

Enforcement-driven financing of water quality in California: The case of supplemental environmental projects

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Abstract

In this report, we compile empirical evidence regarding federal and state trends in the use of Supplemental Environmental Projects (SEPs). Our primary interest is in SEPs associated with enforcement of the federal Clean Water Act (CWA). We move from briefly examining the broadest trends—federal and state use of SEPs—to more particular emphasis on the experience of California’s State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB) with SEPs. Drawing on state and regional enforcement databases as well as extensive interviews with agency enforcement personnel, we evaluate the use of SEPs by the regional boards in California and offer recommendations for improving the use of this important policy tool.

Introduction and Problem Statement

The principal tools of environmental enforcement—injunctions and civil penalties—may halt environmental damage and deter future harm but they do not necessarily reverse any impacts resulting from noncompliance or, more broadly, improve the environment generally (Kristl 2007). In theory, civil penalties could be structured to achieve both: the penalty acts as a deterrent while the funds themselves are directed towards restoration. In the US, this general approach to civil penalties involves the use of Supplemental Environmental Projects (SEPs). Once accepted by citizen plaintiffs or environmental agencies in a settlement resolving an enforcement action, a SEP allows a defendant to implement a project that would benefit the environment above and beyond what it is otherwise obligated to do. Both parties theoretically profit from this flexible approach to environmental enforcement. The dual goals of deterrence and restoration are achieved while enabling the defendant to gain something other than notoriety for its environmental infraction (Kristl 2007). By implementing a SEP, which is presumably perceived by the public and the agency in a positive light, they can reap reputational and political benefit from what is otherwise a purely negative situation.

The basic approach—as well as the term itself—emerged during settlement proceedings to resolve the increasing number of successful enforcement actions filed by citizen plaintiffs under the Clean Water Act (CWA) during the mid-1980s. Unlike other federal statutes, the CWA’s citizen suit provisions permit citizens to sue for civil penalties as well as injunctive relief (Thompson 1987). Hundreds of such actions were filed by citizen plaintiffs, and many resulted in negotiated settlements. If the settlement required the defendant to pay civil penalties, to whom should the penalty be paid? When the federal government won such a case in court, the answer was crystal clear: any penalties collected must be sent to the US Treasury under the provisions of the Miscellaneous Receipts Act. If, instead, the federal government reached a settlement with a defendant, the Environmental Protection Agency’s (EPA) civil penalty guidance during the early 1980s allowed defendants to make “environmentally beneficial expenditures” or fund “mitigation projects” in exchange for a reduction in the total monetary penalty (Gelpe and Barnes 1990). If such projects were attractive at the time to EPA officials as well as defendants, citizen suit plaintiffs were even more

motivated to avoid enriching the US Treasury at the expense of the environment (Gelpe and Barnes 1990). Nevertheless, attorneys from the Department of Justice registered several objections during the late 1980s against such “credit projects” during congressional hearings on “environmental improvement projects” funded while enforcing federal environmental legislation (Ludwiszewski 1987, cited in Gelpe and Barnes 1990). Around the same time, this early proliferation of synonymous terms had been replaced by “Supplemental Environmental Project,” the term preferred by the EPA when it released settlement guidance on the topic in 1991 (US EPA 1991, cited in Stevens 1994).

That guidance marked the beginning of a major shift: eventually, the federal government eventually dropped its opposition to SEPs and, instead, began promoting them as an essential tool in federal enforcement of environmental legislation. In the last 15 years or so, more SEPs have been negotiated by government lawyers than citizen plaintiffs. The innovation has been adopted by state regulators as well. Forty-eight states have, either explicitly or implicitly, permitted the use of SEPs in environmental enforcement (PLRI 2007).

SEPs arose out of the ambiguous and uncertain ground that lies between compliance and noncompliance. Such sanctions were not expressly permitted by legislation. Their legal validity had to be established in a series of court cases. Congress has now, after the fact, expressly endorsed their use under at least one environmental statute, the Clean Air Act (Farber 1999). Daniel Farber described this process of innovation arising out of ambiguity as an example of “positive slippage,” where enforcement does not slip behind ideal levels but rather sideways (Farber 1999). He also suggested that the process that gave rise to SEPs resembled the “reinvented” regulation that was in vogue during the 1990s. In general, the reinventers promoted introducing more flexibility and creativity into command-and-control regulatory regimes. Farber warned, though, that even positive slippage or reinvented regulation can cause transparency and accountability problems (Farber 1999). By their very nature, the settlement discussions that give rise to SEPs are not transparent—they are privileged and confidential negotiations. When civil penalties are to be paid to the US Treasury, accountability is relatively straightforward. Accountability is more difficult when the desired outcome is an environmental benefit rather than a deposited check.

The US EPA established final guidelines governing SEPs in 1998. These require that 1) there is a nexus between the discharge violation and environmental benefits arising from a SEP, 2) the SEP must improve protection or reduce risks to public health of the environment, and 3) the SEP must consist of a project that violators would otherwise not have performed, either as part of their regular responsibilities under the law or because of environmental programs already adopted and funded (EPA 2006).

Generally, the “nexus test” means that violators must address a problem related to the one caused by the discharge violation (e.g., if the discharge was sediment into a creek, then the SEP might be restoring fish habitat, preferably somewhere close to the discharge). SEPs can be tremendously beneficial in that they provide much more funding for water-related conservation projects than would otherwise be possible. Just as importantly, they keep a portion of settlement fines local rather than sending them to Washington or a state treasury.

Objectives and Procedure

In this report, we compile empirical evidence regarding federal and state trends in the use of SEPs. Our primary interest is in SEPs associated with enforcement of the CWA. We move from briefly examining the broadest trends—federal and state use of SEPs—to more particular emphasis on the experience of California’s State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB) with SEPs.

Results

Trends in SEP use: Citizen plaintiffs

The citizen suit provisions in the Clean Water Act differs from similar provisions in earlier statutes. It explicitly permits citizens to sue for civil penalties (Thompson 1987). Although first authorized when the act passed in 1972, the citizen suit provisions of the CWA were not heavily utilized until the mid-1980s. Between 1978 and 1982, 125 notices of intent to sue or suits were filed under environmental statutes administered by the EPA (ELI 1984, cited in May 2003). Of those, 41 were filed to enforce the CWA. In 1983 alone, the number of such actions under the CWA more than doubled to 108 (Fadil 1985, cited in Thompson 1987). The rapid growth continued throughout the remaining years of the Reagan administration. A 1988 study identified 882 such actions filed under the CWA (Jorgenson and Kimmel 1988, cited in Gelpe and Barnes 1990). Of those actions, 48 were settled out-of-court (Jorgenson and Kimmel 1988, cited in Stevens 1994) and 65 or more included SEPs (Jorgenson and Kimmel 1988, cited in Mann 1991).

There are limited data on citizen suit use during the late 1980s and early 1990s. Data for the period 1995 to 2001 are more complete (May 2003; Table 1). As shown in Table 1, there is a general decline in the use of citizen suits to enforce the CWA, particularly in the number of consent decrees achieved by citizen plaintiffs, which fell from an all-time high of 54 in 1997 to 20 by 2001. Even so, citizen settlements tended to outnumber federal actions in most years (Table 1).

Table 1. Trends in Clean Water Act citizen suits, 1995-2001

	Notices of intent to sue filed by citizen plaintiffs	Citizen enforcement cases logged by Dept. of Justice	Citizen enforcement consent decrees reviewed by Dept. of Justice	Consent decrees negotiated by Dept. of Justice based on EPA referral
1995	128	43	30	24
1996	179	71	48	60
1997	187	53	54	35
1998	237	49	37	33
1999	151	24	41	24
2000	173	28	26	22
2001	119	30	20	27

Table 1 is based on previously published data (May 2003). May based his work on spreadsheets compiled by the US EPA Office of General Counsel and the US EPA Office of Air and Waste Remediation. The four columns present data drawn from May's tables 3, 5, 6, and 14.

These trends in citizen suit use may or may not reflect trends in SEP utilization by citizen plaintiffs. At the very least, though, the number of consent decrees (Table 1) may represent an upper bound on the number of SEPs since only out-of-court settlements are eligible for SEPs. In 2001, then, citizen plaintiffs were responsible for at most 20 SEPs; all 20 SEPs could have been adopted only if 100 percent of the consent decrees achieved by citizen plaintiffs acting under the authority of the Clean Water Act actually included SEPs in their settlements.

Numerical trends aside, anecdotal data on early SEPs suggest that a wide range of organizations and projects were funded using SEPs negotiated by citizens. Two dozen examples are listed in Table 2. Some SEPs resulted from a joint action involving citizen plaintiffs and one or more government agencies. When such details are known, they are marked in Table 2 as a "joint action."

Table 2. SEPs in consent agreements to settle Clean Water Act citizen suits prior to 1993

Case	Year	Amount	SEP	Source
<i>Citizens Coordinating Committee on Friendship Heights, Inc. v. Washington Metropolitan Area Transit Authority</i>	1983	\$10,000	Payment to Little Falls Branch Improvement Fund	Stevens 1994
<i>Natural Resources Defense Council, Inc., and Connecticut Fund for the Environment v. Harper-Leader Inc.</i>	1984	\$24,000	Payments to Middlebury Land Trust and another environmental organization	Mann 1991
<i>Sierra Club and Natural Resources Defense Council, Inc. v. Raytheon Co.</i>	1984	\$50,000	Payment for land acquisition	Mann 1991
<i>Sierra Club v. Florida Wire and Cable Company</i>	1985	\$20,000	Payments to Jacksonville University and the Open Space Institute	Mann 1991
<i>Public Interest Research Group of New Jersey and Atlantic States Legal Found., Inc. v. Tenneco Polymers, Inc.</i>	1986	\$255,000	Payment to American Littoral Society to work on Delaware Basin	Mann 1991
<i>Chesapeake Bay Found. v. Bethlehem Steel Corp.</i>	1987	\$1.5 million	Payment to a fund to help clean Chesapeake Bay	Stevens 1994
<i>Friends of the Earth v. Eastman Kodak Co.</i>	1987	\$49,000	Payment to Conservation Foundation	Stevens 1994
<i>Natural Resources Defense Council, Inc. v. Duquesne Light Co.</i>	1987	\$40,000	Payment to Western Pennsylvania Conservancy	Mann 1991
<i>Sierra Club, Inc. v. Port Townsend Paper Corp.</i>	1987	\$137,500	Payment to the Nature Conservancy to purchase wetlands	Stevens 1994
<i>Atlantic States Legal Found., Inc. v. Minnesota Mining and Manufacturing</i>	1988	\$85,000	Payment to various environmental education and water quality projects	Stevens 1994
<i>Atlantic States Legal Found., Inc. v. Alcoa</i>	1988	\$140,000	Payments to the Nature Conservancy and Ducks Unlimited	Mann 1991

Case	Year	Amount	SEP	Source
<i>Natural Resources Defense Council, Inc. v. Interstate Paper Corp.</i>	1988	\$55,250; \$27,750	Payment to Trust for Public Land for wetlands mitigation and study; payment to Georgia Conservancy for environmental education	Stevens 1994
<i>Public Interest Research Group of New Jersey v. Public Serv. Elec. and Gas Co.</i>	1988	\$41,900	Payments to New Jersey Conservation Foundation and Academy of Natural Sciences	Mann 1991
<i>Atlantic States Legal Found., Inc. v. Koch Refining Co.</i>	1989	\$200,000	Payment to various projects [joint action]	Stevens 1994
<i>Atlantic States Legal Found., Inc. v. Caribbean Gulf Refining</i>	1989	\$60,100	Payments to the Nature Conservancy and the American Clean Water Project	Mann 1991
<i>Northwest Environmental Defense Center v. Unified Sewerage Agency of Washington County</i>	1990	\$100,000; \$900,000	Payment to Oregon Dept. of Env. Quality to fund staff positions; payment to an environmental fund to protect the Tualatin River basin	Stevens 1994
<i>Sierra Club, Inc. v. Environmental Controls Design, Inc.</i>	1990	\$45,000	Payment to Sierra Club to “support projects dedicated to maintaining and protecting water quality in Oregon”	Stevens 1994
<i>Atlantic States Legal Found., Inc. v. Simco Leather Corp.</i>	1991	\$8,480	Payment to a state university “to examine existing water quality conditions in the Mohawk River,” particularly non-point-source pollution	Stevens 1994
<i>Citizens for a Better Environment v. Minneapolis</i>	1992	\$260,000	Payment for nine projects [joint action]	Stevens 1994
<i>Massachusetts Public Interest Research Group v. ICI Americas Inc.</i>	1992	\$600,000	Payment “to local environmental projects to preserve and restore the Taunton River watershed”	Stevens 1994

Case	Year	Amount	SEP	Source
<i>Arkansas Wildlife Federation v. Bekaert Corp.</i>	1992	\$245,000	Payment for wetlands acquisition and study projects on the Arkansas River	Stevens 1994
<i>Massachusetts Public Interest Research Group v. General Electric Co.</i>	1993	\$825,000; \$100,000	Payment to Saugus River Watershed Council; payment to US National Park Service	Stevens 1994
<i>Natural Resources Defense Council, Inc. v. ARCO Alaska, Inc.</i>	1993	\$400,000	Payment to a Native Alaskan organization for scholarships to study natural resource management	Stevens 1994

Trends in SEP use: US EPA

Nearly twenty years after the Department of Justice scaled back its opposition to SEPs, the EPA still does not include SEPs in many negotiated agreements to settle alleged violations of environmental statutes (Kristl 2007). Its rhetorical enthusiasm for SEPs notwithstanding, the EPA has negotiated them in even fewer settlements in recent years than in the past (Table 3). After reaching a high of nearly 27 percent in 1995, they tapered off to 7-9 percent during the 2000s.

The EPA's record with CWA settlements is even worse. During FY2001-2009, the EPA settled 4,133 formal enforcement actions that resulted in an administrative penalty, but only 163 included a SEP (Table 4). The annual utilization rate during the Bush administration tended to hover around 2-4 percent. Settlements were more likely to be included when the EPA referred CWA cases to the Department of Justice for judicial enforcement. Of the 170 such actions that were concluded during FY2001-2009, 41 included a SEP, resulting in a SEP utilization rate of 24.1 percent (Table 5 and Figure 1).

Table 3. SEPs in settlements, US EPA, FY1992-2009

Fiscal Year	Settlements	Settlements with SEPs	Percent with SEPs
1992	1,644	222	13.5%
1993	1,779	229	12.9
1994	1,599	190	11.9
1995	1,293	348	26.9
1996	1,296	240	18.5
1997	1,624	266	16.4
1998	1,498	221	14.8
1999	1,573	197	12.5
2000	2,141	193	9.0
2001	1,955	164	8.4
2002	1,633	157	9.6
2003	1,901	150	7.9
2004	2,449	213	8.7
2005	2,430	207	8.5
2006	4,797	220	4.6
2007	2,435	184	7.6
2008	2,276	188	8.3
2009	2,117	150	7.1

Source: based on previously published data (Kristl 2007). Data for FY2007-2009 were compiled using his methodology, drawing data from US EPA 2007, 2008, 2009.

Table 4. SEPs in Clean Water Act settlements of administrative enforcement actions, US EPA, FY2001-2009

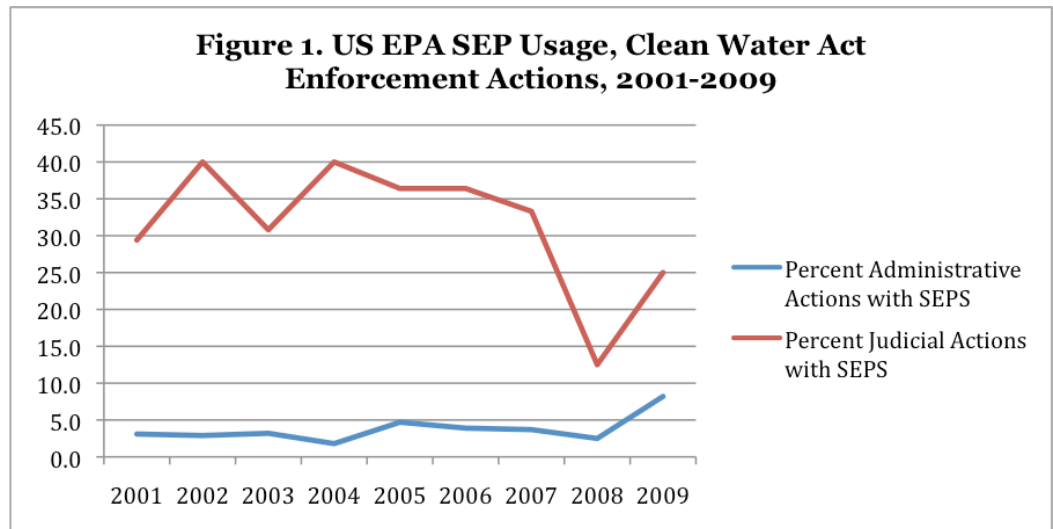
Fiscal Year	Settlements	Settlements with SEPs	Percent with SEPs
2001	413	13	3.2%
2002	375	11	2.9
2003	412	13	3.2
2004	561	10	1.8
2005	613	29	4.7
2006	385	15	3.9
2007	402	15	3.7
2008	399	10	2.5
2009	573	47	8.2

Source: US EPA ECHO (Enforcement and Compliance History Online) database. Search criteria: formal administrative cases (not judicial ones) in which the enforcement action was closed in a particular fiscal year and resulted in an administrative penalty.

Table 5. SEPs in Clean Water Act settlements of judicial enforcement actions, US EPA, FY2001-2009

Fiscal Year	Settlements	Settlements with SEPs	Percent with SEPs
2001	17	5	29.4%
2002	25	10	40
2003	13	4	30.8
2004	15	6	40
2005	11	4	36.4
2006	11	4	36.4
2007	9	3	33.3
2008	16	2	12.5
2009	12	3	25

Source: US EPA ECHO (Enforcement and Compliance History Online) database. Search criteria: judicial cases in which the enforcement action was closed in a particular fiscal year and resulted in an administrative penalty.



Source: US EPA ECHO (Enforcement and Compliance History Online) database.

Kristl (2007) and Robertson (2009) provide several reasons why the US EPA underutilizes SEPs. First, EPA imposes an 80 percent mitigation cap on SEPs. As Robertson explains:

If the EPA calculates a \$100 settlement penalty for a violation, the defendant is presented with two options. The defendant can agree to perform a SEP that will cost \$100 and pay a \$20 settlement penalty (since only 80% of the SEP cost can be used to mitigate the settlement penalty). Alternatively, the defendant can simply pay the \$100 settlement penalty. Thus, the defendant must pay a total of \$120 when the SEP is included in the settlement, but must only pay a total of \$100 if the SEP is not included. Assuming most defendants are rational economic actors, they will choose the less expensive option. (p. 1037)

Second, the EPA requires a very tight nexus between a violation and its associated SEP. In many instances, the nexus requirement is impossible to meet, at least to the satisfaction of EPA staff. Third, very small settlement amounts don't provide enough funds to justify the effort of identifying, proposing, and implementing SEPs. Many states experience similar obstacles with SEP implementation, but not all, since guidelines or rules vary enormously from agency to agency.

Trends in SEP use: State water quality enforcement agencies

There are a number of good recent state-by-state SEP usage and policy comparisons. The Public Law Research Institute (PLRI) at the Hastings College of Law produced the most recent survey. In that work, PRLI staff drew upon state environmental department websites, interviews with state attorney general staff, law reports and articles, and interviews with scholars, attorneys, and public interest group representatives. The result is a comprehensive picture of state SEP policies (PLRI 2007).

Almost all the states allow SEPs (North Carolina and South Carolina are the two exceptions); about half the states rely on published, formal guidelines. Although the PLRI authors underscore the environmental benefits of SEPs, they raise concerns echoed by regulators (especially enforcement attorneys) we spoke with in California. Principally, their report “argues against leaving the negotiation of SEPs to the unfettered discretion of enforcement personnel and suggests that states without formal guidelines look to other states as examples. SEPs uninformed by guidelines may be insufficiently transparent and open, leading to inequities for both violators and affected communities” (PLRI 2007, p. 15).

For the 48 states that allow SEPs in environmental enforcement proceedings, we determined whether their websites provide summary or detailed information about SEPs relating to CWA enforcement. Of the 48, seven provided enough detail to make annual comparisons on SEP usage, which follow below.

The Texas Commission on Environmental Quality (TCEQ) had the most detailed dataset, offering not only the number or dollar amounts of SEPs (and data on regular enforcement actions), but also good descriptions of the projects. Table 6 shows that Texas has made consistent use of SEPs in water quality enforcement actions for the period in which there are data (1997-2009). SEPs kept pace with increasing settlements, although in recent years usage has hovered around 20 percent. SEP costs in water quality settlements for the year 2009 were typical of recent years—of \$1,803,607 in payable water quality penalties, \$825,405 were paid in SEPs, a 45 percent rate. Thus, the usage of SEPs (percent of enforcement actions that result in a SEP) may be around 20 percent, but the ratio of SEP cost to payable penalties in recent years has been much higher.

Table 6. SEPs in water quality settlements, Texas Commission on Environmental Quality, FY1997-2009

Fiscal Year	Settlements	Dollar value of admin. penalties	Settlements with SEPs	Dollar value of SEPs	Percent with SEPs
1997	111	\$929,667	18	\$750,446	16.2%
1998	112	\$484,505	20	\$415,730	17.9
1999	164	\$889,245	19	\$370,302	11.6
2000	185	\$748,818	45	\$652,330	24.3
2001	169	\$644,863	39	\$456,332	23.1
2002	128	\$522,530	43	\$497,213	33.6
2003	120	\$511,315	31	\$440,024	25.8
2004	140	\$976,499	30	\$561,703	21.4
2005	211	\$1,058,102	47	\$730,776	22.3
2006	335	\$1,672,195	65	\$1,903,552	19.4
2007	235	\$1,382,641	62	\$649,756	26.4
2008	476	\$1,960,158	111	\$1,132,879	23.3
2009	414	\$1,803,607	76	\$825,405	18.4
mean (n=13 yrs)	215.4	\$1,044,934	46.6	\$722,035	21.6

Source: Texas Commission on Environmental Quality annual enforcement reports (TCEQ 1997-2002, 2008-2009). Data for FY2003-2008 are from a single annual report (TCEQ 2008); data for all other fiscal years are from annual reports (TCEQ 1997-2002, 2009).

We used data for settlements in two TCEQ program areas: WQ (water quality, which includes “domestic and industrial waste water treatment plants, on-site sewage facilities, Edwards Aquifer protection, stormwater, and sludge use operations (beneficial use sites and transporters)”) and WWA (waste water in agriculture, which includes “water quality facilities that are agricultural in nature such as dairies and concentrated animal feeding operations”) (TCEQ 2008). We did not include data from other program areas that may relate to water quality: OSSF (on-site sewage facilities), PWS (public water supply systems), and MM (multimedia) (TCEQ 2008).

In Connecticut, the Department of Environmental Protection’s Bureau of Water Protection and Land Reuse is responsible for enforcing federal and state water quality statutes. The department adopted a formal policy on SEPs in 1993

and revised it in 1996 (PLRI 2007, CDEP 1996). During FY1998-2008, it issued 274 consent orders, of which at least 93 resulted in administrative penalties. Of those consent orders that resulted in administrative penalties, 65 (or 69.9 percent) also included SEPs (Table 7). The total paid to implement SEPs (\$3.35 million) exceeded the total paid in administrative penalties (\$2.65 million).

Table 7. SEPs in water quality settlements, Connecticut Department of Environmental Protection, FY1998-2008

Fiscal Year	Consent orders	Consent orders with administrative penalties	Dollar value of administrative penalties	Consent orders with SEPs	Dollar value of SEPs	Percent with SEPs
1998	35	13	\$430,248	6	\$255,450	46.2%
1999	22	7	\$168,160	6	\$142,752	85.7
2000	29	12	\$327,670	12	\$592,639	100
2001	36	13	\$227,572	7	\$420,384	53.9
2002	25	9	\$255,495	9	\$910,343	100
2003	31	14	\$407,668	11	\$163,092	78.6
2004	17	8	\$341,015	6	\$322,350	75
2005	19	12	\$279,816	6	\$366,960	50
2006	19	-	\$84,250	0	\$0	0
2007	16	5	\$12,250	2	\$35,000	40
2008	25	-	\$118,445	-	\$142,678	-
mean (n=9 yrs)	25.6	10.3	\$272,210	7.2	\$356,552	69.9

Source: Connecticut Department of Environmental Protection annual reports (CDEP 1999-2009).

Data for 1998-2005 are for the department's Water Management Bureau; data for 2006-2009 are for the department's Bureau of Water Protection and Land Reuse. Data for 1998 and 1999 are for calendar year rather than federal fiscal year, which the department adopted for its reporting as of 1 October 1999, the beginning of FY2000. As a result, any consent orders issued between 1 October 1999 and 31 December 1999 may appear in the 1999 and 2000 data. To calculate the SEP utilization rate (final column on right), we assumed that all consent orders with SEPs also included an administrative penalty. For FY2006 and

FY2008, the department did not provide, as it had in other years, the number of consent orders with administrative penalties and the number of SEPs. Those two years are therefore excluded from the average.

On its website, the Illinois Environmental Protection Agency (IEPA) provides detailed data on “formal enforcement cases” brought by its Division of Legal Counsel. The IEPA has allowed SEPs to be used in settlements since the early 1990s; the Illinois legislature passed legislation specifically allowing their use in 2003 (PLRI 2007). During calendar years 2002-2009, the IEPA issued 348 civil enforcement orders in its water programs (Table 8). Of those, 40 (or 11.5 percent) included SEPs. The total paid to implement SEPs (\$5.05 million) was less than half the total paid in civil penalties (\$11.74 million).

Table 8. SEPs in water quality settlements, Illinois Environmental Protection Agency, 2002-2009

Calendar Year	Orders without SEPs	Penalties without SEPs	Orders with SEPs	Penalties with SEPs	Dollar value of SEPs	Percent with SEPs
2002	40	\$4,004,000	7	\$316,250	\$406,000	14.9%
2003	23	\$608,457	5	\$325,000	\$545,000	17.9
2004	30	\$1,195,750	4	\$46,475	\$516,023	11.8
2005	39	\$1,039,500	8	\$994,750	\$3,183,100	17
2006	39	\$462,737	8	\$111,025	\$169,893	17
2007	46	\$588,470	4	\$66,500	\$38,565	8
2008	39	\$689,164	3	\$122,026	\$170,000	7.1
2009	52	\$1,115,771	1	\$50,000	\$20,000	1.9
mean (n=8 yrs)	38.5	\$1,212,981	5	\$254,003	\$631,073	11.5

Source: Illinois Environmental Protection Agency Enforcement Orders database.

The Maryland Department of the Environment has informally allowed SEPs since 1998 and formally since 2006 (PLRI 2007). During FY2002-2008, its Water Management Administration pursued 482 administrative or civil enforcement actions regarding surface water discharge violations, yielding \$3.9 million in penalties (Table 9). Only 6.6 percent of those actions resulted in a settlement that included SEPs, but several were massive: those 32 settlements included SEP payments of \$13.61 million.

Table 9. SEPs in water quality settlements, Maryland Department of the Environment, FY2002-2008

Fiscal Year	Penalty and other enforcement actions	Dollar value of administrative or civil penalties	Enforcement actions with SEPs	Dollar value of SEPs	Percent with SEPs
2002	83	\$288,482	9	\$1,063,900	10.8%
2003	79	\$684,533	6	\$2,827,000	7.6
2004	28	\$171,090	5	\$227,200	17.9
2005	45	\$434,521	6	\$361,500	13.3
2006	71	\$1,351,044	3	\$8,928,000	4.2
2007	104	\$488,149	3	\$207,000	2.9
2008	72	\$488,911	0	\$0	0
mean (n=7 yrs)	68.9	\$558,104	4.6	\$1,915,401	6.6

Source: Maryland Department of the Environment annual reports (MDE 2003-2009).

Table 10. SEPs in water quality settlements, Michigan Department of Environmental Quality, 1991-2003

Calendar Year	Settlements	Settlements with penalties	Dollar value of penalties	Settlements with SEPs	Dollar value of SEPs	Percent with SEPs
1991	43	18	\$2,345,500	1	\$98,000	2.3%
1992	46	18	\$3,466,500	2	\$135,000	4.3
1993	21	16	\$435,900	0	\$0	0
1994	12	10	\$509,500	4	\$139,000	33.3
1995	11	10	\$529,250	4	\$479,750	36.4
1996	13	9	\$203,540	5	\$30,000	38.5
1997	17	13	\$908,000	4	\$329,500	23.5
1998	19	13	\$751,250	6	\$203,500	31.6
1999	23	14	\$178,000	13	\$513,150	56.5
2000	21	16	\$2,129,900	11	\$4,186,400	52.4
2001	74	65	\$495,500	9	\$180,500	12.2
2002	31	24	\$3,979,100	6	\$182,000	19.4
2003	31	19	\$353,461	2	\$43,000	6.5
mean (n=13 yrs)	27.8	18.8	\$1,252,723	5.2	\$501,523	18.5

Source: Michigan Department of Environmental Quality 2004.

The Michigan Department of Environmental Quality’s Water Bureau’s Enforcement Unit has just as much detail as Texas for settled cases 1990-2004, for about 389 settlements (Table 10). Also similar to the Texas case, the usage of SEPs averaged 18.5 percent, but the ratio of SEP cost to payable penalties in recent years has been much higher (40 percent, on average). Nine settlements included a SEP but no civil penalty. The last column (percent with SEPs) is therefore calculated using the total number of settlements (the second column) rather than just those with civil penalties.

Summary data for the years 2000-2008 were available for water quality enforcement and SEPs in Rhode Island; they are presented below in Table 11.

Table 11. SEPs in water quality settlements, Rhode Island Department of Environmental Management, 2000-2008

Calendar Year	Consent agreements	Penalties assessed	Consent agreements with SEPs	Dollar value of SEPs	Percent with SEPs
2000	4	\$111,250	1	\$155,000	25.0%
2001	9	\$212,345	2	\$164,670	22.2
2002	10	\$14,650	0	\$0	0
2003	15	\$609,850	2	\$517,500	13.3
2004	31	\$156,300	2	\$300,000	6.5
2005	18	\$112,523	3	\$58,050	16.7
2006	22	\$251,197	3	\$301,333	13.6
2007	27	\$110,402	1	\$11,250	3.7
2008	25	\$187,515	4	\$431,000	16
mean (n=9 yrs)	17.9	\$196,226	2	\$215,423	11.2

Source: Rhode Island Department of Environmental Management (RIDEM) annual reports (RIDEM 2001-2009).

We used data for settlements in two RIDEM program areas: Water Pollution and ISDS (septic systems). The latter program changed its name to OWTS (on-site wastewater treatment system) in 2008 (RIDEM 2009).

California's experience resembles that of the states described above, with patterns most like Texas than any other. These data come from a relatively new database, the California Integrated Water Quality System (CIWQS). Unlike other states, California decentralizes enforcement to its 9 regional water quality control boards; Table 12 thus represents the sum of all 9 regional board enforcement actions. Unfortunately, these data conflict substantially with data collected by the SWRCB's own Office of Enforcement, and may not be definitive (Bradley 2009). For example, using 2006 and 2007 data, state enforcement staff supplemented the CIWQS, essentially by fact-checking with the regional boards. SWRCB enforcement staff reported that SEPs represented 53% of total penalty assessments in 2006, and 58% in 2007. The CIWQS reports SEP dollar values in excess of penalty values for those same two years. At this time, it's unclear where the errors lie, but for purposes of state-by-state comparisons, we used the CIWQS data to situate California among other states (Figure 2).

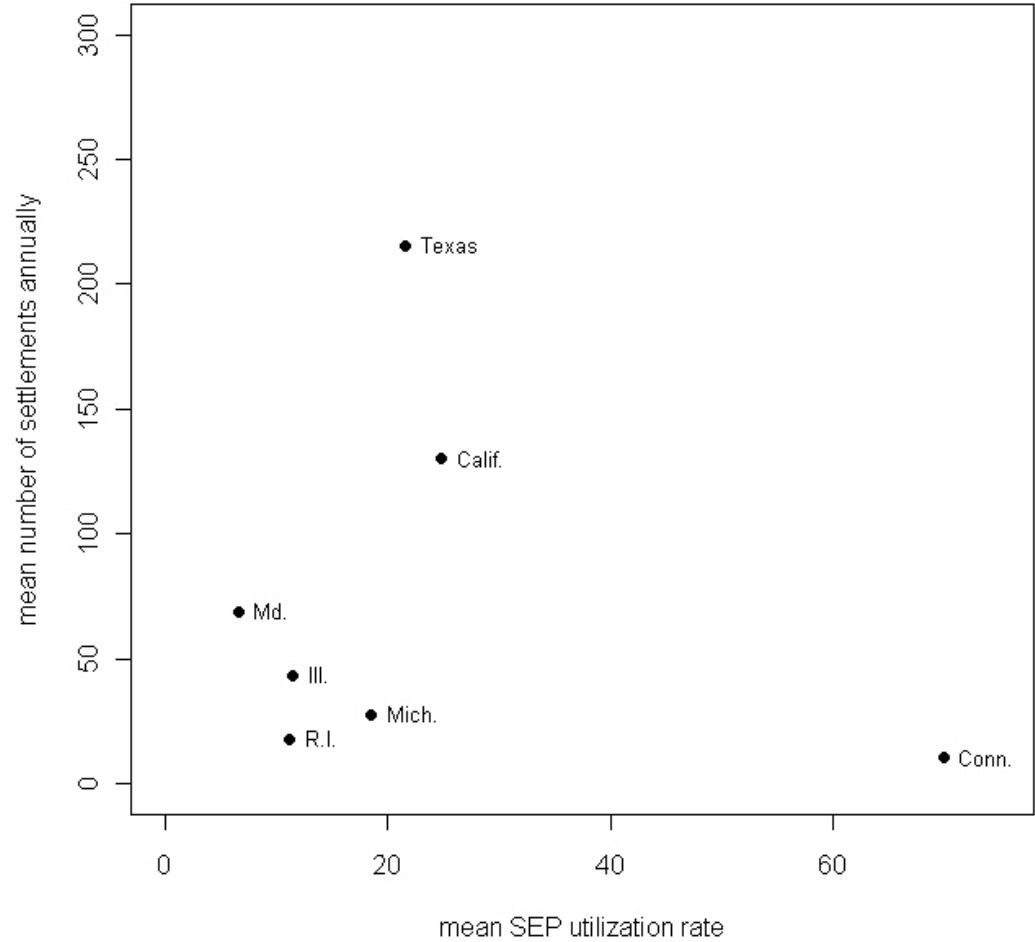
Table 12. SEPs in water quality settlements, California State Water Resources Control Board, 2000-2009

Calendar Year	Admin. orders	Dollar value of admin. penalties	Admin. orders with SEPs	Dollar value of SEPs	Percent with SEPs
2000	120	\$6,181,091	32	\$3,435,721	26.7%
2001	153	\$4,219,452	36	\$1,841,736	23.5
2002	130	\$3,189,925	44	\$2,085,252	24.8
2003	113	\$2,587,570	57	\$2,180,861	50.4
2004	150	\$3,852,208	41	\$1,101,900	27.3
2005	91	\$12,813,646	27	\$3,140,200	29.7
2006	64	\$2,132,924	23	\$4,723,026	35.9
2007	87	\$3,769,322	31	\$7,401,502	35.6
2008	264	\$26,092,281	22	\$2,744,945	8.3
2009	168	\$13,135,986	19	\$2,832,180	11.3
mean (n=10 yrs)	134	\$7,797,441	33.2	\$3,148,732	28.2

Source: California State Water Resources Control Board, CIWQS database.

Figure 2 shows that Connecticut has a very high SEP utilization rate, possibly because state guidelines do not limit the dollar amounts of SEPs as long as some monetary penalty is still assessed in enforcement actions (PLRI 2007). It may also be that, given the low number of total settlements, Connecticut officials can afford the staff time needed to review and oversee SEPs associated with consent orders. California, like Texas, emerges as a state with a relatively high SEP usage rate while also handling a large number of settlements, as one would expect given the state's size.

Figure 2. State Comparisons of Mean SEP Utilization Rate and Mean Number of Annual Water Quality Settlements.



California’s regional experience with Supplemental Environmental Projects

The PI on this project (Press) served on the Central Coast Regional Water Quality Control Board from 2001 to 2008. The current project was prompted, in general, by the PI's observations of enforcement actions and SEPs approved in the Central Coast region. More proximately, however, in late 2007, the State Water Resources Control Board signaled its intention to revise the state’s Water Quality Enforcement Policy, including the formal rules governing SEPs. Anecdotal evidence suggested that the nine regions varied considerably in their use of SEPs, and that the quality of projects also varied from place to place. In the run-up to the State Board’s policy revision, some enforcement officials at the state and regional levels were concerned that SEPs were not working properly and that reforms were warranted. These reformers were urging State Board members to dramatically

curtail SEP usage throughout the state. Conversely, other regional board staff and stakeholders felt that SEPs were quite useful and that more enforcement actions should result in such projects.

The current project was thus undertaken to provide some perspective on these concerns and policy preferences. We interviewed 24 respondents, most of them regional board enforcement staff, but also a few state board officials, and representatives of dischargers (city public works, POTW staff, utility/water districts) and water quality stakeholders (especially environmental non-governmental organizations). Table 13 presents a summary of the interview questions we posed to these respondents.

Table 13. Interview Questions

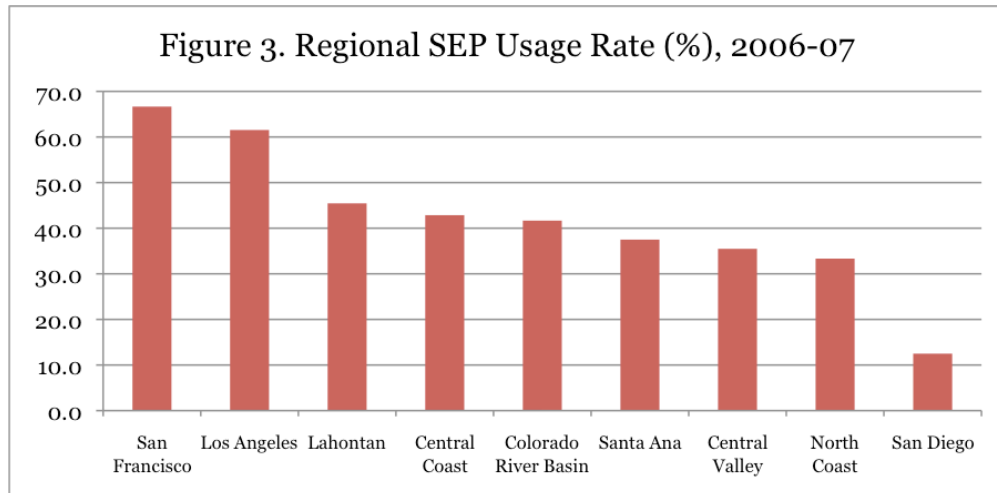
- In your region, what proportion of enforcement liability was used on SEPs versus traditional fines since 1998?
- Were the enforcement actions resulting in SEPs disputed?
- Who originates the proposed SEPs? Who implements the projects? Were the project proponents the same as those carrying them out?
- Did the dischargers implement the SEPs?
- What baseline assessments, if any, were used for SEPs? What ongoing monitoring of project results were carried out, if any?
- Are quantitative data available with which to measure SEP performance (e.g., changes in water quality, riparian vegetation cover, erosion, species recovery)?

We also conducted an extensive review of legal literature, state technical reports, and water quality databases.

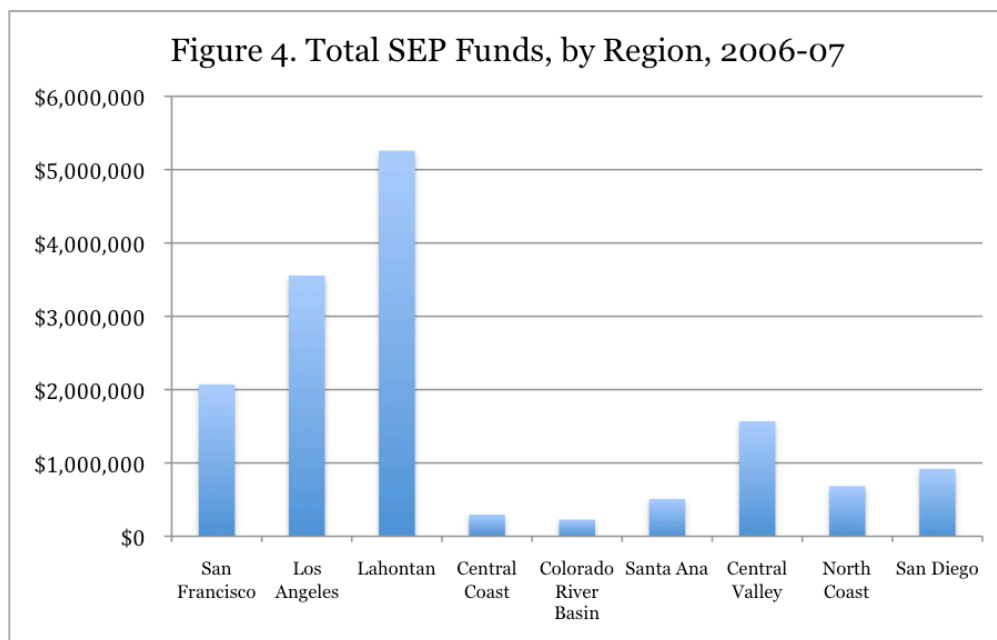
California: Regional trends in SEP usage

Figure 3 displays trends in regional SEP usage (i.e., the percent of administrative civil liability settlements with SEPs) for the nine regions in a two-year period (2006-2007). Figure 4 displays the SEP funds data for the same regions and time period. As stated earlier, the dataset compiled by SWRCB enforcement staff is probably the most reliable. Data for earlier and later years are available through the CIWQS, but likely require a great deal of ground-truthing and corrections.

The big urban regions made the most use of SEPs in this two-year period, which is not surprising, since they tend to have a larger regulated community with the attendant larger number of enforcement actions one would expect. Interestingly, two sanitation districts in Los Angeles County provided 65% of the total SEP funds secured in this two-year period. A \$2.2 million SEP was approved by the Los Angeles regional board to fund an environmental education center that would be built in the Whittier Narrows Natural Area. Pursuant to spills from the Los Angeles County Sanitation District 14, the Lahontan regional board approved a \$4.55 million SEP to build portions of a new Antelope Valley Recycled Water Project. Appendix 1 lists some recent SEPs in the Los Angeles region; this wide range of projects mirrors the variation in SEPs approved around the state.



Source: Bradley, 2009.



Source: Bradley, 2009.

Controversies regarding SEPs and the regional boards

State enforcement officials provided several reasons why they wished to de-emphasize SEPs as an enforcement settlement option, and these became arguments they made in support of the State Board's revisions to its SEP policy. All of these concerns appear frequently in the literature as well as state-by-state surveys and reports like the one produced by the PLRI (2007).

First, for any given violation, approving a SEP reduces funds for California's cleanup and abatement account (CAA). The CAA receives a portion of all of the regional board penalties. Regions can then petition the SWRCB to release funds, either very quickly for cleanup emergencies or on a longer-term basis for water quality improvement projects very similar to SEPs. Although the regional boards don't use SEPs much more than other state agencies, state prosecutors worry that

the CAA balance will fall below the minimum needed to meet emergency purposes.

Second—and echoing some, but by no means all, regional board enforcement officers—state enforcement officials worried that SEPs may reduce the core goal of a monetary penalty, which is deterrence. In this view, violators would receive positive publicity from paying for SEPs, which runs counter to the negative feedback agency officials seeks in an enforcement action. One state official told us, “corporations want as much as possible to go to SEPs, [because there’s] less stigma if the money goes to SEPs.” Some regional board enforcement staff questioned this reasoning, arguing that violators had to pay the same amount of money, on the one hand, and that many SEP projects don’t receive much publicity, on the other. In a twist on the state’s deterrence concerns, a staff member of the Los Angeles region (4) argued that violators choose SEPs, because “the dischargers... would like to give the money to anyone but the state... they’re getting fined by the state, why would they want to give their money to the state?”

When SEPs were first used nationally, analysts were concerned that EPA’s SEP program would result in under-deterrence if violators were allowed to implement SEPs whose dollar costs were lower than enforcement fines (Dana 1998). That does not seem to be issue in California because violators are required to pay for a SEP and reduced fine equivalent to the dollar amount of a standard violation fee (technically speaking, liability for a penalty is “suspended” by an amount equivalent to the SEP). However, it is theoretically possible that enforcement staff or regional board members, knowing that violators are receptive to SEP settlement, may use their discretion to reduce the overall liability.

Third, SEPs can add to staff workloads. It was unclear from our interviews just how important a factor workloads were. In principle, if staff were deeply involved in the design, selection, implementation and especially, oversight, of SEPs, their workload would surely increase dramatically. Our conclusion from staff respondents was that staff were not allocated time or assistance to perform significant oversight, and so their workloads did not increase a great deal because of SEPs. Of course, if staff did track SEP implementation closely, it could increase their workloads.

Fourth, critics objected to the SEP selection process. Most of the regional boards offer a list of “pre-approved” SEPs on their websites. These include the San Francisco (2) Central Coast (3), Los Angeles (4), Central Valley (5), Lahontan (6), Colorado River Basin (7) and Santa Ana (8) regional boards. The North Coast (1) and San Diego (9) regional boards don’t make a pre-approved SEP list easily accessible on their websites. In the state’s view, offering a pre-approved list encourages “bounty-hunting” on the part of third-party SEP providers. That is, much like the stereotypical ambulance-chasing personal injury attorney, water quality advocates will seek out violators and pressure them to opt for the SEPs that they had managed to get included on the pre-approved list. We did not find much evidence supporting this concern; our respondents were not aware of significant communication between third-party SEP advocates and violators, although they did also acknowledge that they would have little way of knowing how much interaction these parties might have.

Are pre-approved SEPs good projects? One state enforcement official was

concerned that SEPs were not negotiated very strategically, resulting in “lowball budget” for projects—here, the implication is that all parties (staff, violators, and third-party SEP providers) have strong incentives to agree on projects and relatively little incentive to make sure that projects are adequately funded. To some extent, regional board members can offer a reality check during settlement hearings (unless hearings are waived in a particular action) by questioning SEP providers prior to approving SEPs.

It’s not unusual for regional enforcement staff to impose penalties on the same dischargers over a number of years. In those cases, staff come to know a great deal about dischargers, i.e., whether they act in good faith, are diligent with reporting spills and releases, and whether they (or their designees) do a good job with SEPs. One enforcement officer from northern California said that their board routinely offered the SEP option to dischargers, but recalled one case in which they did not:

But there will be penalties going out where our past experience with that entity, this particular entity, I think they blew it on an SEP, I think it was a poor project, they weren’t upfront with us so I’m not even going to extend the opportunity on the next go-around.

Importantly, regulators cannot require that violators implement SEPs in lieu of paying fines to a state or federal general fund. This one feature of the enforcement guidelines creates a strong incentive for third parties and/or regulatory staff to persuade violators to opt for SEPs instead of paying traditional monetary penalties. Moreover, the timing of compliance decisions is critical—there is usually very little time between a final ruling against a discharger and the time when SEPs can be adopted. In effect, staff or third parties must know enough about upcoming enforcement actions to anticipate that a discharger will be fined and may be receptive to considering an SEP as part of their settlement—hence, fears of bounty-hunting.

Most of our respondents who were dischargers or regional board staff supported SEPs as a general matter of enforcement policy, and in particular, the SEPs approved in their regions. The large project to create a new “Discovery Center” in the Whittier Narrows Natural Area of the Los Angeles region was an exception. Regional board staff expressed concern that the SEP did not adequately meet the nexus test, since the proposed site lay miles inland from where the South Bay contaminant discharges from the sanitation district occurred. But despite the staff’s demurs, regional board members approved the SEP.

In sum, revisions to the state SEP policy seemed to be motivated by concerns that SEPs 1) weakened deterrence or rewarded violators, 2) failed to result in actual water quality improvements, 3) diverted funds that could more profitably be sent to the Cleanup and Abatement Account, 4) encouraged improper bounty-hunting on the part of third parties and/or regional board staff, and 5) provided inadequate accountability to the public and oversight.

The State Board responded to these concerns by lowering the maximum dollar amount of SEPs to 50 percent of assessed liability for any enforcement action. In addition, the State Board adopted or modified a host of what could be termed accountability measures in its revised policy. These include controls on how SEPs

are proposed (e.g., including detailed budgets and workplans), implemented (e.g., notifying regional board staff that dischargers had made payments) and monitored (e.g., including requirements that SEP implementers provide financial audit data when SEPs are completed). The State Board expressly allowed regional boards to charge dischargers for the full cost of oversight when such oversight is required—and left it to the regional boards to make that determination (CA SWRCB 2009).

The Los Angeles Board (region 4) took the state's policy changes further, opting to “generally not consider” SEPs below \$50,000 in cost. Thus, under the State Board's new 50% upper limit on SEPs, “for a discharger to be eligible for a SEP, the penalty assessed against it must be \$100,000 or more, otherwise it will violate either the \$50,000 or more requirement, or the 50 percent or less requirement” (LA RWQCB 2009). If such a policy were adopted by all the regional boards, there would be fewer SEPs, although the amount of money spent on SEPs would probably not decline very much, because most SEPs approved in recent years cost relatively little.

The 2006-07 data compiled by Mark Bradley at the State Board allows a glimpse of how LA's \$50,000 rule would affect SEPs statewide (Bradley 2009). Of the 191 enforcement actions in 2006-07, 78 had SEPs, a usage rate of about 41 percent. In dollar terms, there were \$28,072,311 in penalties assessed and \$10,540,132 in SEPs, a 37 percent usage rate. Applied statewide, LA's rule would result in only 38 SEPs out of 191, a usage rate of about 20 percent, or half the actual rate. But the dollar amount would only drop from 37 percent to 34 percent, in large part because just five settlements between \$626,000 and \$4,750,000 accounted for 84 percent of all SEP funds.

Conclusion: Policy recommendations

Brooke Robertson (2009) offers several recommendations for expanding the use of federal SEPs, including:

- 1) Creating an environmental trust fund to pay for SEP implementation
- 2) Changing the mitigation percentage so that violators face the same monetary liability regardless of whether they pay fines or implement SEPs
- 3) Relaxing the nexus requirements
- 4) Allowing third-party contractors to bid on and carry out SEPs

Recommendations 2-4 are already implemented in California's revised SEP policy. Indeed, if anything, some state and regional officials in California worry that nexus requirements are not adequately enforced. Regional staff already feel they have wide latitude and discretion on the nexus issue.

Robertson's second recommendation partly speaks to federal concerns that very small penalties will not generate enough funds for successful SEPs. To put it another way, small SEPs are not likely to succeed as well as larger ones. If staff are concerned, like federal regulators are, that small projects are less likely to be successful, the state could adopt LA's \$50,000 minimum SEP rule (the state already allowed SEPs only on enforcement actions costing \$15,000 or more; it could simply raise that limit). In any event, we advocate raising the SEP limits from 50 percent to 75 percent, finding that the 50 percent limit rather arbitrarily

curtails SEP activity.

Another way to get at this problem would be to allow small-dollar SEPs only from those on a pre-approved regional board list. The pre-approved SEP list has advantages—staff can review the list and implementing parties long before projects get approved and started; dischargers can get ideas for SEPs that meet the nexus test and also fit with their own goals. There are also disadvantages to the pre-approved approach. One staff member in the San Francisco regional board pointed out that:

what I found is that the actual list of projects is not all that useful because [of] the projects themselves...some of them are time-sensitive, and it's very difficult to keep it current. I'd have to call every nonprofit regularly to update it. Also, each of those projects has an amount, and it's very rare that the fine matches the amount, so...I use the list mostly for contact information. For example, if a discharger, if Chevron in Richmond gets fined, I know the nonprofits in the area that would have potential projects, and they could work with Chevron.

Robertson's first recommendation, however, speaks to the broader challenge of merging a polluter-pays principle to environmental mitigation in US environmental policy and regulation. Many rank-and-file agency officials like SEPs because such projects can ameliorate the damage created by dischargers. But funds are always scarce, and in recent times, declining. Since legislators and taxpayers are rarely in the mood for raising new fees, all parties are motivated to struggle over existing fees and fines. At the same time, there is not a regulator in the state who would not welcome more staff and funds for environmental restoration.

Currently, penalty assessments go from dischargers in the nine regions to the state of California Cleanup and Abatement Account (CAA) or the Waste Discharge Permit Fund. Officials in the urban regions (e.g., San Francisco, Central Coast, Los Angeles, Santa Ana, San Diego) would prefer to keep as much money from penalty assessments in their regions as possible, and SEPs are a way to do that. Some of our respondents complained that their region sent more assessed penalties to Sacramento than they received back in cleanup funds. From the state perspective, that is exactly what should happen. Penalties from urban regions whose violators are relatively easy to identify—and charge with cleanup costs—flow to the more rural regions, where responsible parties are often long gone (e.g., abandoned mines in the Sierra foothills).

The tussle between different regional boards, and between the regions and the state, however, really begs the question of whether the state has adequate staffing in restoration in the first place. Like every other state, regional and local agency, California's water quality regulators are desperately understaffed and underfunded. The conflict over the CAA would virtually disappear if the regions felt that they were getting better funding for mitigation, restoration, and cleanup. Moreover, the new SWRCB SEP policy seeks to improve accountability, but oversight is only as good as the staff conducting it, and all regions report that they are too short-staffed to properly monitor SEP implementation. Since the State Board allocates staff FTE to the regions, we suggest that the State Board create 1-

3 new staff positions per regional board for SEP oversight. The San Francisco region (2) has a part-time coordinator that helps facilitate the SEP process. This decreases staff time devoted to SEPs – in the end the coordinator not only streamlines the process but costs less compared to the staff time that would otherwise go towards managing SEPs. However, we fully recognize that the state is unlikely to make new FTE available until California is well out of recession.

Ultimately, we will not really know just how well or poorly SEPs perform until the state and regions allocate adequate staffing to track SEP implementation. In essence, then, the answers to the central questions of this study remain anecdotal and impressionistic because the ensemble of water quality regulators in California simply cannot keep track of all SEPs on top of their other duties. Our respondents most familiar with SEPs generally felt that they were worthwhile, but repeatedly noted that they did not collect data on the environmental outcomes of the projects they had a hand in approving, so they really couldn't make definitive assessments of their value.

Moreover, each region reports SEP data slightly differently. We recommend that the SWRCB mandate consistent reporting procedures for the state database. Additionally, most regions remain unaware of how other regions utilize SEPs. Several respondents suggested a mechanism to disseminate information across regions to both provide insights into how they work across regions, and to find ways of making the process work better. This includes understanding how other regions address the nexus issue, determine when SEPs work best, identifying what areas of the SEP process prove cumbersome or difficult and why, and opening lines of communication to draw on the experiences of other regions.

This is not necessarily a problem throughout the country or across all media. When Texas approves air quality SEPs, these often result in clean diesel school bus purchases. The paper trail from violator to school bus is relatively easy to establish; this is not so with many water quality SEPs. Will the purchase of a property on the top of a coastal watershed improve water quality downstream, somewhere near the site of a water quality violation? Possibly, but the environmental assessment mechanisms necessary for making such a determination are not in place.

To some extent, SEPs and disbursements from the CAA address true cleanup problems, i.e., actually removing contaminants from surface and groundwater or soils that may convey pollutants to water bodies. In the coastal, relatively more urbanized regions, enforcement officials generally succeed at imposing cleanup costs on dischargers, so the proportion of violations resulting in “orphaned” and emergency cleanups in these regions is relatively small. The projects that remain address long-term watershed restoration and improvement needs; SEPs are ideal for these purposes.

A key reason why regional staff appreciate SEPs so much is precisely because they can be used to fund programs that regional boards would otherwise have no staff or funding to undertake. Ultimately, SEPs represent but one of many possible funds for water cleanup and restoration. The state's resource conservation districts energetically pursue watershed enhancement projects every year, and they are joined by many non-governmental organizations. California voters in the 2000s were generous with their support for water quality and resource conservation bonds, approving Propositions 13 (2000, \$1.97 billion), 50

(2002, \$3.4 billion) and 84 (2006, \$5.4 billion). Only a portion of these bond funds can be used on watershed restoration or damage mitigation, but they were much needed, especially since far fewer funds were available in the 1990s. Given the state's structural budget deficits and the slow economy, it's unlikely voters will be this generous for quite some time.

Despite their long-standing dissatisfaction with information on SEPs, state and regional board staff still don't know enough about these projects to make comprehensive program evaluations. Ideally, regulators and the public should be able to compare SEPs to other water quality projects, policies, and programs in terms of effectiveness, efficiency (e.g., costs, benefits), equity, and administrative complexity. But that goal, as so many others suggested by good-government advocates, remains elusive.

Water code violations will always be with us, as will the need to repair and improve our watersheds and water bodies. As far as regional enforcement officials can tell, Supplemental Environmental Projects remain an attractive and sensible regulatory tool, whether for deterring non-compliance, punishing violations, or deriving some environmental benefit from the regrettable, but fairly constant, stressors that dischargers impose on our state's waters. We strongly recommend that the state and regional boards, as well as the state legislature, vigorously support their use into the future.

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Appendix 1. Recent Los Angeles Regional Water Quality Control Board SEPs

WATER SHED	SEP	ENTITY	SEP TYPE	COST	FUNDED
Ventura Coastal Watershed	Ocean Water Quality Monitoring Program	County of Ventura Envt'al Health Division	Watershed Ass't	\$558,662	\$63,000
	Surfers Point Sanitary Sewer Diversion	City of San Buenaventura	Poll. Prev.	\$907,000	\$0
	Ventura River Watershed Monitoring Program	Santa Barbara Channelkeeper	Watershed Ass't	\$79,249	\$19,501
Ventura River Watershed	Ventura County Hillside Erosion Control Ordinance Support	County of Ventura Resource Conservation District	Poll. Prev.	\$321,000	\$0
	Bouquet Creek Acquisition and Restoration	City of Santa Clarita	Envt'al Rest.	\$104,525	\$51,000
Santa Clara River Watershed	Santa Clara River Comprehensive Monitoring Plan	City of Santa Clarita	Watershed Ass't	\$349,900	\$0
	Upper Santa Clara River Watershed	City of Santa Clarita	Envt'al Rest., Poll. Prev., Public	\$304,960	\$0
	Arundo/Tamarisk Removal Plan (SCARP) – Site Specific Project		Awareness (Educ.), Watershed Ass't, Watershed Mgt. Public		
Santa Monica Bay Watershed Mgt Area	Kelp Restoration	Santa Monica BayKeeper	Watershed Ass't, Watershed Mgt.	\$52,000	\$30,000
	Beach Volunteer Monitoring Program	Santa Monica BayKeeper	Envt'al Rest.	\$51,500	\$46,250
	Public Awareness Program Dealing with Urban Sources of Debris Project	Algalita Marine Research Foundation	Poll. Prev., Public Awareness, Watershed Ass't, Non-Point Source	\$37,000	\$0

			Program Imp.		
	Eelgrass Restoration and Monitoring Project at Anacapa Island	Santa Barbara Channelkeeper	Envt'al Rest., Public Awareness (Educ.)	\$63,572	\$0
	Boater Education Program	Santa Monica Bay Restoration Foundation	Public Awareness (Educ.), Poll. Prev.	\$111,700	\$0
	Enhancement of the Southern California Coastal Ocean Observing System for Santa Monica and San Pedro Bays	Marine Envt'al Biology Department, University of Southern California	Envt'al Auditing, Watershed Ass't	\$754,000	\$0
	Public Involvement and Education Program (PIE)	Santa Monica Bay Restoration Commission	Public Awareness (Educ.)	\$150,000	\$0
	Ballona Creek Watershed Outreach Project	Santa Monica Bay Restoration Foundation	Public Awareness (Educ.)	\$386,500	\$0
	Kids Lead LA: Watershed and Marine Education Outreach Program	S.T.A.R., Inc.	Poll. Prev., Public Awareness	\$220,037	\$50,000
	Kelp Restoration and Marine Habitat Project Phase 2	Algalita Marine Research Foundation	Envt'al Rest.	\$87,615	\$52,500
Los Angeles County Coastal Watershed	Spring Outdoor Program	Cabrillo Marine Museum	Public Awareness	\$45,000	\$0
	Ocean Outreach Program	Cabrillo Marine Museum	Public Awareness	\$55,000	\$0
Los Angeles River Watershed	Los Angeles River Integrated Watershed Assessment and Development of a Watershed Management	Southern California Coastal Water Research Project	Watershed Ass't	\$481,656	\$73,500

Tool

	Five Year Seasonal Bacteria Citizen Monitoring	Southern California Marine Institute	Envt'al Auditing	\$85,197	\$8,420
	Snapshot Bacteria Citizen Monitoring	Southern California Marine Institute	Envt'al Auditing	\$79,886	\$0
	Watershed Assessment and Restoration for the Compton Creek Watershed	Heal the Bay	Watershed Ass't	\$101,120	\$0
	The Adopt-A-Beach School Assembly Program	The Malibu Foundation for Evt'al Education	Public Awareness (Educ.)	\$705,000	\$138,500
	Publication "Stormwater: Asset not Liability" (Second Edition)	The Los Angeles & San Gabriel Rivers Watershed Council	Public Awareness (Educ.)	\$48,400	\$0
	Assessment of Endocrine Disruption in Southern California Coastal Fish	Southern California Coastal Water Research Project	Envt'al Ass't	\$390,000	\$97,707
Multiple Watersheds	Speakers Bureau	Heal the Bay	Public Awareness (Educ.)	\$135,263	\$0
	Key to the Sea	Heal the Bay	Public Awareness (Educ.)	\$189,992	\$0
	Coastal Cleanup Day	Heal the Bay	Envt'al Rest.	\$91,560	\$0
	Fate and Transport of Trace Metals from Watersheds to Estuaries to Enhance TMDLs	Southern California Coastal Water Research Project	Envt'al Ass't	\$199,500	\$0
	Eco-tour Program	TreePeople	Public Awareness (Educ.)	\$88,975	\$0

Source: Los Angeles Regional Water Quality Control Board, 2010.