Strengthening Binational Management of the Tijuana River

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I. INTRODUCTION

The Tijuana River is perhaps the best known of the various unapportioned rivers and streams crossing the U.S.-Mexico border. A part of the intensely-urbanized San Diego-Tijuana metropolitan region of the border, the river is formed of the confluence of Cottonwood Creek, Pine Creek, and Campo Creek in the United States that drain to Mexico’s Rio Alamar, the Rio de las Palmas, and its feeder tributaries in Mexico. It has a watershed of 1,750 square miles.
miles draining on the western slope of the California coastal range, with 73 percent of this watershed located in Mexico. Roughly 62 percent of the capturable runoff is located in Mexico and the remaining 38 percent is situated in the United States. The river and its watershed today provide vital economic and ecosystem services affecting two of the most dynamic metropolitan regions (and their respective suburbs) on the west coast of North America: Tijuana and San Diego, with a combined metropolitan population of nearly 2.7 million people in 2010.

The river's surface waters are critical for the water supplies of both conurbations, both historically and contemporarily. Barrett Dam and Morena Dam capture its runoff north of the border and the Abelardo Rodriguez Dam impounds its water on Tijuana's outskirt. Its associated subsurface water supplies are indispensable for various ranches, farms, and small communities on the western slope of the coastal range. Flooding, contamination, erosion, and sedimentation within its associated streams and arroyos potentially affect both countries, not just one.

The sister city interdependencies the Tijuana River establishes certainly rival those of any other river on the U.S.-Mexican border. Knowing this, it is remarkable that the river still remains unapportioned and the subject of just eleven technical binational agreements at the federal level dealing with flood control and sanitation, ten of these subsidiary to the landmark 1944 U.S.-Mexico Water Treaty (the “1944 Water Treaty”) and one associated with the 1983 La Paz Agreement. This is all the more peculiar considering that Article 16 of


the 1944 Water Treaty recognized the need to allocate and manage the river and articulated a vision for "Recommendations for the equitable distribution between the two countries of the waters of the Tijuana River system,"10 which remains unrealized today. While much is written on basin water management, and though various binational initiatives have addressed aspects of the problem, the need to strengthen treaty-based binational cooperation in managing the river remains.11

This article argues the need for a more comprehensive binational agreement on managing the river and its watercourse. It reviews the management challenges on the Tijuana River and describes existing international instruments and initiatives relevant to strengthening binational cooperation in managing the river and its watershed. We begin with an overview of binational water management as it applies to the Tijuana River. We then review the water management challenges in the Tijuana River basin. Our analysis proceeds by pointing to potential applications of existing bilateral treaties and agreements to Tijuana River management. We follow this with a review of the various water management initiatives related to the Tijuana River the United States and Mexico have undertaken since 1993. We conclude by arguing that a new comprehensive binational agreement is needed to manage the various watershed concerns within the Tijuana River Watershed ("TRW") and suggest how both countries might craft such an agreement to fulfill the unrealized promise of the 1944 Water Treaty and establish a framework for cooperation that supports the sustainable management of the watershed for future generations.

II. BINATIONAL COOPERATION AND THE TIJUANA RIVER

International law and policy governing internationally-shared freshwater resources place a premium on states' ability to conclude formal government-to-government agreements concerning the management of these resources. While formal agreements cannot in themselves assure cooperative relations among riparians in governing shared resources, the institutionalization of cooperation in international water management generally requires some type of formal agreement or set of agreements characterizing the resource, the desirability of cooperation, the aims and purposes of the agreement, the mechanisms intended to achieve the agreed upon objectives, and measures to insure the parties' compliance with whatever agreements the parties strike.12

By this measure, the management of shared resources along the U.S.-Mexico border is highly institutionalized. The water treaties between Mexico and

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10. 1944 Water Treaty, supra note 7, at art. 16.
the United States are among the most enduring international watercourse treaties in the international community today. Together with the 1848 Treaty of Guadalupe Hidalgo, which defines the sovereign territorial limit of the two countries, many regard these treaties as diplomatic pillars of the U.S.-Mexico relationship. Today, these agreements, which include various boundary conventions applicable to their riparian boundaries and two water treaties, govern the allocation and management of the two major transboundary river basins, the Colorado River and the Rio Grande River, and most of their tributaries. Despite the broad geographic scope and purpose of these treaties, however, they do not apply to a small number of streams that cross the border or, with slight exception, to shared groundwater, or at the present time to ecological preservation of riparian resources, though the countries have made some progress recently in this regard. The U.S.-Mexico water treaty regime certainly has its limitations.

This is relevant to understanding the situation on the Tijuana River. What is evident in the historical record and reflected in the text of the 1944 Water Treaty’s Article 16 is that at the time of ratification the two governments envisioned the need for such an agreement in view of then-existing demand on the basin’s known water supply and anticipated future growth. The parties perceived the value of extending the administrative and diplomatic authority of the newly established International Boundary and Water Commission (“IBWC”) to binational negotiations concerning the river and, by extension, incorporating the river geographically under the sanitary authority of the IBWC. There is little doubt that the treaty drafters believed the countries should draw the Tijuana River more thoroughly into the treaty regime, something they could accomplish by extending the authority of Article 16 and using the diplomatic tools entrusted to the IBWC.

What we have in the 1944 Water Treaty bearing on the Tijuana River is something akin to a framework agreement, an agreement to agree, which provides an administrative home, some procedures, and some goals that the drafters thought to be relevant at the time to more fully incorporating the Tijuana River into the treaty regime. In the absence of a more detailed historical investigation, we can only speculate as to why the governments failed to engage the allocation mandate. Yet, we can fairly assume that the drafters envisioned

17. See 1944 Water Treaty, supra note 7, at arts. 3, 16.
18. See generally DINAR ET AL., supra note 12, at 160 (defining “framework agreements” and providing examples of such agreements concerning shared freshwater resources).
19. The record does show that the IBWC discussed the problem of allocation on various occasions in the late 1940’s, 1950’s, and 1960’s. See, e.g., JOSEPH F. FRIEDKIN, PROPOSED
strengthening the treaty’s application to the Tijuana River, that many of the circumstances that contributed to that view endure, that other compelling reasons for an elaboration of the Treaty’s application to the Tijuana River have since arisen, and that achieving such an agreement would strengthen the legacy of bilateral cooperation on shared water resources along the border with potential benefits to the United States and Mexico and the sustainable development of the Tijuana-San Diego region.

III. THE CASE FOR STRENGTHENING BINATIONAL COOPERATION ON THE TIJUANA RIVER

The Tijuana River system presents multiple challenges ranging from water supply and allocation, sanitation and water quality, ecological needs, flooding, stormwater, and sediment management - most of which require binational cooperation for effective government management. In addition to these problems, there is also the diplomatic and logistical problem of binational engagement for watershed management on a transboundary basis. A brief review of these issues is necessary to advance the case for strengthening binational cooperation in managing the Tijuana River watershed.

A. WATER SUPPLY AND ALLOCATION

The Tijuana River watershed is both a conduit and a repository of vital surface and underground waters serving communities on each side of the border. Precipitation within the watershed is highly variable and concentrated between November and April. Mexico’s National Water Commission has estimated the Tijuana River Watershed output at 54,841 acre-feet annually. Of the two adjoining urban areas, the Mexican side may be slightly more dependent on the watershed’s resources for its urban water supply than San Diego (city and county) if one considers San Diego’s groundwater abstraction from well fields along the Tecate and Alamar Rivers and the Rio de las Palmas. Only 21 percent percent of San Diego’s surface water storage capacity is located in the Tijuana River basin, compared with 100 percent of Tijuana’s surface storage capacity, and surface water sources from all San Diego watersheds constitute just 12 percent of San Diego’s water supply, diminishing the impact of Tijuana River surface water on its overall water budget. San Diego also takes a small amount of groundwater from the basin. Across the border, surface runoff and...
groundwater contribute 5 percent of Tijuana’s water supply. While the Tijuana River today plays a relatively small role in the region’s water supply, the general scarcity of water and rising consumptive demand on both sides of the border accentuate its importance. Even when one takes into account the watershed’s highly variable runoff and the possibility of water falling below existing dams, the fact that the United States and Mexico have never apportioned or cooperatively managed these waters as a consumptive resource is puzzling, particularly at a time of rising interest in the Tijuana River’s ecosystem services.

Figure 1. The Tijuana River Watershed

Source: Institute for Regional Studies of the Californias, supra note 11, at 12.

Historically, water authorities in each nation sought to secure their water stock from more reliable sources, particularly the Colorado River and California’s State Water Project. With aggregate water demand chronically challenging supply, both countries pursued additional water transfers, conservation, groundwater development, and other alternative sources. As each country has

24. INST. FOR REG’L STUDIES OF THE CALIFORNIA, supra note 11, at 42.
29. See generally Jeffrey Jacobs, The Sustainability of Water Resources in the Colorado
gone about crafting its own water supply solutions, local attention to sharing Tijuana River water has receded in regional water policy.\textsuperscript{29} The 2009 update of California's state water plan only references the Tijuana River with respect to flooding.\textsuperscript{31} The City of San Diego's 2010 water plan, for example, scarcely mentions the Tijuana River, noting the attractiveness of potential groundwater storage in the Tijuana River estuary north of the international boundary but otherwise emphasizing San Diego's access to imported water supplies and making no reference to Mexico or sharing Tijuana River water.\textsuperscript{32} In a similar way, Baja California's State Water Program for 2008-2013 only references the Tijuana River in regard to contamination problems provoked by reclaimed waters and the projects to treat them.\textsuperscript{33} A comprehensive assessment for the TRW in 2005 by the Binational Watershed Advisory Council ("BWAC") also neglects any need to allocate the river's resources, fails to mention Article 16, and provides just a brief reference to the IBWC's role in regional water policy.\textsuperscript{34} Interestingly, this report barely mentions drought concerns and climate change, which stress the region's reliance on out-of-basin water sources -- namely California's State Water Project and the U.S. and Mexican Colorado River aqueducts.\textsuperscript{35} The report does point to a growing demand for water and the long-term need for water supply augmentation, conservation measures, water reuse, groundwater storage, and desalination as a hedge against drought.\textsuperscript{36} In sum, it is safe to say that allocating the Tijuana River's surface and subsurface resources is not presently on the working agendas of either country.

\textit{River Basin}, The Bridge 6, 10-11 (Winter 2011).

30. See Smith, \textit{supra} note 5, at 361-63.


32. CITY OF SAN DIEGO, \textit{supra} note 22, §§ 4-4.1, 4.3.


34. See Inst. for Rec'l Studies of the Californias, \textit{supra} note 11, at 3, 17, 176, 180.

35. See id., \textit{e.g.} at 42, 43, 124. It bears mentioning that Mexico, since 1972, has also made occasional use of California's Colorado River Aqueduct to wheel water to Tijuana on an emergency basis, making use of San Diego Water Authority's aqueduct link to the Metropolitan Water District of Southern California. See, \textit{e.g.}, INT'L BOUNDARY & WATER COMM'N, MINUTE 240: EMERGENCY DELIVERIES OF COLORADO RIVER WATERS FOR USE IN TIJUANA, 1 (June 3, 1972), http://www.ibwc.gov/Files/Minutes/Min240.pdf. Since the original delivery in August 1972, Mexico has to date signed thirteen IBWC Minutes for emergency water deliveries to Tijuana. INT'L BOUNDARY & WATER COMM'N, Minutes Between the United States and Mexican Sections of the IBWC, \textit{http://www.ibwc.gov/Treaties_Minutes/Minutes.html} (last visited Feb. 20, 2014) (showing that Minutes 243, 245, 252, 256, 259, 260, 263, 266, 267, 280, 287, 310, and 314 concern emergency water delivery to Tijuana). Mexico's need for emergency deliveries of Colorado water abated with completion of the first Mexican Colorado River aqueduct in 1981, but new needs arose in the 1990's as Tijuana's population growth combined with periodic droughts to stress the city's water supply. See Michael J. Cohen, Municipal Deliveries of Colorado River Basin Water, Pac. Inst., 33-34 (June 2011), \textit{available at} http://www.pacinst.org/reports/co_river_municipal_deliveries/crb_water.pdf.

B. WATER QUALITY AND SANITATION

Water quality is another challenge with ramifications for human health and the health of ecosystems. The California State Water Resources Control Board classifies the TRW as a Category I impaired watershed based on a wide range of point and non-point source pollution threats. Agriculture in San Diego County is a major source of non-point source pollution north of the border and an enduring problem, but urbanization poses the greater pollution threat. Rapid urbanization, particularly on the Mexican side of the border, contributes to soil erosion and particulates as dwellings are constructed on the banks of deep canyons within the watershed. The dramatic growth of both the maquiladora (assembly for export) industry and human settlements in Tijuana and San Diego County in the past three decades has amplified the threat of surface and ground water pollution from untreated wastewater, uncontained industrial waste, and public refuse.

The threat of uncollected sewage and spillage across the boundary motivated the binational construction of the San Diego International Wastewater Treatment Plant, whose origins date as far back as the 1960’s. This controversial facility, which collects sewage from Tijuana’s sewage grid, continues to be inadequate for local needs and has recently spawned another binational water treatment project on the Rio Alamar. Part of the problem is concentrated in the heavily populated lower reaches of the watershed on the Mexican side of the border where human settlements are constructed on the steep banks of tributaries like Los Laureles Canyon and Smugglers Gulch. Much of this development is situated off Tijuana’s present sewerage grid, though the degree of the

37. PROJECT CLEAN WATER, supra note 2.
impact is not well understood.\textsuperscript{44} Black water contamination and other water-borne refuse not only presents a surface health hazard and groundwater threat but also drains to the Tijuana River Estuary on the United States’ side of the boundary line, threatening fauna and flora in the Tijuana River National Estuarine Research Reserve.\textsuperscript{45}

C. BIODIVERSITY AND ECOSYSTEM SERVICES

Both water availability and water quality impact biodiversity in the watershed.\textsuperscript{46} The TRW plays a vital ecosystem services role, functioning as a link on the Pacific Flyway and sustaining an extraordinary mix of fauna and flora.\textsuperscript{47} The Tijuana River Estuary has been the focus of long-term conservation efforts and is today one of the last remaining relatively pristine estuaries on the southern California coast.\textsuperscript{48} The Tijuana River National Estuarine Research Reserve (“TRNERR”), with its associated wetlands, not only protects various endangered and threatened species but is also the focus of considerable governmental investment (estimated at nearly half a billion dollars over the past half century) aimed at sustaining this unique resource.\textsuperscript{49} Unregulated informal settlements along the canyons that drain across the boundary to the wetland, as well as recent border security development, have worsened problems of erosion and sedimentation in the estuary and seriously threaten these wetlands.\textsuperscript{50}

The Tijuana River Estuary may be the best-known biodiversity problem in the watershed, but one may find many other biodiversity concerns related to urban and industrial development in the basin. The Alamar River/Cottonwood Creek sub-basin, which runs from the international boundary near Tecate to Tijuana is the best-preserved riparian corridor in the Tijuana Region and provides habitat for numerous species of birds, wildlife, and vegetation.\textsuperscript{51} Presently, however, encroaching urbanization and land development threaten this biologically rich area.\textsuperscript{52} Over much citizen protest, Mexico’s National Water Commission is now proceeding with plans to channelize the lower Rio Alamar

\textsuperscript{44} Pombo, supra note 40; INST. FOR REG’L STUDIES OF THE CALIFORNIAS, supra note 11, at 43.


\textsuperscript{47} Id. at 4, 33; see also Spalding, supra note 27, at 1.

\textsuperscript{48} Tijuana River Nat’l Estuarine Research Reserve, supra note 45, at 1, 12, 15.


\textsuperscript{50} See Tijuana River Nat’l Estuarine Research Reserve, supra note 45, at 89, 95, 101-02.

\textsuperscript{51} See Alamar River Corridor, supra note 46, at 4, 9, 29, 33.

\textsuperscript{52} Suzanne Michael & Carlos Graizbord, INST. FOR REG’L STUDIES OF THE
through a highly urbanized part of the Tijuana municipality, thereby eliminating several miles of scarce riparian vegetation.53

D. FLOODING, STORMWATER, AND SEDIMENTATION

Flooding is another longstanding binational concern. The coastal range, with its steep and rocky slopes and highly variable precipitation, is historically associated with rapid deposition of rainwater, which, when coupled with limited containment, means flooding is an ever-present threat.44 Flood control and water supply justified early reclamation efforts on the Cottonwood Creek/Rio Alamar and the Rio de las Palmas tributaries.55 Today, the United States and Mexico impound 78 percent of the Tijuana River’s watercourse.56 Catastrophic damage from floods, of which the notorious winter 1980 Zona del Rio flood is indicative,57 was the official justification for channelizing and lining the Tijuana River in its international stretch below Abelardo Rodriguez Dam in the 1970’s.58 Flooding remains a serious problem on both the Tijuana River mainstream and along its tributaries below the Barrett and Moreno dams in the United States and below the Mexican dams, El Carrizo on the Rio Tecate and Rodriguez on the Rio de la Palmas.59

Even minor flooding contributes to stormwater management challenges in the watershed, some of which are binational in nature.60 Stormwater contributes to erosion, deposition of debris, blockages and deterioration of culverts and pipage, and other stresses and threats to infrastructure within the watershed.61 Over the past two decades, both countries have recognized the need to cooperatively manage stormwater events, reduce hazards, and remediate damages, particularly those from the watershed’s lower canyons draining to the United

54. FRIEDKIN, supra note 19, at 14.
55. REDONDO, supra note 1, at 417.
61. Id.
States. The deposition of sediments to the TRNERR wetlands has diminished wetland habitat and has been a consistent matter of concern to reserve managers who have called on local governments to support the construction of sediment capture basins and urged greater binational cooperation in managing waste and sediment problems with the Tijuana municipality.

In addition to these substantive challenges, local officials working in the watershed report serious logistical challenges in working with their counterparts across the border. In the United States, for example, technicians with the San Diego Regional Water Quality Control Board, San Diego County, the TRNERR, and specialists from other governmental stakeholder agencies have difficulty just crossing the border to speak with Mexican officials with responsibilities affecting the watershed. Local officials lack diplomatic credentials, meaning they lack authorization to cross the border in the course of routine work; such binational endeavors require special administrative authorization. Obtaining authorization is difficult and time consuming. Mundane problems, such as the inapplicability of insurance that would cover the risks of local international travel, complicate cross-border travel. These bureaucratic impediments make binational managerial collaboration for watershed management especially difficult.

In sum, the many management challenges now found in the basin make a compelling case for the need to strengthen binational management of the watershed beyond the current set of agreements in place. Fortunately, the two countries have a substantial tool kit of binational and multilateral agreements on which to draw on when considering any elaboration of their current shared commitments to managing the watershed.

IV. BILATERAL AGREEMENTS AND THEIR APPLICATION TO THE TIJUANA RIVER

As seen above, water management along the U.S.-Mexico border is generally regarded as a well-institutionalized, long-standing binational arrangement. The principal treaties, however, directly address the division and management of the waters of the Rio Grande and the Colorado Rivers, leaving a number of rivers and streams unapportioned and indirectly linked to the treaty system, all of these located along the land boundary between the two countries. With the

62. Id. at 7-8.
65. Id.
exception of the Tijuana River, which Article 16 of the 1944 Water Treaty referenced but did not allocate, the treaty system incorporates these streams, including the Mimbres, Whitewater Draw, Rio San Pedro, the Santa Cruz, Rio Sonoyta, and the New River, either by riparian linkage to the drainages of the international rivers or by extension of the 1944 Water Treaty’s Article 3 provision for solutions to border sanitation problems. Other agreements, such as the 1983 La Paz Agreement, the 1993 BECC-NADB Agreement, the 1993 NAAEC Agreement, and the 1935 U.S.-Mexico Migratory Bird Treaty may also apply to these streams depending on the circumstances. A brief discussion of each of these instruments demonstrates the types of mechanisms available to the governments for dealing with aspects of Tijuana River management.

A. THE 1944 WATER TREATY

The United States and Mexico have not yet achieved binational allocation of the Tijuana River’s waters, although they repeatedly discussed allocation the first half of the 20th century and incorporated it in the 1944 Water Treaty. At the time the drafters wrote the Treaty, the average total runoff for the Tijuana River was 74.8 million cubic meters (mcm)/60,641 acre-feet (af) - of which the United States was impounding 13.5 mcm/10,945 af (on the Rio Alamar/Cottonwood Creek branch) and Mexico was impounding 23 mcm/18,646 af (on the Rio de las Palmas branch). While both nations planned additional storage projects in their respective territories, they originally conceived that at least one of these, the then-proposed Marron Dam on the Rio Alamar/Cottonwood Creek, would be an international dam, which both countries would jointly construct, with a storage capacity of 12 mcm, after which both countries would equally divide its water. Such an arrangement would have required a formal treaty allocating this water, but it never came to pass.

Instead, at the time the United States and Mexico signed the 1944 Water Treaty, the two countries, lacking adequate hydrological data and wishing to avoid any further complications in reaching agreement on the Rio Grande and

68. 1944 Water Treaty, supra note 7, at art. 16.
69. Id. at art. 3.
70. See La Paz Agreement, supra, note 8, at arts. 2, 5.
74. COYRO, supra note 3, at 743.
the Colorado Rivers, opted to treat the Tijuana River allocation as an agenda item for future study, referring to the river in Article 16. Since then, original plans notwithstanding, the two nations have not built any other impoundments on the transboundary streams, Cottonwood Creek/Rio Alamar, Campo/Tecate Creek, or below Rodriguez Dam on the Rio de las Palmas.

Of the two primary concerns Article 16 identifies—water allocation and flood control—the two countries have only utilized the flood control provision (see text in Table 1 below). In 1967 the two countries entered into agreement to jointly build channelization works on the Tijuana River, citing the authority found in Article 16. The Tijuana River channelization project, completed in 1979, is still the only instance in which the United States and Mexico have explicitly utilized their Article 16 authority.

Even so, Article 16 puts the governments on record as recognizing the value of an equitable division of the Tijuana River’s water as well as the need to approach any division and joint development of storage works in an equitable manner. It is also possible for the United States and Mexico to broadly construe Article 16’s Section 2 provisions for flood control so as to apply to works that would benefit “domestic, irrigation, and other feasible uses of” the Tijuana River. The general provisions of the 1944 Water Treaty found in Article 3, Articles 17-25 may also cover the Tijuana River. What this means is that (I) the priority of uses associated with the established regime for the Rio Grande and Colorado Rivers would by extension apply to any agreement the parties might reach regarding the international waters of the Tijuana River unless otherwise excepted; (II) that the sanitation provision in Article 3 applies to the river; (III) that proprietary assumptions related to the development of works associated with implementing any future binational agreement also apply unless otherwise excepted; and, (IV) that the IBWC’s Article 24 authority to “initiate and carry on investigations and develop plans for works,” “to exercise and discharge the specific powers and duties entrusted to the Commission,” and “[t]o settle all differences that may arise between the two Governments with respect

76. 1944 Water Treaty, supra note 7, at art.16; HUNDLEY, supra note 16, at 133-34; REDONDO, supra note 1.
80. 1944 Water Treaty, supra note 7, at art. 16.
81. Id.
82. Id. at arts. 3, 17-25.
83. Id.
84. Id. at art. 3. The IBWC, in Minute 283, has already recognized the application of the 1944 Water Treaty’s sanitation provisions to the Tijuana River. See MINUTE 283, supra note 41, at 1.
85. 1944 Water Treaty, supra note 7, at arts. 16, 24.
to the interpretation and application of this Treaty” may also apply to the Tijuana River. Importantly, as developments elsewhere in the treaty regime occur, advances in other treaty-governed watersheds may come to apply or serve as precedent for addressing problems in the Tijuana River basin.

Table 1. 1944 Water Treaty/Title IV/Article 16

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<th>IV - Tijuana River</th>
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<td>Article 16</td>
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<td>In order to improve existing uses and to assure any feasible further development, the Commission shall study and investigate, and shall submit to the two Governments for their approval:</td>
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<td>(1) Recommendations for the equitable distribution between the two countries of the waters of the Tijuana River system;</td>
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<td>(2) Plans for storage and flood control to promote and develop domestic, irrigation and other feasible uses of the waters of this system;</td>
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<td>(3) An estimate of the cost of the proposed works and the manner in which the construction of such works or the cost thereof should be divided between the two Governments;</td>
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<td>(4) Recommendations regarding the parts of the works to be operated and maintained by the Commission and the parts to be operated and maintained by each Section.</td>
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The two Governments through their respective Sections of the Commission shall construct such of the proposed works as are approved by both Governments, shall divide the work to be done or the cost thereof, and shall distribute between the two countries the waters of the Tijuana River system in the proportions approved by the two Governments. The two Governments agree to pay in equal shares the costs of joint operation and maintenance of the works involved, and each Government agrees to pay the cost of operation and maintenance of the works assigned to it for such purpose.

Source: 1944 Water Treaty, supra note 7.

In sum, a number of important provisions of the 1944 Water Treaty do apply to the water management situation on the Tijuana River. These provisions set certain parameters for a future binational agreement or agreements on shared binational management of the watercourse. At minimum it means that the sanitation authority of the Treaty applies to the Tijuana River, that any future agreement related to its management would necessarily involve the IBWC at the diplomatic level, and that any management regime would certainly need to conform to the priority of uses now found in the Treaty. Provisions establishing proprietary responsibilities related to construction and implementation of any works or systems related to the agreed management regime likewise apply. Moreover, each of the IBWC’s national sections has some measure of administrative initiative, subject to the concurrence of its own government, to

86. Id. at art. 24.
undertake actions that may advance binational cooperation for watershed management along the border. The best illustration of this is the U.S. section of the IBWC's establishment of Citizen Advisory Forums in various transboundary watersheds, including a San Diego Citizens Forum, established in 2002.88 The IBWC's national sections also play a leading role in the Binational Technical Committee for the TRW that serves as a coordinating mechanism for Tijuana River water supply and sanitation discussions among federal and state water agencies on both sides of the border.89

B. THE 1970 BOUNDARY TREATY

The United States-Mexico 1970 Boundary Treaty89 is unquestionably marginal to the character of any future agreement on the Tijuana River, but, as one of a limited number of treaties in force between the two countries, it warrants mention in this case.90 While the 1970 Treaty applies to the boundary reach of the Rio Grande and the Colorado90, it would have minimal relevance to the Tijuana River, which technically crosses the border twice - once upstream on the Cottonwood Creek branch of the river and another time as it enters the Tijuana River estuary just west of the international port of entry at San Ysidro/Tijuana. The 1970 Treaty does, however, establish the principle that any contemplated works should not impair the integrity of the international boundary and places jurisdiction for implementing this provision in the hands of the IBWC.90

C. THE 1936 MIGRATORY BIRD CONVENTION AND THE 1940 WESTERN HEMISPHERE CONVENTION

The United States and Mexico are parties to two closely related agreements, the 1936 Migratory Bird Convention and the 1940 Western Hemisphere Convention on Nature Protection and Wildlife Preservation, which together establish a bilateral and multilateral obligation to protect various migratory species of wildlife and their habitats.91 These agreements, for example, reinforce bi-national commitment to sustain formal protected reserves on either side of the

89. See COMISION ESTATAL DE AGUA DE BAJA CALIFORNIA, supra note 21, at 12.
91. As of January 1, 2010, the United States and Mexico had signed a total of twenty-one bilateral treaties and conventions, the remainder of their bilateral agreements taking the form of formal protocols, executive agreements, memoranda of understanding, IBWC minutes, La Paz Agreement annexes, or other inter-governmental understandings. See Treaties in Force: A List of Treaties and Other International Agreements of the United States in Force on January 1, 2010, U.S. DEPT. OF STATE, 177-85 (2010), http://www.state.gov/documents/organization/143863.pdf. The majority of these bilateral treaties concerned boundary and water affairs. Id. This list, of course, does not include multilateral agreements.
92. 1970 Boundary Treaty, supra note 90, at art. I.
93. Id. at art. IV.
94. Migratory Bird Convention, supra note 73, at art. I; Convention Between the United States of America and other American Republics Respecting Nature Protection and Wildlife
border even where these reserves are not officially binational in character, such as the Tijuana River Estuary Research Reserve. While the administration of these agreements is left to the domestic authorities of each country (for example, the U.S. Fish and Wildlife Service in the United States91 and the Secretariat of the Environment and Natural Resources in Mexico)92 the agreements establish an important binational obligation that is contingent, at least in part, on the effective administration of shared water resources. Any binational negotiations on sharing Tijuana River water could draw upon these treaties in justifying water management to sustain ecosystem services.

D. THE LA PAZ AGREEMENT

As an executive agreement, the 1983 U.S.-Mexico Agreement on Border Environmental Cooperation,97 otherwise known as the La Paz Agreement, now thirty years in effect, has considerable application to binational management of the Tijuana River. It establishes a regular mechanism for bilateral consultation and problem-solving on environmental issues, including water quality/water pollution concerns and conservation.98 The La Paz Agreement also includes a provision encouraging data sharing and environmental assessment of projects and policies that may affect the border environment.99 It establishes a diplomatic procedure whereby the two countries may develop subsidiary protocols in the form of annexes to the La Paz Agreement.100 It further acknowledges that the 1944 Water Treaty takes precedence in water matters within its jurisdiction and does not affect the authority of the IBWC under the treaty.101

Coupled with IBWC Minute 270, the La Paz Agreement is the basis for a 1985 La Paz Annex agreement addressing international sewage and sanitation concerns in the lower Tijuana River reach of the international boundary.102 As the foundation for the Border 2020 Program, it presently justifies the ongoing work of the local Baja California-California Regional Working Group and its Tijuana-San Diego Water Task Force, groups that focus on water quality, storm water management, and other water related environmental issues in the TRW.103 The United States and Mexico can use the La Paz Agreement, coupled with the 1944 Water Treaty, to reinforce the priority of any agreement struck under Article 16 of the 1944 Water Treaty, to draw a strong link to environmental and

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93. La Paz Agreement, supra note 8.
94. Id. at arts. 5-10.
95. Id. at art. 6.
96. Id. at art. 3.
97. Id. at art. 12.
98. Id. at annex I; MINUTE 270, supra note 41.
ecological concerns, and to build on intersecting support for environmental and ecological objectives between the domestic agencies of the two governments if they become interested in implementing a new binational agreement on managing the TRW.

E. THE BECC/NADB AGREEMENT

The United States-Mexico Agreement to Establish a Border Environment Cooperation Commission ("BECC") and a North American Development Bank ("NADB"), is an executive agreement that entered into force January 14, 1994 and provides a mechanism for identifying, certifying, and funding needed environmental projects along the border. The BECC is not a vehicle for reaching formal agreements on binational cooperation but does perform an important supporting role in developing the infrastructure that might be needed in service of such accords and, importantly, is tasked with insuring that its certified projects meet stipulated environmental protection criteria. The BECC and NADB have been instrumental in funding water conservation projects associated with wastewater treatment plants, irrigation, and water storage projects binational agreements authorized under the authority of the 1944 Water Treaty. Thus, these agreements contribute to increasing the capacity of the federal governments and subnational governments along the border in addressing watershed management issues.

V. BINATIONAL DEVELOPMENTS OF RELEVANCE FOR THE TIJUANA RIVER SITUATION

A number of binational treaty-related developments related to water management, most of these originating in the mid-1990's, would seem to strengthen the position of the governments in moving forward with a more comprehensive agreement on managing Tijuana River water. These initiatives, most of them formalized at IBWC minutes, include Minute 306, dealing with ecosystem conservation in the Colorado River Delta; Minutes 307 and 308, addressing water supply in the Rio Grande River and calling for a binational basin-wide advisory council to advise the IBWC on issues along the international reach of the river; the establishment of the Water Conservation Investment Fund (WCIF)

104. BECC and NADB Treaty, supra note 71, at ch. I art. I §§ 2(i)(B), (E), 2(ii), art. II § 2(b), § 3(b).
105. Id. ch. I art. I § 1(b), § 2.
107. See id. at 1.
at the NADB, as certified by BECC, and the IBWC’s hosting of a Binational Summit in 2005 to assess and recommend administrative procedures for improving water management on the Rio Grande. Minute 306, though tied to the 1970 Boundary Treaty, which applies to the boundary portion of the Colorado River and, thus, is not legally attachable to the Tijuana River situation, moves the IBWC forward in a very limited way by recognizing the importance of conserving the ecological values associated with international rivers. Minutes 307 and 308 commit the two governments to managing water conservation in the Conchos River basin by extending Treaty authority supporting the establishment of the WCIF and calling for the establishment of a binational watershed advisory body to the IBWC – two measures that legitimize the governments’ use of Treaty authority for these purposes.

The involvement of BECC and NABD in these initiatives and the report of the Binational Summit illustrate the potential of using current binational agreements in complex multi-governance solutions that advance watershed management. While these measures are particular to the Rio Grande River basin, they are relevant to considering the elasticity of the treaty system for dealing with management of the Tijuana River and legitimizing government action, if two nations should choose to reach further agreement on the Tijuana River.

Additional treaty elasticity may also be found in several new linked agreements on the Colorado River. In 2010, the IBWC reached two agreements, Minute 317 and 318, that build on both the 1944 Water Treaty and the 1970 Boundary Treaty to allow Mexico to store treaty water in upstream U.S. dams, establish a Binational Consultative Committee for water management on the lower Colorado River, and for the first time, establish a conceptual link for ecological preservation to the 1944 Water Treaty. Prior to Minute 317, the only treaty justification for IBWC action in the area of ecology was found in Minute 306’s reference to the 1970 Boundary Treaty, reflecting the resistance of Colorado River stakeholders to any extrapolation of the treaty that might establish an ecological claim to the river’s waters. See Minute 306, supra note 108, at 1. Though a number of analysts have identified the need for an IBWC minute clearly establishing a legitimate ecological use for U.S.-Mexico treaty water, no such agreement currently exists. In this context, then, the reference in Minutes 317 and 318 to protecting ecological values on the Colorado River is an advance in the treaty regime.

http://www.ibwc.gov/Files/Minutes/Minute308.pdf.


15. INT’L BOUNDARY & WATER COMM’N, MINUTE 317: CONCEPTUAL FRAMEWORK FOR U.S.-MEXICO DISCUSSIONS ON COLORADO RIVER COOPERATIVE ACTIONS 2 (June 17, 2010), available at http://www.ibwc.gov/Files/Minutes/Minute_317.pdf; INT’L BOUNDARY & WATER COMM’N, MINUTE 318: ADJUSTMENT OF DELIVERY SCHEDULES OF WATER FOR THE YEARS 2010-2013 AS A RESULT OF INFRASTRUCTURE DAMAGE IN IRRIGATION DISTRICT 14, RIO COLORADO, CAUSED BY THE APRIL 2010 EARTHQUAKE IN THE MEXICALI VALLEY, BAJA CALIFORNIA 2, 4 (Dec. 17, 2010), available at http://www.ibwc.gov/Files/Minutes/Min_318.pdf. Prior to Minute 317, the only treaty justification for IBWC action in the area of ecology was found in Minute 306’s reference to the 1970 Boundary Treaty, reflecting the resistance of Colorado River stakeholders to any extrapilation of the treaty that might establish an ecological claim to the river’s waters. See Minute 306, supra note 108, at 1. Though a number of analysts have identified the need for an IBWC minute clearly establishing a legitimate ecological use for U.S.-Mexico treaty water, no such agreement currently exists. In this context, then, the reference in Minutes 317 and 318 to protecting ecological values on the Colorado River is an advance in the treaty regime.
governments announced Minute 319, which builds on these earlier agreements to reach a five-year temporary agreement on water provision for Colorado River Delta ecology. While these developments are particular to the Colorado River basin, they provide a precedent for addressing ecological issues in other basins under treaty jurisdiction.

In sum, despite the absence of any formal binational agreement apportioning and managing the water of the Tijuana River, it is nevertheless evident that a number of binational and multilateral agreements are already in place that may guide and shape the contours of any future international agreement. At the very least, Article 16 of the 1944 Water Treaty highlights the need to address functional aspects of Tijuana River water management and provides a binational mechanism for reaching an agreement. This obviates the need to start from scratch in realizing an international accord or accords for the Tijuana River—as one knowledgeable observer put it, the IBWC already has the authority to convene a technical committee to study how the two countries might strengthen TRW management.

Yet, despite the existence of this critical legal and diplomatic infrastructure, some of it half a century old and now bolstered by other binational agreements, the two federal governments have yet to strengthen their formal binational cooperation on the Tijuana River beyond flood control and sewage management, much less pursue an integrated approach to managing the watershed system. This binational policy paralysis persists in the face of growing recognition of the need for binational cooperation in managing water resources in the Tijuana River Watershed. Various studies and reports, including work by Paul Ganster, Patricia Herrera and Jaqueline Lafragua, Mark Spalding, Christopher Brown and Stephen Mumme, Suzanne Michel, Juan Rodriguez Esteves, and an influential study by the BWAC suggest that the domestic institutional

118. See id. at 28.
120. See Spalding, supra note 27, at 9, 11, 16, 19.
124. See INST. FOR REG’L STUDIES OF THE CALIFORNIAS, supra note 11.
setting for watershed management has evolved considerably in both countries since 1990, including new legislative and administrative measures at several levels of governance that favor more integrated watershed planning and administration. Such developments would seem to strengthen the rationale for more robust binational governance of the TRW.

However, significant political obstacles confront any concerted effort to reach binational agreement on TRW management. Any move toward more comprehensive, treaty-based, binational cooperation on managing the TRW would need to proceed by taking account of certain political realities in binational water relations. These include (I) the U.S.-IBWC's inability to take initiative in the absence of strong state and local support;125 (II) the need to reconcile centralized administration of water and ecological resources in Mexico with the decentralized, fragmented, state-based politics of water in the United States;126 (III) the problem of satisfying competing water rights claims within the basin;127 and, (IV) the need to reach binational consensus on a common set of priorities for watershed governance that are compatible with Article 3 of the 1944 Water Treaty, which establishes priorities for water use on the treaty rivers.128 The political demands of building a supportive domestic political coali-

125. As Mumme has documented in previous work, the IBWC's U.S. Section is very much a creature of state and local constituencies along the border. See Stephen P. Mumme, Regional Power in National Diplomacy: The U.S. Section of the International Boundary and Water Commission, 14 PUBLIUS 115, 126, 131-33 (1984). The IBWC's Mexican Section, the Comisión Internacional de Límites y Aguas (CILA) is centrally dominated and functions under the authority of the Mexican Secretaría de Relaciones Exteriores (SRE), depending both on the strong support of the SRE and Mexico's National Water Commission (Comisión Nacional de Agua, or CNA) for its initiatives. See generally SECRETARIA DE RELACIONES EXTERIORES, ORGANIGRAMA (2011), available at http://www.sre.gob.mx/index.php/cancilleria/organigrama (last updated Mar. 12, 2013).


127. It is reasonable to assume that San Diego County property owners—mainly farmers and ranchers downstream of Morena and Barrett Reservoirs—would challenge any binational initiative to apportion water flowing to Mexico in Cottonwood and Campo/Tecate Creeks. Any new dam would require some form of agreement on protecting riparian flow, much as the originally proposed Marron Dam (which would have lied at or near the boundary) would have done, if only to protect groundwater stock upstream of the dam. REDONDO, supra note 1, 233-34 (discussing Marron Dam). The authors have been unable to locate any analysis of riparian flows or groundwater stock on Campo Creek and Cottonwood Creek below Barrett Dam.

128. 1944 Water Treaty, supra note 7, at art. 3. This article stipulates the priority of use for waters of treaty-controlled rivers and would certainly apply to any binational effort to adjudicate and manage Tijuana River water. Because the Treaty favors domestic and municipal and agricultural water uses, which currently prevail within the watershed in both countries, the most likely source of disagreement and compromise is the relative importance of ecological uses of water. Without future agreement on ecological uses of treaty water, both countries would need to justify such uses on the basis of fishing and hunting or "other beneficial uses" under Article 3.
tion for such an agreement in both countries are likely to be quite high, particularly in the San Diego region and California. Numerous organized water-related stakeholder groups exist in both areas, and major institutional water interests like the Metropolitan Water District of Southern California would need to be on board. 129

VI. BINATIONAL MANAGEMENT INITIATIVES FOR THE TIJUANA RIVER WATERSHED

Despite these challenges, there is some basis for optimism that the United States and Mexico may make progress in strengthening binational cooperation on the TRW. True, they have made little progress towards insuring security of supply through formal allocation of surface and groundwater resources, protecting ecological resources, addressing water quality issues outside the scope of the international wastewater treatment process, or establishing a systematic administrative mechanism for managing water related problems in the TRW in an integrated or more coordinated fashion. Yet, as recounted above, the countries have realized some nation-to-nation agreements affecting the watershed— including sanitation measures, emergency water transfers, and flood control measures—much of this under the authority of IBWC and the 1944 Water Treaty. Various cross-border subnational agreements and informal initiatives responding to local watershed concerns complement these measures, most of these occurring since 1993 (Table 2). While federal agencies have brokered some of these initiatives, most are the product of sub-state or non-state citizen initiatives at the local and regional level.

At the federal level, the Border Liaison Mechanism (BLM), dating to 1993, places U.S. and Mexican consular officials in the role of conveners for watershed related concerns and has facilitated a good deal of dialogue among various governmental and non-governmental stakeholders over the past two decades. 130 The BLM has been instrumental in building local government-to-government linkages supporting citizen networks aimed at dealing with problems as diverse as water quality, sewage, and stormwater drainage, and facilitating inter-institutional contacts involving educators and non-profits interested in understanding and improving conditions in the watershed. 131 The BLM has become the primary venue for the San Diego Association of Governments’ Border Water Council—an influential group of governmental stakeholders including the San Diego Water Authority, San Diego County, the City of San Diego, the IBWC, Environmental Protection Agency, other federal agencies, and tribal governments on the U.S. side and Mexico’s Comision Nacional de Agua, Secretaría del Medio Ambiente y Recursos Naturales, Comision Internacional de Limites y Aguas, Comisión Estatal de Servicios Públicos de Tijuana, and the Tijuana municipality. 132

129. As Spalding cogently observes, environmental administration and regulation in the border region is “a confusing web of international, federal, tribal, state, and local agencies and jurisdictions,” complicating the problem of reaching political consensus. Spalding, supra note 27, at 18.
130. See Brown & Mumme, supra note 121, at 906-07; Ganster, supra note 117.
131. See Brown & Mumme, supra note 121, at 906-07, 912.
132. See Michel, supra note 122, 253-255.
Important federal initiatives have also evolved through the Border XXI and Border 2012 Programs originating in the mid-1990's. Under the just-completed Border 2012 Program, the California-Baja California Regional Workgroup has pursued an agenda including coastal water quality monitoring as well as funding an artificial wetland demonstration project to assist with sewage treatment from Tecate’s wastewater treatment plant. The IBWC’s U.S. Section, beginning in 1999, established a series of Citizen Forums along the border, one of which is focused on the San Diego-Tijuana area and the Tijuana River estuary. While the San Diego-Tijuana Forum’s board is comprised of U.S. citizens, it strives to draw on binational expertise in discussing IBWC projects and related activities in the watershed. Following destructive flooding in 2008, which damaged human settlements in Tijuana and deposited harmful sediments in the estuary downstream, the IBWC was instrumental in helping organize the Tijuana River Valley Recovery Team.

Table 2. Partial List of Binational TRW Initiatives (1993-2010)

<table>
<thead>
<tr>
<th>Federal</th>
<th>Border Liaison Mechanism</th>
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<tr>
<td></td>
<td>Border 2012 California-Baja California Regional Workgroup</td>
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<td></td>
<td>Border 2012 Grant Program –volunteer binational beach monitoring program</td>
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<tr>
<td></td>
<td>Border 2012 TRW Task Force</td>
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<td></td>
<td>IBWC-U.S. Citizen Forum</td>
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<tr>
<td>State/Regional</td>
<td>Border Water Council/ Binational Technical Committee</td>
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</tbody>
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137. Id.
139. See generally Brown & Mumme, supra note 121, at 906-07, 912.
140. See generally U.S-Mexico Border 2012 Program, supra note 134.
141. See generally id.
143. See generally Citizens’ Forum Meetings, supra note 135.
<table>
<thead>
<tr>
<th>Local/County/Municipal</th>
<th>San Diego Association of Governments/Border Water Council(^{144})</th>
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<tbody>
<tr>
<td></td>
<td>Binational Watershed Advisory Council(^{149})</td>
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<tr>
<td></td>
<td>Binational Environmental Education Web(^{130})</td>
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<td></td>
<td>Bren School of Environmental Science &amp; Management, University of California Santa Barbara(^{131})</td>
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<td></td>
<td>Regional Workbench Program(^{139})</td>
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<tr>
<td></td>
<td>Oscar Romo and Keith Pezzoli’s Los Laureles Canyon Project(^{153})</td>
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<tr>
<td></td>
<td>San Diego County Tijuana Watershed Advisory Committee(^{144})</td>
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<td></td>
<td>Proyecto Bio-regional de Educacion Ambiental (PROBEA)(^{143})</td>
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<tr>
<td></td>
<td>Proyecto Fronterizo de EducACIÓN Ambiental</td>
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145. See generally Esteves, supra note 123; BINATIONAL VISION, supra note 11, at 158.

146. See generally BORDER ECOWEB: GUIDE TO FINDING ENVIRONMENTAL INFORMATION ABOUT THE U.S.-MEXICAN BORDER REGION THROUGH THE INTERNET (Elena Lelea & Paul Ganster eds., San Diego State University, 1999).


148. See generally SAN DIEGO ASS’N OF GOV’TS, supra note 144.

149. See generally BINATIONAL VISION, supra note 11, at 3, 241-42.


The State of California, which has a substantial long-term investment in sustaining the Tijuana River estuary, has also engaged Mexican governmental partners at the state and municipal levels for watershed enhancements, most recently in striking a deal with the Tijuana municipality aimed at sediment control in one of the principal contributing drainages to the Tijuana River estuary at Los Laureles Canyon. California's Water Quality Control Board, Coastal Commission, and Coastal Conservancy also encourage and occasionally fund various local initiatives aimed at water quality and ecological improvement in the watershed.

At the local level, a considerable number of watershed initiatives and projects have emerged, most addressing very particular problems that link to the federal and state programs mentioned above. One such initiative, the BWAC, was formed in 2002 after California passed Proposition 13, which funds watershed management plans throughout the state. With the support of the Regional Water Quality Control Board and San Diego County, San Diego State
University helped create the BWAC as a binational partnership drawn from universities, non-profits, private sector organizations, and tribal governments, and charged with crafting a vision for managing the TRW on a binational basis.165 The BWAC's comprehensive (except for water allocation) vision document led to the formation of a binational governmental stakeholder—the Technical Subcommittee—that is tasked with identifying binational and domestic actions that the countries could undertake in a coordinated fashion to cooperatively strengthen water management in the watershed.166

The BWAC spotlights a number of critical water supply and watershed management needs and proposes action plans to address them. One such action plan establishes a binational groundwater working group to oversee technical studies of groundwater in the basin, expand water reuse, and establish a binational Tijuana River Watershed Council to harmonize and coordinate watershed management actions across the border.167 The BWAC report identifies a wide range of interesting policy options for watershed protection and sustainable use of its resources, including pursuing conservation easements, ecological parks, constructed wetlands, hardened but permeable road surfaces in Tijuana's squatter colonies, and other measures aimed at mitigating adverse ecological impacts, protecting human health, and ensuring human safety.168 As yet, however, no binational master plan or formal operational proposal has emerged from this process. Nor has the BWAC's ambitious objective of establishing a Tijuana River Border Watershed Council yet materialized, though it initiated a promising new effort to establish this body in May 2013.169

Additional organizations have undertaken other efforts in the past decade including county and municipal arrangements, civic action groups, and university networks. At the county and municipal level, the Tijuana Watershed Advisory Committee for San Diego County, the San Diego Association of Governments’ Committee on Binational Regional Opportunities, and the Binational Flood Warning System for the Tijuana Watershed are among the policy forums and action initiatives currently addressing aspects of river management.170 Binational citizen groups like the Binational Environmental Education Web, Proyecto Bio-regional de Educacion Ambiental, Jan, Los Ninos de Baja California, and Proyecto Fronterizo de Educacion are directing attention to the river's pollution problems and its ecological value.171 University research groups like the Institute for Regional Studies of the California's at San Diego State Uni-

165. BINATIONAL VISION, supra note 11, at 15; Ganster, supra note 117, at 29.
166. ADDENDUM TO THE BINATIONAL VISION, supra note 144, at 365; Ganster, supra note 117, at 29.
167. BINATIONAL VISION, supra note 11, at 160; ADDENDUM TO THE BINATIONAL VISION, supra note 144, at 371.
168. BINATIONAL VISION, supra note 11, at 4, 59, 154, 197-98, 204.
171. BINATIONAL VISION, supra note 11, at 44; About SANDAG: Committee on Binational Regional Opportunities, SAN DIEGO ASS’N OF GOV’TS, http://www.sandag.org/index.asp?committeeid=34&fuseaction=committees.detail (last visited Mar. 9, 2014); ENVTL. PROT. AGENCY REGION 9, supra note 154.
172. See supra notes 150, 156-159 and accompanying text.
versity, the University of California San Diego’s Regional Workbench, the University of California Santa Barbara’s Bren School of Environmental Science and Management, and the Los Laureles Canyon Project collaboration between the TRNERR and the University of California have mobilized both research efforts and citizen support for Tijuana River remediation and protection that have also informed governmental initiatives mentioned above.173

These many and varied initiatives suggest that the climate for a more comprehensive, watershed-oriented, binational agreement is now more favorable than it has been in decades. Four recent developments point in this direction. The first, led by the San Diego Regional Water Control Board, is the establishment in 2012 of a binational, multijurisdictional Tijuana River Valley Recovery Team and Recovery Strategy designed to address many of the problems outlined above.174 The second, mentioned above, is a renewed effort to resuscitate the Binational Vision Initiative and establish the long-discussed Binational Watershed Council to build on the efforts of the Tijuana River Valley Recovery Team and provide a practical coordinating council in support of comprehensive watershed management.175 The third is the City of San Diego’s and the Tijuana Municipality’s renewed initiative to strengthen binational cooperation176 and to include support for improved management of the Tijuana River.177 Fourth, there is a new IBWC initiative, which local governments back, to reach a new agreement focused just on the problem of sediment control affecting the Tijuana River estuary.178

VII. PROTECTING THE TIJUANA RIVER WATERSHED

It is interesting that, more than half a century after the United States and Mexico signed the 1944 Water Treaty, both countries have only made limited diplomatic progress towards either allocating or managing the Tijuana River’s waters and its watershed. As this analysis shows, this is not for want of public interest in the watershed over the past decade. Indeed, there is today a good

175. Decision made by participants, Managing the Binational Tijuana River Watershed Workshop (May 14-16, 2013).
178. Denise Ducheny, Bart Christensen, & David Wells, Managing the Binational Tijuana River Watershed Workshop (May 14-16, 2013); see Memorandum from County of San Diego, distributed at the Managing the Binational Tijuana River Watershed Workshop (May 14-16, 2013) (explaining that the new IBWC minute would link sediment reclamation in the estuary to planned reclamation of the Nelson Sloan Quarry in San Diego County) (on file with Water Law Review).
deal of binational governmental and citizen-led effort to address issues within the watershed and to do so on a more comprehensive basis—as seen with the BWAC’s 2005 assessment and recent initiatives to strengthen aspects of binational cooperation in the watershed. The region’s rapid growth and interdependence ensure that public interest in TRW management will continue to grow, its extraordinary dependence on out-of-basin water sources notwithstanding. What has emerged to date, however, is more of a fragmentary, semi-coordinated effort to deal with pieces of the puzzle rather than a broad-gauged formal commitment or series of linked commitments to watershed management in the basin. The challenge here is to build on the many particular initiatives and cross-border connections that have been developing and solidifying among governments and NGO’s over the past decade in order to generate the political support and momentum for a more comprehensive agreement.179

While the logic of comprehensive or integrated watershed management is compelling from conservation, ecosystem, and public health perspectives, the difficulty in moving forward in this issue area is partly related to the intrinsic nexus between water allocation and other elements of water management. Potential monetary costs, tradeoffs, and political hurdles associated with apportioning the river’s water complicate the long-neglected allocation problem. Today’s TRW management challenge, however, is only modestly related to the actual allocation of the river’s water supply. Both countries have developed their own infrastructure to harvest and regulate surface water runoff and exploit available groundwater resources, establishing facts on the ground that will be hard to change. While some benefit would accrue by formally allocating remaining Tijuana River water resources, as was originally envisioned, neither country appears to have much incentive to do so. That is why both countries are more likely to successfully address the allocation issues when joined with the many other sustainable watershed management needs within the basin. The accumulation of public health and ecological concerns points to the need for greater binational cooperation based on a comprehensive vision and a formal, binational plan for securing water quality, public sanitation, and biodiversity within the basin.

Though many challenges stand in the way of further binational cooperation in the TRW, this article demonstrates that the existing treaty architecture is no obstacle to such cooperation; indeed, it is an asset rather than a hindrance. Article 16 still matters for embedding the Tijuana River in the 1944 Water Treaty regime; the La Paz protocols and other agreements also add to the diplomatic toolkit available to both countries for initiating negotiations and crafting agree-

179. Initiatives like the BWAC, as evident at the May 2013 Tijuana River Workshop, have arguably produced a critical mass of interested actors on both sides of the TRW—actors who not only bring critical perspectives on TRW’s problems but who have much-needed links to local governments and are in a strategic position to push the governments to prioritize TRW management issues. Many of the BWAC’s members, for example, participate in subnational forums like the CNA’s watershed council for Baja California (Consejo de Cuenca) and USIBWC’s San Diego Citizen Advisory Forum. See generally Jose Luis Castro & Paul Ganster, Participacion local transfronteriza en la frontera Mexico y Estados Unidos: El Consejo Consultivo de la Cuenca Binacional de Rio Tijuana, paper presented at 3rd National Congress of the Water Issues Network of the Mexican National Commission on Science and Technology (CONACYT), (Dec. 7-8, 2012) (paper on file with Water Law Review).
ments. The accumulation of new treaty-related agreements and initiatives elsewhere along the border, though not directly related to the TRW, strengthens the treaty basis for reaching such a comprehensive agreement on the TRW. Recent treaty progress on the Rio Grande and the Colorado Rivers, for example, endorses the idea of binational advisory commissions and the need to address ecological resources in managing the rivers. This strengthens the case for principles and practices that the United States and Mexico could successfully apply to TRW management.

As Mark Spalding argued a decade ago, a comprehensive agreement on the TRW should focus on conservation and sustainable use of the river's resources, balancing ecological and social needs with economic development, and establishing an institutional foundation for binational management of the watershed. The countries can most effectively accomplish this by directly linking the realization of ecological and social watershed objectives to the 1944 Water Treaty's Article 16 and the authority of the La Paz Agreement. A truly comprehensive approach would take advantage of the treaty's unrealized promise of Tijuana River water allocation in order to quantify, to the extent practicable, existing uncaptured runoff below Barrett Dam and commit such water to the preservation of ecological values on the Rio Alamar branch. Such an approach would also prohibit any additional groundwater extraction for municipal use on Mexican tributaries on the Rio Alamar that would significantly impair the availability of surplus flows for ecological benefit. In this respect, both countries would make concessions to sustain a modest, though variable, instream flow on the Alamar-Tijuana River to achieve a public good of value to both nations.

Both governments should likewise use Article 16 provisions to authorize adopting a binational framework for local projects reclaiming wastewater for ecological and amenity uses and for engaging in binational management of additional flood mitigation, stormwater management, sedimentation control and reclamation, and water quality protection and improvement. It is here that the governments should explicitly link the 1944 Water Treaty's Article 16 authority to the La Paz Agreement to justify binational sharing of watershed data and conservation initiatives, and inter-sector cooperation among federal, state, tribal, and county-municipal agencies, as well as the non-profit, civil-society sector. The governments should use this linked authority to formally create a Bi-national Watershed Council with the following duties:

(I) identify watershed priorities;

(II) coordinate intergovernmental and binational watershed activities that work with existing federal, state, and local authorities and non-governmental bodies to include the La Paz Agreement-based Border 2020 Watershed Task Force in the San Diego-Tijuana Region;

(III) solicit funding for prioritized projects, drawing on IBWC, EPA-Secretaría del Medio Ambiente y Recursos Naturales, and BECC-NABD resources as well as those of domestic governments;

(IV) build local watershed management capacity; and

180. MINUTE 317, supra note 115, at 3; MINUTE 319, supra note 116.
181. SPALDING, supra note 27, at 2-3.
(V) support public participation and program accountability in TRW management.

For this purpose, both governments should make express provision for subsidiary arrangements with the U.S. and Mexican consulates that authorize watershed authorities, at various levels of government, diplomatic license and risk protection to cross the border in the routine performance of their binational watershed duties.

In sum, and much in the spirit of what the late expert on U.S.-Mexican environmental diplomacy, Al Utton, termed “preventive diplomacy,” the Tijuana River situation reminds us of the need to continue reinforcing binational management of water resources along the border, the imperative of linking advances in binational cooperation to the treaty instruments already in place, as well as the complexity and difficulty of doing so. After seventy years of waiting, the time has come for a comprehensive agreement on managing the Tijuana River.