an examination of all existing water rights with a view to protection of those rights — including instream flow rights.

In the issuance of building permits, counties have routinely accepted a determination of the *physical availability* of water as sufficient to issue a water availability certificate for the installation of a well. *Hirst* confirmed counties' duties to determine the *legal availability* of water before issuing building permits.

Hirst Responses

The response of counties to the *Hirst* ruling varied, including:

- Requiring applicants to obtain professional opinions (Pierce and Spokane counties)
- Issuing building permits with disclaimers to "proceed at your own risk" (King and Snohomish counties)
- "Wait-and-see" approaches (Thurston and Lewis counties)
- Building moratoria (portions of Skagit and Kittitas counties)
- Offering water banking institutions for mitigation (portions of Clallam and Walla Walla counties)

Limited Staff

Most counties are not well-equipped, either with appropriate staff or financial resources, to navigate the arcane complexities of water resource rules, statutes, policy and management — though some counties do have water resource staff with excellent capabilities.

"WRIAs"

Some counties span multiple Water Resource Inventory Areas (WRIAs) — the state's geographical planning boundaries for water resources. A county spanning five or six WRIAs is not uncommon and such counties may face an equivalent number of different instream flow rules.

"Exempt Wells"

In 1945, the Legislature established the Groundwater Code, Chapter 90.44 RCW. In the code, they identified certain "small withdrawals" of groundwater as being "exempt" from the permitting process. These groundwater uses — including domestic, livestock, and some small-scale industrial uses — are commonly referred to as being "permit exempt" (hence "exempt wells"). Ecology has not actively managed exempt wells. This has left the guidance, administration, and enforcement of exempt wells to hover somewhat ambiguously between local and state agencies.

Mitigation Constrained

Regarding the *Foster* decision, it should be noted that the concept of flexible mitigation is widely implemented in Washington State in the management of natural resources other than water allocation. Such flexibility is evidenced in mitigation wetlands, wetland banking, and averaging of riparian buffers setbacks. Even in water allocation decisions, changing a seasonal consumptive irrigation right to year-round domestic was considered reasonable water resource management and broadly accepted. However, the Court decided in *Foster* that this approach wasn't allowed because of shoulder season impacts, despite a comprehensive mitigation package including modeling, reclaimed water, riparian zone restoration, wetlands creation, and over-mitigation during critical salmonid life cycle periods. The water right denied in *Foster* was one by the City of Yelm in a package of ten water rights that were concurrently approved with a similar mitigation structure. No water right other than the City of Yelm's water right was contested (due to the limited standing of the plaintiff) and all of the other involved water rights are now being exercised with out-of-kind mitigation.

ESSB 6091 PART 1 – RELIEF FOR COUNTIES (THE "*HIRST* FIX")

The first part of ESSB 6091 relieves counties of determining the legal availability of water in the issuance of building permits and allows counties to rely on Ecology determinations. This part provides amnesty/grandfathering for all wells with respect to building permits and adequate water supply under the GMA. ESSB 6091 is carefully worded with respect to grandfathering exempt wells only in the context of GMA and building permits. It does not grandfather exempt wells with respect to the Prior Appropriation Doctrine. All water use is subject to this Doctrine, whether the use is established with permit exempt wells or with administratively-issued water right permits. This Doctrine includes the requirement to not impair "senior" (previously-issued) water rights, whether these are administratively-issued water rights, exempt wells, instream flows, or tribal water rights.

Grandfathering Exempt Wells

Prior Appropriation Applies

While the law provides immediate relief to GMA entities with respect to determining the legal availability of water from exempt wells, significant liability persists. It is unlikely that exempt wells will also be grandfathered within the context of prior appropriation through the amendment of instream flow rules described in Part 2 of the law (discussed below). Any such exemption would require a fundamental change in Washington State water law as concerns the seniority system under the Prior Appropriation Doctrine. Far too many constituencies have vested interests under the system (i.e., all existing water right holders) to make accomplishing such a change feasible.

Mitigation Legislation

Swinomish Ruling

This friction with established water law has the potential to encounter significant problems similar to those experienced in the Washington State's Skagit Valley. An instream flow rule was passed in the Skagit Valley in 2001 without water reservations for future uses — including exempt wells. Ecology subsequently amended the rule in 2006 to include reservations, but the *Swinomish* case determined that the 2001 rule established the instream flow as a senior water right that could not be impaired. The Swinomish Tribe and Ecology subsequently agreed to not cut off or interrupt the use of almost 500 exempt wells installed after the 2006 instream flow rule while Ecology finds mitigation for the impacts of these wells.

Impacts Mitigation

It is predicted that impacts from all exempt wells installed under the purview of ESSB 6091 will require mitigation. Exactly who will fulfill this possible responsibility to mitigate impacts remains unknown. Based on the *Swinomish* precedent, amendment of instream flow rules under Part 2 of the legislation — to retroactively establish reservations — is unlikely to survive judicial review. Stream flow enhancement efforts in Part 3 of the legislation may provide mitigation (see discussion below). Ecology assumed mitigation responsibility in the *Swinomish* case, and the Swinomish Indian Tribe graciously granted time to Ecology to find a solution. However, future situations may not meet with the same patience, either on the part of tribes, environmentalists, or senior water right holders. Should no solution or mitigation be developed in Parts 2 or 3 of the legislation, homeowners may be denied the continued use of wells upon which GMA administrative entities have granted building permits. In such a case, homeowners may seek compensation or restitution.

ESSB 6091 PART 2 – DEALING WITH EXEMPT WELLS

Watershed Plans

Many of the provisions set out in ESSB 6091 build upon the state's watershed planning process. Washington State's Watershed Planning Act (RCW 90.82) was established by the Legislature in 1997 to set a framework for developing local solutions to watershed issues in Washington. Between 1998 and 2012, 44 watershed-based planning groups developed plans and 33 groups adopted their plans. As planning was completed, the effort switched focus to watershed management.

ESSB 6091 Categories

ESSB 6091 primarily affects two categories of watersheds (Figure 1):

- Watersheds with instream flow rules that <u>have</u> a watershed plan (7 watersheds; Section 202 of the new law)
- Watersheds with instream flow rules that <u>do not have</u> a watershed plan (8 watersheds; Section 203 of the new law)

Remaining Watersheds

The remaining watersheds consist of:

- Watersheds without instream flow rules (32 watersheds; business as usual)
- Special watersheds: Skagit (WRIAs 3 and 4) and Yakima Basin (WRIAs 37, 38 and 39) (5 watersheds; with advanced on-going efforts to address exempt well issues)
- Watersheds with instream flows with reservations for exempt well use (10 watersheds)

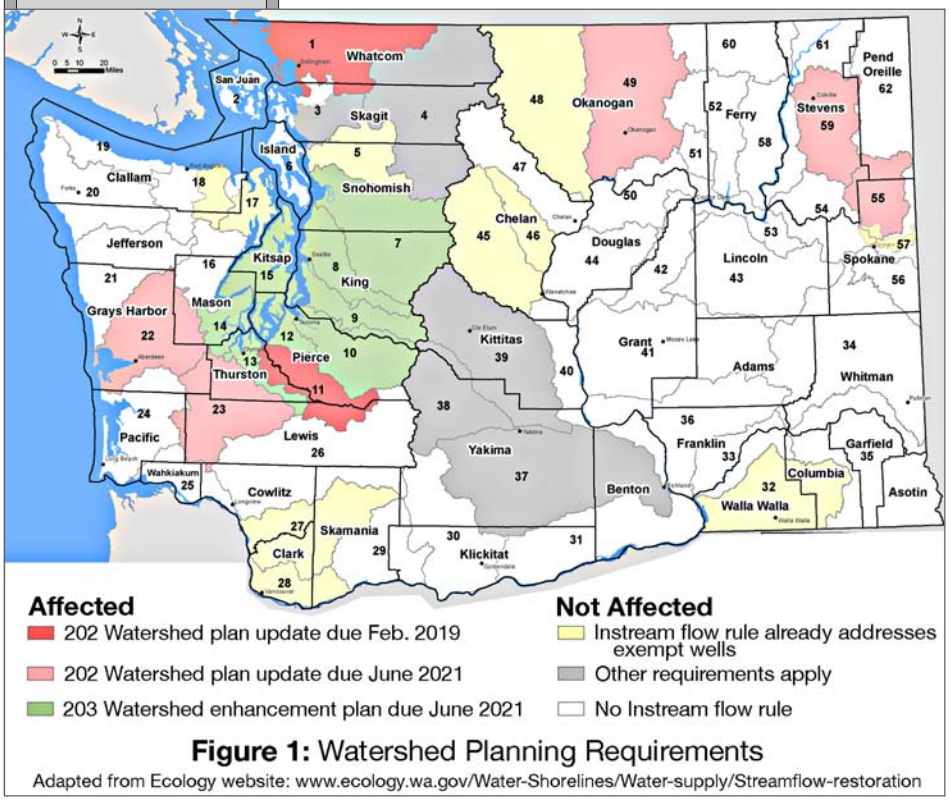

Figure 1: Watershed Planning Requirements
Adapted from Ecology website: www.ecology.wa.gov/Water-Shorelines/Water-supply/Streamflow-restoration

ESSB 6091 assumes that watersheds without instream flow rules do not have a conflict between exempt well installation and maintenance of instream flows, so no action is required in these watersheds. Portions of WRIAs 3, 17, 18 and 57 (Lower Skagit, Snow-Quilcene, Dungeness and Upper Spokane) are included in this category. Exempt wells may be installed in these watersheds and determinations of water availability may continue as they have in the past by simple compliance with RCW 18.104 (Water Well Construction). For exempt wells in these watersheds, there will be only consideration of the physical availability of water and no requirement to consider the legal availability of water. There is no acknowledgement of the prior appropriation construct with respect to senior water rights. The potential to restrict instream flow impacts to protect endangered species is also not addressed in the new law.

Mitigation Legislation

Excluded Areas

The Skagit River Basin (WRIAs 3 and 4) is excluded from this new law presumably so as not to disrupt on-going efforts to address the conflict between exempt wells and instream flows as an outcome of the *Swinomish* case and agreements between Ecology and the Swinomish Tribe. Similarly, the Yakima River Basin is excluded from this new law because of: the approaching conclusion of the surface water rights adjudication; the near total control of instream flows by the federal Bureau of Reclamation; and well-advanced efforts to address groundwater availability. The Yakima Basin includes the Kittitas Valley, where numerous water right banks have been established over the past decade to provide drop-for-drop mitigation to mitigate for exempt well use.

Reserved Water Accounting

Ten watersheds currently address exempt wells. These include reservations in the instream flow rule for future exempt well use and water banking. Continued accounting by counties of the degree to which reserved water has been allocated is required, consistent with the existing instream flow rule. Otherwise, no additional action is required under the new law.

Amendment Schedule

The remaining watersheds to be addressed in Part 2 of the new law have instream flow rules and are divided into those with and without watershed plans (Table 1; Figure 1).

Table 1: Schedule for Amending Instream Flow Rules

Recommendation		Watersheds	Affected Counties (minor)	New Interim Limits on Exempt Wells for Domestic Use Until New Regulations Adopted
Type	**Due**			
Watershed Plan Update **"202" Watersheds (7)** **WATERSHEDS WITH watershed plans** Watershed planning entity leads effort	Feb. 1, 2019 or Aug. 1, 2020 (Ecology Option)	WRIA 1 Nooksack	Whatcom (Skagit)	5,000 gpd 3,000 gpd average annual
		WRIA 11 Nisqually	Pierce, Thurston (Lewis)	
	June 30, 2021	WRIA 22 Lower Chehalis	Grays Harbor (Mason)	
		WRIA 23 Upper Chehalis	Lewis, Thurston, Grays Harbor (Pacific, Cowlitz, Jefferson)	
		WRIA 49 Okanogan	Okanogan	
		WRIA 55 Little Spokane	Spokane, Pend Oreille, Stevens	
		WRIA 59 Colville	Stevens (Pend Oreille)	
Watershed Restoration & Enhancement Plan **"203" Watersheds (8)** **WATERSHEDS WITHOUT watershed plans** Ecology leads effort Centered around Puget Sound	June 30, 2021 Ecology Recommendations	WRIA 7 Snohomish	Snohomish, King	5,000 gpd 950 gpd average annual 350 gpd during drought
		WRIA 8 Cedar-Sammamish		
		WRIA 9 Duwamish-Green	King	
		WRIA 10 Puyallup-White	Pierce, King	
		WRIA 12 Chambers-Clover	Pierce	
		WRIA 13 Deschutes	Thurston (Lewis)	
		WRIA 14 Kennedy-Goldsborough	Mason, Thurston	
		WRIA 15 Kitsap	Kitsap, Pierce, Mason, King	

Watershed Planning Units

The Watershed Planning Act's watershed planning program allowed local stakeholders to develop water resource management solutions to be developed over four years. Watershed planning stakeholder groups — Planning Units — were constituted. These Planning Units consisted of the following required entities from within the watershed (initiating governments): all counties and all tribes with reservations within the watershed; and the largest city and largest non-municipal purveyor. Many additional entities were commonly included. A required component of watershed planning was the quantification of the amount of water available to inform water allocation decisions. Optional components included instream flow analysis, water quality analysis, and storage analysis — in part to address federal Clean Water Act and Endangered Species Act regulations. Ecology provided significant support in the form of technical, organizational, and financial support but was a non-voting member of these Planning Units.

Mitigation Legislation

Planning Approaches

Consensus by the stakeholder group was required for adoption of a watershed plan, which some Planning Units accomplished. The success of watershed planning varied widely across the State and was not dependent upon whether a watershed plan was adopted. Some watersheds with adopted plans have been effective in implementing progressive water resource management (e.g., Wenatchee, WRIA 45), while others have not. Some watersheds that did not adopt a plan have implemented progressive water resource management solutions as a result of the watershed planning process (e.g., Kitsap, WRIA 15). Revising instream flow rules under Part 2 of the new law resurrects and closely parallels the watershed planning concept.

Exempt Wells & Instream Flow Rules

New Law

ESSB 6091 states (in both subsections 202(1) and 203(1)):

> "Unless requirements are otherwise specified in the applicable rules adopted under this chapter or under chapter 90.22 or 90.54 RCW, potential impacts on a closed water body and potential impairment to an instream flow are authorized for new domestic groundwater withdrawals exempt from permitting under RCW 90.44.050 through compliance with the requirements established in this section."

Contradictory?

The RCW chapters referenced above relate to statutes allowing the establishment of instream flow rules. These cited subsections appear contradictory because they simultaneously authorize potential impacts and impairments on instream flows while requiring consistency with established instream flow rules and prior appropriation constructs:

> 90.22.030 Existing water and storage rights — Right to divert or store water. The establishment of levels and flows pursuant to RCW 90.22.010 shall in no way affect existing water and storage rights and the use thereof…
>
> 90.22.060 Instream flow evaluations — Statewide list of priorities — Salmon impact. By December 31, 1993, the department of ecology shall, in cooperation with the Indian tribes, and the department of fish and wildlife, establish a statewide list of priorities for evaluation of instream flows. In establishing these priorities, the department shall consider the achievement of wild salmonid production as its primary goal.
>
> 90.54.920 Rights not impaired. (1) Nothing in this act shall affect or operate to impair any existing water rights.

Instream Rights Protected

Instream flows have been established as water rights within the prior appropriation construct, entailing the normal protection of the rights based on the seniority system (see *Swinomish*). If existing rights are fully protected, then amendment of instream flow rules will not be able to achieve any more than what was attempted in the Skagit instream flow rule amendment and later rejected by the *Swinomish* decision. If such proves to be the case, an additional legislative statutory "fix" will be required to attain the apparent intended objective of allowing out-of-kind mitigation.

Additional Fix?

Watersheds with Instream Flow Rules & Watershed Plans (Section 202)

There are seven watersheds falling within ESSB 6091 Section 202's focus on watersheds operating under instream flow rules *which have adopted watershed plans*. The initiating governments of the watershed planning process, in collaboration with the Planning Unit and support available from Ecology, must update their plans to measure, protect and enhance salmonid habitat.

At a minimum, the updated plans must offset impacts from domestic exempt wells, according to the following prioritization:

Mitigation Priorities

1. Avoid impacts: Drop-for-drop mitigation, in-time, in-place and in kind. This may be in the form of water right banking, reclaimed water projects, and storage projects (conventional above-ground, off-channel, and Aquifer Storage and Recovery (ASR)). This meets the status quo of required mitigation that is sometimes referred to as "finding the unfindable."
2. Minimize impacts: Ecology has stated that their policy with regards to meeting these criteria will be flow mitigation within the same WRIA. This may consist of drop-for-drop mitigation that may not completely offset impacts, augmented by improving flows in other streams in the WRIA.
3. Provide net environmental benefits: Out-of-kind mitigation. This may include mitigating critical limiting habitat factors to offset streamflow impacts.

Net Benefit Determination

These same criteria are echoed in ESSB 6091 Section 203 and in the development alternative mitigation plans as addressed in Part 3. Ecology must determine that the updated plan results in a net environmental benefit over a 20-year projection of exempt well installations. Addressing potential impacts arising from sources other than domestic exempt wells, including exempt wells for other purposes and administratively issued allocations, is addressed in Part 3 – the *Foster* "Fix".

Mitigation Legislation

Options

Deferred Decisions

Institutional Knowledge

Plan Updates

No Plan: Ecology Leads

Committee Membership

Schedule

SRF Board Backup

Success Considerations

Exempt Wells Definition

Additional suggested options provided are:

- Water rights acquisition (banking)
- Water conservation and water reuse
- Off-channel storage and aquifer recharge
- Stream gauging and groundwater monitoring
- Floodplain restoration

As noted, Planning Units set up under the watershed planning program required a consensus (with some variation between Planning Units). The Planning Units that are a subject of this section have already achieved consensus in the past as proven by the adoption of a watershed plan. This may be a good indicator of achieving consensus in the future under this new law. On the other hand, past consensus may have been achieved by deferring some difficult decisions — such as the treatment of exempt wells and instream flow regulation. Additionally, many of the key players with institutional knowledge are no longer present 10-20 years later. Leadership will be a key determinant in the success of upcoming efforts.

Among these watersheds with instream flows and watershed plans, the Nooksack and Nisqually watersheds (WRIAs 1 and 11) are required to submit updated watershed plans by February 1, 2019. If an updated watershed plan is not provided by this date, Ecology must adopt rules by August 1, 2020. There is no consequence if a rule is not adopted by this deadline.

The remaining watersheds must provide watershed plan updates by February 1, 2021. There is no deadline for Ecology to transfer these updates into rules. Until such rules are adopted, building permits issued by counties based on the physical availability of water from exempt wells may continue. A caution is provided here that though installation of exempt wells may continue, that comes with no guarantee that continued use of the wells is assured if no mitigation of their impacts is secured.

Watersheds with Instream Flow Rules & No Watershed Plans (Section 203)

The eight watersheds falling in Section 203 of the new law (watersheds with instream flow rules but *no adopted watershed plans*) are coincidentally concentrated in Central and South Puget Sound. Ecology will take the lead by chairing a watershed restoration and enhancement committee, which closely parallels the Planning Unit structure for watershed planning used under Section 202. The following entities invited to participate in this committee:

- All tribes with reservation land or usual and accustomed harvest areas
- The Washington Department of Fish & Wildlife
- All counties and cities
- The largest irrigation district plus a representative of agricultural interests
- The largest publicly-owned non-municipal purveyor, the local residential construction industry, a local environmental interests organization and a local organization representing agricultural interests

For these eight watersheds (Table 1), Ecology must provide recommendations for amendment of existing instream flow rules that are unanimously approved by all members of the watershed restoration and enhancement committee by June 30, 2021. The recommendations must parallel the same criteria as for Section 202 (address impacts from domestic use exempt wells and prioritization of mitigation type).

If the draft plan presented by Ecology is not unanimously accepted by the watershed restoration and enhancement committee, Ecology will submit a draft plan to the Salmon Recovery Funding (SRF) board for recommendations. Ecology will then consider the SRF board recommendations, amend and adopt the (perhaps revised) plan, and shall initiate rulemaking within six months after plan adoption. There is no time requirement for the consideration by the SRF board or adoption of the plan by Ecology. Therefore, the full timeline to reaching rulemaking for amending instream flow rules is open-ended.

At least four considerations affect the likelihood of success for this approach. First, it allows the process to move forward without being halted by individual vetoes. Second, it lays in Ecology's hands the power of drafting the complete amendment to the instream flow. Third, it depends upon Ecology and the SRF board to have the political fortitude to present solutions. And finally, it does not impose an overall completion schedule. It will be difficult to get these plans drafted and transformed into rules. Although the first consideration may make drafting a plan easier to accomplish, the remaining considerations and public process depend upon Ecology's commitment and capabilities. If these falter, rulemaking will not be completed and the status quo will be maintained.

Changes in Exempt Well Limitations in ESSB Sections 202 & 203 Watersheds

Exempt wells in Washington State are defined in the following statute:

> "RCW 90.44.050: …That any withdrawal of public groundwaters for stock-watering purposes, or for the watering of a lawn or of a noncommercial garden not exceeding one-half acre in area, or for single or group domestic uses in an amount not exceeding five thousand gallons a day,… or for an industrial purpose in an amount not exceeding five thousand gallons a day, is… exempt from the provisions of this section, but, to the extent that it is regularly used beneficially, shall be entitled to a right equal to that established by a permit issued under the provisions of this chapter: PROVIDED, HOWEVER, That the department from time to time may require the person or agency making any such small withdrawal to furnish information as to the means for and the quantity of that withdrawal…"

Mitigation Legislation

Exemption Specifics

The 5,000 **g**allons **p**er **d**ay (gpd) limitation applies only to domestic and industrial uses and specifically differentiates between domestic use and irrigation of a half acre. The discrete exempt well limit for irrigation is unlimited with respect to quantity but limited to irrigation of one-half acre. Irrigation duties generally vary across Washington State between 1.5-4 acre-feet per acre and so irrigation of a half acre would generally equate to a maximum of 2 **a**cre-**f**eet per **y**ear (afy). There is no limit to the quantity of water for stockwatering. Recent Ecology policy appears to conflate the domestic and irrigation uses of exempt wells. An argument could be provided to maintain separation of the two uses, which may allow irrigation of greater than a half acre as long as it doesn't exceed the daily usages caps and the appropriate average annual cap (Table 2). These uses are exclusive to each other. For instance, one interpretation of RCW 90.44.050, notwithstanding Ecology's most recent policy statement, is that an exempt well may not be used for domestic use and irrigation of a half acre. This raises the question of whether multiple exempt wells may be installed on a property to serve the different uses defined in RCW 90.44.050. *Ecology v. Campbell & Gwinn*, 146 Wn.2d 1, 43 P.2d 4 (2002), determined that multiple exempt wells may not be installed to serve a housing development if the cumulative withdrawal quantity exceeded 5,000 gpd. The policy outcome of that decision was to allow up to six houses per exempt well, based on the guidance of the time from the Washington Department of Health (DOH) of 840 gpd being required per household (5,000 gpd divided by 840 gpd/household = 6 households). This court decision consequently became known as the "6-pack" rule. The DOH guidance has since been recognized as being conservatively large and current policy allows up to 15 residential connections per exempt well, which equates to 333 gpd per residence.

Cumulative Withdrawal Limits

Average Annual Limits (Overlay)

ESSB 6091 adds additional *average annual limits per connection* for domestic use of 3,000 gpd per connection in the Section 202 watersheds and 950 gpd per connection in the Section 203 watersheds. Additional exterior irrigation is allowed for fire protection, and exempt well use in the Section 203 watersheds is reduced to 350 gpd per connection during a drought emergency order.

Table 2
Representative Exempt Well Domestic Water Use Estimates

Qualification		Daily Use (gpd)	500 Wells or Connections (cfs)
PERMITTED EXEMPT WELL USE LIMIT			
RCW 90.44.050	Daily maximum per well.	5,000	3.9
ESSB 6091 (per connection; multiple connections limited by RCW 90.44.050)			
Section 202 Watersheds	Average annual.	3,000	2.3
Section 203 Watersheds	Average annual.	950	0.74
Section 203 Watersheds	Under declared drought conditions.	350	0.27
SINGLE RESIDENCE / CONNECTION ACTUAL USE PATTERNS (assuming 2.6 people per residence per US 2010 census)			
Average Annual			
Interior	60 gpdpc	156	0.12
Exterior (W. WA)	15% of interior	23	0.02
Total (W.WA.)		***179***	***0.14***
Exterior (E.WA.)	100% of interior	156	0.12
Total (E.WA.)		***312***	***0.24***
Peak Monthly			
Interior	60 gpdpc	156	0.12
Total with Exterior – W. WA.	Interior x 2.5 peaking factor [a]	390	0.30
Total with Exterior – E. WA.	Interior x 6 peaking factor [b]	936	0.72

a – Golder, 2014. Skagit County Exempt Well Metering Program – 2012-2013.
b – Golder, 2003. Little Spokane (WRIA 55) and Middle Spokane (WRIA 57) Watershed Planning Phase II – Level 1 Assessment; Data Compilation and Preliminary Analysis.

Table 2 compares permitted quantities with actual use average annual and instantaneous quantities to present a range of potential impacts on streamflows depending on the degree of hydraulic continuity as a function of the geological setting. The metric of potential withdrawal from 500 wells is presented to provide the context of the current level of potential mitigation needed in the Skagit Basin for legacy exempt wells installed after the instream flow rule was established in 2006 that now need mitigation. Because actual use patterns are well below the new per connection limits, the new limits will likely have no effect on exempt well use.

Mitigation Legislation

Streamflow Impoundment?

Metering Costs

Interior Use v. Exterior Use

Ecology Discretion

Enforcement v. Incentives

Out-of-Kind Mitigation

***Foster* Mitigation**

ESSB 6091 does not impose effective additional constraints on representative average single domestic residential use. It may constrain isolated egregious use if such use has been monitored by metering and subjected to enforcement. This regimen will have minimal effect on improving streamflows because the overall impact on instream flows from exempt use is a function of the overall average usage — not isolated individual egregious uses. The 350 gpd limitation imposed under the drought conditions in the 203 watersheds will have minimal benefit to instream flow protection because, while it may restrict isolated egregious use, it is unlikely to affect average use over significant time periods. In reality, the new limitations are expected to have little effect on altering water use or protecting instream flows.

Metering

ESSB 6091 requires Ecology to initiate two pilot metering projects: one in the Dungeness watershed and another in the Upper Yakima watershed (i.e., Kittitas Valley). The cost for these projects is to be borne by Ecology. The estimated cost of meter provision and installation is estimated at about $1,000 per well. Metering is already required in these areas as a function of water banking activities, so the only ongoing difference may be to transfer the cost of metering from water users to Ecology.

There is much data documenting domestic water use patterns in Washington State, including, among many more sources:

- Dungeness water bank data
- Kittitas water bank data
- Carpenter-Fisher metering study (Golder, 2014, Skagit County Exempt Well Metering Program - 2012-2013)
- King County water use data
- Chumstick-Mission water use analysis (AMEC, 2009)
- Compilations by the United States Geological Survey (Land and Welch, 2015)

A constant of these studies is that people generally use the about same amount for interior water use — i.e., to drink, cook, clean. These activities consistently result in the use of 40-60 gallons per day per capita with little geographical variation. The principal average variation is exterior use, which generally ranges from an additional 15% on the wet west side of the State to an additional 100% on the dry east side of the State on an annual basis. If the purpose of a metering study is to characterize water use relating to individual or exempt wells, effort might better be spent mining the existing information rather than collecting additional data.

The State has the right to "…require…information as to the means for and the quantity of that withdrawal…" (RCW 90.44.050). Therefore, metering is more of a discretionary policy decision than a question of Ecology's authority to require it.

Enforcement may be of limited value because there are probably few exempt wells that exceed legal limits. Moreover, implementing an enforcement program is costly and more likely to trigger adverse reactions from exempt well owners. A better use of metering is to raise the awareness of individual water users of their water use patterns and water resource management. This combined with incentive programs (e.g., distribution of subsidized low-flow fixtures) and public outreach may be more effective in reducing water use and thereby minimizing instream flow impacts.

PART 3 – ALTERNATIVE MITIGATION OPTIONS – THE "*FOSTER* FIX"

ESSB 6091 Part 3 addresses the *Foster* issue of out-of-kind mitigation to offset impacts of new appropriations as they relate to instream flows and fish habitat. Unlike the rest of this new law, Part 3 is not restricted to exempt wells, but is relevant to all future water allocations. Out-of-kind mitigation is an alternative to drop-for-drop mitigation and considers, among other options:

- Shifting reduction of flows from critical low flow periods to flood periods (e.g., from summer to winter)
- Over-mitigation during habitat critical times (e.g., increasing instream flows in the late summer by more than the impacts)
- Habitat improvements such as: riparian and wetland restoration; increasing buffers; conservation easements; instream enhancements (large woody debris recruitment and engineered log jam installation); and upland habitat restoration

As additional background on the *Foster* issue, the Cities of Yelm, Lacey, and Olympia jointly advanced a water rights application package consisting of ten water right applications. Only the City of Yelm's water right was appealed. The comprehensive application package, developed over approximately 20 years with extensive technical work, communications with a broad stakeholder base including tribes and vetting with sister State agencies (Fish & Wildlife and Natural Resources), included:

- Acquisition and retirement of a senior irrigation water right to provide full mitigation of the impacts on an annual basis, plus over-mitigation during the irrigation season and the critical low flow late summer season
- Riparian habitat and wetland restoration
- Groundwater recharge of reclaimed water to augment instream flows

Mitigation Legislation

Shoulder Season Impacts

Instream Rule Intent

Strict Standard

Evaluating Task Force

Schedule & Process

Pilot Projects

Yelm Resubmission

Recurring Priorities

Concept Limitations

The Washington Supreme Court (Court), in *Foster*, denied the City of Yelm's water right. However, the remaining nine water rights in the joint application were approved. These water rights were not challenged and are currently being exercised on a similar basis to what was proposed for the Yelm water right (i.e., out-of-kind mitigation with net environmental benefit) denied in *Foster*.

Even though stream flows during critical late summer habitat conditions would be increased as a result of the proposed mitigation package, residual impacts to instream flow remained in the shoulder seasons according to instream flow rules (e.g., April and October). The Court determined in the *Foster* decision that no marginal impact in the shoulder seasons was allowed regardless of how much out-of-kind mitigation was provided and regardless of the net benefit to aquatic habitat on the basis of the instream flow rule.

The intent of the instream flow rule, based on RCW 90.22.010 (1969), is to protect fish, game, aesthetics, and recreational values. It is interesting that out-of-stream consumptive use is not mentioned, presumably because that was not a concern at that time. RCW 90.54.010 (1971) expands the concerns to include providing sufficient water for:

(1) Residential, commercial, and industrial needs;
(2) Productive fish populations; and
(3) Productive agriculture.

The Court's decision in *Foster* did not provide reasonable justification for upholding the instream flow rule on the basis of the intent of RCW 90.22 or 90.54 and denied the City of Yelm's water right. It assumed that the instream flow regulation established an administratively-issued water right that must not be impaired regardless of the original intent of the law upon which it was established.

Under ESSB 6091 Part 3, a Task Force is established to evaluate out-of-kind mitigation through a mitigation sequencing process and scoring system.
The Task Force includes 12 voting members:

(4 members) State representatives of Democrats and Republicans from the Senate and House
(4 members) Two representatives from each of the environmental and tribal communities
(4 members) A representative from each of the farming community, Washington cities, municipal water purveyors, and business interests

The composition of the Task Force thus consists of an equal political balance between elected officials, stewards of the resource, and consumptive users. The Washington State Departments of Ecology, Agriculture and Natural Resources participate as non-voting representatives.

The first meeting of the Task Force must occur by June 30, 2018 and must make recommendations to the legislature by November 15, 2019. This gives it less than 17 months to achieve agreement and provide its findings and recommendations. This is a tough timeline to bring together and achieve agreement among the diverse interests. Recommendations must be made by at least a 60% majority of the Task Force. Minority recommendations may be made with the support of at least five voting members (42%). Because eight votes are required to achieve a 60% majority (seven votes = 58%), there will only be a majority or a minority recommendation.

Five pilot projects are identified to inform the Task Force and upon which Ecology must provide water allocation decisions (Section 301(8)). The criteria in the law are sufficiently strict so as to identify the following candidates:

- City of Port Orchard
- City of Sumner
- City of Yelm
- Spanaway Water Company
- Bertrand Watershed Improvement District

Some of these candidates already have well-developed alternative mitigation plans. The City of Yelm was the subject of the *Foster* case, and processing of their application under this new law is expected to consist of resubmitting their application supported by the original report of examination that was overturned by the Court. Ecology is empowered by this act to make allocation decisions for these five projects on the minimum basis of providing net environmental benefits. The recurring priority (*see* above list for Sections 202 and 203) for processing criteria in decreasing order of preference are: 1) Avoid Impacts; 2) Minimize Impacts; 3) Provide Net Environmental Benefits (out-of-kind mitigation).

Out-of-kind mitigation is the crux of what is being tackled by the "*Foster* fix." The issue can be presented as follows: salmonid habitat on a stream that is impaired with respect to multiple variables may realize a net environmental benefit when flow is reduced, if more critical habitat variables are addressed.

There are two limitations on this concept, assuming the impacts and benefits can be adequately quantified. First, this approach may only work for initial (new) water right applications on a stream for which instream flow is not the limiting factor for salmonid habitat at the moment. If allocation decisions in a watershed are made using this construct, the more critical variables will be ameliorated and streamflows will become the critical variable. In this instance, trading streamflow for other improvements will not provide net environmental benefit. The line between whether streamflow or other variables are the more critical is fuzzy. It will be difficult for the Task Force to provide definite criteria. If implemented, this

Mitigation Legislation

Addressing Degradation

policy approach is most likely to leave significant discretion to Ecology. Any legislation coming out of Task Force recommendations will need to clearly provide the authority to Ecology for such discretion.

It is reasonable to assert that degraded habitat variables should be fixed by those responsible, rather than being available for use as a credit in the processing of water right allocations. Moreover, correction of degraded habitat through the water rights allocation process should not be an excuse for the failure of the effective implementation of critical areas ordinances under the Growth Management Act to protect riparian zones, correction of culverts to allow fish passage, and under the state's Shoreline Management Act to restore habitat. However, habitat improvements through allocation decisions beyond what is otherwise regulated is reasonable. These may take the form of conservation and development easements, wetland banking, and expansion of riparian buffers.

ADMINISTRATION

Streamflow Restoration

Ecology plans to form a subsection within its Water Resources Section called Streamflow Restoration with approximately 27 employees. The administrative burden includes providing support to the 15 watersheds listed in Table 1, and the anticipated processing of amendments of up to 15 instream flow rules. Additionally, Ecology expects 5-10 projects to be generated in the coming biennium and possibly up to 100 projects operating in five years as funding for Stream Flow Enhancement becomes increasingly available.

Demanding Schedule

This administrative burden and schedule is intense and will be difficult for Ecology to meet. Much of the work will be based on previous watershed planning work. Key to capitalizing on the previous work and making the most efficient use of both effort and funds will be institutional memory. Many personnel at Ecology and local (e.g., county) institutions are no longer available. The support of consultants is anticipated to be solicited, particularly those with watershed planning experience in the individual watersheds.

FUNDING

Building Fee

Funding is derived from two principal sources. First, a minimum fee of $500 must be submitted with building applications to counties, of which $150 is applied to county administrative costs and $350 is deposited into a fund managed by Ecology to administer the law including watershed planning projects and watershed restoration and enhancement projects. These funds may only be spent for projects within WRIAs from which they originate. These fees may be modified by rulemaking.

Funding Split

Ecology's new Streamflow Restoration subsection will have an annual operational budget that is expected to average $5 million (M) for the first five years, and $3.75M has been requested for the 2018-2019 fiscal year. Ecology plans for $50,000 to be provided to local entities leading WRIA efforts. Tribes will be provided $25,000 for their engagement plus an additional $15,000 for each additional WRIA they are involved with.

15-Year Allocation Intent

The Legislature expressed its intent to allocate $300M over 15 years through capital budgets, averaging $20M per year (Section 304). The first $20M has already been appropriated within the capital budget passed as a result of passing ESSB 6091. These funds may be spent according to Ecology's discretion and do not have to be spent in specific WRIAs — though Ecology has stated that there will likely be a preference for the 15 watersheds with instream flow rules. By comparison, approximately $85M was spent on watershed planning previously (1998-2010; an annual average of $7M).

The structure for deciding how to distribute these funds has not yet been defined. A grant application process may be established similar to the watershed planning process. One criticism of the watershed planning process was poor control of funding. However, there is not a predefined dollar amount for various stages of effort under the new law as there was in the watershed planning process. Ecology may therefore have more discretion in the allocation of funds depending on guidelines they adopt.

SUMMARY/TAKE HOME

County Relief

ESSB 6091 relieves counties of making a determination of the legal availability of water for exempt wells for single domestic residential use, as part of the process of issuing building permits — at least for the time being. It allows counties to rely on Ecology's determinations on the legal availability of water. For the most part, it allows business to proceed as usual, in that exempt wells may continue to be installed and building permits issued. It also presents a stakeholder process to resolve the availability of water for exempt wells.

Uncertainties Remain

Uncertainties of the new legislation include:

- Whether the new law authorizes impacts and impairments by amendment of existing instream flow rules, or whether additional legislation is needed
- Funding: $20M has already been appropriated
- Ability of stakeholders to find consensus
- Lack of firm timeline requirements, the lack of consequences if deadlines are not met, and the willingness of the SRF Board and Ecology to unilaterally impose solutions

Mitigation Legislation

Additional Legislation

Addressing Prior Appropriation

Significant Effort Needed

- Ecology's evolving policy in response to the new law
- Potential law suits

Out-of-kind mitigation is the cornerstone of the *Hirst* and *Foster* "fixes." Part 3 of the new law requires that a Task Force provide recommendations that would require additional legislative action to allow out-of-kind mitigation. Therefore, it is reasonable to assume that additional legislative action is also needed to allow out-of-kind mitigation as part of instream flow rule amendments under Part 2 of the new law (as opposed to such authorization being implicit in the new law).

Without legislative action that modifies the Prior Appropriation Doctrine, we remain stuck with the status quo. This is a difficult hurdle to overcome but one that must be dealt with in order to better manage water resources in Washington State — to accommodate rural water supply through exempt wells — and allow for appropriately mitigated new water uses while protecting aquatic habitat and our iconic salmon runs.

Success of the new law in providing better water resource management will require significant good faith effort from all parties. The new post-*Hirst* status quo reinstates the previous pre-*Hirst* status quo of installation of exempt wells while solutions are developed. Proponents of the status quo may see little incentive to work toward a solution because they have it all right now — notwithstanding the accumulating "mitigation debt" from exempt wells.

The State of Washington is offering support to avoid new litigation and a return to the uncertainty of the past year. The support available through the new law as administered by Ecology includes technical expertise, process facilitation, and funding assistance.

While ESSB 6091 has provided a temporary reprieve for counties, this *Hirst* "Fix" is better characterized as a "Patch" that will require concentrated and sustained effort by all stakeholders interested in a good outcome.

For Additional Information:

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Ecology webpage regarding ESSB 6091:
www.ecology.wa.gov/Water-Shorelines/Water-supply/Streamflow-restoration

Ecology webpage regarding the *Hirst* case:
www.ecology.wa.gov/Water-Shorelines/Water-supply/Water-rights/Case-law/Hirst-decision

Ecology webpage regarding the *Foster* case:
www.ecology.wa.gov/Water-Shorelines/Water-supply/Water-rights/Case-law/Foster-decision

Chris Pitre is a principal owner of Coho Water Resources based in Seattle. His clients include the public and private sectors as well as tribes. He is a licensed geologist and hydrogeologist and a certified water rights examiner (Washington), with degrees in geology, chemistry (Carleton University) and hydrogeology (University of Waterloo). He has practiced hydrogeology and integrated water resources management in the Pacific Northwest since 1992, with two years (2011-2012) in Australia. He managed watershed planning projects in approximately a dozen watersheds across Washington State (2001-2010). His practice areas include: water rights; groundwater supply wells; watershed planning; wastewater management; reclaimed water; and expert witness services. He is currently involved in the installation of large municipal wells in the Yakima Valley and processing of a new water right application in a 203 watershed.

Klamath Takings

Tribal Priority Rights

Revised Reclamation Plan

Irrigation Terminated

Breach of Contract Claim

Plaintiffs' Claims

Unquantified Rights

ESA Issues

KLAMATH TAKINGS CLAIMS DENIED

END OF A LONG DRY ROAD: FEDERAL COURT OF CLAIMS REJECTS KLAMATH FARMERS' TAKINGS CLAIMS

by Douglas MacDougal, Marten Law Group (Portland, OR)

Introduction

In a seventy-five page opinion, the United States Court of Federal Claims (Court) in September 2017 brought to a bitter end "takings" litigation that began 16 years ago, in 2001. *Lonny Bailey, et al. v. United States*, Case No. 1-591L, (U.S. Ct. of Fed. Claims, Sept. 29, 2017) (herein referred to as the *Opinion*). The *Opinion* held that while several plaintiffs had property interests that were physically taken by the United States government, they could not pursue their takings claims because their water rights were junior to the earlier priority rights of the Klamath, Yurok, and Hoopa Valley Indian Tribes. This was so, the Court held, even though those Tribal rights were unquantified and unenforced by the Tribes at the time of the taking. The case contains potentially useful analyses for future takings cases. It also presents, however, some disquieting conclusions from the perspective of traditional Western prior appropriation water law.

Background

One may remember the long lines of Klamath farmers protesting the US Bureau of Reclamation's shut-off of water for irrigation in the Klamath basin in 2001. That year brought a devastating drought to the region. A Revised Operations Plan was released April 6, 2001 by the Bureau of Reclamation (Reclamation). This Revised Operations Plan (2001 Plan) was produced to conform with federal Endangered Species Act (ESA) biological opinions from the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) that had mandated that federal project water from the Klamath Project that otherwise would have gone to irrigators be left in Upper Klamath Lake (UKL) and in the Klamath River for the benefit of listed species. The 2001 Plan had the effect of terminating the delivery of irrigation water from UKL to the plaintiffs. The only relief came in July 2001, when Reclamation finally released approximately 70,000 acre-feet of water. *Opinion* at 22.

The impact on farmers and communities in the region was severe. Seeking to compensate for their losses, water users initiated a lawsuit in October of that year in the Court of Federal Claims alleging: "takings" under the Fifth Amendment to the United States Constitution; breach of the Klamath Compact; and breach of contract. The breach of contract claims were later dismissed, but the other claims crawled their way through litigation till they were barred in the recent opinion. The Court of Federal Claims dismissed the breach of contract claims of three plaintiffs, the Klamath Irrigation District, the Tulare Irrigation District, and Lonny Baley, on 28 U.S.C. § 1500 (2012) grounds. *See Klamath Irr. Dist. v. United States*, 113 Fed. Cl. 688 (2013). On June 3, 2014, all remaining plaintiffs' contract claims were dismissed at plaintiffs' request, without prejudice. *Opinion* at 26.

As one might expect in an opinion of this length, the Court covered a lot of ground — factually, procedurally, legally, contract by contract, claim by claim — with exceeding thoroughness. Several factors made the case especially complex. To begin with, there were different types of plaintiffs whose Klamath Project water rights were characterized in somewhat different ways. There were: the Klamath Irrigation District and Tulelake Irrigation District repayment contracts; Warren Act contracts; settlement contracts with the Van Brimmer Ditch Company; and water rights associated with leased lands in the National Wildlife Refuges. Those entities each had different forms of contract and contract histories with Reclamation (*see Opinion* at 2-12 for a description of the contracts). Adding to the complexity was the fact that water rights in the basin had not been quantified, but were grinding through the administrative processes of the Klamath Basin Adjudication (KBA) which began in 1975 and continues even today before Oregon's Klamath County Circuit Court. Then too, there were strong forces competing for water that year.

There are three Native American tribes — the Klamath, Yurok, and Hoopa Valley tribes (the Tribes) — who assert Federal reserved water rights within their reservations to support the harvest of fish for tribal purposes in the basin's streams and lakes in Oregon (claimed by the Klamath Tribes under its 1864 treaty with the United States) and in California (claimed by the Yurok and Hoopa Valley tribes, pursuant to various presidential executive orders). These rights are more particularly described in the *Opinion*, at 12-14. These tribal water rights are asserted to exist from time immemorial, with priority dates asserted on that basis. None of these rights had been quantified as of 2001.

The Klamath Project is also subject to ESA requirements. 15 U.S.C. §1531, et seq. In an earlier case, certain Klamath water users raised the question of whether their water rights were subservient to

Klamath Takings

restrictions under the ESA. The federal District Court in Oregon answered an emphatic yes. *See Klamath Water Users Protective Association v. Patterson*, 204 F.3d 1206, 1213 (9th Cir. 1999) amended by 203 F.3d 1175 (9th Cir. 2000). Klamath Project operations potentially affect three species of fish protected under the ESA: the endangered Lost River Sucker (LRS); the endangered Short Nose Sucker (SNS); and the threatened SONCC coho salmon (Southern Oregon Northern California Coast coho salmon). *Opinion* at 16. These species were the subjects of biological opinions issued in the spring of 2001.

Biological Opinions

USFWS presented its final biological opinion in April 2001, and concluded that Reclamation's proposed operations plan was likely to jeopardize the continued existence of the LRS and SNS, and adversely modify their critical habitat. These biological opinions followed Reclamation's own Biological Assessments, forwarded to the respective services earlier that year, concluding that the result of operation of the Project was likely to adversely affect each of those species in violation of the ESA. *Opinion* at 18. The day after the USFWS opinion was released, NMFS issued its final biological opinion concluding that the proposed operation plan was likely to jeopardize the existence of some coho salmon and adversely modify its critical habitat. *Opinion* at 18-22. The reasonable and prudent alternatives of those opinions required that Reclamation *not* divert water from UKL if surface elevations went below certain minimum lake levels. As a result of these biological opinions, Reclamation announced the revised 2001 Plan in April 2001 which allocated no irrigation water to the farmers in the basin. *Opinion* at 21.

Minimum Lake Levels

Perfect Storm

In short, the spring of 2001 was a perfect storm of water demand and regulation at a time of extreme drought and need. The Court briefly detailed the effect on farmers in the Klamath Basin. Thousands of acres of crops died due to the shutoff of water to irrigators. Reclamation's late release of water did no good. Reclamation's July release of 70,000 acre-feet of water from UKL was described as "too little, too late." *Opinion* at 22-23. Some farmers received payments and reimbursements from various federal programs, but the remaining losses became the subject of this lawsuit.

Cognizable Property Interests?

Federal Project Water

Of critical consequence in this case was the fact that it was brought by individuals whose beneficial interest in Klamath Project water was deemed appurtenant to their lands. In response to questions earlier certified to it by the Court of Federal Claims, the Oregon Supreme Court concluded that the individual plaintiffs had equitable, beneficial interests in federal project water. *Opinion* at 38. The Supreme Court's conclusion is important because in order to prevail in a takings claim case one needs a cognizable property interest. These are legally recognized property interests to which a federal takings claims may be asserted. Determination of the nature of the property interest under state law was the first step in the takings analysis. *See Opinion* at 26 and 38. The three-factor test for determining, under Oregon law, whether plaintiffs acquired an equitable or beneficial property interest in their water right was:

Property Interest

> ...whether plaintiffs put the water to beneficial use with the result that it became appurtenant to their land, whether the United States acquired the water right from plaintiffs' use and benefit, and, if it did, whether the contractual agreements between the United States and the plaintiffs somehow have altered that relationship. In this case, the first two factors suggest that plaintiffs acquired a beneficial or equitable property interest in the water right to which the United States claims legal title, but we cannot provide a definite answer to the court's second question because all the [contractual] agreements between the parties are not before us.

Id., citing *Klamath Irrigation District v. United States*, 635 F.3d at 515 (quoting *Klamath Irrigation District vs. United States*, 227 P.3d at 1169).

The first two elements of the test were admittedly satisfied. *Opinion* at 38. It was clear plaintiffs put the water to beneficial use, and it was clear that in creating the Klamath Project, the United States acquired the water rights within the appropriate legal authorities in order to organize water deliveries to those plaintiffs for their use and benefit.

Contracts Analysis

What was not clear was whether individual contracts (noted above) had changed those interests. So, the federal court undertook a contract-by-contract analysis and came to the conclusion that with the exception of several plaintiffs, the contracts did not alter their interest in their water right, or bar them from making a takings claim. *See, e.g*., *Opinion* at 46-48. "Therefore, the shortage provisions in Warren Act contracts which immunize the United States from liability due to 'other causes' are applicable in the present case. As such, plaintiffs whose claims arise from water they receive from Irrigation Districts whose contracts with the United States contain such shortage provisions…have had their beneficial rights to receive Klamath Project water altered in such a way that they are barred from seeking compensation for a taking under the Fifth Amendment or an impairment under the Klamath Compact of those rights in 2001." *Opinion* at 47. The Court also held that "plaintiffs who leased lands in the National Wildlife Refuges are barred from recovering damages based on the denial of water to those lands." *Opinion* at 48. The reason was that those leases provided broadly that the United States "shall not be held liable for damages

Shortage Provisions

Klamath Takings

because irrigation water is not available." *Id*. Pre-project homesteaders under "Form A and B" applications — which contained water shortage exculpation provisions benefiting Reclamation — were issued patent deeds. These patents did not contain such exculpations. The Court found that the doctrine of merger applied to extinguish the applications and no disclaimer would be applicable to these water users. *Opinion* at 40-42.

Disclaimer of Liability

Almost every Reclamation contract contains a standard disclaimer of liability for water shortages. A typical disclaimer states that:

> On account of drought, inaccuracy in distribution *or other cause*, there may occur at times a shortage in the quantity of water provided for herein, and while the United States will use all reasonable means to guard against such shortage, in no event shall any liability accrue against the United States, its officers, agents or employees, for any damage, direct or indirect, arising therefrom, and the payments due hereunder shall not be reduced because of any such shortage.(emphasis added).

This disclaimer is quoted from *Opinion* at 10, and is found in six of the district plaintiffs' Warren Act contracts. Some of the Warren Act contracts at issue in the Klamath case contained this or a very similar disclaimer, but others had an important variation. The phrase "or other cause" was missing from contracts of four districts. These contract disclaimers read:

Crucial Variation

> The United States shall not be liable for failure or to supply water under this contract caused by hostile diversion, unusual drought, interruption of service made necessary by repairs, damages caused by floods, unlawful acts or unavoidable accidents.

Opinion at 10.

ESA "Cause"

The Court found this to be a critical distinction because the phrase "or other cause" included water shortages arising from meeting the requirements of the ESA biological opinions. "In the circumstances of the present cases, the presence or absence of the two words 'other cause' in a Warren Act contract is dispositive. Although 2001 was a dry year, the Bureau of Reclamation's statements in 2001 make clear that the reason the Bureau refused to supply water to the plaintiffs in 2001 was not because of drought, but because of what it perceived as the requirements of the Endangered Species Act as set forth in the FWS and NMFS Biological Opinions and of its tribal trust obligations toward the Klamath, Yurok and Hoopa Valley tribes." *Opinion* at 45. But disclaimers in the Warren Act contracts that did not have the phrase "or other cause" did not give Reclamation an out. (*see* the Court's contract-by-contract analysis in the *Opinion* at 38-48.

Tribal Trust Obligations

The repayment contracts between Reclamation and Klamath Irrigation District (KID) and Tulelake Irrigation District (TID) contained a similar broad-form Reclamation exculpation from liability:

Shortage "Causes"

> On account of drought *or other causes*, there may occur at times a shortage in the quantity of water available in Project reservoirs and, while the United States will use all reasonable means to guard against such shortage, in no event shall any liability accrue against the United States…for any damage, direct or indirect, arising therefrom and the payments to the United States provided for herein shall not be reduced because of any such shortages. (emphasis added)

Opinion at 8. The cited KID contract was dated November 29, 1954. The TID contract was dated September 10, 1956 and contained the identical water shortage provision. *Id*.

Contract Signatories

The key distinction in this contract situation, however, was that no plaintiffs were signatories to either of these Reclamation Repayment Contracts with the irrigation districts. The contracts were signed only by the districts, and not by landowners. Therefore, they were not bound by the contracts or the water shortage provisions contained in them. It was conceded that the landowners' water rights were already appurtenant to their lands within these districts, prior to the creation of the districts. There was no evidence that any landowner assumed the obligations of the contracts. *Opinion* at 42-43. The Court found that the defendant did not provide any "alternative legal grounds arising outside of the language of the contract as to why individual landowners would be bound by their terms." *Opinion* at 43.

Select Group Eligible

The Court found that there was a *select group* of class members who "asserted cognizable property interests for which they may seek compensation from defendant… ." *Opinion* at 48. On the other hand, the claims of Van Brimmer Ditch Company shareholders were dismissed for technical reasons based in part upon its position in the Klamath Basin Adjudication. *Opinion* at 31-38.

Plaintiffs' Challenges

At this point, however, one is only two-thirds of the way through the *Opinion* and some of the biggest challenges to the plaintiffs' chances of success yet remain. The first is the thorny question of whether those cognizable property interests can be regarded as eligible for a takings analysis under applicable law, and if so, what form should that analysis take? Then one must ask: would the diversion of water for ESA purposes be considered a physical taking or a regulatory taking? Finally, would the loss of water in 2001 be deemed a permanent taking or a temporary taking? After that, we come around the final turn and encounter the biggest and ultimate hurdle: the effect of senior Tribal water rights. Before we get there, let us briefly review the Court's holdings on the takings questions.

Klamath Takings

Physical Taking

Regulatory Taking

Diversion Control

Permanent Taking

Water "Gone Forever"

Subordinate Rights

Tribal Rights Senior

ESA Obligations

Junior Water Rights

Was Plaintiffs' Property Taken or Impaired?

To answer the question whether the eligible plaintiffs' interests were taken or impaired, the Court needed to decide whether Reclamation's actions constituted a regulatory or a physical taking. These are the two broad frameworks of takings jurisprudence currently active in this country. *Opinion* at 48. "A permanent physical taking involves a 'permanent physical occupation of property' and is treated as a per se taking for which the government must pay compensation regardless of the circumstances." (citations omitted; court emphasis) On the other hand, "[R]egulatory takings 'involve 'restrictions on the use of… property,' and determining whether such restrictions constitute a compensable taking requires 'balancing and "complex factual assessments" utilizing the so-called *Penn Central* test.'" (Citations omitted). *Id*. The Court decided that the government's actions "should be analyzed under the physical takings rubric." *Opinion* at 49. The court relied heavily on *Casitas Municipal Water District v. United States*, 543 F.3d 1276 (Fed Cir. 2008)(*Casitas*), a recent physical takings case involving water rights.

The United States had insisted that it did not actually operate the Klamath project diversion works, or physically redirect the water to or from UKL or the Klamath River. Having taken no physical action with regard to Project water diversions, it could not have physically taken the water. *Opinion* at 52. All Reclamation did, it argued, was issue instructions which impaired the use of the Project water. "According to defendant, these facts show that no physical taking by the government occurred because 'instructions are not physical actions.'" *Id*. The Court, however, found this argument incorrect as a matter of law, finding that diversions were clearly controlled by the government. Reclamation wrote to the irrigation districts in March 2001 stating that "no Klamath project water could be diverted…without the Bureau of Reclamation's express authorization." Opinion at 52-53. The government's letter was taken as an order. The government effectively took control of the diversion operations, and this was deemed a physical appropriation of water because it "caused the water to be diverted away from plaintiffs' property." *Id*.

Temporary or Permanent Taking?

The government argued that if its actions were to be considered as physical takings, the Court should analyze them as temporary rather than as permanent. This is because water rights are appurtenant to the land, and perpetual rights, whereas the interruption in water use occurred only in 2001. *Opinion* at 56-57. The Court rejected this argument and held that the size and scope of the physical invasion is immaterial; even if the government physically appropriates only a tiny slice of a person's holdings, a takings has occurred and compensation must be provided. *Id*. at 57. The water that plaintiffs were deprived of in 2001 is "gone forever" and as such the taking was not temporary. *Id*. at 59, citing *Casitas* at 1294 n.15.

Senior Tribal Rights: Coup de Grace to the Irrigators' Junior Claims

The United States' last line of argument was that the government did not take plaintiffs water rights because the plaintiffs' water rights were already subordinate to those of the Klamath, Yurok, and Hoopa Valley Indian Tribes. The US argued that the amount of Klamath Project water needed to satisfy the Tribes' rights was "at least equal to the quantity needed to satisfy the requirements of the Endangered Species Act… ." *Opinion* at 60. In addition, it argued that Reclamation's Revised 2001 Operations Plan showed that the water hold-back was based in part on the government's obligation to "satisfy its trust obligation towards the Tribes to supply the water to meet their senior water rights." *Id*.

The Court found these arguments persuasive. It laid out the well-settled legal bases for the Tribes' water right claims, including the statement that the Tribes' reserved rights are senior to those of all plaintiff users with a priority date of "time immemorial." *Id.* at 62. The full discussion of the well-settled law of Tribal water rights is found in the *Opinion* at 60-66. The Court followed this discussion with an in-depth analysis of the two biological opinions, with the aim of showing that the "Tribal water rights were at least co-extensive to the amount of water that was required by defendant to satisfy its obligations under the Endangered Species Act… ." *Id*. at 74. The full discussion of the interaction between the requirements of the ESA and the Tribal water rights is found at *Opinion* at 64-74.

The Court thus ended its arduous analysis of contracts, takings law, tribal water rights, and biological opinions with the holding that there was, after all, no taking or impairment because plaintiffs' time immemorial water rights are junior to Tribal rights:

> Although the court recognizes that many plaintiffs, including those who testified before the court, were severely and negatively impacted by the government's actions, the government's decision in 2001 to withhold water from plaintiffs in order to satisfy its Endangered Species Act and Tribal Trust obligations did not constitute an improper taking of plaintiffs' water rights or an impairment of plaintiffs' water rights because plaintiffs' junior water rights did not entitle them to receive any Klamath Project water in 2001. For the same reason, the government's actions did not improperly impair plaintiffs' right to Klamath Project water in violation of the Klamath Compact.

Id. at 74.

Klamath Takings

"Time Immemorial" Rights

No "Call" for Water

Unquantified Tribal Rights

***Winters* Holding**

"Calls" on Unquantified Rights?

Conclusion

While the Court's analyses of the contracts and of the nuances of takings law was presented in commendable detail, one wonders whether all of it was entirely necessary, given the final rationale for the holding. It is indisputable that the Tribal water rights have time-immemorial priority, senior to all other water rights, a conclusion unchallenged by plaintiffs. This legal fact, obvious as it was from the first page of the opinion, became decisive to the entire case 75 pages later. "Based on the superior water rights held by the Klamath, Yurok, and Hoopa Valley Tribes…the remaining class members were not entitled to receive water in 2001. The government's actions in 2001, did not, therefore, constitute a taking of these plaintiffs property… ." *Opinion* at 75.

The surprise ending to this complex mystery is that whole case turned on the simple, traditional, Western water right rule that a junior user cannot complain when a senior appropriator takes his water. A junior user cannot cry foul — or apparently claim a taking — when his right to the use of water was always subject to dispossession by a senior appropriator's prior right to use. Should this be true, though, when the senior user never made a "call" on his water? What if he could not have made his call under State law? [Editor's Note: a "call" is a request by a senior appropriator for regulation and shutoff of junior users' rights in order of priority until such time as all of the senior's right is satisfied].

The conclusion to the case did not appear to be as thoroughly analyzed as the other, technical matters that ultimately had no bearing whatever on its outcome. For example, from a traditional, prior appropriation water rights perspective, it is not necessarily obvious (at least to this author) that the existence of an unquantified Tribal right upon which no call was made, or injunction sought, means that the plaintiffs had no right to the use of their water. Nor indeed, to use the Court's own words, that the plaintiffs were not "entitled" to receive their water. The court relied partly on *Winters v. United States*, 207 U.S. 564 (1908), which involved a Tribal claim for injunctive relief to prevent the off-reservation diversion of water from Fort Belknap Indian reservation to protect unquantified Tribal water rights. *Opinion* at 65.

The Court seemed to be saying that, hypothetically, the Tribes could have sought to enforce their rights in 2001 and that the possibility of this hypothetical case was good enough to take the United States completely off the hook for any takings liability. In the present context, it is interesting to recall that in 2001, the Klamath Basin Adjudication had not yet issued a single Finding of Fact and Order of Decision (FFOD) quantifying anyone's water rights. The administrative phase of the Klamath Basin Adjudication, including contested case hearings on pre-1909 water rights and the FFODs arising from those hearings, was more than a decade in the future — Tribal rights being the last on the list to be quantified. It has also been the case that in Oregon "calls" on unquantified water have not generally been enforceable. The Oregon Water Resources Department, consistent with ORS 539.170, began enforcing calls (including as to Tribal rights) only after FFODs were issued. Nor is there any indication in this case that the Tribes in 2001 tried to call or enjoin any water diversions from UKL.

For Additional Information:

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Case Availibility:

Case number 1-591L was re-captioned from *Klamath Irrigation District, et al. v. United States* to *Lonny Baley, et al. v. United States* by order of the Court on February 14, 2017 after the claims of Klamath Irrigation District, along with a number of plaintiffs were dismissed from the case. *Opinion* PDF available at: https://ecf.cofc.uscourts.gov/cgi-bin/show_public_doc?2001cv0591-567-0

Doug MacDougal has over 30 years of experience in water rights, natural resources, and real estate law. His water-related experience includes representing clients in water rights, permitting and regulatory matters, and natural resource policy issues. Doug has been lead counsel on a number of complex water negotiations in Oregon water basins, involving federal, tribal, environmental, and private party interests. He has substantial experience in contested water cases involving water right transfers, stream and groundwater hydrology, and native rights, and has been involved in the ongoing Klamath Adjudication. He frequently consults on individual, basin, and watershed issues involving water rights, the Clean Water Act, endangered species, dams, and hydropower operations. He also has been heavily engaged in various ESA Section 7 consultations, and has undertaken a variety of due diligence assignments involving water, natural resource, and real estate issues in large multi-party transactions. His work emphasizes representation of ports, irrigation water users, ranches, and municipalities.

WATER BRIEFS

COMPACT SETTLEMENT NE/CO

REPUBLICAN RIVER

On February 22, the Governors and Attorneys General of Nebraska and Colorado announced their settlement of claims regarding Colorado's past use of water under the Republican River Compact of 1943 (Compact). The Compact equitably apportions the waters of the Republican River Basin among Colorado, Kansas and Nebraska. A new "Settlement of Claims" (Settlement) agreement between the states of Colorado and Nebraska was signed by Nebraska Governor Pete Ricketts and Attorney General Doug Peterson as well as Colorado Governor John Hickenlooper and Attorney General Cynthia Coffman, with the Settlement fully executed as of January 31, 2018. The Settlement builds upon the states' recent collaborative water management efforts and approval of detailed interstate Compact accounting procedures of water in the Republican River basin. While the States are currently in compliance with the terms of the Compact, this Settlement resolves potential claims related to alleged past violations.

Colorado agreed to pay Nebraska $4 million by December 31, 2018, contingent upon approval by the Colorado General Assembly during the 2018 legislative session. In consideration for that payment, Nebraska agreed to "waive and be forever barred from bringing all claims against Colorado for violations of the Compact and the FSS [Final Stipulation Settlement] for any accounting period ending on or prior to December 31, 2013." The Final Settlement Stipulation, dated December 15, 2002, was entered into between Kansas, Nebraska and Colorado to "resolve pending claims brought by Kansas against Nebraska" in a case before the US Supreme Court in the case of *Kansas v. Nebraska and Colorado*, NO. 126 Original…" (FSS approved by the US Supreme Court by decree on May 19, 2003, 538 U.S. 720 (2003). The Settlement stated that Colorado did not admit to violating the Compact and also that the "amount of payment was the subject of negotiation…does not constitute a valuation of water in any of the States, and may not be used by them as evidence of the value of water in any future dispute… ." The Settlement pointed out that the states wished "to continue into a new era of cooperative management of the waters of the Republican River Basin." Settlement at 1.

Governor Hickenlooper commented, "[T]he settlement provides funds that could be used in the Republican River Basin within Nebraska and creates additional opportunities for cooperative water management between the states." Attorney General Cynthia Coffman of Colorado said the agreement "avoids the costs and uncertainty of litigation and furthers the principles of the Compact, including removing controversy, fostering interstate cooperation, and ensuring the most efficient use of water in the Republican River basin." Joint Press Release (2/22/18).

Governor Ricketts recommended that his Legislature invest the funds provided through the Settlement in surface water resource conservation projects in the Republican River basin. The joint press release noted that, "Nebraska water users were affected by the reduced water supply allocated to the State, as a result of Colorado's past years of use. These water users should benefit from further investments. Since establishing their streamflow augmentation project and other measures, Colorado has been in full compliance with the Compact since 2015."

Pending approval by the Colorado and Nebraska legislatures, the funds provided through this settlement, expected sometime later in 2018, will be managed by the Department of Natural Resources for surface water related projects that will add to the existing ongoing implementation of the integrated management plans led by the Natural Resource Districts in the basin. Past significant investments include augmentation projects, proposed new excess water diversions, incentives for reducing irrigated acreage, and water efficiency technologies.

The Republican River with its 24,900 square mile watershed originates in Colorado, crosses the northwestern corner of Kansas and then flows into Nebraska. In accordance with the Republican River Compact of 1943, 49% of the water is allocated to Nebraska, 40% to Kansas, and 11% to Colorado.

Litigation battles erupted frequently in the past between the three states, including a 2015 Supreme Court judgment that ordered Nebraska to pay $5.5 million to compensate for Kansas' actual economic looses during 2005-2006 and also for "disgorgement" of Nebraska's unjust enrichment. For additional background regarding the interstate disputes between the states concerning the Republican River, *see* Griggs, *TWR* #100 and Moon, *TWR* #133.

For info: Settlement available upon request from TWR; Nebraska website: https://dnr.nebraska.gov/water-planning/republican-river-basin

"POINT SOURCE" RULING HI

POLLUTED WELLS DISCHARGE

On February 1, a three-judge panel of the 9th Circuit Court of Appeals issued a decision affirming the federal district court's summary judgment rulings "finding the County discharged pollutants from its wells into the Pacific Ocean, in violation of the CWA, and further finding the County had fair notice of what was prohibited." *Hawai'i Wildlife Fund v. County of Maui*, No. 15-17447, --- F.3d ---, 2018 WL 650973, *Slip Opinion* at 25.

The case dealt with the discharge of treated wastewater effluent by the defendant County of Maui (County), which occurred through four wells operated by the County. "Although constructed initially to serve as a backup disposal method for water reclamation, the wells have since become the County's primary means of effluent disposal into groundwater and the Pacific Ocean." *Id*. at 4-5. The County treated sewage at its facility and "then either sold [the treated effluent] to customers for irrigation purposes or injected [the effluent] into the wells for disposal." *Id*. at 5. The 9th Circuit found that the fact that "some of the treated effluent then reaches the Pacific Ocean is undisputed" although there is no direct outfall to the Ocean. *Id*. "Although the County quibbles with how much effluent enters the ocean and by what paths the pollutants travel to get there, it concedes that effluent from all four wells reaches the ocean." *Id*.

The Court reaffirmed the district court's decision that the County was liable under the federal Clean Water Act (CWA) for discharging pollutants

WATER BRIEFS

without a valid NPDES permit. The 9th Circuit found that the County's discharge of effluent into its wells constitutes "point source" discharges under the CWA. *Id*. at 10. In its Conclusion, the 9th Circuit summed up its rationale for the decision. "At bottom, this case is about preventing the County from doing indirectly that which it cannot do directly. The County could not under the CWA build an ocean outfall to dispose of pollutants directly into the Pacific Ocean without an NPDES permit. It cannot do so indirectly either to avoid CWA liability. To hold otherwise would make a mockery of the CWA's prohibitions." *Id*. at 25.

The Water Report plans on publishing a more detailed article on this decision in its April issue.

For info: Opinion available at: http://cdn.ca9.uscourts.gov/datastore/opinions/2018/02/01/15-17447.pdf

SNOWPACK RESEARCH WEST

DRAMATIC DECLINES

Climate change impact on mountain snowpack in the western US is a topic of immense importance to water managers. The Introduction of a new study highlights the critical nature of warming trends: "California's recent multi-year drought (2011-16) and its extension into Oregon and Washington has shown that warming can create drought simply by preventing the accumulation of mountain snowpack." *Dramatic Declines in Snowpack in the Western US*, Philip W. Mote, Sihan Li, Dennis P. Lettenmaier, Mu Xiao & Ruth Engel, *NPJ / Climate and Atmospheric Science*, Volume 1, Article number: 2 (2018), doi:10.1038/s41612-018-0012-1 (published online March 2, 2018), page 1.

The study focuses its attention on the dramatic declines over the last six decades found throughout the western US in varying degrees of severity. "Mountain snowpack stores a significant quantity of water in the western US, accumulating during the wet season and melting during the dry summers and supplying much of the water used for irrigated agriculture, and municipal and industrial uses. Updating our earlier work published in 2005, we find that with 14 additional years of data, over 90% of snow monitoring sites with long records across the western US now show declines, of which 33% are significant (vs. 5% expected by chance) and 2% are significant and positive (vs. 5% expected by chance). Declining trends are observed across all months, states, and climates, but are largest in spring, in the Pacific states, and in locations with mild winter climate…We find a large increase in the fraction of locations that posted decreasing trends, and averaged across the western US, the decline in average April 1 snow water equivalent since mid-century is roughly 15-30% or 25-50 km^3, comparable in volume to the West's largest man-made reservoir, Lake Mead." Abstract at 1.

The widespread nature of the declines is noted in the Results section of the study: "Nearly all (92%) of snow courses and a large fraction (78%) of VIC grid cells now post negative trends over the updated period of record 1955-present…Most of the largest negative trends are in eastern Oregon and northern Nevada, but trends < -70% also occur in California, Montana, Washington, Idaho, and Arizona."

The Discussion section notes the challenges concerning "solutions" going forward. "The magnitude of these changes relative to the built storage (reservoirs), and the certainty with which continued warming will lead to continued declines at a similar or increasing rate, illustrates the immense challenge facing western water managers. Patterns of water use that became established (even entrenched) during the climate of the past cannot be changed without intense political effort owing to large cultural, economic, and infrastructure investments in the status quo ante. Solutions cannot consist solely of future infrastructure: new reservoirs cannot be built fast enough to offset the loss of snow storage, so solutions will have to lie primarily in the linked arenas of water policy (including reservoir operating policies) and demand management."

The study makes available all data presented in the manuscript at: ftp://ftp.coas.oregonstate.edu/dist/OCCRI_SNOW. The study is highly recommended reading for any water managers and also provides significant References for the study with hotlinks to those references.

For info: Snowpack Study available at: www.nature.com/articles/s41612-018-0012-1

EARTHQUAKE RISK TX/NM

FRACKING-INDUCED QUAKES

Stanford's School of Earth, Energy & Environmental Sciences on February 8th released a new study that includes a map created by geophysicists that can help predict areas that may be at risk of fracking-induced earthquakes. The map could guide oil discovery efforts in the region. Stanford geophysicists developed the detailed map of the stresses that act in the Earth throughout the Permian Basin in West Texas and southeastern New Mexico, highlighting areas of the oil-rich region that could be at greater risk for future earthquakes induced by production operations. (*See* Jens-Erik Lund Snee, Mark D. Zoback. *State of Stress in the Permian Basin, Texas and New Mexico: Implications for Induced Seismicity*. The Leading Edge, 2018; 37 (2): 127 DOI: 10.1190/tle37020127.1). The study was supported by the Stanford Center for Induced and Triggered Seismicity, an industrial affiliates program that studies scientific and operational issues associated with triggered and induced earthquakes.

The study, published this month in the journal The Leading Edge, provides a color-coded map of the 75,000-square mile region that identifies those potential oil and gas development sites that would be would be most likely to trigger an earthquake associated with fluid injection. Previous Stanford research has shown that wastewater injected as a step in hydraulic fracturing (fracking) underlies an increase in seismic activity in parts of the central and eastern US, particularly in Oklahoma, starting in 2005. While none of these small-to-moderate earthquakes has yet caused significant property damage or injury, they represent an increased probability of larger earthquakes. Texas is poised to take center stage, as the Permian Basin is becoming the country's most important oil- and gas-producing region. In the 1920s, energy companies began extracting the basin's bountiful petroleum deposits during a boom that lasted decades. More recently, the advance of hydraulic fracturing techniques has spurred new development. Hundreds of thousands of wells could be drilled in the region in the next few decades.

In a previous study, Zoback

WATER BRIEFS

and postdoctoral scholar Cornelius Langenbruch found that in Oklahoma, fluid injection caused about 6,000 years of natural earthquakes to occur in about five years.
For info: Study available at: www.sciencedaily.com/releases/2018/02/180208141415.htm

CALIFORNIA WATERFIX CA

ECONOMIC ANALYSIS

On February 13, the California Department of Water Resources (DWR) released a Cost-Benefit Analysis for California WaterFix by Dr. David Sunding, a professor of natural resource economics at UC Berkeley. The analysis finds the first stage of the project could bring billions of dollars in benefits to Californians who obtain their water from participating State Water Project (SWP) contractors. These benefits include improved water quality, more reliable water supplies, and enhanced disaster preparedness. DWR is proposing to pursue WaterFix as planned while also considering an option to construct the project in stages. The economic analysis will help participating agencies develop and consider necessary actions.

The report found benefits exceeding costs in every scenario analyzed — even up to $1.82 in benefits for every $1 in costs. Urban agencies could see $2 billion — $4 billion in net benefits depending on the scenario analyzed. Those benefits would increase with the availability of financing through low-interest federal loans. SWP agricultural agencies would see several hundred million dollars in net benefits under several scenarios, and again those benefits would increase with the availability of federal low-interest loans and the ability to trade unwanted project shares with urban contractors. The analysis also indicates that federal contractors south of the Delta would receive benefits exceeding costs.

The report compares benefits and costs of WaterFix Stage 1 relative to what would occur if WaterFix were not built, including further restrictions designed to minimize harmful reverse flows and protect species.
For info: Analysis available at: www.californiawaterfix.com/economic-analysis/; More on California WaterFix at: www.californiawaterfix.com

SUSTAINABLE WATER CA

INTEGRATED MANAGEMENT

On February 28, UCLA released a comprehensive report entitled *LA Sustainable Water Project: Los Angeles City-Wide Overview* (2018), by Katie Mika; Elizabeth Gallo; Erik Porse; Terri Hogue; Stephanie Pincetl; and Mark Gold, UCLA: Sustainable LA Grand Challenge, (2/1/2018). The UCLA report recommends measures Los Angeles could take to reduce its dependence on imported water, including capturing local stormwater and increasing the use of recycled water.

This report assesses the potential to improve water quality standards while integrating complementary One Water Management practices that can increase potential local water supplies for the City of Los Angeles (City). This final report summarizes the current practices and future opportunities at the City-owned Water Reclamation Plants and underlying groundwater basins and highlights the importance of considering all aspects of integrated water management even when dealing with water quality or supply-focused projects.

Implementing watershed-scale best management practice programs to meet stormwater permit requirements will significantly improve water quality in all watersheds. However, additional mechanisms such as increasing Low Impact Development implementation and comprehensive source tracking and source control mechanisms will be required to potentially eliminate water quality exceedances. There are multiple efforts occurring in the City and the region to increase the recharge of recycled water into the ground and the volumes of remediated groundwater extracted.

This research further assessed the impacts of potential water supply portfolios, with greater volumes of locally-supplied water, on GHG emissions and energy needs of supplying LA's water. This research demonstrates the complex interrelationships between all aspects of urban water management, including, for example, stormwater management and local water supply.
For info: Report at: https://escholarship.org/uc/item/4tp3x8g4

STREAMFLOWS CO

IRRIGATION TIMING AGREEMENT

Cold Mountain Ranch and the Colorado Water Trust finalized a pilot agreement intended to increase streamflows in the Crystal River in drier years. The three-year agreement, born out of the Crystal River Management Plan, will compensate the Cold Mountain Ranch owners, Bill Fales and Marj Perry, for retiming their irrigation practices to leave their irrigation water in the Crystal River when the river needs it most.

Cold Mountain Ranch relies on the Crystal River to irrigate pastures and hay fields that support its cow-calf operation. Under the agreement, the Water Trust will monitor flows in the river and if flows fall to 40 **c**ubic **f**eet per **s**econd (cfs) in August or September, the ranch may voluntarily decide to shift its diversion scheduling. The Water Trust will monitor and measure the changed practice and pay the ranch $175 per cfs per day to encourage that shift. Once streamflows reach 55 cfs, payments would cease. The pilot agreement can restore up to 6 cfs in the Crystal River and has built-in incentives if other area ranches choose to join.

The Crystal River drops out of the Elk Mountains above Marble and flows north to its confluence with the Roaring Fork River at Carbondale. The river supports a number of traditional ranching operations as well as towns, recreationalists, and fish populations. During the drought of 2012, demand for water outpaced supply, and the river went dry. Local entities Roaring Fork Conservancy and Public Counsel of the Rockies hosted meetings with water users to decide what, if anything, could be done for the river. Those meetings sparked the stream management planning process, and the final Crystal River Management Plan (River Plan) was released in 2016. Stream management planning is a critical and measurable objective outcome of Colorado's Water Plan.

Drawing from the River Plan's river science and stakeholder group, the Water Trust proposed to water users options to reduce or retime their irrigation to improve flows in the river. This agreement is the first to come from that outreach. The agreement required input and review from Piktin County and Colorado Cattlemen's

WATER BRIEFS

Agricultural Land Trust, the co-holders of a conservation easement on Cold Mountain Ranch.

"When we first began this conversation with the water users on the Crystal in 2012, we lacked the legal protections and the scientific basis to put agreements like this together," said Zach Smith, staff attorney for the Water Trust. "Now, we have a pilot agreement that is designed to improve the health of the Crystal River in partnership with agriculture. It could provide a model for other communities in Colorado as well."
For info: Zach Smith, Colorado Water Trust, 720/ 204-5845 or zsmith@coloradowatertrust.org; Bill Fales, Cold Mountain Ranch, 970/ 963-2019. Crystal River Management Plan: www.roaringfork.org/your-watershed/crystal-river/stream-management-plan/

POTABLE REUSE AZ

GUIDANCE FRAMEWORK

WateReuse Arizona, AZ Water Association, and the National Water Research Institute (NWRI) have announced the publication of *Guidance Framework for Direct Potable Reuse in Arizona*, a 114- page document meant to inform the State of Arizona as it develops regulations for **d**irect **p**otable **r**euse (DPR) that are protective of public health and effectively manage the state's water resources. Published by NWRI, the *Guidance Framework* can be downloaded at www.nwri-usa.org.

DPR is an emerging strategy to improve water reliability and mitigate water scarcity that involves using highly treated municipal wastewater to augment public drinking water supplies. At present, the State of Arizona does not have guidance or regulations specific to DPR; however, in 2016, the State began revising the Arizona Administrative Code to expand the beneficial reuse of treated wastewater in Arizona. The revision process involved extensive stakeholder involvement and expertise. Notably, two technical work groups made up of stakeholders were commissioned in 2017 by the Arizona Department of Environmental Quality (ADEQ) to address a series of questions related to water reuse in Arizona, including the future of DPR. ADEQ also prepared and released a draft interim regulation in June 2017 to allow DPR under strict regulatory oversight until a final DPR regulation can be developed and enacted. Work has already begun on the final DPR regulation.

The AZ Water Association and WateReuse Arizona — active stakeholders in the process to revise the Arizona Administrative Code to include DPR — tasked NWRI with preparing the *Guidance Framework,* which involved reviewing existing potable reuse regulations, project experience in the US, and current research to develop specific recommendations regarding the development of regulations for DPR in Arizona. NWRI is a nonprofit organization experienced with the technologies, water quality, policies, and research studies associated with potable reuse across the nation, and has produced a number of research and guidance documents on DPR (including analogous reports for regulatory agencies in the states of California and New Mexico).

The recommendations in the *Guidance Framework* cover various facets of DPR, ranging from managerial (terminology, financing, outreach, operator training) to technical (pathogen reduction requirements, advanced treatment technologies, water quality and performance monitoring, facility operations).

NWRI submitted the *Guidance Framework* to the AZ Water Association and WateReuse Arizona in late January 2018. The report has since been provided to ADEQ to support the development of the regulatory framework for potable reuse in Arizona. "We are pleased that NWRI was able to support WateReuse Arizona and AZ Water in developing recommended safe and effective approaches for implementing DPR in Arizona," said Kevin Hardy, Executive Director of NWRI.
For info: John Kmiec, jkmiec@maranaaz.gov; Tim Thomure, Timothy.Thomure@tucsonaz.gov; Gina M. Vartanian, gmelin@nwri-usa.org. *Guidance Framework* at: www.nwri-usa.org

COLUMBIA TOXICS NW

ONLINE MAP

A new, online map of the Columbia River Basin shows where toxic contaminants are having an impact on fish and wildlife. The map is posted on the NW Power & Conservation Council's (Council's) website (see below). The map was developed through the efforts of a toxic contaminants workgroup whose members want to raise awareness of the issue of toxic contaminant impacts on Columbia River Basin fish and wildlife.

The workgroup focused on developing mapping products providing education on toxic contaminant issues across a broad spectrum of audiences. The group selected Polycyclic Aromatic Hydrocarbons (PAHs) as the pilot for a toxics contaminant map and public education tool. PAHs are a class of chemicals that occur naturally in coal, crude oil, and gasoline and are also produced in the burning of coal, oil, gas, wood, garbage, and tobacco. They can be present in the air and also can accumulate in places like parking lots, where runoff from rain can deposit them in streams or groundwater. These chemicals can affect humans, fish, and wildlife.

The workgroup compiled all readily available data on PAHs in the Columbia River Basin and organized those data into a standard template. The data then were incorporated into an online story map that includes information on the effects of PAHs on fish and wildlife, the potential sources of PAHs, and opportunities for reducing PAHs and their effects.

Members of the workgroup included staff from the Council, NOAA Fisheries, the Columbia River Inter-Tribal Fish Commission, Washington Department of Ecology, Oregon Department of Environmental Quality, the Lower Columbia Estuary Partnership, the Upper Columbia United Tribes, the Yakama Nation, the United States Geological Survey, the US EPA, and others.
Access Map at: www.nwcouncil.org/ext/maps/Contaminants/
For info: John Harrison, NWPCC, 503-222-5161 or jharrison@nwcouncil.org

CALENDAR

March 19 UT
Water Law & Policy Seminar, St. George. Presented by Utah Water Users Workshop. For info: Donna Keeler,801/ 292-4662 or https://conference.usu.edu/uwuw/Law.cfm

March 20 OR
Water Quality Conference: NPDES Permitting, Stormwater Management & Source Control, Portland. World Trade Center Two. For info: Holly Duncan, Environmental Law Education Center, 503/ 282-5220, info@elecenter.com or www.elecenter.com

March 20-22 CA
14th Annual Western Boot Camp on Environmental Law, San Francisco. Holland & Knight LLP, 50 California Street, Ste. 2800. Presented by Environmental Law Institute. For info: www.eli.org/boot-camp/western-bootcamp-environmental-law

March 21 CO
Environmental Law & Policy in the Age of Trump: 2018 Martz Spring Symposium, Boulder. University of Colorado School of Law, Wolf Law Bldg., Wittemyer Courtroom. For info: www.colorado.edu/law/research/gwc/events

March 22 WEB
USACE & Reclamation: Sediment Management for Multi-Purpose Federal Reservoirs Webinar, WEB. 11 am - Noon MT. Sponsored by CIRES Education & Outreach and CIRES Western Water Assessment. For info: http://cires.colorado.edu/news/announcing-reservoir-sedimentation-management-webinar-series

March 22 TX
2018 Gulf Coast Water Conservation Symposium, Houston. United Way Community Resource Center, 50 Waugh Drive. Presented by Texas Water Foundation. For info: www.eventbrite.com/e/2018-gulf-coast-water-conservation-symposium-tickets-42601464126

March 22-23 OR & WEB
The Mighty Columbia Conference, Portland. Embassy Suites Portland - Downtown. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

March 25-27 CA
2018 WateReuse California Annual Conference, Monterey. Portola Hotel & Spa. Presented by WateReuse. For info: https://watereuse.org/news-events/conferences/california-annual-conference/

March 25-28 WA
Sustainable Water Management Conference, Seattle. Renaissance Seattle. Presented by American Water Works Association. For info: www.awwa.org/conferences-education/conferences/sustainable-water-management.aspx

March 26-28 OR
Principles & Practices for Environmental Conflict: An Intensive Workshop, Troutdale. McMenamins Edgefield. Organized by Four Worlds LLC. For info: Todd Votteler, 512/ 970-9840 or votteler@waterdisputes.org

March 27 WA
The Snoqualmie Watershed Improvement District Water Bank: Providing Water for Farms, WA-AWRA Dinner Meeting, Seattle, Ivar's Salmon House on Lake Union, 5:30-8pm. For info: waawra.or

March 28 AZ
WRRC Conference 2018: The Business of Water, Tucson. University of Arizona, Student Union. Presented by Water Resources Research Centr. For info: https://wrrc.arizona.edu/conferences/2018

March 29-30 MT & WEB
Buying & Selling Ranches Seminar, Billings. Northern Hotel, 19 N. Broadway. For info: The Seminar Group, 800/ 574-4852, info@theseminargroup.net or www.theseminargroup.net

March 30 CA
2018 Water Board Data Fair, Sacramento. Cal EPA, 1001 I Street, 9am-3:30 pm. Presented by State Water Recources Control Board & ImagineH2O. For info: www.eventbrite.com/e/water-board-data-fair-2018-tickets-43041513325

April 3-4 CA
Solving Water Challenges Through Partnerships - P3 Water Summit, San Diego. Grand Hyatt Hotel. For info: www.p3watersummit.com

April 4-5 CA
California Tribal Water Summit, McClennan Park. McClennan Conference Center. Hosted by the CA Dept. of Water Resources. For info: Angela Rabe, SWRCB, 916/ 322-4266, Angela.Rabe@waterboards.ca.gov or http://www.water.ca.gov/waterplan/tribal/tws/index.cfm

April 5 CA
Water Affordability Symposium, Sacramento. California Natural Resources Agency Bldg., 1416 9th Street. Presented by State Water Resources Control Board. For info: https://goo.gl/forms/9KEAYFbGJsvwciKe2

April 5-6 NM
18th Annual Law of the Rio Grande Conference: Protecting & Enhancing Our Water Resources, Santa Fe. La Fonda. For info: CLE Int'l, 800/ 873-7130 or www.cle.com

April 6 OR
Environmental Law Under Trump: Annual Environmental Law Symposium, Portland. Lewis & Clark Law School, 10015 S.W. Tewilliger Blvd. For info: elaw@lclark.edu

April 9-11 DC
Federal Water Issues Conference - National Water Resources Assoc., Washington. Embassy Suites. For info: NWRA, www.nwra.org/upcoming-conferences-workshops.html

April 10 WY
Wyoming Water Forum: Paul Caffrey, WyGISC. "Wyoming National Hydrology Dataset (NHD) Data Stewardship", Cheyenne. Wyoming Water Development Commission at 6920 Yellowtail Rd. Presented by Wyoming State Engineer's Office. For info: http://seo.wyo.gov/interstate-streams/water-forum

April 16-18 FL
36th Annual ABA Water Law Conference, Orlando. Hilton Bonnet Creek. Presented by Section of Environment, Energy & Resources. For info: https://shop.americanbar.org/ebus/ABAEventsCalendar

April 17-18 DC
National Water Policy Fly-In, Washington. Washington Court Hotel. Presented by National Association of Clean Water Agencies. For info: www.nacwa.org/conferences-events

April 22-25 FL
GIS and Water Resources X Conference, Orlando. Rosen Centre Hotel. Presented by American Water Resources Association. For info: www.awra.org

April 24-25 WA
Lake Roosevelt Forum Conference, Spokane. Davenport Hotel. RE: Columbia River Treaty, Upper Columbia Fish Reintroduction. For info: www.lrf.org

April 24-26 CO
FLOW 2018: Managing Rivers, Reservoirs, and Lakes in the Face of Drought - Practical Tools & Strategies for Sustaining & Protecting Ecological Values of Water, Fort Collins. Hilton Hotel. Presented by the Instream Flow Council. For info: www.instreamflowcouncil.org

The Water Report
Water Rights, Water Quality & Water Solutions in the West
260 N. Polk Street • Eugene, OR 97402

CALENDAR

(continued from previous page)

April 26 WEB

Permitting for Reservoir Sediment Management Webinar - Dr. Rollin Hotchkiss, WEB. 11 am - Noon MT. Sponsored by CIRES Education & Outreach and CIRES Western Water Assessment. For info: http://cires.colorado.edu/news/announcing-reservoir-sedimentation-management-webinar-series

April 26-27 WA

Water Law in Washington Seminar, Seattle. TBA. For info: Law Seminars Int'l, 206/ 567-4490 or www.lawseminars.com

May 2-4 AZ

Arizona Water Association's 91st Annual Water Conference & Exhibition, Phoenix. Phoenix Convention Center, South Building. For info: www.azwater.org (Events > Annual Conference

May 8 WY

Wyoming Water Forum: Ramesh Sivanpillai, WyGISC. "LANDSAT Missions and Water Data", Cheyenne. Wyoming Water Development Commission at 6920 Yellowtail Rd. Presented by Wyoming State Engineer's Office. For info: http://seo.wyo.gov/interstate-streams/water-forum

May 8-11 CA

Association of California Water Agencies Spring Conference & Exhibition, Sacramento. Sacramento Convention Center. For info: www.acwa.com/events

May 9 OR

Stormwater Summit, Eugene. Lane Community College. Presented by Oregon Association of Clean Water Agencies. For info: www.oracwa.org

May 15-16 TX

Environmental Trade Fair & Conference, Austin. Austin Convention Ctr. Sponsored by Texas Commission on Environmental Quality. For info: www.tceq.texas.gov/p2/events/etfc/etf.html

May 15-16 CA

Emerging Water Technology Symposium - 6th Biennial, Ontario. TBA. Presented by Alliance for Water Efficiency. For info: www.iapmo.org/Pages/EmergingWaterTechnologySymposium.aspx

May 16-18 OR

Pacific Northwest WateReuse Conference, Portland. Sheraton Portland. Presented by WateReuse. For info: https://watereuse.org/news-events/conferences/watereuse-pacific-northwest-annual-conference/

May 21-22 NY

17th International Conference on Industiral Chemistry & Water Treatment, Queens. Hilton New York JFK Airport. For info: www.NyEventsList.com

May 23-24 NY

5th World Conference on Climate Change & Global Warming: "Abrupt Impacts of Climate Change", Queens. Hilton New York JFK Airport. For info: https://climate.conferenceseries.com

May 24 WEB

Economics of Sustainable Reservoir Sediment Management Webinar - Dr. George Annandale & Dr. Rollin Hotchkiss, WEB. 11 am - Noon MT. Sponsored by CIRES Education & Outreach and CIRES Western Water Assessment. For info: http://cires.colorado.edu/news/announcing-reservoir-sedimentation-management-webinar-series