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An Assessment of the Sustainable Groundwater Management Act for Municipal Water Suppliers

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The Sustainable Groundwater Management Act ("SGMA") is now in its fourth year of operation. Groundwater Sustainability Agencies ("GSAs") have been formed throughout the medium- and high-priority basins across California, and those GSAs are now developing Groundwater Sustainability Plans ("GSP"). The GSPs will ultimately afford greater long-term groundwater supply reliability by avoiding chronic groundwater depletion and other "undesirable results," such as significant loss of storage, water quality degradation, subsidence, and seawater intrusion. To achieve sustainable management in basins experiencing pronounced overdraft conditions, either augmented recharge will be necessary or groundwater extractions will need to be reduced over time. This process will affect municipal water suppliers that rely on groundwater basins that are subject to SGMA’s provision. It is, thus, important that municipal water suppliers understand the requirements of SGMA, the potential impacts to their groundwater supplies, and the procedural and substantive options and strategies that should be considered throughout the process.

To that effect, this paper will cover:

1. An overview of SGMA and its essential provisions;
2. The issues that will need to be resolved to implement SGMA, including the potential division of available water supplies within a basin;
3. A summary of key groundwater rights laws;
4. A discussion of groundwater basin adjudications and new laws designed to streamline future adjudications and harmonize their results with SGMA; and
5. Strategies that municipal water providers may employ to optimize outcomes from the SGMA/adjudication process.

I. SGMA’S ESSENTIAL PROVISIONS

SGMA was enacted in 2014 (amended in 2015) to establish a comprehensive local process for sustainable management of groundwater in California. SGMA requires the establishment of one or more GSAs, which must develop and adopt one or more GSPs for groundwater basins designated as medium- or high-priority by the Department of Water Resources ("DWR"). The GSPs must serve to eliminate overdraft conditions in the basin and to return the basin to a condition that assures long-term sustainability within twenty years of the GSP’s implementation.

A. GSA Designation and Required Cooperation with Basin Interests

SGMA allows any local agency with water supply, water management or land use responsibilities to serve as a GSA. The GSA may be a single entity or a group of entities organized under a memorandum of agreement or joint powers agreement.

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1 Wat. Code §§ 10720 et seq.
2 Wat. Code § 10721(j),(n).
3 Wat. Code §§ 10723.6
A GSA was required to be established for all areas of each medium- or high-priority basin or subbasin by June 30, 2017.\textsuperscript{4} GSAs were established in nearly all subject basins by this deadline and this matter is now largely complete.

SGMA requires that a GSA "consider the interests of all beneficial uses and users of groundwater."\textsuperscript{5} DWR has also adopted regulations detailing the required contents and framework for a GSP,\textsuperscript{6} and these regulations require that a GSP include information describing the notice and communication procedures for stakeholder involvement.\textsuperscript{7} Finally, SGMA encourages a GSA to appoint and consult with an advisory committee consisting of interested parties for the purpose of developing and implementing a GSP.\textsuperscript{8}

\textbf{B. GSA Powers}

SGMA significantly expands the groundwater management powers of a local agency—or group of local agencies—acting as a GSA. However, a GSA cannot impose regulatory requirements under SGMA outside of its boundaries.\textsuperscript{9} Once recognized as a GSA, SGMA authorizes the agency to, among other things:

- Adopt rules, regulations, ordinances, and resolutions;\textsuperscript{10}
- Conduct investigation of water rights;\textsuperscript{11}
- Require well registration;\textsuperscript{12}
- Require well operators to measure and report extractions;\textsuperscript{13}
- Require reporting of diversions of surface water to storage;\textsuperscript{14}
- Acquire property and water rights;\textsuperscript{15}
- Impose a voluntary program for the fallowing of agricultural lands;\textsuperscript{16}
- Reclaim water;\textsuperscript{17}
- Impose well spacing requirements;\textsuperscript{18}
- Regulate groundwater extractions, including limiting or prohibiting groundwater production;\textsuperscript{19}
- Impose fees and assessments;\textsuperscript{20}

\textsuperscript{4} Wat. Code § 10735.2(a)(1).
\textsuperscript{5} Wat. Code § 10723.2(a)(1).
\textsuperscript{7} 23 Cal. Code Regs. § 354.10.
\textsuperscript{8} Wat. Code § 10727.8(a).
\textsuperscript{9} Wat. Code § 10726.8(b).
\textsuperscript{10} Wat. Code § 10725.2(b).
\textsuperscript{11} Wat. Code § 10725.4(b).
\textsuperscript{12} Wat. Code § 10725.6.
\textsuperscript{13} Wat. Code § 10725.8(a), (c) (These powers are exercised through the GSP).
\textsuperscript{14} Wat. Code § 10726 (This requirement is also triggered after a GSA implements a GSP).
\textsuperscript{15} Wat. Code § 10726.2(a), (b), (d).
\textsuperscript{16} Wat. Code § 10726.2(c).
\textsuperscript{17} Wat. Code § 10726.2(e).
\textsuperscript{18} Wat. Code § 10726.4(a)(1).
\textsuperscript{19} Wat. Code § 10726.4(a)(2)).
• Undertake enforcement actions for violation of a GSA’s rule, regulation, ordinance, or resolution;\textsuperscript{21} and
• Undertake well-permitting authority if designated to the GSA by the county.\textsuperscript{22}

SGMA expressly states that neither the actions of a GSA nor a GSP shall determine or modify water rights.\textsuperscript{23} Nonetheless, SGMA gives GSAs broad powers that could significantly impact water rights in practice. SGMA authorizes an agency to regulate groundwater extractions, including limiting or prohibiting groundwater production.\textsuperscript{24} The process of limiting extractions will significantly affect groundwater rights. GSAs also have other powers that may indirectly impact water rights, including the ability to impose fees and assessments on groundwater production.\textsuperscript{25}

C. GSA Financial Authority

SGMA authorizes a GSA to impose fees prior to GSP adoption to fund certain activities, including preparation, adoption, and amendment of a GSP; investigations; inspections; and program administration, among other things.\textsuperscript{26} A GSA is authorized to adopt and impose fees by adopting a resolution or ordinance at a properly-noticed public meeting as required by Water Code section 10730(b). As an alternative method of fee collection, a GSA may collect fees in the same manner as ordinary municipal ad valorem taxes.\textsuperscript{27} SGMA also authorizes a GSA to impose fees after adoption of a GSP in order to fund groundwater management activities.\textsuperscript{28}

D. GSP Preparation

The fundamental requirement for sustainability under SGMA is that critically overdrafted basins achieve “the absence of undesirable results” within 20 years of GSP adoption – or by January 31, 2040, for critically overdrafted basins.\textsuperscript{29} A GSP must set minimum thresholds to measure the absence of “undesirable results” in each of six areas: (1) chronic lowering of groundwater levels, (2) reduction of groundwater storage, (3) seawater intrusion, (4) degradation to water quality, (5) land subsidence, and (6) depletions of interconnected surface water.\textsuperscript{30} The GSP must also include a water budget with an estimate of the “sustainable yield” for the subbasin or basin.\textsuperscript{31}

\textsuperscript{20} Wat. Code §§ 10730 (before or after adoption of a GSP), 10730.2 (additional authority after adoption of a GSP).
\textsuperscript{21} Wat. Code § 10732.
\textsuperscript{22} Wat. Code § 10726.4(b).
\textsuperscript{23} Wat. Code §§ 10720.5, 10726.8(b).
\textsuperscript{24} Wat. Code § 10726.4(a)(2).
\textsuperscript{25} Wat. Code §§ 10730, 10730.2.
\textsuperscript{26} Wat. Code § 10730(a).
\textsuperscript{27} Wat. Code § 10730(d)(1).
\textsuperscript{28} Wat. Code § 10730.2(a).
\textsuperscript{29} 23 Cal. Code Regs. § 354.24.
\textsuperscript{30} 23 Cal. Code Regs. § 354.28(c).
\textsuperscript{31} 23 Cal. Code Regs. § 354.18(a),(b)(7).
Depending on the number of GSAs within a basin, there are three options for GSP submittals: (1) a single GSA developing a single GSP; (2) multiple GSAs developing a single GSP; or (3) multiple GSAs developing multiple GSPs, with a coordination agreement.  

There are several opportunities for participation of private stakeholders in GSP development. First, the GSP regulations require that a GSA publish and submit to DWR a written statement describing how interested parties can participate in the development and implementation of a GSP. Second, a GSA must hold a public hearing on a GSP and must provide at least 90 days’ advance notice of the hearing. After a GSP is submitted, DWR must allow at least a 60-day comment period.

E. DWR’s Review of GSPs and Ongoing Oversight

Upon adoption of a GSP, the designated GSA must submit the GSP for DWR review. DWR has developed detailed regulations with criteria for evaluating GSPs. Upon completion of its review, DWR has the power to request changes to the GSP in order to address deficiencies. DWR is required to re-evaluate GSPs every five years to ensure continued compliance and sufficiency. After adoption of a GSP, the GSA must submit to DWR an annual compliance report containing basin groundwater data, including elevation, aggregate extraction, water usage and any changes in groundwater storage to monitor progress toward this sustainability goal.

F. State Intervention

SGMA provides for state intervention—a “backstop”—when local agencies are unwilling or unable to manage their groundwater basin. Specifically, SGMA authorizes the State Water Resources Control Board (“SWRCB”) to designate medium- and high-priority basins as probationary basins if prescribed local management requirements are not met; specifically if: (i) no local agency has been designated as the GSA by June 30, 2017 (no state intervention resulted for this milestone in any basin); (ii) the agency designated as the GSA fails to prepare and adopt a GSP by January 31, 2020 (for critically overdrafted basins) or January 31, 2022 (for non-critically overdrafted basins); or (iii) the GSP is inadequate and the basin is either in a condition of long-term overdraft or groundwater extractions are resulting in a significant depletion of interconnected surface waters.

For those basins designated as probationary basins, SGMA authorizes the SWRCB to remove groundwater management authority from local agencies and to adopt and

32 Wat. Code § 10727.
33 Wat. Code § 10727.8(a); 23 Cal. Code Regs. § 353.6(a).
34 Wat. Code § 10728.4.
35 Wat. Code §§ 10733.4(c); see also 23 Cal. Code Regs. § 355.8(b), (f).
36 Wat. Code §§ 10733.4(a), 10733(a).
38 Wat. Code § 10733.4(d).
40 Wat. Code § 10728.
41 Wat. Code § 10735.2(a)(1), (4)-(5).
implement an interim plan. A GSA that subsequently adopts a GSP may petition the action may also be sufficient to rescind an interim plan. A GSA that subsequently adopts a GSP may petition the SWRCB for a finding that a local GSP has been adopted and is adequate, and for rescission of the interim plan. The filing of a judicial order or decree entered in an adjudication action may also be sufficient to rescind an interim plan.

SWRCB must exclude from probationary status any portion of a basin for which a GSA demonstrates "compliance with the sustainability goal." This provision is intended to avoid penalizing GSAs and stakeholders in portions of a basin that are managing groundwater sustainably while other areas of the basin are not. However, demonstrating compliance with SGMA’s sustainability goal may be difficult if there is insufficient coordination among diverse GSAs within a basin.

II. ISSUES THAT WILL NEED TO BE RESOLVED TO IMPLEMENT SGMA SUCCESSFULLY

While SGMA requires the adoption, and state approval, of GSPs, the legislature left key practical issues for future compromise or litigation. Importantly, it does not provide for determinations of groundwater rights and how they relate to pumping allocations and obligations to pay for basin replenishment and management. Determining the basin’s sustainable yield and other technical matters may also involve considerable controversy. Local stakeholders must resolve these issues through negotiated compromise, enforcement by the State Water Resources Control Board, or the courts.

A. Sustainable Yield and Other Technical Issues

A fundamental goal of the Act is to avoid extractions in excess of a basin’s sustainable yield that will ultimately cause “undesirable results.” Determining sustainable yield may be controversial in many basins. Controversy may also develop concerning the merits of technical management options such as groundwater replenishment, storage programs, and other strategies.

As an initial measure to build consensus, the GSA might focus on collaboration respecting a technical work plan to produce the essential information necessary for future plan development. Divergent interests that share in the development of the technical study are often more likely to accept the technical findings and resulting management strategies. To

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42 Wat. Code § 10735.8(a).
43 Wat. Code § 10735.8(b).
44 Wat. Code § 10735.8(c).
45 Wat. Code § 10735.8(g)(1)(A), (2), (4).
46 Wat. Code § 10735.8(g)(1)(B), (2), (4).
47 Wat. Code § 10735.2(e).
48 Wat. Code §§ 10720.5, 10726.8(b).
49 Wat. Code § 10721, paragraphs (t), (u), (v), and (w).
facilitate such efforts, the GSA might establish a technical committee populated by participating stakeholders to negotiate the elements of the work plan.

B. Plan Components

Among other requirements, a GSP must include provisions concerning the basin’s physical characteristics and challenges, historic and projected demands, control of saline intrusion, wellhead protection and well abandonment, recharge area protection, abatement and remediation of contaminated groundwater, impacts on groundwater dependent ecosystems, monitoring protocols, overdraft mitigation, and measurable objectives to obtain sustainable groundwater management within a 20-year planning horizon. Plans may also include provisions pertaining to groundwater storage, carryover, and voluntary transfers of production allocations. To implement these GSP components, many GSPs will need to determine the basin’s sustainable yield, establish individual groundwater production allocations, implement replenishment strategies (if possible), and impose pump assessments to fund basin replenishment and other solutions. Such determinations will often invoke controversy among affected stakeholders. The GSA should pursue early and diligent outreach to affected groundwater users to encourage consensus on these subjects.

Prior court actions to adjudicate groundwater rights and manage overdrafted basins may also offer some insight into how GSPs may be structured. In several cases, the courts allocated groundwater supplies among diverse users based on an assessment of groundwater rights and then reduced allocations over time to eliminate overdraft. Many judgements also addressed pumping assessments to fund basin replenishment activities, trading of allocations, carryover of unused allocation from year to year, and storage of non-native water in the basin’s available storage space. Similar provisions are likely to be included within future GSPs under SGMA.

C. Groundwater Rights

In practice, balancing basin yield and demands will frequently require reductions in cumulative and individual groundwater production and/or significant assessments to fund replenishment programs. Efforts to assign the burden for these difficult initiatives among competing groundwater users will often be met with claims respecting water right priorities. As noted, the Act does not address or resolve groundwater rights. Thus, the GSA will need to resolve such claims through negotiation, litigation, or both.

The GSA may facilitate compromise by structuring the GSP in a manner that respects underlying groundwater rights while affording new opportunities. For example, the GSA might establish different classes of production allocations and distribute financial

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50 Wat. Code §§ 10727.2 and 10727.4.
51 Wat. Code §§ 10726.2 and 10726.4.
53 See e.g., City of Barstow v. Mojave Water Agency (2000) 23 Cal.4th 1224 (hereinafter, “Mojave”) (discussing water right priorities and the necessity to consider such legal priorities in the context of developing a groundwater management regime).
responsibilities in a manner that reflects underlying groundwater right priorities.54 Further, groundwater users might be enticed to support the GSP in order to participate in attractive new opportunities included within the GSP. Examples include opportunities to carry over unused production allocations from year to year, storage and conjunctive use programs, and voluntary transfers of production allocations.55

However, disagreements over the status of underlying common law water rights—e.g., whether prescriptive rights have developed56—may persist among groundwater users or between the GSA and certain groundwater users. In these circumstances, groundwater adjudications may be necessary to resolve water right claims and harmonize applicable water rights within a groundwater management plan.

D. Protecting the GSP and Future Conflict Resolution

Once a GSP is developed, the GSA should consider how to protect the GSP from future legal challenge and how to resolve subsequent disputes. The Act allows for the GSA to validate the GSP pursuant to the validation procedures set forth in the Government Code.57 This process affords a means to immunize the GSP from future legal challenges pertaining to the GSP. However, a validation action will not define and allocate groundwater rights. Rather, a groundwater adjudication will be necessary if that result is desired.

54 The operable judgment in the Seaside Groundwater Basin is illustrative. It creates two classes of production allocation: “Standard Production Allocation,” which is roughly similar to appropriative rights, and “Alternative Production Allocation,” which is a landowner-based right that is similar to an overlying right. Both allocations are restricted to a maximum annual production quantity. This reflects a compromise by the landowners in that overlying rights are not fixed in quantity. However, the Standard Production Allocation producers bear the burden of ramping down production to bring collective allocations into balance with the basin’s safe yield as well as the cost of management and replenishment imposed through pumping assessments. The Alternative Production Allocation producers (i.e., the landowners) do not bear such costs. This is consistent with the superior priority of overlying rights held by landowners under the common law. Similar to common law restrictions applicable to overlying rights, the landowners (Alternative Production Allocation Producers) cannot transfer their allocation, engage in basin storage, or carry over their Alternative Production Allocation from year to year. Only the Standard Production Allocation producers enjoy these benefits. However, the Alternative Production Allocation producers may convert their rights to Standard Production Allocation. Once they do so, their rights are subject to all prior rampdown and subject to the pumping assessments imposed on Standard Production Allocation. After conversion, the new Standard Production Allocation, which was converted from Alternative Production Allocation, is transferable. Thus, the formerly landowner-based right, which was “locked” on the property, can be transferred in exchange for compensation. This creates a means to take advantage of market-based reallocations of water rights, which incentivizes conservation, reveals the “true” price of water, and reallocates water from lower to higher-valued uses, in a manner that would not be available under the common law. Amended Decision, California Am. Water v. City of Seaside et al., No. M66343 (Monterey County Superior Court, filed Sept. 31, 2004); SGMA provides similar opportunities to cap the quantity of overlying rights and then allow the transfer of those rights. Wat. Code § 10726.4.

55 See Wat. Code § 10726.4 (allowing a GSA to establish pumping allocations and transferability of such allocations as well as allocation carryover programs as a component of a GSP); Wat. Code § 10727.4 (providing for facilitation of conjunctive use and storage opportunities).

56 See discussion, infra, Section III.B.

57 Wat. Code § 10726.6 (providing for validation pursuant to sections 860 et seq. of the Code of Civil Procedure.)
A groundwater adjudication may be a prudent strategy to achieve finality respecting groundwater rights and GSP durability. Adjudications also benefit from the court’s continued jurisdiction to resolve future conflicts pursuant to post-judgment proceedings, thereby avoiding the prospect that a future conflict could nullify aspects of the GSP or otherwise disrupt management.\(^{58}\)

The downside of many past adjudications has been the substantial time and cost required to complete them. Earnest efforts to garner consensus for a negotiated GSP may reduce the time and cost of future adjudications. Where substantial consensus is achieved, stakeholders can request that the court enter the negotiated GSP in the form of a stipulated judgment among the settling parties. The adjudication can also proceed against objecting parties to bind them to the judgment, as necessary.\(^{59}\) The greater the consensus, the greater the likelihood of expediting the process.

III. SUMMARY OF KEY GROUNDWATER RIGHTS LAWS

As noted above, SGMA expressly provides that neither the actions of a GSA nor a GSP shall determine or modify water rights.\(^{60}\) Yet, the setting of pumping allocation, fee assessments on pumping, allocation transfer programs, and many other aspects of a GSP will frequently affect essentially all aspects of a water right, including the determination of how much groundwater one can produce, at what cost and under what rules and restrictions. GSA determinations in this respect that are inconsistent with common law water right priorities will often trigger a groundwater basin adjudication or other legal challenge to the GSA’s actions. Therefore, whether acting as a GSA or considering how best to assure that future municipal water supplies derived from groundwater are maintained, municipal water suppliers must understand the basic contours of groundwater law.

In California, a water right, regardless of type, is an usufructuary right; it only conveys a right to use water on a recurring basis.\(^{61}\) Usufructuary water rights are nonetheless a property entitlement.\(^{62}\) However, an overarching limitation on all water rights is that the

\(^{58}\) A final adjudication can afford efficient and prompt future dispute resolution through the court’s continuing jurisdiction as opposed to the prospect of a new lawsuit arising under SGMA management and possibly nullifying aspects of the GSP or otherwise disrupting basin management. The difference can be as stark as a six- to eight-week proceeding for a motion, hearing, order and return to management under a post-judgment proceeding versus a multi-year litigation under an SGMA conflict.

\(^{59}\) See e.g., Code Civ. Proc. § 850 (allowing a trial court to impose a proposed stipulated judgment on objecting parties in a comprehensive groundwater basin adjudication if parties representing at least 50 percent of all parties and 75 percent of all water rights agree on the proposed stipulated judgment and the proposed stipulated judgment is: (i) consistent with Article X, section 2 of the California Constitution; (ii) is consistent with the water right priorities of non-stipulating parties; and (iii) treats objecting parties equitably).

\(^{60}\) Wat. Code §§ 10720.5, 10726.8(b).

\(^{61}\) Turlock Irr. Dist. v. Zanker (2006) 140 Cal.App.4th 1047 (“Water itself is not subject to ownership in California by private parties. Instead, a party can own the right to use water.”); accord Mojave, 23 Cal.4th at 1236 n. 7 (hereinafter, “Mojave”).

\(^{62}\) United States v. State Water Resources Control Bd. (1986) 182 Cal.App.3d 82, 103 (“... once rights to use water are acquired, they become vested property rights. As such, they cannot be infringed by others or taken by governmental action without due process and just compensation.”).
water be put to beneficial use by reasonable means. In addition to affording legal rights to withdraw and use water, water rights designate priorities to use water among competing users in circumstances of shortage.

A. California’s Dual System of Water Rights

California employs a dual system of water rights in which both riparian/overlying rights and appropriative rights are recognized. Riparian/overlying rights arise from, and are based in, land ownership. A riparian right authorizes the owner of land adjoining or abutting a natural surface watercourse to divert and use water on the riparian land. An overlying groundwater right, which is analogous to a riparian right to surface water, allows a landowner to extract and use groundwater on land overlying the groundwater supply. Riparian and overlying rights are considered correlative rights. Therefore, similarly situated property owners that abut or overlie a common source generally share an equal priority to withdraw and use water from the source. The rights arise solely from property ownership and generally are not determined by the history or frequency of water use.

Appropriate groundwater rights allow for the appropriation of groundwater for use on non-overlying properties, but only so long as there is water available for appropriation that is surplus to the present cumulative needs of the overlying owners. The right to appropriate water is dependent upon continuous use, and therefore appropriative rights can be forfeited for extended non-use. Priority between appropriative users is predicated on the rule of “first-in-time, first-in-right;” that is, the appropriator that commenced appropriation earlier in time is entitled the full amount of their historical appropriation before later-in-time appropriators may withdraw water.

In supplying water to the public, municipal water suppliers act as appropriators even if they provide water service to customers overlying the same basin from which they draw their water supply. Municipalities only enjoy overlying water rights with respect to the use of water on overlying parcels owned by the municipality, such as a city park.

63 Cal. Const. art. X, sec. 2.
64 Mojave, 23 Cal.4th at 1240.
65 Id.
66 Id.; City of Pasadena v. City of Alhambra (1949) 33 Cal.2d 908, 925 (hereinafter, “Pasadena”).
67 Id.
69 Id.
70 City of Los Angeles v. City of San Fernando (1975) 14 Cal.3d 199, 282-86 (hereinafter, “San Fernando”).
74 Wright, 174 Cal.App.3d at 90; Tehachapi, 49 Cal.App.3d at 1001 n. 6.
While overlying rights are generally senior in priority to appropriative rights,75 there is little case law addressing conflicts among overlying right holders where a common supply is insufficient to serve all overlying water users.

There is no statewide comprehensive permitting program for groundwater. Although appropriations of surface water (and groundwater flowing in a known and defined channel) is subject to the SWRCB’s permitting jurisdiction, percolating groundwater is not.76 Therefore, the determination of rights to percolating groundwater falls within the exclusive province of the courts.77 If there is a physical interconnection between percolating groundwater and surface or subsurface flow, water rights in the two supplies can be adjudicated in the same legal proceeding.78

B. Safe Yield, Overdraft, Prescription, and Subordination

The “safe yield” of a basin (or in SGMA parlance, the “sustainable yield”79) is the amount of water that can be extracted from a groundwater basin on an annual basis without causing an undesirable result.80 Undesirable results have generally been understood to include long-term falling groundwater levels and depletion of storage, land subsidence, sea water intrusion, decline of water quality and similar adverse consequences of groundwater overdraft. SGMA borrowed the term “undesirable results” from case law and defined sustainable groundwater management in relation to avoiding six undesirable results specified in the law.81

In some instances, the natural safe yield (recharge from natural sources) may be distinguished from operating or perennial yield (recharge from all sources). The recharge of a basin from natural sources can be supplemented by a groundwater management program that utilizes nonnative supplies such as imported water, recycled water, or captured storm water. It may also be possible to increase the natural safe yield by inducing additional inflow and minimizing rejected recharge by regulating water levels in a basin. In these circumstances, the entity responsible for the augmented artificial recharge is entitled to the additional recoverable yield within the basin—a “fruits-of-one’s-labor principle.”82

When a basin’s safe yield is exceeded, groundwater overdraft begins.83 The senior priority enjoyed by overlying landowners can be lost after an extended period of overdraft condition if the landowners do not promptly seek judicial enforcement of their senior priority rights.84 The overdraft establishes adversity for purposes of the appropriators.

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75 San Fernando, 14 Cal.3d at 282-86.
76 Wat. Code §§ 1200 et seq.
77 See Wright, 174 Cal.App.3d 74, 87-89.
79 Wat. Code § 10721(v).
80 Pasadena, 33 Cal.2d 908.
81 See Wat. Code §§ 10721(x), 10727.2(b)(4).
82 San Fernando, 14 Cal.3d at 256-58; City of Santa Maria v. Adam (2012) 211 Cal.App.4th266, 304-305.
83 Pasadena, 33 Cal.2d at 936-37.
84 San Fernando, 14 Cal.3d at 284.
including municipal water suppliers, perfecting prescriptive groundwater rights.\textsuperscript{85} If the overdraft continues for a period of at least five years, without objection by the overlying landowners, appropriators can prescribe rights from the overlying landowners.\textsuperscript{86}

Under Civil Code section 1007, neither private parties nor public entities can obtain prescriptive rights against public utilities, municipalities or other public entities. Accordingly, private pumpers can only obtain prescriptive rights against other private pumpers. Although public pumpers cannot lose water rights by prescription, their acquisition of prescriptive groundwater rights can be limited by an overlying owner’s “self-help”—groundwater pumping by the overlying owner during the prescriptive period.\textsuperscript{87}

The doctrine of subordination may also be applied to cap and limit groundwater use by landowners in future adjudications of overdrafted basins. Through this doctrine, the dormant portion of a landowner’s overlying rights may be “subordinated.” The subordination doctrine has been applied in the surface water context, but not yet in the groundwater context. In the case In re Water of Long Valley Stream System (“Long Valley”), the California Supreme Court approved the SWRCB’s subordination of the dormant riparian rights in the surface water context.\textsuperscript{88} To date, the courts have not applied the same principle to subordinate dormant overlying rights.\textsuperscript{89} However, as part of the recent groundwater basin adjudication reform law, the legislature explicitly permits the court to apply the principles set forth in Long Valley within a comprehensive groundwater basin adjudication.\textsuperscript{90} Moreover, the California Supreme Court in Mojave explained that the subordination principle applied in Long Valley may need to be applied in the future to subordinate dormant overlying rights “to harmonize groundwater shortages with a fair allocation of future use.”\textsuperscript{91}

\textsuperscript{85} Id.
\textsuperscript{86} Id.
\textsuperscript{88} In In re Water of Long Valley Creek Stream System (1979) 25 Cal.3d 339, 355, 357-359 (hereinafter, “Long Valley”), the California Supreme Court held that although unexercised riparian rights could not be extinguished entirely, in the context of a comprehensive stream adjudication, the state had the authority under Article X, section 2 of the California Constitution (state policy requiring maximum beneficial use of water) to subordinate the priority of dormant riparian rights to the priority of presently exercised riparian rights. The SWRCB has applied Long Valley to subordinate unexercised riparian rights in several instances, including to subordinate riparian rights unexercised for periods as short as approximately ten years. (See, e.g., In the Matter of the Determination of the Rights of the Various Claimants to the Waters of Purisima Creek Stream System in San Mateo County, California, Order WR: 85-1, 1985 WL 20014, at *10-11; In the Matter of the Determination of the Rights of the Various Claimants to Waters of Purisima Creek Stream System in San Mateo County, California, Order WR 84-9, 1984 WL 19066, at *4; In the Matter of the Determination of the Rights of the Various Claimants to the Waters of San Gregorio Creek Stream System, In San Mateo County, California, Order WR 89-16, 1989 WL 98156, at *5 [amended in part by Order WR 90-6, 1990 WL 272140, at *1] [subordinating riparian rights unexercised for a period of approximately 10 years].)
\textsuperscript{89} Wright v. Goleta Water District (1985) 174 Cal.App.3d 74, 87-89 (refusing to extend the principle applied in Long Valley to subordinate dormant overlying groundwater rights in a groundwater basin adjudication reasoning that the comprehensive legislative scheme applicable to adjudication of riparian rights is not applicable to overlying rights).
\textsuperscript{90} Code Civ. Proc. § 830(b)(7).
\textsuperscript{91} Mojave, 23 Cal.4th at 1249, n. 13.
IV. GROUNDWATER BASIN ADJUDICATIONS AND NEW GROUNDWATER BASIN ADJUDICATION LAWS

A groundwater basin adjudication is a lawsuit to determine groundwater rights that also typically establishes a basin-wide groundwater management plan, often referred to as a “physical solution.” Traditionally, adjudications have been used—mostly in Southern California—to determine the basin’s “safe yield,” limit cumulative groundwater production to the safe yield, establish programs to enhance the basin’s yield, comprehensively adjudicate groundwater rights, and assign individual pumping allocations. Adjudication judgments also typically allow for voluntary transfers of pumping allocations and maintain the court’s continuing jurisdiction to oversee the management plan, adapt the plan over time, and resolve future disputes.

In the SGMA era, adjudications will likely assume an expanded and slightly different role. In 2015, as a complement to SGMA, the state adopted legislation—AB 1390 (Alejo) and SB 226 (Pavley)—to establish a new procedure to process adjudications in a more efficient manner, ensure that litigants don’t obstruct or delay SGMA, and harmonize future adjudications with groundwater management under SGMA. This new “adjudication reform law” is intended to work in concert with SGMA to bring about sustainable groundwater management.

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92 See e.g., Seaside, 183 Cal.App.4th at 474-76,480.
93 Id.
94 Id.
95 AB 1390 set forth new provisions in the Code of Civil Procedure designed to render future adjudications more efficient and expedited including provisions relating to: in rem jurisdiction and the comprehensive effect of the adjudication (Code Civ. Proc. § 834); efficient methods to serve all potential groundwater claimants, including all landowners overlying the basin, whether or not they are current pumpers (Code Civ. Proc. § 835); elimination of peremptory judicial challenges pursuant to Code of Civil Procedure section 170.6 and venue removal motions pursuant to Code of Civil Procedure section 394 (Code Civ. Proc. § 838(c)); establishing that comprehensive adjudications are presumed to be complex litigation (Code Civ. Proc. § 838(b)); electronic service of pleadings and papers (Code Civ. Proc. § 839); phasing of trial and limiting discovery to correspond to each phase (Code. Civ. Proc. § 840); formation of classes of overlying groundwater rights holders pursuant to Code of Civil Procedure section 382 (Code. Civ. Proc. § 840); appointment of special masters (Code. Civ. Proc. § 840); requiring litigants to make early factual disclosures concerning groundwater pumping and use, among other disclosure requirements (Code Civ. Proc. § 842(a)); requiring disclosures concerning expert witnesses accompanied by expert reports (Code Civ. Proc. § 843); and requiring parties to submit direct testimony through written affidavits or declarations rather than live testimony (Code Civ. Proc. § 844).
96 See Wat. Code § 10737.2 (requiring that a court overseeing an adjudication for a basin required to have a GSP manage the proceeding in a manner that minimizes interference with the timely completion and implementation of a GSP, avoids redundancy and unnecessary costs in the development of technical information and a physical solution, and is consistent with the attainment of sustainable groundwater management within the time frames established by SGMA).
97 See Wat. Code § 10737.4 (exempting a basin managed pursuant to a judgment entered in an adjudication from the state enforcement provisions of SGMA if the judgment is submitted to DWR for evaluation and DWR determines that the judgment satisfies the objectives of SGMA).
98 See Wat. Code § 10737.8 (prohibiting a court from entering a judgment in an adjudication unless the court finds that the judgment will not substantially impair the ability of a GSA, SWRCB, or DWR to comply with SGMA and to achieve sustainable groundwater management.)
As discussed above, there is an apparent paradox between (i) the grant of powers to GSAs in SGMA to establish pumping allocations, restrict pumping, assess pumping fees, etc. and (ii) the act’s declaration that it does not alter water rights and that pumping limitations by a GSA shall not be construed to be a determination of groundwater rights. The apparent paradox is resolved by understanding that an adjudication serves as a potential check on groundwater restrictions or extraction fees imposed by a GSA that run afoul of common law water rights. In practical effect, the GSP development process should be viewed as a stakeholder negotiation to seek agreement on management terms to either avoid litigation or narrow the issues to be litigated. If stakeholders are unable to agree, particularly on significant issues like pumping allocations and fee structures, an adjudication is likely.

It is important to understand that an adjudication will not preclude sustainable basin management.99 Indeed, the new adjudication reform law directs the courts to manage adjudications to minimize interference with the timely completion and implementation of GSPs, consistent with the attainment of sustainable groundwater management.100 Thus, adjudications are not tools to avoid groundwater management, but are a means to ensure that basin management is undertaken in a manner consistent with water law priorities and principles. Where a GSA proceeds in manner inconsistent with settled legal principles, the courts can order modifications to render GSPs lawful and mandate that GSAs correct errant decisions.101

Municipal water suppliers should participate collaboratively in the GSP development process. At the same time, they should understand the likely effects of an adjudication and develop a strategy if negotiations breakdown and adjudication becomes necessary. Where a GSA is proceeding fairly with due regard for both water right underpinnings and science-based management decisions, it will typically be best to avoid or postpone an adjudication. But, where a GSA or other basin stakeholders are not proceeding in an equitable, lawful, and science-based manner, stakeholders may consider an adjudication to right the process and should assess the pros and cons of an earlier than later filing.

V. CONSIDERATIONS FOR SGMA IMPLEMENTATION STRATEGIES FOR MUNICIPAL WATER SUPPLIERS

Municipal water suppliers will often be intimately involved with SGMA implantation, either as the GSA (or member of a GSA) to the extent they are a local agency that has elected to perform such function, or as a pumper that relies on the groundwater basin for part or all of the water supplies they serve to the public. In some instances, the municipal water supplier may fill both roles. Under such circumstances, it will be particularly important that the municipal water supplier demonstrate fairness and impartiality with respect to its role in developing the GSP, and particularly the division of basin groundwater between public

99 See Code Civ. Proc. § 847 (empowering the court to adopt a preliminary injunction limiting groundwater production while the adjudication proceeds within basins experiencing long-term overdraft); Code Civ. Proc. § 848(b) (authorizing the court to stay the adjudication to allow for progress on a GSP, the development of technical studies, or other settlement initiatives).
100 Wat. Code § 10737.2.
101 Mojave, 23 Cal. 4th 12 at 1250.
and private users. More broadly, because the specter of adjudication will reside behind most GSP development efforts, and in light of the expense and delay that a contested adjudication may entail, it behooves stakeholders to seek a collaborative and consensual agreement on the terms of the GSP. This effort will require extensive engagement and transparency concerning the technical assessment of basin conditions and substantive groundwater management choices.

A. Technical Assessment of Basin Conditions

Whether a municipal water supplier is a member of the GSA developing a GSP or is simply a pumper reliant on the basin, an early undertaking will need to be a thorough and transparent assessment of the basin’s technical condition. This will include amassing necessary technical data (e.g., historical pumping rates, well drilling logs and related information, well level records, geologic mappings, etc.), performing predictive groundwater modeling and simulations, and evaluating potential management actions (e.g., replenishment programs, brackish groundwater treatment, well relocation and water conveyance strategies, etc.). The technical effort will serve several functions. It will inform key elements for the GSP, including the assessment of undesirable results, sustainable yield, minimal thresholds, and measurable objectives. It will also help guide consideration of opportunities for optimal basin management strategies, including the pace of necessary ramp down in cumulative production if necessary. Finally, the technical work will assist in determining whether there is a strong case to support a finding of overdraft and the historical extent and period of overdraft, which are factual predicates to water right outcomes, including those resulting from prescription and subordination.

Retention of competent hydrogeologists to consult with the GSA and municipal water suppliers will be key to this effort. It will also be important to foster a collaborative technical process. Thus, technical advisory committees or working groups should be established to afford participation by technical representatives of the various stakeholders in the process.

B. Assessment of Likely Water Rights

Once the historical and current condition of the basin is understood, an assessment of water rights claims should be made. This will include determining whether prescriptive rights have likely developed on behalf of appropriators (including municipal water suppliers), the extent of preservation of overlying rights against prescription through “self-help” pumping, whether dormant overlying rights are subject to potential subordination, the availability of surplus groundwater available for appropriators, potential division of water supplies among correlative overlying landowners, and the existence of augmented artificial basin recharge to be claimed by those responsible for such recharge.\(^\text{102}\) This assessment should occur both privately, with competent legal counsel to inform negotiating positions, and ultimately in a candid public setting as well to assist all

\(^{102}\) See discussion, *supra*, at Section III.
stakeholders in discussing the likely contours of the water rights existing within the basin
to which the GSP should conform.

C. Negotiation and Compromise

Although certain legal norms applicable to groundwater conflicts are well established, (see section III, supra), there are many unresolved legal questions concerning the division of groundwater rights under shortage conditions and with respect to unique circumstances. An assessment of these issues is beyond the scope of this paper, but examples include uncertainties concerning the relevance of historical production and the period of historical production to the division of rights, the practical outcome of prescriptive and “self-help” pumping, the factors relevant to division of groundwater among landowners holding correlative overlying rights, and entitlements to surface water diverted from surface water bodies flowing across the basin that subsequently seep into and recharge the basin. These difficult issues compel counsel with competent legal representation. They should also compel efforts to negotiate compromises that resolve competing claims without resort to litigation. In this respect, the risk of litigation should not be underappreciated. Not only is there vast uncertainty respective of legal outcomes, the time and expense to obtain a final judgment (likely after appeals) will often be substantial. Meanwhile, great utility may be lost from the legal and economic certainty that may otherwise be achieved through a negotiated compromise. Therefore, all stakeholders—GSAs and public and private pumpers alike—should earnestly explore means to negotiate contested issues relating to the GSP. GSAs might also consider retaining a professional facilitator with experience mediating large, multi-party conflicts over common-pool resources. Finally, stakeholders should explore opportunities for dynamic basin management options such as basin replenishment and developed-water programs and water trading markets, and whether opportunities for participation in such programs can improve settlement potential (i.e., allowing the parties to move beyond negotiating a “zero-sum” division of native yield).

D. Preparation for Litigation if Necessary

While municipal water suppliers should earnestly strive for negotiated compromise concerning the division of pumping rights and future basin management, they should also appreciate and plan for the prospect of a future adjudication. For example, they should develop and organize records that may be relevant to an adjudication including pumping and water delivery records, well drilling reports and data, groundwater assessments, publications and other information concerning overdraft conditions, etc. Municipal water suppliers should also consult with legal counsel concerning an adjudication strategy if necessary, including water rights claims, physical solution opportunities, potential expert witnesses, etc.

VI. CONCLUDING REMARKS

SGMA and the complimentary adjudication reform laws now afford the impetus and process to achieve sustainable groundwater management throughout California. It has taken decades to deplete many of our overtapped groundwater basins to their present
condition, and it will take many years to bring them back into a sustainable state. This process will often require difficult decisions, accompanied by comprise where possible and litigation when necessary. In the interim, as GSPs are being developed and adjudications are proceeding, uncertainty pertaining to water supply availability may be heightened as technical and legal questions are yet to be resolved. Ultimately, however, the outcome promises greater certainty and understanding of available groundwater supplies and opportunities. This, in turn, will afford great benefit to all public and private enterprise that depend upon the supply and foster improved water supply reliability planning.