A Perpetual Experiment to Restore and Manage Silicon Valley's Guadalupe River

Richard Roos-Collins

Follow this and additional works at: http://digitalcommons.law.ggu.edu/ggulrev

Part of the Environmental Law Commons, and the Water Law Commons

Recommended Citation
http://digitalcommons.law.ggu.edu/ggulrev/vol35/iss3/2

This Article is brought to you for free and open access by the Academic Journals at GGU Law Digital Commons. It has been accepted for inclusion in Golden Gate University Law Review by an authorized administrator of GGU Law Digital Commons. For more information, please contact jfischer@ggu.edu.
A PERPETUAL EXPERIMENT TO RESTORE AND MANAGE SILICON VALLEY'S GUADALUPE RIVER

RICHARD ROOS-COLLINS

INTRODUCTION

The Guadalupe River originates in the Santa Cruz Mountains and flows northwest through San Jose, California into San Francisco Bay. Since statehood in 1857, the river has been extensively developed for water supply, flood protection, residential and commercial facilities in the floodplain, and other economic uses. Even though it is located in the heart of Silicon Valley, it remains a spawning and rearing habitat for Central Coast steelhead and Chinook salmon, which are cold-

1 Senior Attorney, Natural Heritage Institute ("NHI"), 100 Pine Street, Ste. 1550, San Francisco, CA 94111-5202. The author is lead counsel for the Guadalupe-Coyote Resource Conservation District in the litigation and negotiation of the matters discussed in this Article. He has a J.D. from Harvard Law School (1986) and a B.A. in English from Princeton University (1975). Julie Gantenbein, NHI Staff Attorney, assisted in preparation of this Article.

2 See "Complaint Pursuant to Fish and Game Code Sections 5901, 5935, and 5937; the Common Law Public Trust Doctrine; The Porter-Cologne Water Quality Control Act; and Water Code Section 100" at ¶ 40. The Complaint concerned California water right licenses no. 2205 (Alamitos Creek); nos. 2208 and 2209 (Calero Creek); nos. 2210, 7211, 7212, and 10607 (Coyote Creek); nos. 2206, 2837, and 6943 (Guadalupe Creek); and nos. 5729, 6944, and 11791 (Los Gatos Creek). This Article focuses only on the Guadalupe River.

water anadromous species, and warmwater fish as well. Its banks are riparian habitat for many wildlife species, including foxes, possums, ospreys, and frogs. The river is becoming popular for many forms of recreation, such as seasonal boating and hiking and picnicking at the several public parks that permit access along the banks. This urban stream is now the locus of a collaborative experiment in restoration managed to enhance economic uses.

The Santa Clara Valley Water District ("SCVWD"), the local agency responsible for water supply and flood protection, is committed to measures worth more than $250 million to restore to good condition natural resources of Guadalupe (and two adjacent streams) degraded by nearly 150 years of urban development. SCVWD will study, construct, and manage these measures in cooperation with the Guadalupe-Coyote Resource Conservation District ("GCRCD"), federal and state regulatory agencies, and other parties. This restoration program, which largely results from settlements described in this article, will include enforceable objectives, rigorous monitoring of environmental conditions, and adaptive management of the individual measures, to assure accountability for the promised results.

This Article emphasizes how SCVWD, GCRCD (as the plaintiff in the several complaints), and other parties developed a joint scientific record as the basis for their negotiations, and how the resulting settlements use adaptive management to assure cost-effective restoration in the face of continuing uncertainty about the impacts of SCVWD's water supply and flood protection facilities. Section I addresses the settlement of a water rights complaint brought against the SCVWD to modify

---

4 Id.
5 Id.
7 See Cal. Water Code Appendix § 60-1 et seq.
8 The restoration budget is: $146 million (2003) for implementation of the water rights settlement, as described in Section II; and substantially more than $100 million for the downtown Guadalupe Flood Control Project, as described in Section III (see SCVWD, "Fact Sheet: Guadalupe River Park and Flood Protection Project" (2005)).
10 Id.
the operation of its water supply system in the upper reach of the river. Section II explores the settlement of a related notice of citizens' suit brought against flood protection projects in the more urbanized reaches downstream. Section III discusses the future implementation of these settlements, including consequences for both the Guadalupe watershed and other urban rivers.

I. WATER RIGHTS SETTLEMENT

GCRCD is a special local district that advises landowners in central San Jose on best management practices for their lands and other natural resources. In July 1996, GCRCD, joined by Trout Unlimited and Pacific Coast Federation of Fishermen's Associations as non-profit allies, filed an administrative complaint (the "Complaint") alleging that SCVWD holds and uses water rights to store and divert flows in a manner that causes unlawful harm to the coldwater fisheries and other natural resources of the Guadalupe River and two adjacent streams, Coyote and Stevens. GCRCD brought the Complaint before the State of California Water Resources Control Board (SWRCB), which has exclusive jurisdiction to issue or amend appropriative water rights initiated subsequent to 1914. The Complaint sought to apply to an urban stream the precedent of the Mono Lake Cases, which conditioned Los Angeles Water and Power's rights to divert tributary inflow so as to protect the public trust in Mono Lake, located in the remote and rural Eastern Sierra mountains. However, this Com-
plaint was resolved by negotiation. The resulting Settlement is an important precedent, not legally but practically – because it establishes a joint venture between a water utility and other stakeholders in the perpetual restoration and adaptive management of an urban stream.

A. COMPLAINT

As alleged in the Complaint, SCVWD holds eight water right licenses, issued between 1941 and 1985, for storage and diversion of surface flows from the Guadalupe and its tributaries for municipal and industrial water supply in Silicon Valley. It operates five dams for that purpose in this watershed. None of these licenses requires a release of minimum flow for protection of public trust resources. Certain rivers that reach below SCVWD's points of diversion run dry in most years from late spring (when the rainy season ends in the San Francisco Bay Area) through late fall (when the rainy season begins again), because the diversion covers all natural inflow. GCRCD alleged that this use fundamentally alters the historical condition of this river that, as sustained by the aquifer during the dry season, had continuous flows that attracted the original Spanish Mission in 1797 and subsequent immigrant farmers in the 1800's. It alleged that the use of these rights threatens to extinguish the anadromous fisheries, which depend on continuous flows in the late fall for spawning habitat. Such use has degraded habitat for other fish and wildlife species, boating, and other non-economic uses of the Guadalupe. The Complaint alleged that this use of the licenses violates the

---

16 FAHCE Settlement, supra.
17 Id.
18 Complaint, ¶¶ 17, 19-27.
19 Id., at ¶ 17.
20 Id.
21 Id., ¶¶ 54-58.
22 Id., ¶ 44.
23 Id., ¶¶ 54-66.
24 Id., ¶¶ 48-53.
Fish and Game Code sections 5937, 5901, and 5935; Water Code sections 13146 and 100; and the public trust doctrine.

This statute provides that:

The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam. During the minimum flow of water in any river or stream, permission may be granted by the department to the owner of any dam to allow sufficient water to pass through a culvert, waste gate, or over or around the dam, to keep in good condition any fish that may be planted or exist below the dam, when, in the judgment of the department, it is impracticable or detrimental to the owner to pass the water through the fishway.

CAL. FISH AND GAME CODE § 5937. "Fish" includes: "wild fish, mollusks, crustaceans, invertebrates, or amphibians, including any part, spawn, or ova thereof." Id., § 45. For this purpose, "dam" includes "all artificial obstructions." Id., § 5900(a)). It therefore includes permanent and seasonal dams, drop structures, and all of SCVWD's other facilities which obstruct fish passage. See Complaint, supra, ¶ 86.

This statute provides: "It is unlawful to construct or maintain in any stream in [specified districts] ... any device or contrivance which prevents, impedes, or tends to prevent or impede, the passing of fish up and down stream." CAL. FISH AND GAME CODE § 5901. The Complaint alleged that none of SCVWD's facilities in the Guadalupe watershed included fish ladders or screens. Id., ¶ 92.

This statute requires the owner of any dam on which a fishway has been provided to keep the fishway in repair, open and free from obstructions to the passage of fish at all times. CAL. FISH AND GAME CODE § 5935.

This statute requires that all State agencies "shall comply with state policy for water quality standards . . . in carrying out activities which affect water quality." Cal. Water Code § 13146. The Complaint alleged that this duty applies to the SWRCB in its administration of water rights. Id., ¶¶ 100, 104; see also U.S. v. SWRCB, 182 Cal.App.3d 82 (1986). It specifically alleged that SCVWD's licenses result in violations of water quality standards which the SWRCB has adopted for the Guadalupe adopted pursuant to Water Code §§ 13000 et seq. These standards include: designated beneficial uses of coldwater fisheries and recreation, the prohibition on a sediment load which causes a nuisance, the prohibition of any controllable factor causing an increase of 5 degrees Fahrenheit in the receiving water temperature, and the anti-degradation policy, which effectively requires that the conditions which existed in 1968 not worsen. See Complaint, supra, ¶¶102-105, referring to San Francisco Regional Water Quality Control Board ("SFRWQCB"), San Francisco Bay Basin Plan (1994).

This statute provides:

It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of he State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented....The right to water or to the use of flow of water in or from any natural stream or watercourse in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.

CAL. Water Code § 100. Instream uses, including fisheries and recreation, are beneficial uses recognized by the Water Code. Id., § 1243. The Complaint alleged that SCVWD's appropriations violate Water Code section 100 by causing significant harm to
The Complaint acknowledged that Guadalupe suffers from the tragedy of the commons, i.e., the cumulative impact of 150 years of urban development. Many forms of development, including the permitting of residential and commercial facilities in the immediate floodplain, are wholly outside of SCVWD's control. However, the Complaint alleged that SCVWD is responsible for several causes of such degradation, including management of its water supply and flood protection facilities which largely regulate the river's flows subject only to minor additional impacts by third parties. GCRCD sought to hold SCVWD accountable only for the proportional impacts of its own facilities. In effect, the Complaint relied on an 1884 case, which was the first in California to apply the public trust doctrine to impairment of navigable waters. In *Gold Run Ditch,*

the fish and wildlife resources of the Guadalupe, Coyote, and Stevens, and their tributaries, in violation of the Fish and Game Code, public trust doctrine, and Porter-Cologne Water Quality Control Act. *Id.,§ 107.*

32 *Complaint,* supra, ¶ 57.
33 *Id.,§ 57, 83.*
34 *Id.*
35 *Id.,§ 83.*
the California Supreme Court prohibited hydraulic mining that, as undertaken by a multitude of individual miners, had resulted in discharges of soil and other debris into non-navigable tributaries, eventually impairing navigation in the Sacramento River.\(^{37}\)

As a navigable river, the Sacramento is a great public highway, in which the people of the State have paramount and controlling rights. These rights consist chiefly of a right of property in the soil, and a right to the use of the water flowing over it, for the purposes of transportation and commercial intercourse. . . . To make use of the banks of a river for dumping places, . . . is an encroachment upon the soil of the latter, and an unauthorized invasion of the rights of the public to its navigation; and when such acts not only impair the navigation of a river, but at the same time affect the rights of an entire community or neighborhood, or any considerable number of persons, to the free use and enjoyment of their property, they constitute, however long continued, a public nuisance.\(^{38}\)

While the miners had acted independently and separately, and while their individual actions may have been “slight” or “scarcely appreciable,” the “common result” was impairment of navigation on the Sacramento River. Accordingly, they were jointly and severally liable for the public nuisance, and subject to a “coordinate remedy.”\(^{39}\)

The Complaint requested that the SWRCB adopt several remedies, following public notice and hearing.\(^{40}\) These were: (A) a disclosure of the operating protocols of SCVWD’s water supply facilities, including the quantities and schedules of its diversions relative to natural inflows; (B) a cooperative investigation of the impacts of these facilities on the coldwater fisheries and of alternatives to mitigate any adverse impacts; (C) following such investigation, amendments to the water rights licenses to include flow schedules adequate to maintain the coldwater fisheries and other public trust resources in good condition; and (D) further amendments to require a program of non-flow measures to restore the channel form and riparian

\(^{37}\) Id.
\(^{38}\) Id. at 146-147.
\(^{39}\) Id. at 149-50.
\(^{40}\) As required by 23 C.C.R. § 822.
vegetation of the river." Such measures complement a flow schedule to restore the quantity and quality of fish habitat and may include placement of spawning gravel, planting of trees, and removal of structures that block fish passage either upstream or downstream.42

B. ANSWER

SCVWD filed its “Answer to Complaint” in October 1996.43 The Answer stated generally that the status quo “presently presents the appropriate balance of competing needs and interests...”44 and requested dismissal of the Complaint.

The Answer included substantial factual representations regarding the purpose and benefits of its water rights licenses.45 It alleged that SCVWD, including its predecessors, has been responsible since 1929 to conserve surface and ground waters, and import additional waters, as appropriate for the supply of Santa Clara County, which encompasses 1,300 square miles.46 SCVWD serves 13 local districts and companies which deliver water to the taps of 1.6 million residents from San Jose northwards up the San Francisco Peninsula.47 Its Answer stated that the appropriations from local streams, as well the import of an even greater amount of water from the State Water Project and the federal Central Valley Project,48 are necessary to assure adequate water supply and to prevent land subsidence. Such subsidence had occurred in the 1800’s through early 1900s as a result of continuous groundwater overdraft.49 The land surface sank up to 15 vertical feet in some locations as the hydrostatic pressure of the aquifer (namely, the vertical force of

41 Complaint, supra, 108-112. The restoration program is a “physical solution” that California law permits as an alternative to abandoning appropriation in order to protect or restore the public trust. See Peabody v. Vallejo, 2 Cal.2d 351, 383-384 (1935); see also CalTrout I, supra, 207 Cal. App. 3d at 626, and SWRCB, Decision 1631, supra, http://www.waterrights.ca.gov/hearings/decisions/WRD1631.PDF.

42 Id.

43 The Answer is available online at www.n-h-i.org/Guadalupe_River.html, or in hard copy from the SWRCB. See note 8, supra.

44 Answer, supra, ¶ 159.


46 Id., ¶¶ 10-11.

47 Id., ¶ 16.

48 Id., ¶ 48.

49 Id., ¶¶ 25-27.
such water to hold-up the soil) was depleted. \(^{50}\) Such subsidence had threatened the safety of residential and commercial facilities, saltwater intrusion from the San Francisco Bay, and the storage capacity of the aquifer. \(^{51}\) Today, the aquifer is stable as a result of SCVWD's program of regulated pumping and also deliberate percolation of surface flow via spreading ponds back into the aquifer. \(^{52}\) SCVWD also emphasized that its second statutory function, flood protection, allows conservation of peak flows from the Guadalupe and other local streams for water supply. \(^{53}\) In sum, "SCVWD has implemented a comprehensive water operations strategy that has resulted in a fully integrated water supply system. . . ." \(^{54}\)

The Answer further stated that SCVWD's reservoir parks on the Guadalupe and other local streams are popular for recreation and provide substantial habitat for warm water fish and wildlife. \(^{55}\) It alleged that releases of minimum flows may cause significant harm to water supply as well as non-economic uses of the reservoirs, \(^{56}\) and that the benefits of such releases for the downstream coldwater fisheries and other resources are unknown or at least unproven in the Complaint. \(^{57}\)

The Answer also addressed the legal merits of GCRCD's claims. SCVWD alleged that Fish and Game Code sections 5937, which is specially applied to the Eastern Sierra by Section 5946, \(^{58}\) applies in mandatory form only to licenses in that area, or in the alternative, only to permit or license applications filed after 1975 when the SWRCB adopted a rule applying Section 5937 prospectively throughout the State. \(^{59}\) It alleged that SCVWD actively cooperates with the California Department of Fish and Game ("CDFG"), which has primary authority

\(^{50}\) Id., ¶ 32.

\(^{51}\) Id., ¶ 25-47.

\(^{52}\) Id., ¶ 42, 47.

\(^{53}\) Id., ¶ 39, 43.

\(^{54}\) Id., ¶ 51.

\(^{55}\) Id., ¶ 111-112.

\(^{56}\) Id., ¶ 113.

\(^{57}\) Id., "Introduction," ¶ 97.

\(^{58}\) This statute provides: "No permit or license to appropriate water in District 4 ½ [of CDFG] shall be issued by the State Water Rights Board after September 9, 1953, unless conditioned upon full compliance with Section 5937." FISH AND GAME CODE § 5946. Since Mono Lake is in District 4 ½, the Mono Lake Cases did not actually reach the issue whether Section 5937 applies equally to other parts of the State.

\(^{59}\) 23 C.C.R. § 782. See Answer, supra, ¶ 92-95.
to enforce this and other sections of the Fish and Game Code, and that CDFG has not requested any minimum flow schedule, fishway, or other measure not in place.\footnote{Id., ¶ 88.}

SCVWD argued that, in the absence of a mandatory duty to amend the licenses, the SWRCB may at most undertake a discretionary balancing of the public interest under relevant state laws.\footnote{Id., ¶¶ 96-98.} It argued specifically that any such balancing must take into account various factors that favor the status quo, including: (A) the economic viability of Silicon Valley, (B) the potential waste of water in the absence of scientific evidence determining what minimum flow release at a given facility would restore the downstream coldwater fisheries to good condition, (C) potential adverse impacts by such releases to reservoir uses, (D) contributions of many third parties to the existing conditions of the fisheries, including barriers to fish passage and flow diversions, and (E) the reliance of SCVWD on the licenses that the SWRCB issued without such requiring minimum flow releases.\footnote{Id., ¶ 97.} Finally, SCVWD prayed for dismissal due to estoppel -- namely, GCRCD's toleration for these operations over the course of many decades before filing the Complaint.\footnote{Id., ¶ 160, citing City of Long Beach v. Mansell, 3 Cal.3d 462 (1970).}

The SWRCB did not set the Complaint for hearing or permit further briefing. Instead, in October 1997, SCVWD and CDFG proposed to undertake the “Fisheries and Aquatic Habitat Collaborative Effort” (“FAHCE”) to resolve the Complaint.\footnote{See Letter from Brian Hunter, CDFG Reg. 3 Director and Stan Williams, SCVWD General Manager, to Natural Heritage Institute (Oct. 21, 1997) (“FAHCE Invitation”), available at www.n-h-i.org/Guadalupe_River.html.} Other regulatory agencies with jurisdiction over these streams, and GCRCD as complainant, agreed.\footnote{Id.} While the motives varied and are confidential, SCVWD and other stakeholders\footnote{This Article uses the term “stakeholders,” rather than “parties,” to describe the agencies and private entities participating in the FAHCE negotiations. Technically, with the exceptions of SCVWD, which holds the water right licenses, and the GCRCD, which was the complainant about uses of those licenses, none of these stakeholders obtained party status. The SWRCB stayed the complaint proceeding immediately after SCVWD’s answer and before interventions could occur.} faced substantial expenses and uncertain odds in litigation, given the
novelty of many of the claims. Each stakeholder also recognized the potential that a settlement would create mutual gains not otherwise achievable – for example, by including measures that the SWRCB would not order in a disputed hearing of the Complaint. An example is an adaptive management program, which commits SCVWD and other stakeholders to joint implementation of restoration measures. The SWRCB cannot order a non-licensee to make such a commitment – because, under the Water Code, it does not have personal jurisdiction over any entity that does not hold a water right but it may accept the commitment as made in a settlement with a licensee.

C. FAHCE PROCESS

SCVWD and CDFG proposed a specific structure for collaborative process. The parties refined and adopted this process in organizational meetings through early 1998 then implemented it through January 2003 when they entered into Settlement. The process had six features that proved to be critical to its eventual success.

First, the negotiating table was larger than SCVWD, CDFG, and GCRCD. It included other agencies whose support will materially affect whether SWRCB approves the Settlement as the basis for amending SCVWD’s licenses. U.S. Department of Commerce’s National Marine Fisheries Service (“NMFS”), which generally manages, conserves, and protects living marine resources that spend at least part of their life...
cycle within the U.S. Exclusive Economic Zone, will be responsible for assuring that the Settlement complies with the Endangered Species Act, which protects the threatened steelhead fishery against take. U.S. Fish and Wildlife Service ("FWS"), which generally conserves, protects, and enhances fish, wildlife, and plant resources that do not use marine habitat or otherwise are not under NMFS' jurisdiction, will assure that the Settlement complies with the Fish and Wildlife Coordination Act. San Francisco Regional Water Quality Control Board ("SF Regional Water Board") will advise the SWRCB whether the Settlement complies with the water quality standards adopted by the Basin Plan for the Guadalupe. It participated in the negotiations as an advisor to the other stake-

---

78 Effective October 17, 1997, NMFS listed Central California Coast steelhead (Oncorhynchus mykiss) as threatened under the ESA. See 62 Fed. Reg. 43937 (Aug. 18, 1997). The "Evolutionarily Significant Unit" of Central California Coast steelhead includes coastal California streams from the Russian River to Aptos Creek, and San Francisco and San Pablo Bays, including the Guadalupe.
79 "Take" means: "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect an endangered species, or to attempt to engage in any such conduct . . ." 16 U.S.C. § 1532(19). As defines by rule, "harm" includes significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass includes other actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. 50 C.F.R. §17.3.

By rule NMFS has extended the protection against take, applicable by statute to endangered species, to include Central Coast steelhead as a threatened species. See 65 Fed. Reg. 42,422 (July 10, 2000). Among other things, this rule describes activities associated with on-stream dams and diversions that are likely to cause harm resulting in take, including:

Constructing or maintaining barriers that eliminate or impede a listed species' access to habitat or ability to migrate . . . Constructing or operating dams or water diversion structures with inadequate fish screens or fish passage facilities in a listed species' habitat. . . . Conducting land-use activities in riparian areas and areas susceptible to mass wasting and surface erosion, which may disturb soil and increase sediment delivered to streams. . . .

81 See Reorganization Plan No. 2 of 1939, section 401, codified at 5 U.S.C.App. 1; Reorganization Plan No. 3 of 1940, section 3, codified at 5 U.S.C.App. 1.
82 16 U.S.C. § 661 et seq.
83 See note 15, supra. It also is undertaking a Watershed Management Initiative which attempts to integrate the many regulatory laws which have water quality impacts. See http://www.waterboards.ca.gov/sanfranciscobay/watershedmanagement.htm.
holders. Its formal participation might have constituted a pre-decisional commitment, since it is a sub-division of the SWRCB that will decide whether to approve the Settlement as license amendments. Finally, the City of San Jose participated for several reasons. It operates several water control facilities under its own licenses; a stormwater drains and collection system, which discharges some stormwater back into the streams; and the wastewater treatment facility, which is a potential source of recycled water for reuse in a minimum flow schedule. It administers land use laws applicable to the floodplain of the Guadalupe and the other streams included in the negotiation. It also has a general duty to protect the public welfare of the residents, including development of improved recreational access and facilities.

Second, the collaborative process had a single purpose: development of a management plan that, as applied to SCVWD's facilities and operations on the Guadalupe and other streams, will assure compliance with all laws that require protection of the coldwater fisheries and other trust resources. The plan will include "...innovative solutions for improving fisheries habitat in the County which provide cumulative benefits for the community." For example, we will consider collaboration with the City of San Jose's proposal for streamflow augmentation with recycled water as part of this effort.

Third, the stakeholders jointly interviewed and selected a neutral facilitator to schedule and manage all subsequent meetings. Although SCVWD paid the facilitator's fees and related meeting expenses, the consulting contract clearly provided that the duty of loyalty ran to the process only, and that the resulting process management would be consensual.

---

84 Personal communication with Al Gurevich (February 2005).
85 Personal communication with Al Gurevich (February 2005).
86 Recycled water which has undergone tertiary treatment may be discharged into a stream pursuant to Cal. Water Code §§ 13556, 13576.
88 Cal. Water Code § 100.
89 FAHCE Invitational Letter, supra at 1.
90 Id., at 1.
91 Id., at 1.
92 Id. at 2.
93 Personal communication with Al Gurevich (February 2005).
Fourth, the stakeholders established two standing committees to undertake the hard work of developing the management plan. The Technical Advisory Committee ("TAC") consisted of technical staff responsible for collection, review, and analysis of all scientific data relevant to understand SCVWD's impacts on public trust resources, both under today's baseline conditions and under alternatives that may mitigate existing impacts. A Consensus Committee consisted of managers responsible for negotiating the management plan and taking into account the economic, social, and legal merits of the alternatives that the TAC found to be technically feasible to mitigate adverse impacts on the fisheries.

Fifth, an expert fisheries consultant assisted the TAC to develop and implement a Limiting Factors Study. As with the facilitator, the parties jointly selected the consultant. While SCVWD then entered into a consulting contract to pay his fees and expenses, his duty of loyalty ran solely to the Consensus Committee. The Limiting Factors Study was intended to: (A) identify and rank all physical conditions (such as water temperature, presence of spawning gravels, barrier to fish passage, or presence of riparian cover) that affect the population or distribution of the coldwater fisheries in the streams; (B) for each limiting factor, identify the proportionate contribution of SCVWD's facilities relative to third parties; and (C) identify and evaluate for technical feasibility the flow and non-flow measures that might improve fisheries habitat by mitigating SCVWD's existing impacts.

Sixth, the stakeholders agreed to start with the Limiting Factors Study, then negotiate on the basis of that scientific record, and conclude the process in three years.

---

98 FAHCE Invitational Letter, supra, at 2.
99 Id., at 2.
100 Id. at 2.
101 See FAHCE TAC, "Investigation to Determine Fish-Habitat Alternatives for the Guadalupe River and Coyote and Stevens Creeks, Santa Clara County" (July 1998), available at www.n-h-i.org/Guadalupe_River.html (hereafter, "Limiting Factors Study").
102 Personal communication with Al Gurevich (February 2005).
103 See FAHCE TAC, "Investigation to Determine Fish-Habitat Alternatives for the Guadalupe River and Coyote and Stevens Creeks, Santa Clara County" (July 1998), available at www.n-h-i.org/Guadalupe.html.
104 FAHCE Invitation Letter, supra at 1-2.
agreed to stay further proceeding on the Complaint. The parties subsequently extended that deadline to January 2003 in order to permit additional study of the coldwater fisheries, whose life cycle is more than three years. Still, the deadline motivated the stakeholders to make a disciplined effort to resolve issues expeditiously. Any extension required mutual consent and assurance of continued commitment to keep the shoulder to the wheel.

The TAC and consultant undertook three years of field studies, including surveys of the physical form of streambed and banks, electrofishing to establish population counts by reach, and flow and temperature monitoring on a continuous basis. In March 2000, the TAC completed a Limiting Factors Study. The study summarized existing scientific literature relevant to the stated purpose; mapped the existing habitat conditions of each stream reach affected by SCVWD’s facilities; analyzed the impact of each of eleven limiting factors, again by reach; parsed the contributions of SCVWD and third parties to such impact; and recommended alternatives for mitigation of adverse impacts.

Many study findings were inconsistent with parties’ expectations based on personal observations before the study. For example, the study reported the known fact that a reservoir in this watershed, warmed by the Mediterranean climate, develops a thermal stratification each summer, whereby surface water exceeds 70 degrees Fahrenheit while deeper water is much cooler. The study found that that stratification has a significant and previously unknown consequence for the resolution of the Complaint: the rate of minimum flow release will determine the continued availability of coldwater in a given reservoir as the summer progressed. A higher release schedule will deplete such availability quicker and thus will subject downstream fish to more but warmer flows potentially unsuitable for their spawning. While the study does not purport to be

---

101 Personal communication with Al Gurevich (February 2005).
102 Id.
103 Id.
104 Id.
105 Limiting Factors Study, supra.
106 Id.
108 Id., at 13.
definitive, the TAC jointly recommended its use, and the Consensus Committee used the study findings to guide negotiation. Thus, the Consensus Committee used a joint scientific record as the basis for choosing among measures to include in the eventual Settlement.

Negotiation effectively began on receipt of the Limiting Factors Study. Since negotiations of litigation are confidential, this Article reports only the protocol used to develop, draft, and refine concepts into the form of Settlement.

The Consensus Committee used a protocol known as “one-text drafting.” This mitigates against the risk or fear that the defendant in a water or other environmental resources case will unduly control a collaborative process because it has disproportionate resources. Under this protocol, any party may volunteer to prepare a first draft of a given document. Other parties will comment in advance of the next meeting. The preferred form of comment is: “yes,” “no,” or “yes if....” Parties will discuss comments and seek to resolve disputes at the next meeting. A party other than the initial drafter will then prepare the second draft, showing proposed changes reflective of meeting discussion in redline/strikeout format. The process will continue in this seriatim manner. At any given meeting, only the latest draft is on the table for review. The Consensus Committee effectively used this protocol to draft and negotiate more than a dozen drafts, until all parties approved the final Settlement in January 2003.

D. FAHCE SETTLEMENT

The Settlement states its purpose as resolving all claims in the Complaint and all issues relating to SCVWD's compliance with other federal and state laws applicable to its water supply facilities, excepting only a natural resources damages claim

---

109 Personal communication with Al Gurevich (February 2005).
110 Id.
111 CAL. CODE CIV. PROC. § 1152.
112 Personal communication with Al Gurevich (February 2005).
113 Id.
114 Id.
115 Id.
116 Id.
117 Id.
118 FAHCE Settlement, supra.
relating to the capture of mercury leachate that originated in New Almaden Mine, located upstream of SCVWD’s water supply facilities.\textsuperscript{119} The Settlement consists of: contractual provisions stated in Article I – V and IX-X, which establish how the Settlement will be used in the SWRCB’s proceeding to amend the licenses and related regulatory proceedings; and flow and non-flow restoration measures stated in Articles VI –VIII, which are proposed for incorporation into the licenses and for SCVWD’s subsequent implementation.\textsuperscript{120}

The contractual provisions manage the necessary, but awkward, reality that the parties that are public agencies entered into a Settlement in advance of the preparation of an environmental document required by California Environmental Quality Act (“CEQA”)\textsuperscript{121} for the SWRCB’s approval and any other State action on the Settlement, and by the National Environmental Policy Act (“NEPA”)\textsuperscript{122} for any federal action, such as the Biological Opinion required by ESA section 7.\textsuperscript{123} The Settlement balances the support for the agreed-to restoration measures against the agencies’ duties under CEQA and NEPA not to bind themselves in advance of such an environmental document and consideration of public comments.\textsuperscript{124} The Settlement represents that the Parties concur, on the basis of the Limiting Factors Study and other evidence in the existing record, that these restoration measures will comply with all applicable laws.\textsuperscript{125} It provides that these measures will be the project\textsuperscript{126} for review in the environmental document. It further provides that the parties will support all necessary approvals of these measures without substantial modification,\textsuperscript{127} unless the

\begin{itemize}
  \item \textsuperscript{119} Id., § 1.1.1, referring to Comprehensive Environmental Response, Compensation, and Liability Act section 107(f), 42 U.S.C. § 9607(f). SCVWD had potential liability under CERCLA, even though it had never owned or operated the mine. Its downstream dams captured mercury leachate suspended in the river flow and, through a chemical reaction caused by low-oxygen level in reservoirs in hot weather (known as methylation), may have changed the chemical composition of the leachate. CERCLA creates strict liability for any person who owns or operates a facility where a hazardous waste is disposed. 42 U.S.C. § 9607(a)(3).
  \item \textsuperscript{120} FAHCE Settlement, supra.
  \item \textsuperscript{121} CAL. PUB. RES. CODE §§ 21000 \textit{et seq.}
  \item \textsuperscript{122} National Environmental Policy Act, 42 U.S.C. §§ 4321 - 4347.
  \item \textsuperscript{123} See 50 C.F.R. § 402.14(i).
  \item \textsuperscript{124} FAHCE Settlement, supra, §§ 5.3 – 5.4.
  \item \textsuperscript{125} Id., § 4.1.2.
  \item \textsuperscript{126} Id., §§ 5.3.1, 5.4.1.
  \item \textsuperscript{127} Id., §§ 4.1.2-4.1.3.
\end{itemize}
public record as subsequently developed demonstrates that another alternative will better protect and maintain the beneficial uses of these waters.\textsuperscript{128} In that event, the parties will consider potential amendments to the Settlement pursuant to a dispute resolution procedure.\textsuperscript{129} Assuming that the Settlement is approved without substantial modification, GCRCD will dismiss its complaint.\textsuperscript{130} Following such approval, SCVWD will implement the measures as incorporated as license amendments.\textsuperscript{131} The parties will not seek to reopen the licenses or the underlying Settlement, unless significant new information (including change in applicable law) materially changes the bargained-for benefits.\textsuperscript{132} The term of the Settlement is perpetual,\textsuperscript{133} unless terminated due to SCVWD's withdrawal following compliance with the dispute resolution procedure.\textsuperscript{134} The Settlement is a contract enforceable by specific performance as a supplement to any remedy for enforcement of the licenses under general laws.\textsuperscript{135} As of the publication date of this Article, the parties anticipate that the SWRCB will take final action on the Settlement by mid-2006.\textsuperscript{136}

The Settlement establishes a perpetual program for restoration of the local streams that SCVWD uses for its water supply, including the Guadalupe.\textsuperscript{137} This program has several fundamental parts.

The Settlement provides that the overall management objectives are to restore and maintain steelhead and salmon fisheries in good condition in each stream.\textsuperscript{138} It provides that an Adaptive Management Team, which includes all signatories,\textsuperscript{139} will restate these qualitative objectives in a measurable form for the purpose of monitoring and adaptive management.\textsuperscript{140} Examples of such objectives are: an amount of spawning gravel

\textsuperscript{128} Id., § 4.1.3.
\textsuperscript{129} Id., § 9.1.
\textsuperscript{130} Id., § 5.6.
\textsuperscript{131} Id., § 2.2.8.
\textsuperscript{132} Id., § 4.2.4.
\textsuperscript{133} Id., § 3.1.
\textsuperscript{134} Id., § 3.2.
\textsuperscript{135} Id., §§ 9.3.1-9.3.2.
\textsuperscript{136} Personal communication with Al Gurevich (February 2005).
\textsuperscript{137} FAHCE Settlement, supra.
\textsuperscript{138} Id., § 6.2.2.
\textsuperscript{139} Id., § 7.2.
\textsuperscript{140} Id., § 7.3(A).
in a given reach, or the percentage of the water surface that should be shaded by riparian vegetation to maintain coldwater. These objectives will be enforceable conditions of SCVWD’s licenses.

SCVWD will release a minimum flow from each reservoir or diversion facility. The release schedules, which vary across the reservoirs and watersheds, are intended to maximize the geographic extent and duration of coldwater flow for spawning and rearing. In the Guadalupe watershed, the release schedules are stated not in traditional form (as a value in cubic feet per second) but instead as an obligation to implement a rule curve for each reservoir to maximize the coldwater habitat, taking into account a given year’s hydrologic, weather, and other circumstances. SCVWD will follow a ramping rate to temper any artificial change in flow release. In addition, SCVWD will undertake further study of the feasibility of delivering recycled water from the City of San Jose’s wastewater treatment facility near San Francisco Bay back uphill to the local creeks, or managing the stormwater collection system for the same purpose, and will implement such measures found to be feasible and suitable.

In addition to the flow measures, SCVWD will construct, operate, and maintain non-flow measures in four phases. In Phase One, which will begin on the effective date and continues for ten years, it will remove certain weirs (namely, bank-to-bank structures used to raise the vertical height of flow without substantial storage) and other low barriers to fish passage. The Limiting Factors Study identified each such barrier and assigned a priority based on the feasibility of removal and the significance of the currently unavailable habitat. In Phase Two (years eleven to twenty), SCVWD will remove other barriers, either directly or by contribution if owned by third

---

141 Id., § 6.1.
142 See, e.g., Id., § 6.6.2.1.2.1 (Guadalupe Creek).
143 Id.; see also Appendix E.
144 Id., § 6.2.4.5.
145 Id., § 6.6.
146 Id., § 3.1.2.
147 Id., § 6.6.1.1 (D).
148 Id., § 6.6.1.1 (D).
149 See, e.g., id., § 6.6.2.1.1.
It may also implement a trap-and-haul program to transport spawning adults to habitat blocked by storage dams, if necessary to achieve the management objectives. Phase Three (years twenty-one to thirty) continues that same obligation. In Phase Four (years thirty-one to perpetuity), SCVWD will continue to maintain all non-flow measures constructed in prior phases.

Finally, in consultation with the Adaptive Management Team, SCVWD will implement these obligations in an adaptive manner. In Phase One, it will develop a Fish Habitat Restoration Plan, including Geomorphic Functions Study, to specify the locations and other details of non-flow measures. SCVWD will develop Operation and Maintenance Procedures, more detailed forms of the rule curves in Settlement Appendix E, for the flow measures. The plan will include measurable objectives to implement the qualitative management objectives. In continuing collaboration with the Adaptive Management Team, SCVWD will systematically monitor the changing conditions of the fisheries as these measures are implemented. It may modify flow and non-flow measures alike if, on the basis of monitoring results, the Adaptive Management Team determines that modifications will better contribute to timely achievement of the management objectives. It will spend up to $42 million in each of Phases One, Two and Three, and whatever amount is necessary thereafter to continue the flow and non-flow measures already implemented.

---

150 Id., § 6.6.2.2.
151 Id., § 6.6.2.2. The Limiting Factors Study found that fish ladders are infeasible at the storage dams, due to their respective heights.
152 Id., § 6.6.2.3.
153 Id., § 6.7.3.
154 Id., §§ 7.1-7.2.
155 Id., § 6.2.4.3.
156 Id., § 6.2.4.4.
157 Id., § 7.3(C).
158 Id., § 7.3(B).
159 Id., § 7.3(D).
160 Id., §§ 8.1.1., 6.7.
II. INTEGRATED SETTLEMENTS FOR GUADALUPE FLOOD CONTROL PROJECTS

The Guadalupe is a small urban river. Its average flow is 48 cubic feet per second (c.f.s.). During the rainy season from November through April, its peak flow may be several orders of magnitude more. The 100-year flood (e.g., that flow predicted to occur once a century) is 17,000 c.f.s. Large floods have occurred many times since statehood in 1857. Today, more than 3,000 homes and 1,000 commercial and industrial buildings, including many of the premier computer companies of Silicon Valley, are located in the 100-year floodplain, which includes the riparian and valley lands above the river channel into which such flood flows would spill absent intervention.

SCVWD is the local agency that provides flood protection, while Santa Clara County and municipalities permit land use developments. As in most urban watersheds in California or the nation, it has always been and is legal under local ordinance to permit developments in the floodplain. As a result, SCVWD must intervene systematically to redirect flood flows as necessary to protect life and property. Its plan of flood protection in this watershed consists of three projects. The Upper Guadalupe Flood Control Project ("FCP") begins in the foothills of the Santa Cruz Mountains and continues downstream or northwards to Interstate 280. The Downtown Guadalupe FCP begins at Interstate 280 and ends at Interstate 880. The Lower Guadalupe FCP begins at Interstate 880 and continues to the town of Alviso, near San Francisco Bay.

The planning, financing, and construction processes for these projects are complex regional efforts that have spanned five decades and counting. The lower and downtown projects became operational in January 2005, and the upper project is still under preliminary construction. This Article tells a very

---

162 Id.
163 Id.
164 Id.
165 Id.
166 See note 2, CAL. WATER CODE Appendix § 60-1.
167 Steven E. Ehmann, Conflict at the Confluence, supra.
168 Id.
169 Fact Sheet, supra.
short chapter of that story: how the design and operation of these projects will be integrated as a result of recent settlements, so as to contribute to the restoration of the coldwater fisheries in the Guadalupe and recreational enhancements, including trails, parks, and other forms of public access.

A. NOTICE OF CITIZENS SUIT AGAINST DOWNTOWN FCP

In 1986 Congress authorized the United States Army Corps of Engineers ("Army Corps"), in partnership with the SCVWD and City of San Jose, to construct the Downtown Guadalupe FCP. In February 1992, SF Regional Water Board issued the final regulatory approval, which set forth water quality certification and waste discharge requirements. The approved project consisted of hardscape (such as concrete armoring and training walls) in the river's channel as necessary to increase the hydraulic capacity from the existing 8,000 c.f.s. to 17,000 c.f.s. This certification required mitigation measures to protect aquatic habitat, including development of a Mitigation and Monitoring Plan, planting of riparian vegetation, and maintenance of a low-flow channel for fish passage outside of the flood season. The certification also included an obligation to assist in the implementation of the City of San Jose's River Master Plan for recreational facilities and access. That plan, as developed in the 1980's, provides for a linked complex of gardens (including several dedicated to heritage roses and Sister Cities), a visitor's center, tennis courts, and riparian trails.

The Corps and SCVWD completed the lower reaches (called Contracts 1 and 2) by 1996. These reaches, located in the flight path of San Jose International Airport, were largely

171 As required by Clean Water Act section 401(a), 33 U.S.C. § 1341(a).
172 As required by CAL. WATER CODE § 13260.
174 Id.
175 Id.
176 Fact Sheet, supra.
177 Id.
undeveloped. The upstream Contract 3 is more urbanized: its banks are already occupied by a complex maze of freeway and railway bridges, buildings, and other developments. In May 1996, before construction of Contract 3 began, GCRCD issued a notice of citizens’ suit under Clean Water Act section 505 to enforce the 1992 certification. The notice named the Army Corps and SCVWD, as Project Sponsors. It alleged that the Mitigation and Monitoring Plan required by the 1992 certification had not been fully approved by FWS, NMFS, and DFG (“Resource Agencies”), and that such approval was a condition precedent for construction of Contract 3. It alleged that some mitigation measures constructed in Contracts 1 and 2 did not comply with the performance requirements of the 1992 certification or underlying water quality standards and had already failed in minor floods. The notice proposed negotiation, while stating that GCRCD would seek damages, injunctive relief, and attorneys’ fees in any litigation in U.S. District Court.

SCVWD and the Army Corps did not immediately grasp this olive branch. The 1992 certification resulted from many years of negotiation between the Project Sponsors and Resource Agencies. GCRCD was a latecomer, from their perspective. They were not pleased that GCRCD, a special local district with advisory authority only, appeared to second-guess the measures approved by the Resource Agencies, which have direct authorities to regulate design and operation. Further, Project Sponsors and the GCRCD had developed a mutual distrust as a result of confrontational letters and meetings preceding the CWA Notice. Finally, the GCRCD filed its water rights Complaint shortly after this notice. The SCVWD ini-

181 Id., at 1.
182 Id., at 2-5.
183 Id. at 2-6.
184 Id. at 7.
185 Personal communication with Al Gurevich (February 2005).
186 Id.
187 Id.
188 Id.
189 Complaint, supra.
tially viewed this double-whammy as a threat to its flood protection and water supply operations in total.\(^{190}\)

This inertia ended, thanks partly to the initiative of the President of the Guadalupe Parks and Gardens Club ("Parks Club"). The Parks Club had helped design the riparian parks, which will be features of the downtown project.\(^{191}\) As a former Assistant U.S. Secretary of Defense, the Parks Club President effectively asked each side: "why is this negotiation so hard to start, if the U.S. can finish nuclear disarmament treaties with the former Soviet Republics?"\(^{192}\) In June 1997, the Resource Agencies and Project Sponsors informally agreed that the mitigation measures required by the 1992 certification should be enhanced in three respects: more on-site planning of riparian vegetation, other measures to prevent warming of water temperature as a result of removal of existing vegetation where necessary to assure flow capacity, and removal of fish barriers (such as weirs) in the project reaches.\(^{193}\) GCRCD was invited to join this collaborative process shortly thereafter.\(^{194}\)

SCVWD and the Army Corps did not formally answer the CWA Notice.\(^{195}\) The notice was eventually withdrawn as a result of settlement, discussed below. The notice is significant not as legal precedent, but instead as a turning point in SCVWD's integrated management of flood and non-flood flows to enhance the beneficial uses of the Guadalupe.

B. DOWNTOWN GUADALUPE FCP SETTLEMENT

The Guadalupe Flood Control Project Collaborative ("Collaborative") used the process concurrently used in FAHCE as well.\(^{196}\) Its purpose was to resolve the CWA Notice in a manner that assured compliance with all applicable laws, including ESA section 7 which had become recently applicable as a result of the mid-1997 listing of the Central Coast steelhead.\(^{197}\) Efforts

\(^{190}\) Personal communication with Al Gurevich (February 2005).
\(^{191}\) Id.
\(^{192}\) Id.
\(^{194}\) Id.
\(^{195}\) Personal communication with Al Gurevich (February 2005).
\(^{196}\) 1998 FCP Settlement Record Document, supra, at 15-21; Appendix B, "Ground Rules" at 97 et seq.
\(^{197}\) Id.
were divided between a Technical Fact-Finding Subcommittee, which consisted of technical staff, and the Collaborative, which consisted of decisional managers. The Project Sponsors instructed their environmental consultant, who had been preparing documents related to compliance with the 1992 certification, to undertake further study at the instruction of this Collaborative, and specifically, to evaluate the hydraulic capacity and cost of various alternative designs for Contract 3 to reduce the project impacts to riparian and aquatic habitat. The Collaborative selected a neutral facilitator, whose fees and expenses were paid by the Project Sponsors. It set a deadline of July 1, 1998 for settlement. It used one-text drafting as the negotiation protocol.

The Collaborative established criteria to guide the evaluation of alternative designs. It required that, to be approvable, an alternative would: provide at least as much flood protection and the current project; achieve measurable objectives for other beneficial uses; result in timely project completion; be cost-effective and fundable; and comply with all applicable laws. Applying these criteria to the studies undertaken in rapid succession by the consultant, the Collaborative unanimously approved a bypass facility that diverted flood flows underground and around a constricted reach of the river channel, as superior to the then-current project that relied on very extensive hard-scape of that channel to accomplish the same result. On July 1, 1998, the Project Sponsors, Resource Agencies, and GCRCD entered into a settlement in support of that alternative design.

Like the FAHCE Settlement, the downtown FCP Settlement was a starting point for regulatory approvals. It proposed a design -- two underground culverts each 17-feet high and 25-feet wide on the east side of the river in Contract 3 -- as the preferred alternative for the purpose of environmental re-

198 Id.
199 Id.
200 Id.
201 Id.
202 Id. at 37.
204 Id.
view. It required the Project Sponsors, by April 15, 1999, to
develop a Mitigation and Monitoring Plan that: (A) provides for
replacement of any riparian vegetation that must be removed
in certain locations to assure adequate hydraulic capacity, with
new plantings in other locations of equal or superior value for
the coldwater fisheries; (B) includes other measures to prevent
any harmful increase in water temperature during the transi­
tion period when new plantings do not shade the river as well
as any removed trees; and (C) provides for adaptive manage­
ment of the project over its 100-year useful life. The adaptive
management consists of measurable objectives for flood protec­
tion and environmental benefits, systematic monitoring of ac­
tual conditions over time, and (through an Adaptive Manage­
ment Team consisting of the signatories) modification of project
design or operation as appropriate to remedy any deficit.

On April 14, 1999, the parties entered into a supplement to
the Settlement to confirm that the Mitigation and Monitoring
Plan complied with these requirements. The Project Sponsors
then obtained a series of federal and state approvals, conclud­
ing with the SF Regional Water Board’s issuance of a new wa­
ter quality certification. This certification requires that the
Mitigation and Monitoring Plan will be implemented to prevent
any net loss in riparian vegetation or other natural values,
achieve stated measurable objectives for each beneficial use,
and provide for adaptive management of project design and
operation by an Adaptive Management Team if, over the pro­
ject life, the team finds that a measurable objective is not likely
to be met.

No stranger to the FCP Settlement appealed.

---

206 Id., § II.C.
207 Id., § IV.1-2.
208 Id., § V.1.
209 “Supplement to Dispute Resolution Memorandum regarding Construction,
Operation, and Maintenance of the Guadalupe Flood Control Project” (Apr. 1999),
available at www.n-h-i.org/Guadalupe_River.html.
210 See note 101, supra.
211 2001 FCP Certification, supra, Finding ¶¶ 13, 18.
212 Id., Ordering Provisions ¶ D.3.
213 Id.; see also Finding ¶ 20. Of course, SCVWD retains its legal responsibility
for compliance with the certification. The Adaptive Management Program does not
create a joint enterprise in that sense.
214 Personal communication with Al Gurevich (February 2005).
Construction of the downtown project will conclude in December 2005.\textsuperscript{214}

\textbf{C. GUADALUPE WATERSHED INTEGRATION WORKING GROUP}

In early 2002, at the request of the GCRCD, SCVWD established the Guadalupe Watershed Integration Working Group ("GWIWG") to coordinate the design and operation of the three flood control projects in this watershed.\textsuperscript{215} The lower project began operation in 1985, but the Army Corps and SCVWD were revising the design due to inadequate capacity.\textsuperscript{216} The upper project was at the end of a planning process preparatory to regulatory approvals and initial construction.\textsuperscript{217}

GWIWG consists of the same agencies which entered into the Settlement for the downtown FCP.\textsuperscript{218} It uses the proven collaborative process.\textsuperscript{219} It has an \textit{ad hoc} Design Review Team ("DRT"), which oversees ongoing technical studies, including collaborative review of environmental documents required for any further regulator approvals.\textsuperscript{220} The GWIWG itself is a policy forum where the negotiators commit to recommend decisions for ratification by their respective directors or boards.\textsuperscript{221} Without entering into formal settlements, the GWIWG developed consensus on the designs, including mitigation conditions, for incorporation into the regulatory approvals for the lower and upper projects.\textsuperscript{222} Those approvals have now issued.\textsuperscript{223} The lower and downtown projects are operational as of the date of

\begin{footnotes}
\item[214] Fact Sheet, supra.
\item[215] Personal communication with Al Gurevich (February 2005).
\item[216] Id.
\item[217] Id.
\item[218] Id.
\item[219] Id.
\item[220] Id.
\item[221] Id.
\item[222] Id.
\end{footnotes}
publication of this Article, and the upper project will be constructed in phases through 2015. 224

The lower and upper projects include an adaptive management program consistent with the downtown projects. 225 SCVWD will undertake specified measures to mitigate impacts on riparian corridor and channel form. 226 The certifications incorporate measurable objectives for environmental results. 227 SCVWD will monitor achievement of those objectives and submit annual monitoring reports. 228 The same Adaptive Management Team will evaluate the adequacy of the approved designs to achieve the measurable objective and, within the limits of adaptation approved by the SF Regional Water Board, adapt the designs (e.g., reconfigure a levee design) or operations accordingly over the next century. 229 SCVWD is required to undertake further studies in addition to the monitoring programs to refine designs for geomorphic functionality – to assure that the channel through the affected reaches is capable of handling the water flow and sediment load. 230

III. LOOKING FORWARD

SCVWD will operate its water supply and flood control facilities to achieve measurable management objectives for all beneficial uses. 231 It will undertake more than $200 million in physical measures to restore the environmental quality of this stream. 232 It will monitor achievement of the management objectives that state the desired conditions of coldwater fisheries,

224 Fact Sheet, supra.
226 The cost of these measures, while not estimated in the certifications, will probably exceed $50 million.
228 2002 FCP Certification, supra, at Ordering Provision ¶ D.24, Findings ¶¶ 18, 21; 2003 FCP Certification, supra, at Ordering Provisions ¶ D.28
231 2001 FCP Certification, supra; 2002 FCP Certification, supra; 2003 FCP Certification, supra.
232 Id.
their habitat, and other natural resources. An Adaptive Management Team, consisting of Federal and state regulatory agencies as well as other stakeholders, will collaborate with SCVWD to adapt these facilities to achieve these objectives, subject to the constraint that any such adaptation must fall within the scope of the underlying regulatory approvals. The Guadalupe is the locus of a perpetual experiment in maintaining peaceful co-existence of economic and environmental uses of an urban stream.

This effort is a significant precedent for restoration of other urban streams. First, the local district will integrate management of water supply and flood protection facilities, even though they were separately permitted and funded, in order to restore environmental quality. Second, it will be legally accountable for actual results as described by the measurable management objectives. Such accountability is not required by NEPA and CEQA, which merely provide that the permitting agency will predict the foreseeable impacts of a given action. A permit for water use, whether under the Water Code or other substantive law, typically does not incorporate those findings in an enforceable form and thus does not provide for reopener if unexpected impacts occur. Third, stakeholders will participate in a perpetual Adaptive Management Team to cooperate in analysis of monitoring results and any modification in facility design and operation necessary to achieve management objectives.

---

233 Id.
234 Id.