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INSTREAM FLOWS – AN ENVIRONMENTAL PERSPECTIVE ON TEXAS LAWS

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I. INTRODUCTION

As used here, the term instream flows refers to water flowing in streams and rivers and to freshwater inflows into coastal bays and estuaries. Instream flows are put to use without any need for diverting, storing, or otherwise manipulating the water. Most obviously, water in rivers, streams, and estuaries supports fish and other aquatic species. Similarly, instream flows support birds and other wildlife that feed on aquatic species or that simply use the water or habitat along the rivers, streams, and estuaries.

Instream flows also provide a host of direct services for people. Commercial and recreational fishing along the Texas coast support about \$2 billion in economic activity each year.¹ Nature-based tourism, including bird-watching, is also a large and growing economic activity in coastal areas of Texas.² Each of these activities depends on keeping the estuaries healthy, which, in turn, depends on ensuring adequate inflows of freshwater to maintain the appropriate balance of salinity levels and nutrient and sediment inputs necessary to keep the system productive. Similarly, river flows in inland areas represent important recreational and aesthetic amenities.³

Instream flows also play a key role in maintaining adequate water quality in rivers and streams and in coastal bays and estuaries. We rely on the assimilative capacity of stream and river flows and freshwater inflows to finish the job of wastewater treatment.⁴ If the amount of flow is reduced by increased diversions while the amount of pollution inputs stay the same, water quality we can expect water quality to deteriorate. Upgrading the measures used to control pollution to offset the loss of flows could be very expensive.

In the past, instream flows provided these services without the requirement of any overt effort by us. We just had to stay out of the way. No, however, we are transforming patterns of flow to the extent that affirmative action is needed to ensure that appropriate levels of instream flows continue to be available. One of the key challenges is

¹ Larry McKinney, *Why Bays Matter: Texas Needs Bays and Texas Bays Need Fresh Water*, 61 TEX. PARKS & WILDLIFE 24 (2003).

² *Id.*

³ Amenities such as the San Antonio river walk and the hike and bike trail around Town Lake in Austin are two examples. Another example is the tubing and canoeing activities that are big business on the Guadalupe River above and below Canyon Lake.

⁴ See Steven J. Shupe & Lawrence J. MacDonell, *Recognizing the Value of In-Place Uses of Water in the West: An Introduction to the Laws, Strategies, and Issues*, in INSTREAM FLOW PROTECTION IN THE WEST 1-3 (Lawrence J. MacDonnell & Teresa A. Rice rev. ed. 1993) (noting that a reduction in instream flow could lead to the need for more stringent pollution treatment); Bonnie G. Colby, *Benefits, Costs and Water Acquisition Strategies: Economic Considerations in Instream Flow Protection*, in INSTREAM FLOW PROTECTION IN THE WEST 6-12 (giving examples of water quality benefits that may be adversely impacted by reduced flows).

determining what the "appropriate levels of instream flows" are. This paper will not attempt to address that issue. The answer involves aspects of both science and policy. The view of this author is that we know enough to get started on a serious effort to establish comprehensive instream flow protection programs. We need to make the best decisions possible based on what we know today and find ways, consistent with protecting the reasonable expectations of water rights holders, to make adjustments in the future.

This paper will provide a brief summary of where we are today in Texas with respect to instream flow protection and of how we got here. It will also provide a discussion of various mechanisms that might be used for moving forward from here.

II. THE CURRENT STATUS OF INSTREAM FLOW PROTECTION AND HOW WE GOT HERE

Currently, instream flows are protected in three primary ways: express conditions contained in recently issued water rights permits, permits that have instream use protection as an authorized use, and water rights placed in the Texas Water Trust. Unfortunately, the sum total of those protections is pretty slight compared to the size of the challenge to be met. Fortunately, however, a large portion of the existing water rights in Texas are not fully used, which means that we have time to make appropriate adjustments.

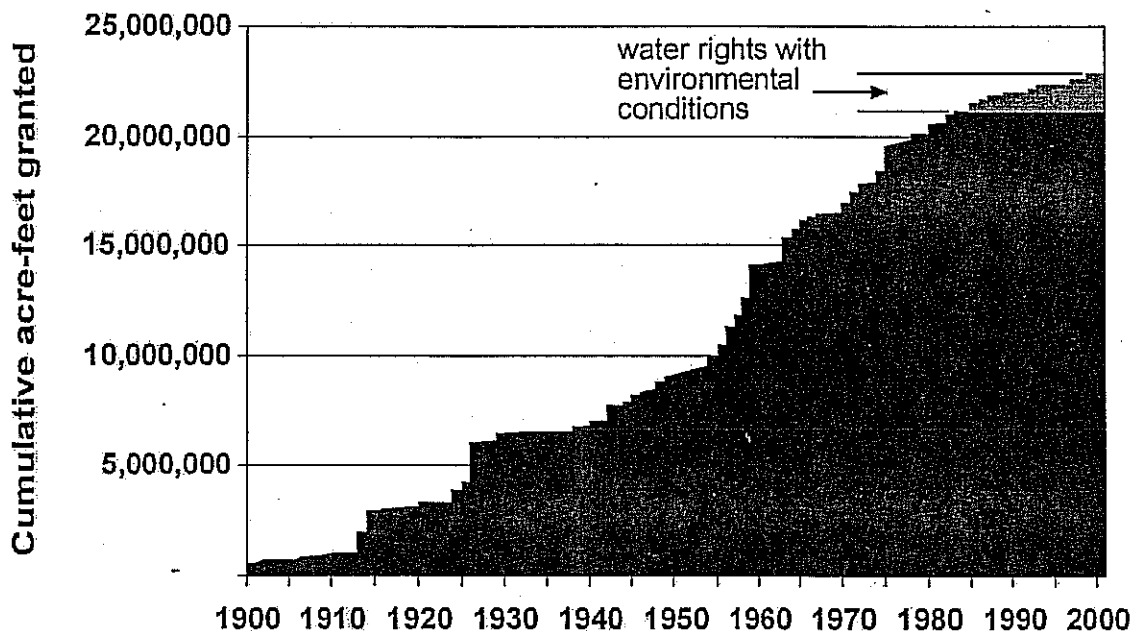
The inclusion in permits of conditions to protect environmental flows is a relatively recent development in Texas water law. Usually, those conditions limit diversions of water for the purposes authorized in the permit by requiring that a stated amount of flow be allowed to pass downstream of the diversion point.⁵ However, very few water rights include such protective conditions. Moreover, because those water rights with conditions generally are the ones with the most junior priority dates, the practical value of the protections is limited particularly during dry periods. During those dry periods, more senior rights that do not include such conditions generally will have the superior claim to the water.

In 1985, amendments to the Texas Water Code directed that consideration of permit conditions to protect instream uses should be a consistent part of the water rights permitting process. Because we have been issuing water rights in Texas for over 100 years and because most of those rights are perpetual, the vast majority of water rights do not include such instream flow protections. The figure reproduced below provides an approximation of the ratios between those two categories. In addition, because water rights permits, with the exception of the middle and lower portions of the Rio Grande basin, are based on the priority system of first-in-time, first-in-right, those older rights

⁵ See Texas Natural Resource Conservation Commission, A Regulatory Guidance Document for Applications to Divert, Store or Use State Water 37-48 (June 1995) (providing a good overview of how the TCEQ assesses water rights applications and develops permit conditions, although the publication is now somewhat outdated because of altered statutes).

without flow protections have the first claim on the water.⁶ Thus, during times of shortage the instream flow protection provisions in junior permits may provide only limited benefits because virtually all of the available flows could be diverted pursuant to the senior rights. Many of the basins in Texas are, for all intents and purposes, fully appropriated or even over-appropriated.⁷ However, those instream flow protection conditions still are critically important for minimizing adverse impacts.

Texas Water Rights - Timeline of all consumptive rights granted



Source: data from Texas Commission on Environmental Quality.



A. A Summary of Current Law

Section 11.147 of the Water Code is one of the key provisions addressing protection of instream flows. The permitting agency, now the Texas Commission on Environmental Quality (TCEQ), is directed to “assess the effects, if any, of the issuance of the permit on the bays and estuaries of Texas.”⁸ That requirement applies to any permit to take, store, or divert water. The provision goes on to direct that, for permits issued within an area no more than 200 river miles from the coast, TCEQ “shall include in the permit, to the extent practicable when considering all public interests” and the results of various studies, “those conditions considered necessary to maintain beneficial inflows to any affected bay

⁶ See Frank R. Skillern, I TEXAS WATER LAW 75 (1988) (describing the operation of the prior appropriation system).

⁷ Even in “over-appropriated” basins, water would be available during wetter years. Depending on the required reliability of water rights sought and on the availability of storage, water might still be available for appropriation.

⁸ TEX. WATER CODE ANN. § 11.147 (b) (Vernon 2000 & Supp. 2004).

and estuary system.”⁹ Thus, TCEQ is directed to consider the impacts of any permit, regardless of the location, on Texas bays and estuaries. For those permits located closer to the coast, there is additional direction to take special care to ensure that freshwater inflows are protected.

Section 11.147 also goes on to direct TCEQ to include “to the extent practicable when considering all public interests, those conditions considered by the commission necessary to maintain existing instream uses and water quality of the stream or river”¹⁰ Thus, protections are not just limited to bays and estuaries. Finally, Subsection (e) of Section 11.147 directs TCEQ to include “to the extent practicable when considering all public interests, those conditions considered by the commission necessary to maintain fish and wildlife habitats.”¹¹ Prior to 2003, those latter two subsections only directed TCEQ to “consider the effect” of permit issuance on instream uses, water quality, and fish and wildlife habitats. However, the agency did routinely include protective conditions prior to the most recent change in language.

Section 11.150 provides further direction on the issue of impacts to fish and wildlife habitats. That provision applies in the case of applications involving more than 5,000 acre-feet of water and directs TCEQ to assess effects on fish and wildlife habitats and authorizes the agency to require “reasonable actions to mitigate adverse impacts on such habitat.”¹² This provision is understood to apply to protection of terrestrial habitats, particularly those affected by reservoir construction. Section 11.046 also provides specific authority for TCEQ to include a requirement when issuing a permit that surplus water be returned to a stream for purposes of protecting, among other things, instream uses.¹³ The Water Code also provides for emergency suspension of permit conditions imposed to protect bays and estuaries and instream uses.¹⁴

Because so many existing water rights permits were issued without conditions to protect instream uses, the handling of reuse of wastewater and of permit amendments becomes critically important. Particularly for municipal uses, a significant percentage (often on the order of 50%) of the water diverted may be returned to the stream, or to some stream, as wastewater return flows. However, as water demands grow, there is increasing interest in reusing those return flows. Direct reuse involves the reuse of wastewater before it is ever

⁹ *Id.*

¹⁰ *Id.* at §11.147 (d). Section 11.150 of the Water Code also directs TCEQ to assess impacts on water quality “in this state.” *Id.* at § 11.150. That language is broader than the Section 11.147 (d) language which directs the inclusion, as appropriate, of conditions to protect “water quality of the stream or river to which the application applies.” *Id.* at § 11.147 (d). The broader charge of Section 11.150 might be important, for example, in the case of a transfer of water from one stream to another where the water quality of the receiving stream also might be affected.

¹¹ *Id.* at §11.147 (e).

¹² TEX. WATER CODE ANN. §11.152 (Vernon 2000). The provision allows TCEQ to provide for offsets in determining mitigation requirements if the project actually results in a net benefit within a particular habitat type. In addition, TCEQ is directed to provide offsets for mitigation required pursuant to federal law.

¹³ TEX. WATER CODE ANN. §11.046 (b) (Vernon 2000).

¹⁴ TEX. WATER CODE ANN. §§ 5.506, 11.048 (Vernon 2000). Those two provisions are very similar. Permit conditions may be suspended upon a finding of an emergency that cannot practically be resolved in another way.

returned to a stream and, if within the authorized use of the underlying water rights permit, does not currently require additional water rights authorization.¹⁵ Indirect reuse involves the discharge of return flows to a stream and the subsequent diversion of that water. Indirect reuse does require separate water rights authorization. The exact nature of that authorization is the subject of spirited debate before TCEQ.

If treated as involving a new appropriation, the statutory provisions discussed above would control for purposes of imposing permit conditions to protect instream uses. If, however, indirect reuse is treated as involving only "bed and banks" authorizations, then different statutory provisions apply. Section 11.042 addresses "bed and banks" authorizations. Subsection (b) of that Section deals with groundwater-derived return flows. It authorizes TCEQ to include conditions "to help maintain instream uses and freshwater inflows to bays and estuaries."¹⁶ Similarly, Subsection (c), which deals with other categories of bed and banks authorizations, provides that TCEQ may include special conditions to address, among other things, protection of instream uses.¹⁷

A few water rights do include instream use protection as an explicit authorized use of state water. For example, the water rights held by the Lower Colorado River Authority for Lake Travis and Lake Buchanan include instream uses as one of the purposes for which water is authorized to be impounded and used.¹⁸ However, other than in rare circumstances, the inclusion of that additional authorized use does not guarantee any particular amount of flow in a stream or river because the water also can be consumed for the other authorized purposes, such as for municipal, industrial, or irrigation use. In addition, a water right on the Rio Grande has been converted to instream use protection and placed in the Texas Water Trust for permanent dedication to the exclusive purpose of environmental flow protection.¹⁹

The Texas Water Trust was established in 1997. The stated purpose of the Trust, which is a part of the water bank created at the Texas Water Development Board to facilitate water transfers, is to "hold water rights dedicated to environmental needs, including instream flows, water quality, fish and wildlife habitat, or bay and estuary inflows."²⁰ However, until the 2003 donation on the Rio Grande, it contained no water rights. Two other provisions of the Water Code provide for a statutory appropriation for instream flow

¹⁵ See TEX. WATER CODE ANN. § 11.046 (c) (Vernon 2000) ("Except as specifically provided otherwise in the water right, water appropriated under a permit, certified filing, or certificate of adjudication may, prior to its release into a watercourse or stream, be beneficially used and reused by the holder of a permit, certified filing, or certificate of adjudication for the purposes and locations of use provided in the permit, certified filing, or certificate of adjudication.").

¹⁶ TEX. WATER CODE ANN. § 11.046 (b) (Vernon 2000).

¹⁷ *Id.* at § 11.046 (c).

¹⁸ See, e.g., Certificate of Adjudication No. 14-5478A (including "instream flow and bay/estuary use"); Certificate of Adjudication No. 14-5482A (including "instream flow and bay/estuary use").

¹⁹ See Chris Roberts, *Ranchers Give Gifts to Rio Grande; Donated Water Will Benefit a Stretch That is Known as 'The Forgotten River,'* TEL. HERALD, Nov. 23, 2003, at B4 (noting donation of 1,236 acre-foot water right by rancher Kit Bramblett to the Texas Water Trust to benefit the stretch of the Rio Grande between El Paso and Big Bend National Park), available at LEXIS, News & Business, News, News Group Files, All.

²⁰ TEX. WATER CODE ANN. § 15.7031 (a) (Vernon 2000).

protection purposes of five percent of the yield of a reservoir constructed with state financial support under the Texas Water Assistance Program if the reservoir is located within 200 river miles of the coast.²¹

B. Recent Developments

Several large applications were filed several years ago seeking water rights for the sole purpose of protecting environmental flows. Certainly, the most talked about of those is the application filed by the San Marcos River Foundation (SMRF) for a water right permit to maintain flows in the San Marcos River and freshwater inflows into the Guadalupe Estuary.²²

The overall rationale for the filing of the instream flow applications is fairly straightforward. If a permit is issued for a specific amount of flow for environmental flow protection purposes at a particular location, no one with a junior water right can take that water out upstream for other purposes. Thus, it is a way to get protection for instream uses that is commensurate with the protections given for all other types of uses of water. Of course, in many river systems, the fact that existing, senior water rights already have been issued for almost all of the flow available other than during wet periods, greatly limits the dependability of potential instream flow water rights.²³ However, such an approach does represent a way to minimize the extent to which the current situation, in terms of protection of environmental flows, could be made worse. Generally speaking, an actual environmental flow permit would provide much greater certainty and enforceability than relying on potential conditions on some future permit to divert water for other uses.

²¹ TEX. WATER CODE ANN. §§ 15.3041 (a), 16.1331(a) (Vernon 2000).

²² Other similar applications were filed by the Caddo Lake Institute, Inc. (seeking protection for flows in the tributaries of and into Caddo Lake, which has been declared administratively complete and assigned application no. 5787); Matagorda Bay Foundation (seeking protection for inflows into Matagorda Bay from sources other than major rivers); and Galveston Bay Conservation and Preservation Association (seeking protection for inflows into Galveston Bay).

The Lower Colorado River Authority Foundation and the Lavaca-Navidad River Authority also filed applications for instream flow protection. However, those applications might most appropriately be viewed as "better us than them" filings.

²³ For example, in the case of the San Marcos River Foundation, the application sought an annual flow amount of 157,469 acre-feet to be measured at a point on the San Marcos River. TCEQ staff recommended reducing that requested amount to 87,106 acre-feet with a specific monthly distribution. TCEQ staff then noted that, based on a modeling analysis assuming a repeat of historical conditions, the full 87,106 acre-feet would not be available during any particular calendar year and would only be available during 26% of the months. Similarly, TCEQ staff recommended reducing the amount requested for inflows to the Guadalupe Estuary from 1.3 million acre-feet to 980,494 per year with a specific monthly distribution and determined that amount would be available in 3.6% of years and 44% of the months. TNRCC (at that time TCEQ was still called the Texas Natural Resource Conservation Commission or TNRCC) Interoffice Memorandum from Kathy Alexander to Iliana Delgado, August 26, 2002. Depending on the specific type of use requested, TCEQ may grant a permit even if the water requested would not be available on a consistent basis. Assuming the amounts chosen as representing environmental flow needs are appropriate (or at least are not too high), that analysis suggests that environmental uses in the San Marcos River and the Guadalupe Estuary would be in serious trouble, even without the authorization of new diversions, if all existing water rights were fully used.

The SMRF application elicited spirited responses. TCEQ staff found the application to be consistent with basic regulatory requirements, determined it to be administratively complete, and directed the publication of notice of the application. However, on March 19, 2003, the TCEQ Commissioners considered the matter and voted to deny the application. The brief written order states that, in the judgment of the three commissioners, protective conditions on new permits, use of the Texas Water Trust, and a statutory dedication of 5 percent of the firm yield of certain reservoirs built with state funds are the means by which instream uses are to be protected.²⁴ The TCEQ decision has been appealed to State District Court in Travis County, where it remains pending.²⁵ In response to the filing of those instream use applications, the Texas Legislature enacted SB 1639.

The environmental flow provisions of S.B. 1639 established a temporary moratorium on the issuance of new permits²⁶ for instream flow protection until September 1, 2005 and established a Study Commission on Water for Environmental Flows. That moratorium has now expired. The Study Commission produced a report that resulted in the environmental flows provisions that made up Article 1 of S.B. 3, discussed below.²⁷ Another provision of S.B. 1639 sets out a "policy regarding waters of the state." That policy statement does acknowledge the importance of maintaining the "biological soundness" of rivers, lakes, bays and estuaries.²⁸ It also states that "state water may be appropriated only as expressly authorized by law" and goes on to say that "the legislature has not expressly authorized granting water rights exclusively" for instream flow protection.²⁹ The actual legal effect of that language is not clear because it seems to represent an interpretation by the current legislature of the actions of previous legislatures.

III. SOME OPTIONS FOR MOVING FORWARD FROM HERE

Fortunately, many of the existing water rights are not fully used. That means, in most instances, we have an opportunity to take steps now to protect healthy river and bay systems rather than having to figure out to restore severely damaged systems. The challenge is to develop a comprehensive approach for doing so.

²⁴ TCEQ Docket No. 2003-0027-WR, March 20, 20003, Order "denying the application by San Marcos River Foundation for a new water right to appropriate 1.3 million acre-feet of water per annum from the Guadalupe River to maintain streamflows for beneficial nonconsumptive instream use and to maintain beneficial inflows of freshwater to the Guadalupe Estuary, and related hearing requests."

²⁵ There actually are two, virtually identical, cases pending. The first, Cause No. GN3-01251, was filed April 18, 2003. The second, Cause No. GN3-01925, was filed June 2, 2003. The two separate filings result from uncertainty about the date on which the TCEQ order denying the application actually became final. Several of the other applicants also have appealed the dismissal of their applications.

²⁶ Codified at TEX. WATER CODE ANN. § 11.0237 (Vernon Supp. 2004). Significantly, the moratorium language was expressly qualified to note that the moratorium did not apply to applications to convert existing water right permits to environmental flow protection.

²⁷ Information about the Study Commission and the text of the report can be found at http://www.senate.state.tx.us/75r/senate/Commit/c890/c890_78.htm.

²⁸ Codified at TEX. WATER CODE ANN. § 11.0235 (Vernon Supp. 2004).

²⁹ *Id.*

A. Establishing a Process for Balanced Input: the SB 3 Approach

Increasingly, the need to provide protection for instream flows is acknowledged as a key issue for water management in Texas. However, there has not been agreement about how that should be accomplished. Senate Bill 3 (SB 3),³⁰ the omnibus water bill that was considered earlier this year during the regular legislative session but ultimately did not pass, would have established a stakeholder-based process for helping to guide the determination of the amount of water needed to meet instream flow needs. Although SB 3 did not pass, the environmental flows provisions enjoyed broad support. There seems to be a reasonable probability that those provisions will be introduced in a future session and passed into law. Accordingly, it seems worthwhile to discuss the concepts included in the legislation.

SB 3 would have directed TCEQ to develop, by rule, environmental flow standards determining the amount of flow that should be available to keep rivers and estuaries healthy and productive. As part of those standards, TCEQ would have been directed to establish environmental flow set-asides of unappropriated water that would not be available for future authorization for consumptive water use. Those set-asides would have been subject to suspension and use to meet human water needs in response to temporary emergency situations. The environmental flow standards, and set-asides, would have been subject to periodic revision through a repetition of the process described below.

To help inform TCEQ's rulemaking decisions, SB 3 also would have established bay/basin advisory groups. There would have been two types of advisory groups for each major bay/basin system. The newly created Environmental Flows Commission would have appointed stakeholder groups for each bay/basin system. Those stakeholder groups, in turn, would have appointed expert science teams of individuals with relevant knowledge and expertise. The expert science team would have been directed to consider the best available science and to develop environmental flow recommendations based solely on what the available science indicates the system needs. The stakeholder group would have taken the recommendations of the expert science team and, considering them in the context of competing human water needs, developed its own recommendations for how much environmental flow should be provided. Both groups would have been required to represent balanced perspectives, open their meetings to the public, and, as much as possible, operate by consensus. The stakeholder group also was to have considered various methods, in addition to the environmental flow set-aside, for meeting the environmental flow standards. The recommendations of both groups would have been presented to TCEQ for its consideration, along with other input, in the rulemaking process.

In recognition of the rapidly dwindling supply of unappropriated water, SB 3 would have set a fairly ambitious schedule for developing environmental flow standards. Even so, given the number of bay/basin systems, it would have taken many years to complete the process. As a result, there was acknowledgement that numerous applications for major

³⁰ The text of SB 3 can be viewed at <http://www.capitol.state.tx.us> by selecting "79th Regular Session - 2005" and searching for SB 3. The environmental flows provisions are contained in Article I of the bill.

water rights could have been approved before applicable environmental flow standards were developed. In recognition of this, SB 3 acknowledged the importance of adaptive management as a way to respond to new information and changed circumstances and would have provided for a limited reopener provision for consumptive water use permits issued after the effective date of the bill. In order to provide certainty for water rights holders, additional flow protections imposed through the reopener provision could not have increased environmental flow requirements by more than 12.5%, when compared to the flow protections in the permit as issued.

SB 3 would have permanently banned the granting of new water rights permits for the purpose of protecting environmental flows. Environmental flow set-asides would play the role that such permits might have played. However, the bill would have expressly authorized TCEQ to approve requests to convert existing water rights to environmental flow protection purposes and requests to add environmental flow protection as an additional authorized use for existing permits. A newly constituted Environmental Flows Commission, along with a state-level science advisory group, would have helped to oversee the stakeholder process and would have been charged with reviewing ways to facilitate the voluntary conversion of existing rights to environmental flow protection.

As discussed above, just as for permit conditions to protect instream uses, an environmental flow set-aside will work only to the extent that there is unappropriated water to be set-aside. Even if the process for establishing set-asides is enacted in 2007, there may well be many water rights applications approved before then. Various combinations of applications for new permits and for indirect reuse authorizations are pending before the agency in an amount of more than three million acre-feet. As a result, the impact of the set-asides in addressing instream use needs may be significantly more limited than originally envisioned.

Regardless, a key part of the promise of SB 3 is the creation of regional venues for competing interests to focus on getting to an agreed-upon resolution of the amount of water needed for instream flow protection. Fights over the adequacy of the science have the potential to bog down progress on this issue for years to come. The SB 3 approach would acknowledge the need to act on the information we have and to make reasonable adjustments as we learn more. That process also would acknowledge that environmental flow set-asides would not be adequate in many circumstances to provide for adequate protection of instream uses. As a result, it also would charge regional stakeholder groups with the task of recommending other regionally-appropriate protection options to be pursued.

B. An Overview of Potential Flow Protection Options

1. Conditions on prospective rights

Although a relatively recent development in terms of water rights permitting, the inclusion of environmental conditions is now a well-established practice in Texas water law. Putting conditions on new rights does not address flow problems created by existing rights. In other words, although placing conditions on new rights can help to minimize

the environmental damage caused by the exercise of the new rights, it generally does not address situations where, as a result of existing rights without such conditions, available stream flow is not adequate to meet environmental flow needs and existing paper water rights. For such "over committed" streams, conditions on new rights generally will only serve to minimize the degree to which the permit worsens an already unacceptable situation. Of course, it is critically important to continue to include protective conditions to do just that.

2. New Water Rights for Environmental Flows

This option has already been discussed above in the context of the application by the San Marcos River Foundation. A fundamental limitation on the value of this approach for providing environmental water is that it results in permits junior to all existing water rights. As a result, this approach has limited value for watersheds that already are heavily appropriated or even overappropriated. However, a more fundamental limitation on this approach, particularly beyond the applications currently pending in court, is the apparent disfavor of it by the Texas Legislature.

3. Reservation from Appropriation

Another approach to protection of environmental flows would be for TCEQ simply to reserve water from appropriation.³¹ In a reservation process, no water right for environmental uses would be granted. Instead, the agency simply would "reserve" unappropriated water from permitting. Like granting permits for environmental needs, this approach is contingent on the existence of an adequate amount of unappropriated water and, thus, suffers from the same limitations. In addition, this approach provides significantly less certainty for meeting environmental water needs than issuing an environmental flow permit. It is likely that any reservation would be subject to agency reconsideration. In addition, because there would be no specific water right, it is not clear that any entity, other than perhaps TCEQ, would have the right to enforce the reservation. The environmental flow "set-asides" that would have been provided for in SB 3 would be a form of reservation.

4. Cancellation of existing rights

Even though the concept of making rights subject to cancellation for non-use is a basic tenet of our water rights system, that basic tenet seems increasingly to be disfavored. Rights to use publicly-owned water traditionally were granted without charge on the premise that authorizing use of the water was necessary in order to encourage economic growth. If the water isn't being put to use, the right is subject to being cancelled so that it might be put to use in some other fashion.³² Accordingly, water rights are described as

³¹ For examples of statutory provisions expressly establishing programs for reservations, see KAN. STAT. ANN. § 82a-703a; MONT. CODE ANN. § 85-2-316; and UTAH CODE ANN. § 73-6-1.

³² The Water Code recognizes this basic concept in three separate ways. First, a water right is subject to being canceled if the holder of the right does not timely commence and pursue construction of any required diversion or impoundment infrastructure. TEX. WATER CODE ANN. §11.146 (Vernon 2000 and Supp. 2004). Second, the Water Code provides for cancellation of a water right after ten consecutive years of unjustified nonuse. *Id.* at §11.177. The Legislature has adopted significant limitations and exceptions to

being usufructuary rights rather than ordinary property rights. However, significant cancellations of water rights have been a very rare event in Texas. Recent legislative changes have further limited the potential for cancellation of unused water rights.³³ Even if a right were cancelled, instream uses might not benefit significantly if the water simply gets diverted by the junior appropriator who is next in line or if the newly available water simply forms the basis for the issuance of a new consumptive water right.

5. Conditions on water rights amendments

A major reason that Texas streams, rivers, and coastal bays generally continue to experience adequate flows during most years is that a large percentage of surface water rights in Texas are not fully used.³⁴ As discussed above, most water rights, particularly the most senior ones, do not contain conditions to protect environmental flows. This places more recent water rights at a double disadvantage as compared to older rights. The recent water rights are junior in priority to those older (senior) water rights, so, in times of shortage, the available water will go first towards satisfying the senior rights. In addition, the more recent (junior) rights contain conditions to minimize adverse impacts to instream uses that limit the exercise of the diversion or storage rights when water is otherwise available to them.

Water rights authorize only the diversions and uses listed in the permit.³⁵ If a change in a water right is sought, such as a request to use the water in another location or for another purpose, an amendment is needed to authorize the change.³⁶ Such amendments could be conditioned on making the changed authorization subject to some reasonable level of instream flow protection.³⁷ When an amendment is sought, the water right holder is seeking an authorization to use state water in a manner not previously authorized. Accordingly, there is a strong policy basis for placing new conditions on the water right in exchange for approving the requested authorization. That policy basis is particularly strong in instances where the right to use state water is being sold for a profit. However, this approach is likely to be quite controversial because of potential adverse effects on the water rights market.³⁸ Those potential adverse impacts could be limited by having a flat

the cancellation process. *See, id.* at §11.177 (b), 11.183, 11.184, and 11.186. Finally, the Water Code also provides for forfeiture of a water right for willful abandonment for three consecutive years. *Id.* at §11.030.

³³ Both Senate Bill 1 (1997) and Senate Bill 2 (2001) included new limitations on the cancellation of water rights. *See*, TEX. WATER CODE ANN. § 11.173 (b) (Vernon Supp. 2004).

³⁴ Texas currently has issued more than 20 million acre-feet per year of surface water rights, but annual usage of surface water for 1999 was estimated to be only about 6.72 million acre-feet. *See* 1 TEXAS WATER DEVELOPMENT BOARD, WATER FOR TEXAS – 2002, at 47 (2002), available at http://www.twdb.state.tx.us/publications/reports/State_Water_Plan/2002/FinalWaterPlan2002.asp (noting that about 42% of the 16 million acre-feet (.42 X 16 = 6.72) of water used in 1999 was surface water).

³⁵ TEX. WATER CODE ANN. § 11.025 (Vernon 2000).

³⁶ *See* 30 TEX. ADMIN. CODE § 295.71 (West 2003) (Tex. Comm'n on Envtl. Quality, Applications to Amend a Permit) (setting out the permit amendment process).

³⁷ Exceptions to this approach likely would be appropriate in some situations, such as for very minor changes, for amendments to water rights initially obtained and used for long-term municipal water supply, and when instream uses already are adequately protected.

³⁸ In 1997, the Texas Legislature directed a move towards reducing the extent of reviews of some water rights amendments. *See* TEX. WATER CODE ANN. § 11.122(b) (Vernon Supp. 2004) (directing the

percentage limit on the impact of the conditions so that all parties would know, from the very instigation of consideration of the transaction, what the implications are.

This approach could also be implemented on a limited basis by applying it only to the extent that the right has not been fully perfected. An appropriation of surface water is not effective until the water has been beneficially used as authorized in the permit.³⁹ Until the full amount authorized has been used in that way, the right is not fully perfected.⁴⁰

6. Voluntary acquisition of existing rights

Another option that has been used in other states, and that has seen some success, is the actual voluntary acquisition of existing water rights from willing sellers and the conversion of those rights to environmental uses. Although there are issues regarding how to quantify and implement the conversion of such rights, by far the biggest impediment to this approach is the lack of funding to support acquisition.

Water rights also could be donated to a governmental entity, such as the Texas Parks and Wildlife Department, or to the Texas Water Trust for environmental purposes. Similarly, the holders of water rights for various consumptive purposes could convert them to instream flow protection. However, it is not clear that adequate incentives exist to encourage large amounts of such donations or conversions.

7. Conservation funding and conversion of saved water to instream flow purposes

Another potential option would be to provide state assistance to water right holders to achieve more efficient use of existing supplies. In order to ensure benefit to environmental flows, that assistance might be conditioned upon the conversion of all, or a portion, of the saved water to instream flow purposes. The concept is attractive because it would help to achieve increased water efficiency, maintain existing uses of water, and help protect the state's fish and wildlife resources. However, the approach certainly would be expensive and quantification of the amount of water saved could be difficult.

8. Dedication of return flows

As flow patterns have become more and more altered, return flows have become an increasingly important component of instream flows. Return flows, even apart from water

assumptions to be used in reviewing amendment applications and directing the approval of applications under various circumstances). However, TCEQ's application of that statutory language and the degree to which the agency limited its review was successfully challenged in court. *See City of Marshall v. City of Uncertain*, 124 S.W.3d 690, 699 (Tex. App.—Austin 2003, pet. granted) (affirming the trial court ruling that TCEQ was required to offer the opportunity for a contested case hearing in determining if the prerequisites for approving the requested amendment were met).

³⁹ TEX. WATER CODE ANN. § 11.025 (Vernon 2000) ("A right to use state water under a permit ... is limited not only to the amount specifically appropriated but also to the amount which is being or can be beneficially used for the purposes stated in the appropriation, and all water not so used is considered not appropriated.").

⁴⁰ *See* TEX. WATER CODE ANN. §§ 11.026 (Vernon 2000 & Supp. 2004) ("No right to appropriate water is perfected unless the water has been beneficially used for a purpose stated in the original declaration of intention to appropriate water or stated in a permit issued by the commission or one of its predecessors.").

quality issues, may have both positive and negative impacts. A conversion of a natural system from one characterized primarily by seasonally variable flows to one more dominated by relatively constant return flows can adversely affect the natural system.⁴¹ However, return flows can play a critically important role in replacing flows that have been captured by diversions and impoundments upstream. The rapidly increasing interest in the reuse of return flows illustrates the fragility of the increasing dependence on return flows as a source of water for instream flow protection. Some mechanism for ensuring the continued presence of a minimum level of return flows also appears necessary. That could come through the use of a variety of the means discussed above, such as conditions on new permits and on permit amendments, voluntary commitments, or even voluntary acquisitions.

IV. THE CONSEQUENCES OF FAILING TO ACT

Protection of instream flows is critically important economically and for preserving Texas' natural heritage. Ultimately, we must act to protect them. If we act now, we have many available options. If, however, we wait until conditions become more severe, the options become less attractive. There already are examples here in Texas and around the country of how that might play out.

The involuntary imposition of conditions on existing rights, undoubtedly, is a highly controversial alternative. The Public Trust Doctrine is a potential mechanism that could support this type of approach. The most well-known example of the application of the doctrine is the Mono Lake case in California.⁴² This doctrine recognizes the usufructuary nature of water rights and the unique status of the water itself as a publicly-owned resource that carries with it a requirement to protect broad public interests. The author is not aware of any example of the doctrine ever being applied to condition existing water rights in Texas.

The federal Endangered Species Act⁴³ (ESA) also may play a significant role in ensuring that water is available for instream uses. The potential implications of the ESA for water rights issues have been illustrated in Texas through the examples of the multiple species associated with the San Antonio portion of the Edwards Aquifer and of the Concho River water snake. One obvious limitation is that the ESA comes into play only when a species listed as threatened or endangered under that Act is likely to be affected. The ESA can

⁴¹ As summarized by the Science Advisory Committee to the Study Commission on Water for Environmental Flows: "The principal goal of providing environmental flows is to assure that sufficient quantities of water, reflecting seasonal and yearly fluctuations, as well as the frequency, timing, and volume of high-flow events, are made available to adequately protect the state's aquatic resources." Science Advisory Committee Report on Water for Environmental Flows (Oct. 26, 2004) at p. 1-7 (emphasis added).

⁴² In *National Audubon Society v. Superior Court*, 658 P.2d 709, cert. denied, 464 U.S. 977 (1983), the California court recognized that existing water rights are subject to limitation pursuant to the public trust doctrine. That ruling resulted in a major restriction on diversions pursuant to existing water rights from the source waters of Mono Lake in order to protect water levels in the lake.

⁴³ 16 U.S.C. Section 1531 *et seq.*

affect existing diversions if the diversions adversely affect a listed species. It also is important to recognize that Section 9 of the ESA applies to all types of actions that may adversely affect listed animal species, regardless of whether there is any government involvement. Section 9 prohibits actions, including habitat modification, that "harm" listed animal species.⁴⁴ Although the ESA is most likely to be significant when federally listed *aquatic* species are at issue, water development projects also can adversely affect terrestrial species by, for example, reducing downstream out-of-bank flows required to maintain wetland habitats or by affecting the food source of such species.⁴⁵

Proactive steps taken now will provide greater certainty for all interests involved and will help ensure that our rich, uniquely Texan natural heritage is passed on to future generations.

⁴⁴ Section 9 specific prohibits the "taking" of an endangered species of animal. 16 U.S.C. §1538 (a)(1). The term "take" is defined to mean "harass, harm, pursue, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." *Id.* at §1532 (19). Threatened species receive only those protections established through administrative regulations. *See id.* at § 1533 (d). The current regulations do provide the same level of protection for threatened species as for endangered species unless a specific regulation is adopted affording a lower level of protection for an individual species. *See* 50 C.F.R. § 17.31 (a). Listed plant species receive a much lower level of protection under Section 9. *See* 16 U.S.C. § 1538 (a)(2).

⁴⁵ For additional discussion of the potential role of the ESA in water development issues, see Rasband, *Augmenting Streamflows: How Useful are Sections 9 and 7 of the Endangered Species Act?*, 7 RIVERS No. 1, at p. 49 (S.E.L. & Associates, 1999).