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Contaminated Groundwater as a Resource in California

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How do we ensure enough water for California's residents, businesses, farms, and the environment into the future? California needs a reliable and resilient source of water in the face of drought, climate change impacts, and population growth. California's water sources currently include the Central Valley Project; the State Water Project; the Colorado River; local water projects such as local streams and reservoirs; groundwater; and emerging sources such as stormwater recycling, desalination plants and toilet to tap projects. One option to increase the reliable water supply into the future for Californians is to treat contaminated groundwater basins and use it as drinking water.

This article summarizes the content of a panel presentation, Session 23, Contaminated Groundwater as a Resource & Emerging Contaminants, at the California State Bar Environmental Law Section Yosemite Conference on October 22, 2017, examining the plans of municipalities and water purveyors to use treated groundwater as drinking water.[1] In light of California's lengthy drought, the expectation of future droughts due to climate change, and the provisions of the Sustainable Groundwater Management Act of 2014

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1. This article does not reflect the views of any person or entity other than the author. The author is not involved as an attorney on record or as a consulting attorney in any cases referenced herein. This article does not address toxic tort claims that could be brought by private parties against water agencies or cases brought by private parties against PRPs for contamination of private wells. This article only addresses possible legal interactions between water agencies and defendant PRPs.

(SGMA),[2] water agencies and municipalities are looking toward expanding local sources of water and implementing more extensive pump-and-treat remedies in impacted groundwater basins. Some of these basins are already the subject of decades-old consent decrees and settlements between and among local, state, and federal agencies and potentially responsible parties (PRPs). The panel, and this article, summarize the obstacles and the collaboration to overcoming those obstacles to convert impaired groundwater into a long-term, resilient drinking water resource.

California relies on groundwater for forty percent of its annual water supply in non-drought years and sixty percent in drought years.[3] There are a number of stakeholders: water purveyors, PRPs, and local, state, and federal agencies. With collaboration, these stakeholders may agree upon a treatment plan, a basin-wide groundwater management plan, and a plan to pay for the treatment. When a contaminated groundwater basin is on the National Priority List (NPL) as a Superfund Site under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA),[4] the number of stakeholders multiply along with the challenges faced when converting the contaminated groundwater into a beneficial end use as drinking water. This article discusses the collaboration among the stakeholders at a CERCLA groundwater site that may be the solution to allow the use of impaired groundwater resources as reliable and sustainable water supply sources.

I. Converting California's Impaired Basins into Drinking Water Involves a Myriad of Laws

A web of state and federal laws governing groundwater quality, groundwater remediation, and water rights control the ability of stakeholders to access impaired groundwater basins for drinking water use. Understanding the basics of these laws is important to navigate them and to identify the stakeholders that will need to collaborate to reach a solution.

A. An Overview of Water Rights in California

First and foremost, is the issue of who has the right to pump and use the water in impaired basins must be determined. A CERCLA remedy that doubles as a source of drinking water will implicate water rights in the basin

2. Cal. Dep't of Water Res., *Sustainable Groundwater Management* (Sept. 18, 2017), https://perma.cc/UYT3-Y5ZY.

3. Cal. Dep't of Water Res., Report to the Governor's Drought Task Force: Groundwater Basins with Potential Water Shortages and Gaps in Groundwater Monitoring (2014), https://perma.cc/K5SE-W93C.

4. 42 U.S.C. § 9601(1)–(41) (2012).

where the remedy occurs. Water rights issues complicate the remedy, its implementation, and its longevity.

In the United States, there are complex legal systems for allocating water rights that vary by region. A water right is the right of a user to use water from a water source, such as surface water or groundwater. Water rights can derive from common law principles, state statutory law, public grants, and state, federal and local regulation of waters through zoning, public health and other regulation. Water rights can be land-based, community-based, and use-based. In California, there is an additional special class of water rights called pueblo rights.[5] Also, in California, based on the California Constitution, under certain circumstances the state can declare water as reserved in trust for the public.[6]

Riparian rights are property rights based on land ownership or possession adjacent to surface water. Community-based rights are water rights granted to communities located where the water originates and flows without alteration. In California, pueblo water rights are a type of community-based water right granted to settlements (or cities) for surface waters that flow through the settlement and for groundwater underlying the settlement.[7] Use-based rights are water rights that are not attached to land or to settlements. They are usufructuary rights that are typically transferable and subject to market-based trading. Appropriative water rights are use-based rights, conferring the right to use water on anyone who actually diverts and uses the water for a "reasonable and beneficial use."[8] The rule of priority applies in disputes over the water; namely, exclusive right is given to the original user—"first in time, first in right."[9] The right may be lost through non-use and is conditional upon beneficial use. Beneficial use is defined as agricultural, industrial, urban use, or environmental use (in-stream water

5. Cal. State Water Res. Control Bd., *History of the Water Boards, The Early Years of Water Rights, Surface Water*, (Sept. 20, 2011), https://perma.cc/Z6ST-CU4R.

6. *See* City of Berkeley v. Superior Court, 26 Cal. 3d 515 (1980); State v. Superior Court, 29 Cal. 3d 210, 229 (1981); State v. Superior Court, 29 Cal. 3d 240, 249 (1981); Marks v. Whitney, 6 Cal. 3d 251, 258 (1971). *See generally* Richard M. Frank, *The Public Trust Doctrine: Assessing Its Recent Past & Charting Its Future*, 45 U.C. DAVIS L. REV. 667, 671-79 (2012); Joseph L. Sax, *The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970).

7. City of Los Angeles v. Pomeroy, 124 Cal. 597, 640–41 (1899); Hooker v. City of Los Angeles, 188 U.S. 314, 319-320 (1903); City of Los Angeles v. City of San Fernando, 14 Cal. 3d 199, 210 (1975).

8. United States v. State Water Res. Control Bd., 182 Cal. App. 3d 82, 122 (1986).

9. *Id.* (citing Irwin v. Phillips, 5 Cal. 140, 147 (1855)).

rights). The appropriated right can be sold, and when sold retains its original appropriation date and annual yield. In California, the doctrine of prior appropriation originated as possessory rights among gold miners working claims on federal land.[10]

Groundwater rights in California are "overlying" rights. Like surface water rights, overlying rights can be riparian (attached to the land) or adjudicated. Riparian overlying rights are correlative; the landowner owns the right to a percentage of the groundwater underlying their land and underlying the land of other landowners. In 1850, when California entered the union, the California Legislature adopted the English common law, and courts applied the English common law rule of absolute ownership of property, including groundwater.[11] In other words, a landowner owns beneath the surface of his or her property to the depths of the earth and up to the heavens.[12] This rule gave landowners the right to use as much groundwater as could be physically extracted from beneath his or her property.

In 1903, the California Supreme Court rejected the absolute ownership rule and replaced it with the correlative rule of "overlying rights." This change limited the extraction of groundwater to a reasonable share of the groundwater in a common groundwater basin, in relation to other overlying users.[13] California also has appropriative and prescriptive water rights for groundwater. The courts in California have recognized the right of an appropriator to take available surplus (unused water, which will not create an overdraft if used) from a groundwater basin and apply it to beneficial use inside or outside the basin.[14] As with surface water, the "first in time first in

10. *Id.*; *see also* Cal. Water Code § 102 ("All water within the State is the property of the people of the State, but the right to the use of water may be acquired by appropriation in the manner provided by law.").

11. Gary W. Sawyers, A *Primer on California Water Rights* 4, https://perma.cc/5XSD-2JZK. *See also* State Water Res. Control Bd., *History of the Water Boards*, *supra* note 5; Justin A. Brown, *Uncertainty Below: A Deeper Look Into California's Groundwater Law*, 45 U.C. DAVIS L. REV. 45, 48 (2016) (citing Pleasant Valley Canal Co. v. Borror, 61 Cal. App. 4th 742, 751 (1998) ("Among its first acts, the Legislature declared that the common law of England should become the rule of decision in the courts . . . .").

12. Acton v. Blundell (1843) 12 M. & W. 324, 354 ("[T]he person who owns the surface may dig therein, and apply all that is there found to his own purposes at his free will and pleasure . . . .").

13. Cal. State Water Res. Control Bd., *The Water Rights Process, Groundwater Rights* (2017), https://perma.cc/CNU9-PVBV. *See also* Katz v. Walkinshaw, 141 Cal. App. 116 (1903).

14. Sawyers, *supra* note 11, at 2.

right" rule of priority applies.[15] In California, prescriptive rights to groundwater are complex because it depends on the condition of overdraft and it is not applied against public entities and public utilities.

Under the Water Commission Act of 1913, California legislated appropriative rights permits, granting oversight to the California Water Commission.[16] In the 1960s, the State Water Resources Control Board ("SWRCB") took over permitting of post-1914 water rights, and still retains that authority. The SWRCB does not have the authority to regulate pre-1914 rights. In other words, pre-1914 rights are protected against all other water rights (except for riparian rights holders and public trust users).

Under the California Constitution, water must be put to reasonable and beneficial use.[17] No water right holder may waste water, or make unreasonable use of water, and if the water right holder does so, the water right can be curtailed or revoked.[18] In addition, a water right holder does not "owns" any water; rather, a water right holder has the right to use water ("usufructuary right").[19]

B. Groundwater Basin Management

Adjudicated rights are necessary in many groundwater basins in California where there are competing demands for a common water supply. In such a case, landowners are entitled to pump and use a reasonable amount of groundwater from a basin underlying their land and to put it to a beneficial, non-wasteful use.[20] If there is insufficient water for all landowners, the landowners are expected to reduce their use to a "safe yield"—a rate of overall pumping that will not cause long-term undesirable effects, such as subsidence or decline in water levels. In California, these groundwater basins are now adjudicated. [21]

In an adjudicated basin, a court determines the quantities of groundwater, or the share of the adjudicated basin, that may be extracted by the individuals or entities owning property overlying the basin. A water master is then appointed by the court to ensure pumping from the basin is

15. *Id.* at 3.

16. Cal. State Water Res. Control Bd., *History of the Water Boards*, *supra* note 5.

17. CAL. CONST. art. X § 2 (West, Westlaw through Ch. 859 of 2017 Reg. Sess.).

18. Sawyers, *supra* note 11, at 10.

19. *Id.*

20. *Id.*

21. *Id.* at 6.

consistent with the court's determination.[22] Adjudication agreements and groundwater management plans are intended to maintain sustainable basin operations. There are approximately twenty-two groundwater basins that have been adjudicated, most in Southern California.[23] Typically, the court and water master retains jurisdiction over the implementation of the adjudication order to ensure compliance.

In September 2014, the state legislature enacted the SGMA to promote local control and sustainable management of basins. The SGMA requires the designation of groundwater sustainability agencies and implementation of groundwater sustainability plans in non-adjudicated medium and high priority basins.[24] Before the SGMA, the groundwater sustainability plans were voluntary.[25] In addition, the pre-SGMA laws did not mandate sustainable management goals. The SGMA established a framework for local agencies to develop plans and strategies to sustainably manage groundwater resources for basins with the greatest problems, with a twenty-year implementation timeline.[26] In large part, SGMA was intended to address overdraft causing subsidence.[27] The SGMA was also intended to address "significant and unreasonable degradation of water quality."[28] Importantly, SGMA does not replace existing water rights.[29]

C. Memorandum No. 97-005

Pursuant to the Department of Health Services, Division of Drinking Water (DDW) Memorandum No. 97-005, the DDW regulates the use of extremely impaired groundwater sources, stating "there are extremely impaired sources that need to be cleaned up and for which the resulting [treated] product water represents a significant resource that should not be

22. Water master service is administered by the Department of Water Resources in accordance with Part 4, Division 2 of the California Water Code.

23. WATER EDUC. FOUND., THE 2014 SUSTAINABLE GROUNDWATER MANAGEMENT ACT: A HANDBOOK TO UNDERSTANDING AND IMPLEMENTING THE LAW 3 (2015), https://perma.cc/P2XG-WACT.

24. *Id*. at 4; Cal. Dep't of Water Res., *Sustainable Groundwater Management*, *supra* note 2.

25. SGMA SUMMARY (Apr. 1, 2016), https://perma.cc/A88A-FQEL; *see generally* www.water.ca.gov.

26. Cal. Dep't of Water Res., *Sustainable Groundwater Management*, *supra* note 2.

27. CAL. DEP'T OF WATER RES., SUSTAINABLE GROUNDWATER MANAGEMENT PROGRAM STRATEGIC PLAN 16 (Mar. 9, 2015), https://perma.cc/X4P3-XFC8.

28. SGMA SUMMARY, *supra* note 25.

29. Cal. State Water Res. Control Bd., *Frequently Asked Questions* (Sept. 15, 2016), https://perma.cc/5BFN-QBV4.

wasted."[30] DDW's policy dictates that, whenever possible, lower quality source waters should be used for nonconsumptive uses, such as irrigation, recreation, or industrial uses, which pose lower health risk.[31] At first blush, this does not appear to align with the goal to convert contaminated groundwater into a reliable drinking water supply. However, the DDW supports the goal that groundwater sources should be protected against contamination, which is consistent with capture and containment of contamination and prevention of dispersion to non-contaminated parts of the basin. In some situations, DDW is willing to consider treating "extremely impaired sources" for drinking water use, even though its policy is to use such water for nondomestic uses.

An extremely impaired water source exceeds ten times a Maximum Contaminant Level (MCL) or action level (AL) based on chronic health effects, or exceeds three times an MCL or AL based on acute health effects.[32] It can also be extremely threatened merely due to proximity to contaminating activities. To use extremely impaired water as drinking water, following treatment, DDW requires a water producer to: (1) complete a source water assessment, including delineation of the capture zone and identification of the source; (2) fully characterize the raw water quality; (3) identify the source protection program in place; (4) identify the treatment process and monitoring that will be used prior to direct usage in a domestic water distribution system; (5) identify the human health risks associated with the failure of the proposed; identify alternative uses for the extremely impaired water; (7) complete a California Environmental Quality Act (CEQA) review of the project; and (8) submit a permit application.[33] The application is subject to a public hearing and evaluation by DDW staff.

One of the significant hurdles to using treated contaminated groundwater as a source of drinking water is DDW Memorandum No. 97-005. This particular hurdle requires advance planning and cooperation by the water purveyors to meet the 97-005 requirements, including a possible CEQA review of the project. While this is a hurdle, it is not insurmountable; however, only water purveyors are required to tackle this one. PRPs are not

30. Memorandum from the Division of Drinking Water and Environmental Management to Drinking Water Program Regional and District Engineers 2 (Nov. 5, 1997) [hereinafter Drinking Water Memorandum], https://perma.cc/46RR-DEYQ. (In 1979, the California Department of Public Health and Department of Health Services, currently the State Water Resources Control Board, Division of Drinking Water (DDW) requested that all major water purveyors sample and analyze groundwater for various compounds.).

31. Drinking Water Memorandum at 1.

32. I*d*. at 2.

33. I*d*. at 2–8.

in the business of distributing water to rate payers and, therefore, are not subject to the DDW requirements. PRPs are not water purveyors, and are not regulated by DDW and are not in a position to complete and submit the documents required by DDW.

D. State and Federal Statutes

The Federal Safe Drinking Water Act (SDWA) is the federal law that protects public drinking water supplies throughout the nation.[34] Under the SDWA, the United States Environmental Protection Agency (EPA) sets MCLs[35] standards for drinking water quality and with its partners implements various technical and financial programs to ensure drinking water safety.

The California Safe Drinking Water Act (CA SDWA) mirrors the federal SDWA. The CA SDWA establishes MCLs that are at least as stringent as those developed by the EPA, as required by the federal SDWA.[36] The California MCL list includes any contaminants that may have adverse health effects and may occur in public water systems, including all the substances for which federal MCLs exist.[37] In addition to MCLs, California enforces Notification Levels (NLs)[38] and Archived Advisory Levels (AALs).[39] NLs are health-based advisory levels established by the DDW for chemicals in drinking water that lack MCLs. State law requires timely notification by drinking water systems whenever a notification level is exceeded in drinking water that is provided to consumers.[40] The level at which DDW recommends removal of a drinking water source from service is called the "response

34. U.S. Envtl. Prot. Agency, *Laws and Regulations*, *Summary of the Safe Drinking Water Act*, 42 U.S.C. §300*f et seq*. (1974) (Aug. 24, 2017), https://perma.cc/G22D-7Z26.

35. U.S. Envtl. Prot. Agency, *Groundwater and Drinking Water, National Primary Drinking Water Regulations* (July 11, 2017), https://perma.cc/ZF5H-4DYB.

36. CAL. HEALTH & SAFETY CODE § 116270(f) (West, Westlaw through Ch. 859 of 2017 Reg. Sess.).

37. CAL. CODE OF REGS. tit. 22 § 64431 (West, Westlaw through Oct. 6, 2017).

38. Cal. State Water Res. Control Bd., *Drinking Water Notification Levels and Response Levels: An Overview* (Feb. 4, 2015), https://perma.cc/8RQH-Y5AR.

39. Cal. State Water Res. Control Bd., *Archived Advisory Levels for Drinking Water* (Jan. 30, 2015), https://perma.cc/JW4S-MHS7.

40. CAL. HEALTH & SAFETY CODE § 116455 (West, Westlaw through Ch. 859 of 2017 Reg. Sess.).

level."[41] In the case of treating impaired, or extremely impaired, groundwater the DDW can require water purveyors to treat to NLs and AALs.

The Porter-Cologne Water Quality Control Act took effect on January 1, 1970.[42] It combined the State Water Rights Board and the State Water Resources Control Board and created the nine Regional Water Quality Control Boards. The Porter-Cologne Act instituted a planning mandate to protect beneficial uses and consider significant factors that affect water quality.[43] The Porter-Cologne Act expanded the enforcement authority of the regional boards to issue waste discharge requirements and remedial orders to implement the water quality control plans.

The California legislature passed the California Environmental Quality Act (CEQA) in 1970, as an analogue to the National Environmental Policy Act (NEPA).[44] CEQA requires state and local agencies in California to provide notice and comment prior to implementing any proposed projects that may have environmental impacts. Pursuant to CEQA, all state and local agencies must consider environmental impacts for any project and consider alternatives and mitigation measures that could reduce impacts of the project.[45] As part of a CEQA Environmental Impact Report (EIR), the lead agency must analyze project impacts to aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gases, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public servicers, recreation, transportation and traffic, tribal cultural resources, and utilities and service systems.[46] If any significant adverse environmental impacts are identified, the lead agency is required to mitigate them to the maximum extent feasible.[47]

Remediating a contaminated groundwater site will be overseen by the EPA or the local or state agency involved in the remediation of the

41. Cal. State Water Res. Control Bd., *Drinking Water Notification Levels and Response Levels*, *supra* note 38.

42. CAL. WATER CODE § 13000 (West, Westlaw through Ch. 859 of 2017 Reg. Sess.)

43. CAL. CODE OF REGS. tit. 22 § 64431 (West, Westlaw through Oct. 6, 2017). *See also* Cal. State Bd. Div. of Drinking Water, *California Regulations Related to Drinking Water* (Sept. 14, 2017), https://perma.cc/T4X2-9JC4.

44. Cal. Nat. Res. Agency, *Frequently Asked Questions About* CEQA (last visited Oct. 31, 2017), https://perma.cc/9P56-XJ78.

45. *Id.*

46. Cal. Nat. Res. Agency, CEQA Environmental Checklist Form, https://perma.cc/NG4G-YN6M.

47. CAL. PUB. RES. CODE § 21002.1 (West, Westlaw through Ch. 859 of 2017 Reg. Sess.).

contamination, pursuant to CERCLA or its state analog. In California, the analog to CERCLA is the Hazardous Substance Account Act (HSAA),[48] which mirrors the mandates of CERCLA. The Department of Toxic Substances Control (DTSC) has authority to oversee a site that is being remediated pursuant to the HSAA. In some cases, the Regional Water Quality Control Board (RWQCB) or the DTSC identifies a site that has been impacted by a release or threat of release, investigate the site, and see the site through to its final cleanup.[49] Alternatively, DTSC/RWQCB and EPA may enter into a Memorandum of Understanding (MOU) and work together.[50] In most multi-party, complex, regional groundwater basin cases, EPA is usually the lead agency.

Under CERCLA, EPA is required "to return usable ground waters to their beneficial uses wherever practicable, within a timeframe that is reasonable given the particular circumstances of the site."[51] Where restoration is not practicable, EPA must take steps to "prevent further migration of the plume, prevent exposure to the contaminated ground water, and evaluate further risk reduction."[52] To do so, EPA must follow the steps set forth in CERCLA and the National Contingency Plan (NCP)[53] to assess the contamination, identify a feasible remedy, and implement the remedial action. EPA typically engages with PRPs at the site to conduct or pay for the studies and the remedial action work. Legal issues often complicate and delay the remedy, including absent parties (or "orphan" shares), causation of response actions when there are multiple sources and commingled plumes, corporate successor liability, bankruptcy, among others. Assuming EPA identifies solvent PRPs with a nexus to the site and the contamination, who are willing to pay for the remedy, EPA still faces legal hurdles when selecting a remedy that is "necessary and consistent" with the NCP.[54] In addition to cleanup standards set by EPA for the remedy,

48. CAL. HEALTH & SAFETY CODE § 25300 (West, Westlaw through Ch. 859 of 2017 Reg. Sess.).

49. CAL. HEALTH & SAFETY CODE §§ 25355.5, 25358.3, 25187 (West, Westlaw through Ch. 859 of 2017 Reg. Sess.); *see* CAL. HEALTH & SAFETY CODE §§ 58009, 58010 (West, Westlaw through Ch. 859 of 2017 Reg. Sess.).

50. Orange County North Basin, E.P.A. (2016), https://perma.cc/G75Y-NC9N.

51. 40 C.F.R. § 300.430(a)(1)(iii)(F).

52. *Id.*

53. 40 C.F.R. § 304.12(h) (West, Westlaw current through Oct. 12, 2017).

54. Comprehensive, Envtl. Response, Compensation, & Liability Act, 42 U.S.C § 9607(a)(4)(A) (2006).

the remedy also must meet Applicable, Relevant, and Appropriate Requirements (ARARs).[55]

Additional ARARs may be identified and ARARs may be refined as a site conditions, site contaminants, and remedial action alternatives are delineated. ARARs usually include state standards; however, they do not necessarily include NLs or AALs. If the NLs or AALs are not listed as ARARs in a CERCLA Consent Decree, the water purveyors are required to treat the impaired water to meet the NLs or AALs through the water treatment system before serving the water to the public. In some cases, the NLs may be included in the ARARs, and treated as part of a remediation response action. Regardless of which entity treats to NLs or AALs at a CERCLA site, if such treatment is required, collaboration is important.

E. Common Law

Unfortunately, water purveyors sometimes find that a CERCLA remedy does not repair a basin fast enough, in that it does not allow wells to be brought back into service when needed, or that it does not achieve a beneficial end-use of drinking water. In particular, water purveyors may assert they have been damaged because of the inability to access their water rights in the past and into the future. Under common law damages theories, water purveyors may seek damages going back three years for nuisance, trespass, or negligence, assuming the statute of limitations has not yet run.[56] While the threat of litigation—or the actual filing of a lawsuit alleging common law damages in addition to statutory claims—may be intended to make water purveyors "whole," such litigation can also become a hurdle to the ultimate conversion of the contaminated basin into a drinking water resource.

CERCLA provides for cost recovery only for the costs of cleanup already incurred in strict compliance with the NCP.[57] Unlike a government entity, a plaintiff who incurs response costs under CERCLA (or the HSAA) bears the burden of proof that the cleanup was consistent with the NCP in order to recover its costs from PRPs.[58] Plaintiffs may not recover damages

55. 40 C.F.R § 300.415(j) (West, Westlaw current through Oct. 12, 2017).

56. The statute accrues when the plaintiff knows, or reasonably should have known, of injury upon or within his property. Knowledge that contamination is within "capture zone" is sufficient to trigger statute of limitations; contamination does not need to be in the wells themselves. *See* Bethpage Water Dist. v. Northrop Grumman Corp., No. CV 13-6362 (SJF)(AYS), 2016 U.S. Dist. LEXIS 25554, at *29–33 (E.D.N.Y. Feb. 29, 2016).

57. 42 U.S.C. § 6972(a)(2) (2012).

58. Wash. State Dep't of Transp. v. Wash. Nat. Gas Co., 59 F.3d 793, 802 (9th Cir. 1995).

incurred as a consequence of the contamination; for example, lost rental value, diminution in property value, lost business income, personal injury costs, attorney fees, or punitive damages.[59] In groundwater contamination cases, plaintiff who seek damages above and beyond those allowed by CERCLA have attempted to use state common law claims to do so.[60]

Interference with a water right has been held in state courts to be a common law trespass, nuisance, and negligence.[61] In *Fall River*, the California Supreme Court considered competing claims to the water flows.[62] The defendant owned land abutting the Fall River and held a riparian right to the naturally flowing river water.[63] The plaintiff held permits issued by the State of California that granted it the right to appropriate a certain amount of water from the Fall River.[64] The Supreme Court rejected the plaintiff's permit rights to the water, holding that "a mere appropriator, until he obtains title by prescription, is, as against the right of a riparian owner, a trespasser."[65] As to a nonriparian owner, the riparian owner is under no duty to share the waters of the creek and the slightest use by such nonriparian owner diminishes to some extent the flow of the stream.[66]

Relevant to this article, however, is the view of the courts on water rights in the context of contaminated groundwater. Common law claims such as trespass and nuisance have been attached to environmental issues for centuries, rooted in English common law.[67] Typically, trespass is found when a defendant has allowed a contaminant to migrate onto a plaintiff's land, or under a plaintiff's land via groundwater.[68] Where a plaintiff has the

59. Cooper Indus. v. Aviall Servs., 543 U.S. 157, 170 (2004)); Key Tronic Corp. v. United States, 511 U.S. 809, 819–20 (1994); Exxon v. Hunt, 475 U.S. 355, 359 (1986); Wehner v. Syntex Corp., 681 F. Supp. 651, 653 (N.D. Cal. 1987).

60. CERCLA preempts state statutory law, but courts have found that it does not preempt common law claims. *See* Artesian Water Co. v. New Castle Cty., 851 F.2d 643, 648–49 (3rd Cir. 1988).

61. *See* Fall River Irrigation Dist. v. Mt. Shasta Power Corp. (Fall River), 202 Cal. 56, 71–73 (1927).

62. *Id.*

63. *Id.* at 65.

64. *Id.*

65. *Id.* at 70.

66. *Id.* at 71.

67. G. Nelson Smith, III, *Nuisance and Trespass Claims in Environmental Litigation: Legislative Inaction and Common Law Confusion*, 36 SANTA CLARA L. REV. 39, 41–42 (1995).

68. CAL. CIV. CODE § 3479 (West 1997). *See* RESTATEMENT (SECOND) OF TORTS § 158 (AM. LAW INST. 1965). There is extensive case law addressing the

right to the groundwater as a riparian owner, with overlying rights, trespass is easier to prove. While trespass is intentional, a nuisance is defined as "[a]nything which is injurious to health, indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property."[69] In other words, nuisance can be a passive or unintentional intrusion on a property owner's enjoyment of his or her property.

In OCWD *v.* A*lcoa*, the Orange County Water District (OCWD) asserted that the groundwater in the North Basin area was contaminated by numerous individual industrial sites in the region being investigated by the RWQCB.[70] Although several of these industrial sites had been remediated with RWQCB oversight, and some had received "no further action" letters from the RWQCB, the OCWD filed suit against them.[71] The OCWD alleged damages arising from, among other things, trespass, nuisance, the HSAA and the Orange County Water District Act (OCWD Act).[72] The trial court ruled that the OCWD's claims for negligence, nuisance, and trespass required the OCWD to establish causation as to each defendant and found that the OCWD could not do so based on the evidence provided in the trial pertaining to its statutory claims.[73] The trial court also issued a declaration that defendants were not liable for damages, response costs, or other costs claimed by the OCWD, or any future costs.[74]

On appeal, the OCWD argued the trial court erred by (1) bifurcating trial and scheduling a bench trial on the equitable claims (the court held a bench trial on the OCWD's claims under the OCWD Act and the HSAA and for declaratory relief) before a jury trial on the common law claims and (2) treating its factual findings following the bench trial on the equitable claims

continued presence of contaminants on a plaintiff's land potentially constituting a continuing trespass and whether the tort is time-barred by a statute of limitations. This article does not address the elements of the cause of action or any such defenses, including the statute of limitations defense.

69. S*ee* Resolution Trust Corp. v. Rossmoor Corp., 34 Cal. App. 4th 93, 99 (1995); Newhall Land & Farming v. Superior Court, 19 Cal. App. 4th 334, 341 (1993); Capogeannis v. Superior Court, 12 Cal. App. 4th 668, 674 (1993); Mangini v. Aerojet-General Corp., 230 Cal. App. 3d 1125, 1135 (1991), *rev. granted*, 883 P.2d 387 (1994).

70. Orange Cty. Water Dist. v. Alcoa Glob. Fasteners, Inc. (Alcoa), 12 Cal. App. 5th 252, 268 (2017).

71. I*d*. at 270.

72. I*d*.

73. I*d*.

74. A*lcoa*, 12 Cal. App. 5th at 270.

as binding on the common law claims.[75] The lower court viewed the OCWD's causation evidence "with distrust" because of certain deficiencies, including (1) the OCWD's failure to conduct a fate and transport analysis of contamination in the North Basin area; (2) the OCWD's failure to update its 2005 and 2008 contaminant plume maps for trial; (3) the OCWD's failure to calculate the rate of natural attenuation for contamination; and (4) the OCWD's failure to conduct an adequate cost/benefit analysis for its remediation plan.[76] The appellate court held that the trial court was entitled to judge the credibility and weight of the OCWD's causation evidence and affirmed the trial court's finding of no liability for all defendants except for Northrop, awarding those defendants their costs and attorneys' fees.[77] For Northrop, the OCWD must go back to the trial court on remand and prove its case.

Similarly, in *Orange County Water District v. Sabic Innovative Plastics* US, LLC, *et al.* ("Sabic"),[78] the OCWD has been in a dispute with defendants over contaminated groundwater in the South Basin area for decades. The OCWD sought to recover its response costs and seek declaratory judgment in court against defendants that allegedly contributed to basin-wide groundwater contamination. In this case, the Fourth District Appellate Court in California reviewed the issue of water rights in the context of cost recovery by a water producer.[79]

The Orange County Water District filed suit against multiple alleged owners or operators of sites in the South Basin area of Orange County that it believed was responsible for contamination that was found in groundwater.[80] In addition to statutory claims under the HSAA, CERCLA and the OCWD Act, the OCWD asserted common-law claims for negligence, nuisance and trespass.[81]

Following a bench trial, the Superior Court granted summary judgment and summary adjudication in favor of the defendants.[82] The OCWD

75. *Id.*

76. *Id.*

77. *Id.*

78. Orange Cty. Water Dist. v. Sabic Innovative Plastics US, LLC, (Sabic), 14 Cal. App. 5th 343, 355–56 (2017).

79. *Id.* at 371.

80. *Id.*

81. Contamination of subsurface soil has been held to interfere with a landowner's possessory interest in its land. *See, e.g.*, Starrh & Starrh Cotton Growers v. Aera Energy LLC, 153 Cal. App. 4th 583, 592 (2007); Cassinos v. Union Oil Co., 14 Cal. App. 4th 1770, 1778 (1993) ("The essence of the cause of action for trespass is an 'unauthorized entry' onto the land of another.").

82. *Sabic*, 14 Cal. App. 5th at 367

appealed. With respect to the common law claims, the appellate panel ruled: (1) the theory of continuous accrual applies to the negligence cause of action's statute of limitations bar and bars some of the OCWD's negligence claims, (2) the OCWD's water right in the groundwater through spreading and sale of groundwater from the basin is not a sufficient property right to maintain a trespass cause of action, and (3) the OCWD has raised a triable issue of fact regarding its property interests in groundwater in the South Basin for a nuisance cause of action.[83] In particular, the appellate panel focused much of its attention on water rights as a property right and whether the OCWD had standing to bring a nuisance or trespass cause of action for groundwater contamination. The OCWD agreed it had no property interests in the land overlying the South Basin area; however, it alleged it had a property interest in the groundwater itself.[84] The appellate panel held water in its natural state cannot be owned by any private person.[85] Rather, property interests in water take the form of a usufruct, or a right to use and cases do not speak of the ownership of water, but only of the right to its use.[86] The panel cited the California Supreme Court holding that the state's interest in water is "not an ownership interest, but rather a nonproprietary, regulatory one,"[87] and the Water Code's reference to "the people of the State," rather than the State itself, "confirms the State's interest is an abstract one, not a proprietary one."[88] Therefore, the panel found the OCWD did not show a property interest in the groundwater based on any delegation of rights from the State of California or the OCWD's regulatory powers.[89]

However, the panel found the OCWD could have appropriative right to the groundwater based on storing groundwater in the South Basin through recharge activities: "[t]he appropriation doctrine confers upon one who actually diverts and uses water the right to do so provided that the water is used for reasonable and beneficial uses and is surplus to that used by riparians or earlier appropriators."[90] Although the OCWD did not itself

83. I*d*. at 414–18.

84. I*d*. at 366.

85. I*d*. at 415; State of Cal. v. Superior Court, 78 Cal. App. 4th 1019, 1025 (2000).

86. Nat'l Audubon Soc'y v. Superior Court, 33 Cal. 3d 419, 441 (1983).

87. City of Barstow v. Mojave Water Agency, 23 Cal. 4th 1224, 1237 n.7 (2000).

88. CAL. WATER CODE § 102 (Deering); *see* State of Cal., 78 Cal. App. 4th at 1026.

89. *Sabic*, 14 Cal. App. 5th at 404.

90. United States v. State Water Res. Control Bd., 182 Cal. App. 3d 82, 101 (1986).

extract or divert groundwater,[91] the OCWD imported the water for recharge purposes, which is a beneficial and valuable use. The OCWD argued that it has an appropriator's right to reclaim water it has imported into the groundwater basin.[92] The appellate court agreed that the Water Code section 7075 "allow[s] an appropriator to retain an interest in appropriated water that the appropriator brings from one stream or basin and adds to another."[93]

Importantly, the panel noted the rule applies only where the water importer intends to reclaim the imported water.[94] Intent to take the water, accompanied by a physical act of taking the water for valuable and beneficial use, must be shown.[95] The OCWD argued that intent to take the water is reflected in the sale of water to other water purveyors in the basin who extract and appropriate basin water for their own purposes and pay fees to

91. *See* City of Pasadena v. City of Alhambra, 33 Cal. 2d 908, 925 (1949) ("The right of an appropriator depends upon an actual taking of water."); Crane v. Stevinson, 5 Cal. 2d 387, 398 (1936); City of Santa Maria v. Adam, 211 Cal. App. 4th 266, 278 (2012).

92. *City of Los Angeles*, 14 Cal. 3d at 260; City of Los Angeles v. City of Glendale, 23 Cal. 2d 68, 76 (1943); Stevens v. Oakdale Irrigation Dist., 13 Cal.2d 343, 350 (1939). *See* Cal. Wat. Code § 7075 ("Water which has been appropriated may be turned into the channel of another stream, mingled with its water, and then reclaimed.").

93. *City of Santa Maria*, 211 Cal. App. 4th at 302.

94. Barton Land & Water Co. v. Crafton Water Co. 171 Cal. 89, 94 (1915). (In explaining its landmark holdings on this subject, the Supreme Court emphasized this intent requirement: "One basis for the holding was the trial court's finding that before commencing the importation of Owens water, plaintiff had formed an intention to recapture the return waters used for irrigation in the San Fernando Valley whenever such return waters were needed for its municipal purposes and the use of its inhabitants, and that the Los Angeles Aqueduct had been planned and located to facilitate the availability and recapture of such return waters. Under these circumstances, plaintiff retained its prior right to the return waters wherever they might appear." *City of Los Angeles*, 14 Cal. 3d at 257. Under certain circumstances, abandonment may also be avoided where the water importer sells or transfers its right to reappropriate to another person.). *See* Stevinson Water Dist. v. Roduner, 36 Cal. 2d 264, 267–68 (1950) (enforcing agreement to transfer right to reappropriate imported water); *see also* Richardson v. McNulty 24 Cal. 339, 344–46 (1864) (distinguishing the concepts of transfer and abandonment in the context of a mining claim).

95. Fullerton v. State Water Res. Control Bd., 90 Cal. App. 3d 590, 598 (1979) (italics omitted); *see* Cal. Trout, Inc. v. State Water Res. Control Bd., 90 Cal. App. 3d 816, 820 (1979).

the OCWD based on the amount of water they extract.[96] The appellate court ruled that these fees are regulatory, not transactional, in nature. In other words, the other water purveyors are not purchasing water or appropriative water rights from the OCWD.[97] This is an important factual distinction. In other water basins, water purveyors transfer water rights through transactions and these may be deemed appropriative rights, or they extract water pursuant to water rights. The appellate panel ruled, however, that the defendants did not establish, for purposes of summary adjudication, that the OCWD has no relevant property interests based on its recharge activities in the Orange County groundwater basin and left that issue open for resolution at the lower court on remand.[98]

It goes without saying that the PRPs have a cadre of defenses and affirmative defenses if sued by a water producer for common law damages. In an effort to focus on the solution, rather than the problem, this article will not address those defenses here. If collaboration is the solution, it is imperative to negotiate rather than litigate.

II. The Stakeholders

Collaboration is critical to converting contaminated groundwater into a reliable source of drinking water, but it is first necessary to identify the stakeholders who need to come to the table. If the impaired groundwater is a CERCLA site, then the stakeholders necessarily include the PRPs and EPA. Because the end use of the treated contaminated groundwater will be distributed to ratepayers and users in the community, stakeholders must also include the water producers. Other possible stakeholders include DDW, the RWQCB, DTSC, and nongovernment organizations or community groups and citizens.

Typically, EPA sends out a special notice letter to notify PRPs of their potential liability at a Superfund site and invite them to participate in negotiations to conduct future cleanup work and pay for site-related costs. Upon receipt of a special notice letter, there is a moratorium period to encourage PRPs to negotiate a settlement agreement, during which time EPA will not unilaterally order the PRP to conduct the cleanup.[99]

DTSC enforces state hazardous waste laws and regulations, including the HSAA. DTSC works with EPA to identify groundwater basins where drinking water is or will be threatened, and prioritizes these areas for further action, including water treatment.

96. *Sabic*, 14 Cal. App. 5th at 410.

97. *Id*. at 410.

98. *Id*. at 404.

99. U.S. Envtl. Prot. Agency, *Superfund "Notice of Liability" Letters* (Jan. 27, 2017), https://perma.cc/ED8N-3GWM.

The SWRCB and nine regional boards were created by the California Legislature in 1967 under the Porter-Cologne Act to protect water quality. The RWQCBs exercise rulemaking and regulatory activities by basin.

PRP liability can be triggered if hazardous wastes are present at a facility, there is a release (or a possibility of a release) of these hazardous wastes, and response costs have been or will be incurred.[100] Potentially liable parties include current owners and operators of a facility, past owners and operators of a facility at the time hazardous wastes were disposed, generators and parties that arranged for the disposal or transport of the hazardous substances, and transporters of hazardous waste that selected the site where the hazardous substances were brought.[101] Because CERCLA liability is joint and several, when there are multiple parties at a site, or multiple sources of contamination contributing to a plume, negotiation with EPA can be complex.

Water purveyors import water or extract groundwater for treatment and distribution to water customers. In addition to industrial sources of pollution, groundwater can often require treatment for naturally occurring contaminants that impair drinking water, including nitrates, organics, metals, and total dissolved solids. All public water systems are subject to health-based standards and laws.[102] They are also subject to comprehensive regulation by the California Public Utilities Commission regarding water supplies, capital improvements, service quality, and water rates. In addition, they must meet regulations set by the DDW.

Mutual water companies are private organizations owned and controlled by their customers. They are often formed in connection with real estate subdivisions, and some operate through the organization of a homeowners' association.

Finally, the community and non-governmental organizations that represent the environment and the public are important stakeholders.

III. The Solution: Collaboration

Working together and with the public's input, PRPs, EPA, DTSC, RWQCB, DDW, and water purveyors can design and implement a remedy that converts impaired groundwater into a drinking water resource. The collaboration usually begins during the Remedial Investigation and Feasibility Study (RI/FS) stage, if not before. With advance discussion, a remedy can address long-term containment and capture of Contaminants of Concern (COCs), as well as other contaminants that may need to be treated to meet DDW standards.

100. 42 U.S.C. § 9601(1)–(41) (2012).

101. 42 U.S.C. § 9607(a) (2012).

102. CAL. CODE REGS. tit. 22, § 64430.

Water purveyors may be able to access state grants, proposition funding, or other funds that could be used to develop "partner" components to a solution. Similarly, response costs may be reduced by using existing water producer extraction wells, conveyance piping, and distribution systems to disseminate treated water. Water purveyors may be able to leverage PRP contractors to expedite construction, operation and maintenance of wells, conveyance piping, and treatment facilities. In addition, leveraging existing infrastructure, facilitating property access, and anticipating approval requirements can expedite the remedy, as well as the conversion of the contaminated groundwater to drinking water.

Unfortunately there are hurdles that must be overcome, including, among other issues: changing cleanup goals, discovery of Emerging Contaminants (ECs), addressing COCs that are not associated with the PRPs at the table, threatened challenges to the remedy, the risk that the treatment could fail resulting in impaired water being served to the public, the risk of overdraft effecting the health of the aquifer, climate change impacts and other force majeure events halting or delaying the remedy and the distribution of treated water as drinking water, and intervening litigation that delays the remedy and water distribution.

A. Changing Cleanup Goals

Cleanup goals, including MCLs and NLs for COCs for groundwater projects may be revised by EPA and DDW over time in response to new public health information. This presents a challenge because the parties must agree on treatment goals, while anticipating future changes.

B. Emerging Contaminants

It in increasingly necessary to evaluate the impact of ECs such as 1,2,3-trichloropropane (1,2,3-TCP), hexavalent chromium, 1,4-dioxane, N-nitrosodimethylamine (NDMA), and perchlorate, on current and potential future remedy performance and treatment plant operations at groundwater basin cleanups. The problem is, ECs may be identified after the remedy is designed and fully implemented. ECs that are not originally identified in the treatment goals when a remedy is designed and implemented create significant risk to PRPs agreeing to sign onto a remediation project intended to be used long-term as pre-treatment for drinking water.

In some cases, EPA may require a change to the remedy to address ECs. EPA will typically require PRPs to: (1) analyze the range of potential modifications or improvements to the remedy that may be necessary to address ECs, (2) analyze potential end use options including providing treated water to water purveyors or reinjection; and (3) perform a comparative analysis of alternatives for the modifications or improvements to the existing remedy. Like the remedy selection process that precedes a remedy, the stakeholders will want to be part of the analysis and decision-

making when it comes to possibly changing the remedy and end use because of ECs.

C. Contaminants of Concern Unrelated to PRPs

Not all contaminants in groundwater are COCs caused by PRPs, but all contaminants may need to be treated to serve the water to the public as drinking water. This creates a shared treatment need for both the COCs and other contaminants. The parties must cooperate to allocate the costs of the treatment accordingly to the responsible parties.

At many CERCLA sites, the COCs are derived from multiple sources that commingle to create a plume that is indivisible. Commingled plumes invariably involve multiple PRPs. The more stakeholders at the table, the more difficult it can be to negotiate a remedy and agreement to pay for it by the responsible parties. Typically, at multiple PRP sites, the PRPs work together as one unit under a joint defense agreement with an allocation agreement. At some sites, there may be a common counsel representing the PRPs. At some sites, the PRPs agree to share equally in the costs until an allocation process can be completed and then subsequently true-up past costs based on the allocation formula.

D. Challenge to Selected Remedy

CERCLA Section 113(h) bars a PRP from seeking to modify remedial decisions in a Record of Decision (ROD).[103] "[T]he case law is well settled that, pursuant to section 9613(h), there is no right of judicial review of the Administrator's selection and implementation of response actions prior to the completion of the response action or the commencement of EPA enforcement."[104] The ban on pre-implementation review applies to contentions that a selected remedy does not meet the substantive requirements of CERCLA, as well as to the EPA's remedy selection process.[105] A party cannot challenge the RI/FS process or actions taken "consistent with permanent remedy," which, falls within the CERCLA's broad definition of remedial action.[106] If a water producer seeks to include potable water use as the end use for a CERCLA remedy and EPA does not agree, the water producer will be precluded from challenging the remedy.[107] For this

103. Fairchild Semiconductor Corp. v. U.S. Envtl. Prot. Agency, 769 F. Supp. 1553, 1555 (N.D. Cal. 1991).

104. Cooper Indus., Inc. v. U.S. Envtl. Prot. Agency, 775 F. Supp. 1027, 1037 (W.D. Mich. 1991).

105. *Cooper Indus., Inc.*, 775 F. Supp. at 1038.

106. *Id.*

107. *See* 42 U.S.C § 9613(h) (2012).

reason, it is incumbent upon all stakeholders to engage and collaborate to reach agreement on the end use and the remedy.

E. Risk That Treatment May Fail

DDW's Memorandum 97-005 reflects the concern of the State that the selected treatment could fail. Water purveyors are typically concerned about this risk. If treatment fails, the water producer will not be able to distribute the water and, in that case, the remedy will need to have alternative dispositions for the water. To develop a remedy that will allow for beneficial end use as drinking water, it is necessary to thoroughly evaluate site characteristics and groundwater capture zones. In some cases, water purveyors conduct the evaluation separately from PRPs and agencies. However, collaboration mandates data sharing and cooperation to reach agreement on the limits of the contamination and the limitations of the possible remedies.

When designing a CERCLA remedy for an impaired groundwater basin, water purveyors will want to be included in the design phase, and EPA will want to ensure a backup plan for the treated water if it fails to meet drinking water standards so that the remedy can continue uninterrupted. The remedy may include alternative end uses such as conveyance to spreading grounds. Or it may require a permit from the SWRCB to release the treated water into the stormwater system or directly to navigable waters of the United States. If the water is discharged pursuant to a permit, it must meet permit requirements, including water quality standards for receiving waters. Without an alternative disposition for rejected water, the remedy could be temporarily stopped, delaying achievement of the containment and capture goals.

F. Risk of Overdraft Impacting Sustainable Yield of Aquifer

Overdraft is the taking of more water from aquifers than can be replenished by rain or by spreading. "Sustainable yield" is the "maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from an aquifer without causing undesirable results."[108] In groundwater basins that are utilized by multiple water rights holders there is a risk of overdraft from pumping. It is important to manage the pumping basin-wide to protect the remedy from interference from other pumping. The goal of PRPs and EPA to capture and contain a plume may be in tension with the goal of water purveyors to extract water. When both activities are occurring in a basin, a long-term groundwater management system is necessary.

108. SGMA SUMMARY, *supra* note 25.

G. Climate Change

A significant reason for converting contaminated groundwater into drinking water is to protect against the lack of surface water and other water sources in the future if climate change impacts result in severe drought conditions. However, climate change resulting in severe drought conditions could also negatively impact the availability of groundwater in impaired basins. After years of severe drought, it is possible that water levels in groundwater basins could drop significantly, preventing the ability to pump from remediation wells. Significant reduction in water levels creates risks for water purveyors and EPA, counting on the pumping and treating of the groundwater to provide drinking water and to capture the plume. EPA acknowledges that remedies may be vulnerable to the impacts of climate change, specifically decreased precipitation and increased drought, and applies climate change science as a standard business practice in site cleanup projects.[109] EPA conducts a screening of remedy vulnerabilities, identifying adaptation measures to increase remedies' resilience to climate change.[110]

H. Intervening or Parallel Litigation

Litigation raises numerous issues that interfere with collaboration and protract the final remedy. An assertion in court that the remedial action is not sufficient to provide drinking water, and that additional damages are justified, is essentially a challenge to the overseeing agency's selection of a remedial action, which is barred by CERCLA 113(h). This challenge is taken seriously by EPA and other agencies. The collaboration can be cut off until the litigation settles or proceeds through the court system. Nonetheless, it is not uncommon for litigation to intervene on other grounds including statutory and common law claims for damages arising from the contamination before the remediation is complete. However, as noted in the Petition for Rehearing by the Respondents in the Sabic case, a "no further action" determination by DTSC or the Regional Board does not preclude a plaintiff from bringing a claim for cost recovery or damages arising from the contamination that DTSC or the Regional Board left in place.[111] This highlights the need to cast a wide net to cover stakeholders that could bring later claims and attempt to collaborate with them to satisfy those claims before litigation proceeds. Importantly, contribution protection in an EPA Consent Decree will not protect PRPs from subsequent

109. U.S. Envtl. Prot. Agency, *Superfund "Notice of Liability" Letters*, *supra* note 99.

110. *Id.*

111. *Sabic*, 14 Cal. App. 5th at 374

toxic tort common law claims; however, contribution protection will preclude cost recovery claims under CERCLA for the area remediated.

I. Community Involvement

The parties should develop and implement community involvement activities subject to approval by EPA and local and state agencies, by providing information regarding the site's history, participating in public meetings, or by assisting with preparation of fact sheets for distribution to the general public.

IV. Conclusion

Managing remediation of basin-wide groundwater contamination, while using the remediated water for a potable end-use requires engaging all stakeholders through the best available science and collaborative decision-making. By jointly recognizing the potential value of returning a basin to full service, stakeholders can create a situation beneficial to all parties: water agencies benefit from reducing dependence on imported water, PRPs benefit from increased certainty, and EPA benefits from expediting the removal of a site from the NPL list. Total response costs could be reduced and remedies could be implemented more quickly, providing needed, reliable, and sustainable regional water supplies and reducing the dependency on imported water.